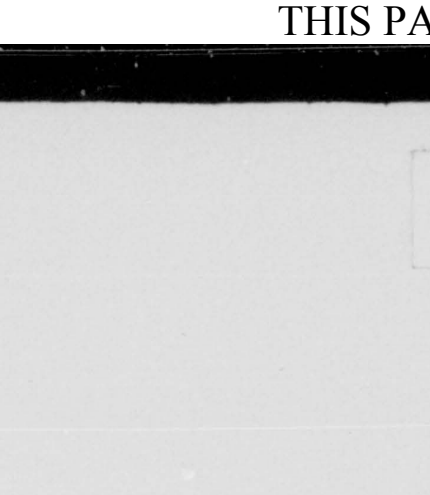

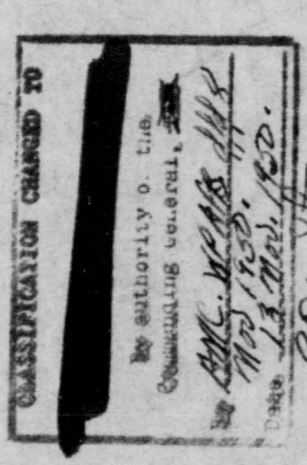

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Auth: C.G. ATSC
Initials: CMT
Date: 31 OCTOBER 1945

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C.C. ATSC
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31 OCTOBER 1945

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CASE HISTORY

of

THE BRODIE LAUNCHING AND LANDING DEVICE

The Brodie system provides for launching light aircraft from a suspended cable and landing the aircraft on the same cable after completion of flight. It was invented and developed by Capt. J. H. Brodie.

Documents in this case history were obtained from the files of Air Technical Service Command, Wright Field, and Headquarters, Army Air Forces, Washington, D. C.

Classified documents are included herein and, therefore, compliance with pertinent sections of AR 380-5 is necessary.

Compiled by
Historical Office
Air Technical Service Command
Wright Field
September 1945

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Summary of the Brodie Launching and Landing Device

In October 1943 a Third Air Force officer reported that successful tests of an airplane launching and landing device had been made at an airport outside of New Orleans. The equipment was developed by Lieutenant James Brodie of the Water Division of the Transportation Corps. It consisted of a 600 foot cable stretched between two supporting arms and carrying a trolley which was in turn connected by a rope to a drum-type brake. In launching or landing, the liaison type airplane used had a hook attached over the center of gravity of the plane in such a way that it engaged a wire-rope sling attached to the trolley.

(1)*

On 6 February 1944 the Army Ground Forces expressed a desire to have the equipment developed for use by ground units operating liaison planes, and in June the Assistant Ground Adjutant General stated a Ground Force requirement for twenty-two articles with accompanying conversion kits for the L-4 and L-5 airplanes.

(9,18,24)

When the Transportation Corps offered to make available the equipment and the services of Lt. Brodie in future development of the project by the Army Air Forces, the AAF replied that it had no requirement for such a device. Assistant Chief of Air Staff (AC/AS), Operations Commitments and Requirements (OC&R) said the AAF was no longer charged with anti-submarine warfare, and in rough terrain an airstrip could be cleared as easily as the Brodie device could be set up. Therefore, the suggested uses of the Brodie system had no place in AAF planning. This stand was reiterated on numerous occasions, and in June 1944 favorable recommendations by the Air Engineer, Materiel, Maintenance and Distribution (MM&D) were rejected by OC&R largely on the grounds that the operation of aircraft from restricted areas would be effectively accomplished through the use of helicopters, which would be available in limited numbers in 1945.

(3,4,5,6)

(5)

(11,14,15, 16,17)

In July 1944 General Giles, Chief of Air Staff, discovered an account of the Brodie device and told General Echols, MM&D, "It appears to me that the Engineer Corps is performing work that we should be doing." The next day General Giles notified MM&D that General Arnold had directed that the AAF "take over all experimental work in connection with this project." If the Ground Forces objected, General Arnold would take the matter to General Marshall "to effect a change in responsibility." Subsequently Lt. Brodie was assigned to Wright Field and the AAF assumed responsibility for the development and production of the Brodie device. The Office of Strategic Services (OSS) had engaged the Maryland Engineering Company and the

(19)

(20)

*The numbers placed in parentheses in the margin refer to documents in the Document File attached.

All American Aviation Company to produce 18 sets of the equipment. OSS retained financial responsibility for these contractual commitments, and the Air Forces undertook supervision of engineering, testing, production, and shipment of the items contracted for. The AAF also assumed responsibility for the development of a method of dropping the gear by parachute.

(32,34,39 42,45,86) (54,68)

On 22 January 1945 Engineering Division, Wright Field reported that "certain amounts of equipment," amounting to "about six complete sets" manufactured on the original OSS contracts had been shipped to field organizations for testing and operational use. Disposition of all 19 sets (including one earlier experimental item) on OSS contracts was recorded by Captain Brodie in August 1945. Four sets had gone to Wright Field for test purposes, one to the Amphibious Training Base at San Diego, two to Fort Sill, Oklahoma for training use, two had been shipped overseas, [redacted] ten were stored at the 843rd AAF Specialized Depot, Columbus, Ohio, awaiting OSS disposition.

(65)

(86)

As the Brodie equipment became more widely known, potential using agencies showed an increasing interest in the device. Requests for the equipment were received from the Air Service Command in the India-Burma Sector; the Commander in Chief, United States Fleet; and the RAF in India. In April 1945 the Air Officer of the 77th Division Artillery reported successful tactical use of the Brodie system installed on an LST in operations against a series of small islands near Okinawa.

(28,29,49)

(76)

In January 1945 a statement of the Air Technical Service Command's (ATSC) development and procurement program to meet Army Ground Forces requirements provided for procurement of (1) 22 complete units, 4 of which could be secured from OSS; (2) 6 L-4 conversion kits and 6 L-5 conversion kits for each of the 22 units; and (3) six months' supply of maintenance parts for 16 of the 22 units. Delivery was to start by 1 March 1945 and to be completed six weeks later. The Engineering Division was to continue research on design improvement.

(62,63,78,86)

ATSC experienced difficulty in the production of the new units for the Ground Forces. Urged by Headquarters AAF to set a definite delivery schedule, ATSC replied that shortages of material and parts were delaying the prime contractor (Maryland Engineering) and the subcontractor (All American Aviation). The estimated delivery date of the first article was later set back to 25 April 1945. Production of the device was further complicated by directives from Headquarters AAF to supply seven Brodie systems modified for use by the Navy. As there were no drawings available and no other personnel with sufficient knowledge to undertake the work, Captain Brodie was sent to the contractor's plant to supervise the modification.

(67,70,71,74)

(75)

(81)

(82) By 16 June 1945, 14 of the new Brodie systems had been completed by the contractor and accepted by the AAF. On 30 June OC&R approved an AAF Board report containing the conclusion that "no requirement exists in the Army Air Forces for the Brodie landing device." It was recommended, however, that the AAF improve the serviceability of the equipment and procure a sufficient number of sets to meet (30) Ground Forces requirements.

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Auth: C.G. ATSC
Initials: CMT
Date: 31 OCTOBER 1945

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RESTRICTED

The [redacted] SYSTEM

OSS
PRESENTATION

Prepared by

PRESENTATION BRANCH
OFFICE OF STRATEGIC SERVICES

Washington, D.C

July 1944

LITHOGRAPHED IN THE REPRODUCTION BRANCH, OSS

INSTRUCTION MANUAL

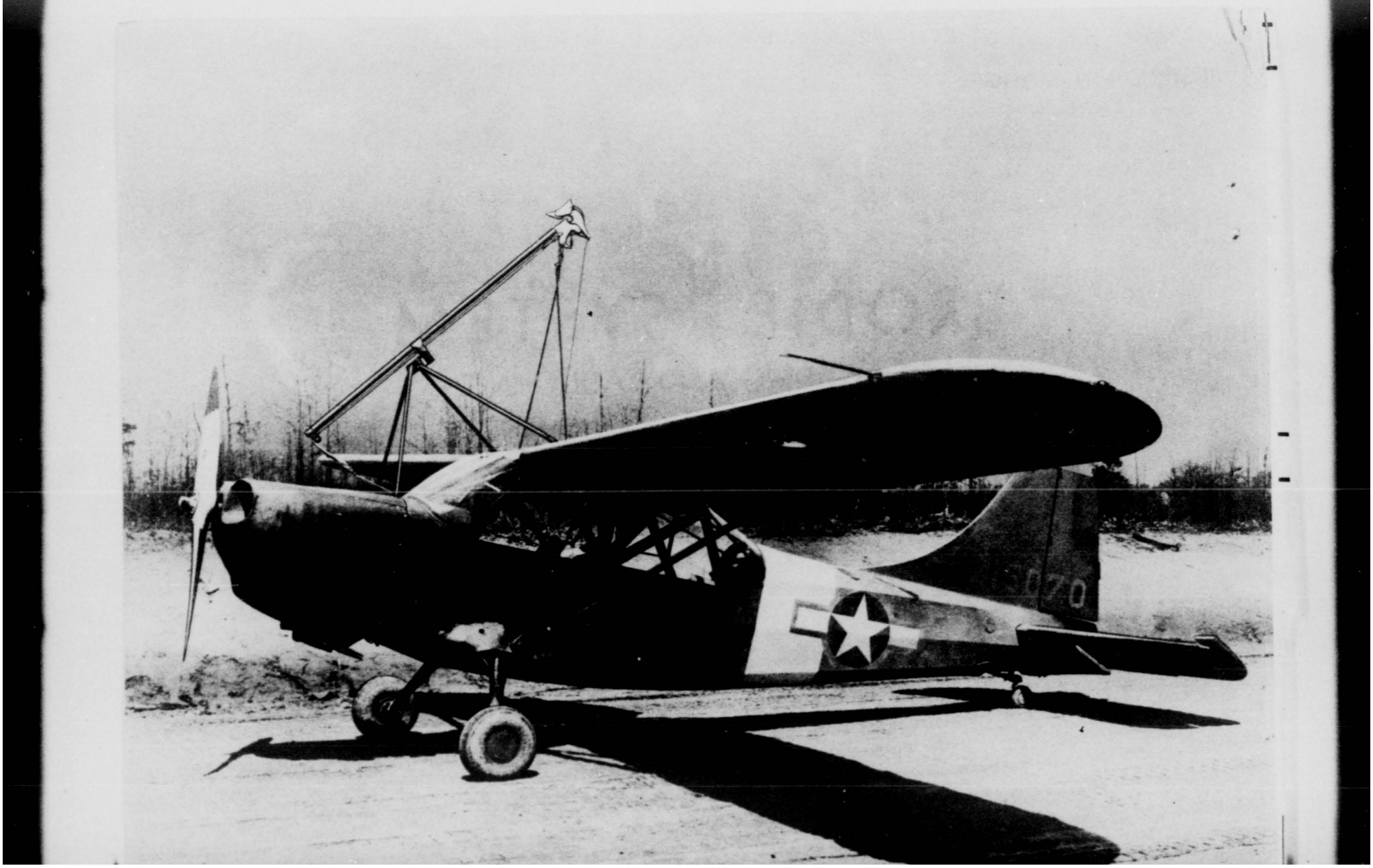
THE BRODIE SYSTEM

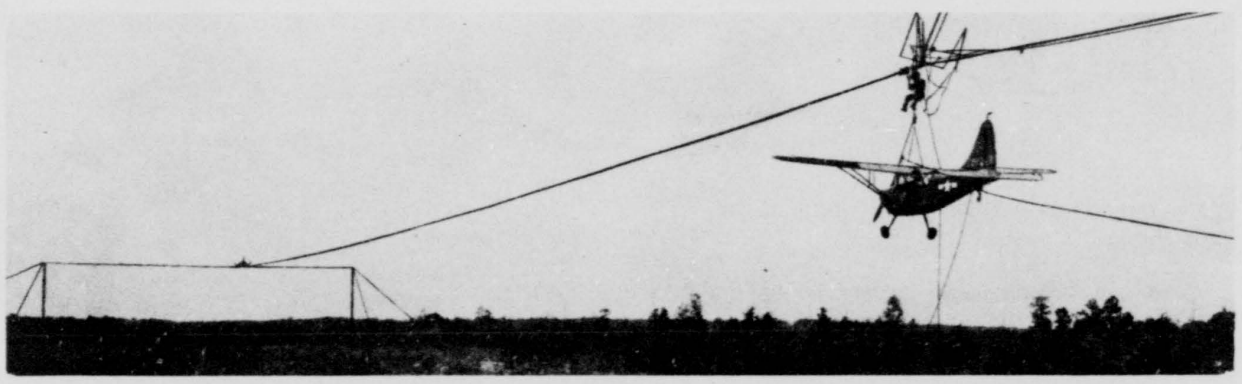
OF LANDING AND LAUNCHING LIGHT AIRPLANES FROM A PORTABLE RIG

Part 1 APPARATUS

Part 2 OPERATION

Part 3 ERECTION





INTRODUCTION

This manual describes a portable rig for landing and launching light planes from a tight, overhead cableway. The system, devised and tested by Lieutenant James H. Brodie, F.A., offers extensive possibilities for tactical use.

The Brodie System greatly increases the usefulness of liaison planes.

It is portable.

It is independent of terrain.

It is difficult to see from above 500 feet.

It can be set up or knocked down and moved to a new location in a comparatively short time.

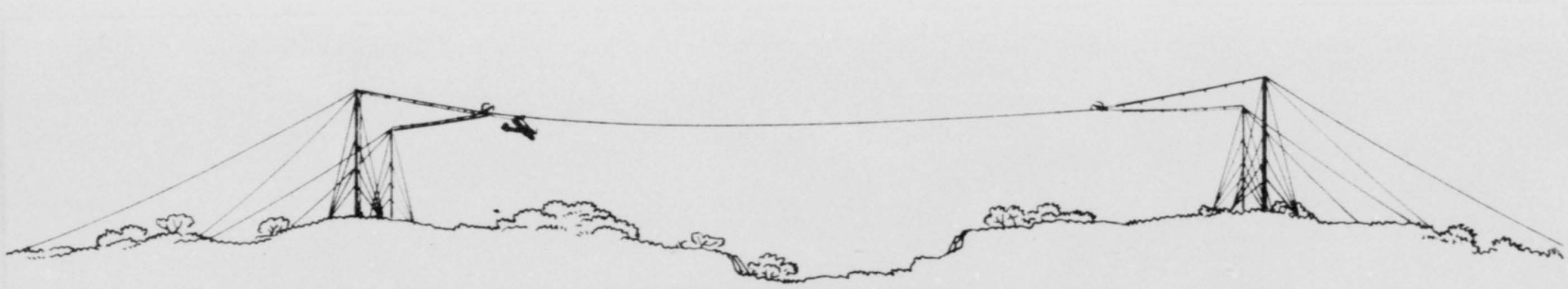
The rig can be set up in well-advanced positions and in any kind of terrain—mountains, deserts, jungles, marshes—where the construction of the conventional runway or landing strip is difficult or uneconomical. It is easily camouflaged and is structurally a difficult bombing target.

Any pilot capable of handling a plane in normal flight can land and take-off from this rig with a minimum of training.

Operation of the Brodie System in the field will undoubtedly result in the discovery and development of additional specific uses to which it can be put.

This booklet is designed primarily to instruct ground crews in setting up and operating the apparatus in the field. It may also serve to suggest new uses to which the Brodie System can be adapted.

All operational information in these pages refers to the Army L-5 airplane.



DESCRIPTION: The system is as simple in practice as it is in theory.

A smooth, straight, clear runway for landing or launching is provided by a horizontal, taut cable. Along this cable runs a trolley with an attached sling underneath.

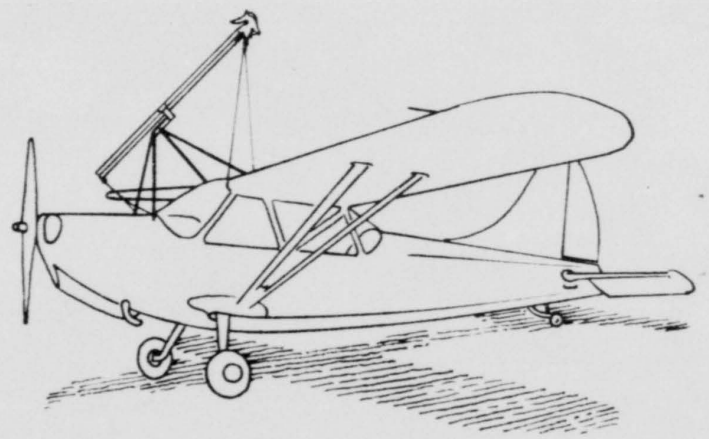
The same cableway is used for both landings and take-offs. However, the trolleys, slings, and minor auxiliary equipment are different for the two operations.

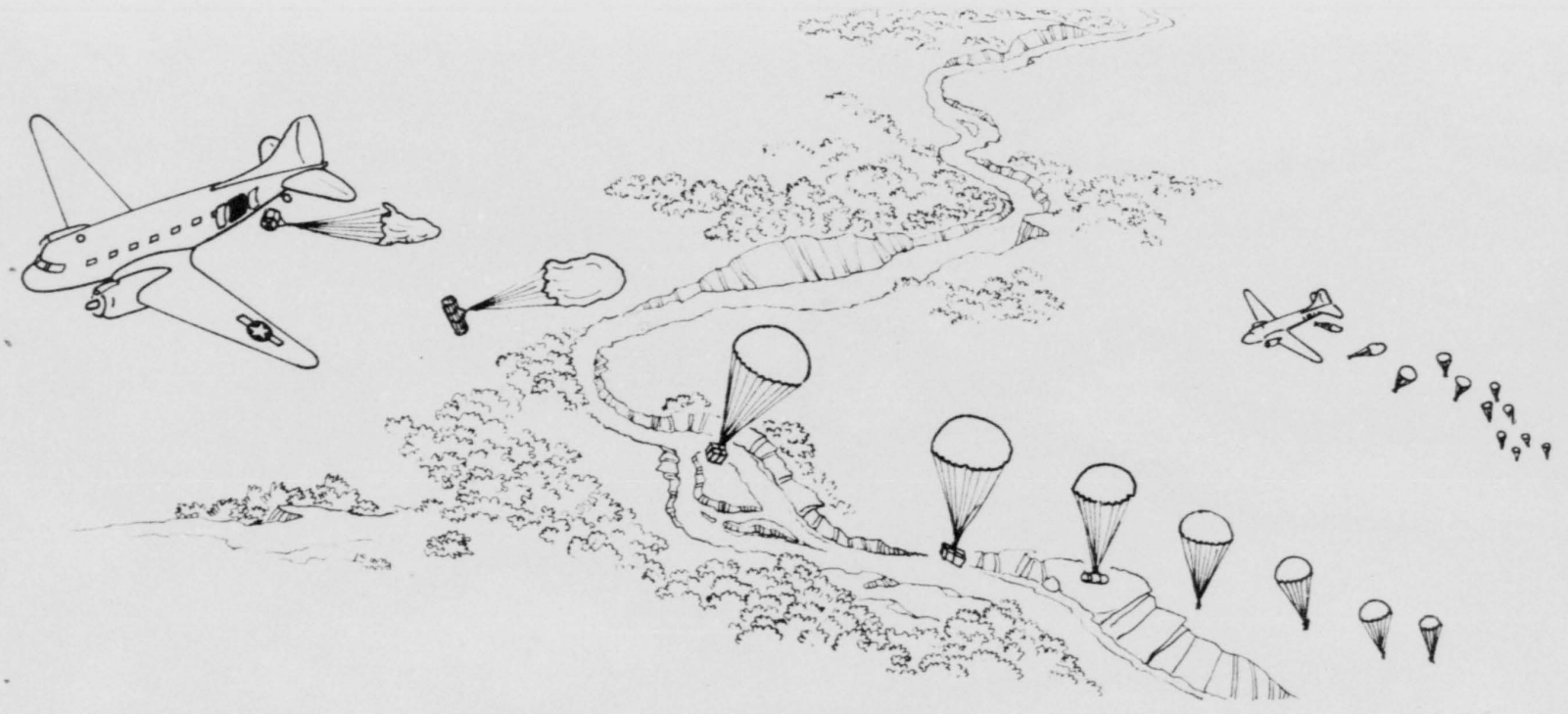
The apparatus is exactly the same at both ends of the cableway. This permits landings, and take-offs from either end, depending on the wind direction.

The plane is fitted with an overhead hook at the end of a swivel arm.

In landing, the hook engages the sling and as the trolley rolls along the cableway the plane is brought to a gradual stop by a brake line attached to the trolley.

In launching, the plane, suspended from a different trolley and sling, accelerates under its own power until flying speed is reached, whereupon it is released by the pilot from the sling and procedes in normal flight.



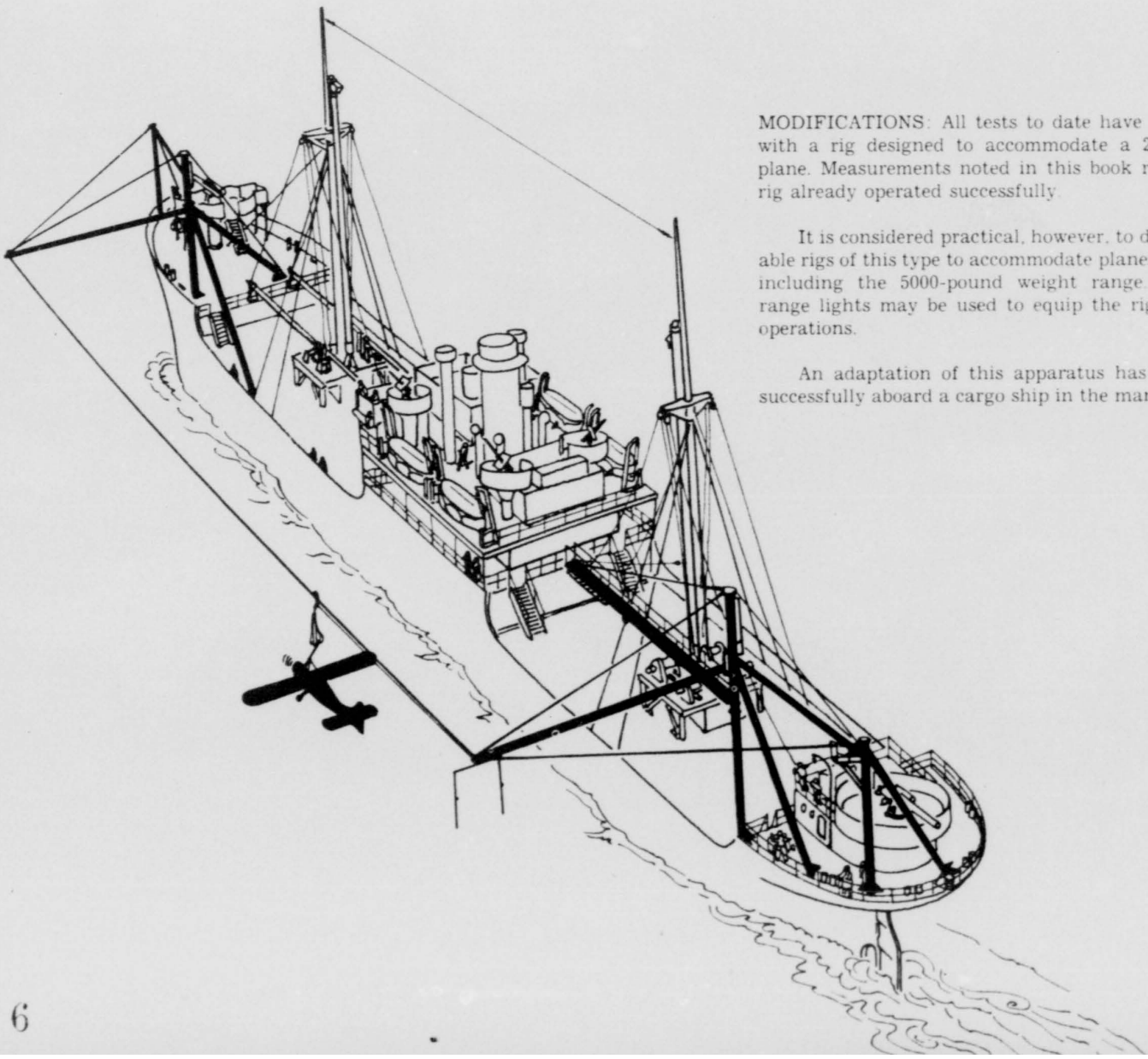


PORTABILITY: All equipment for erecting a Brodie landing and launching rig—including the tools and tackle—weighs less than 9000 pounds. Before assembly each part is small and light enough to be airborne when necessary.

The entire rig plus a 9-man crew can be carried by cargo planes. The rig can be flown over a designated location, landed by parachute, and erected by the airborne ground crew.

Where roads exist two 2½-ton trucks or one 5-ton truck is sufficient to haul in the crew and all equipment.

Even with the use of hand-operated tools and tackle alone the rig can be made ready for landings and take-offs in less than 24 hours.



MODIFICATIONS: All tests to date have been made with a rig designed to accommodate a 2250 pound plane. Measurements noted in this book refer to the rig already operated successfully.

It is considered practical, however, to design portable rigs of this type to accommodate planes up to and including the 5000-pound weight range. Bulls-eye range lights may be used to equip the rig for night operations.

An adaptation of this apparatus has been used successfully aboard a cargo ship in the manner shown.

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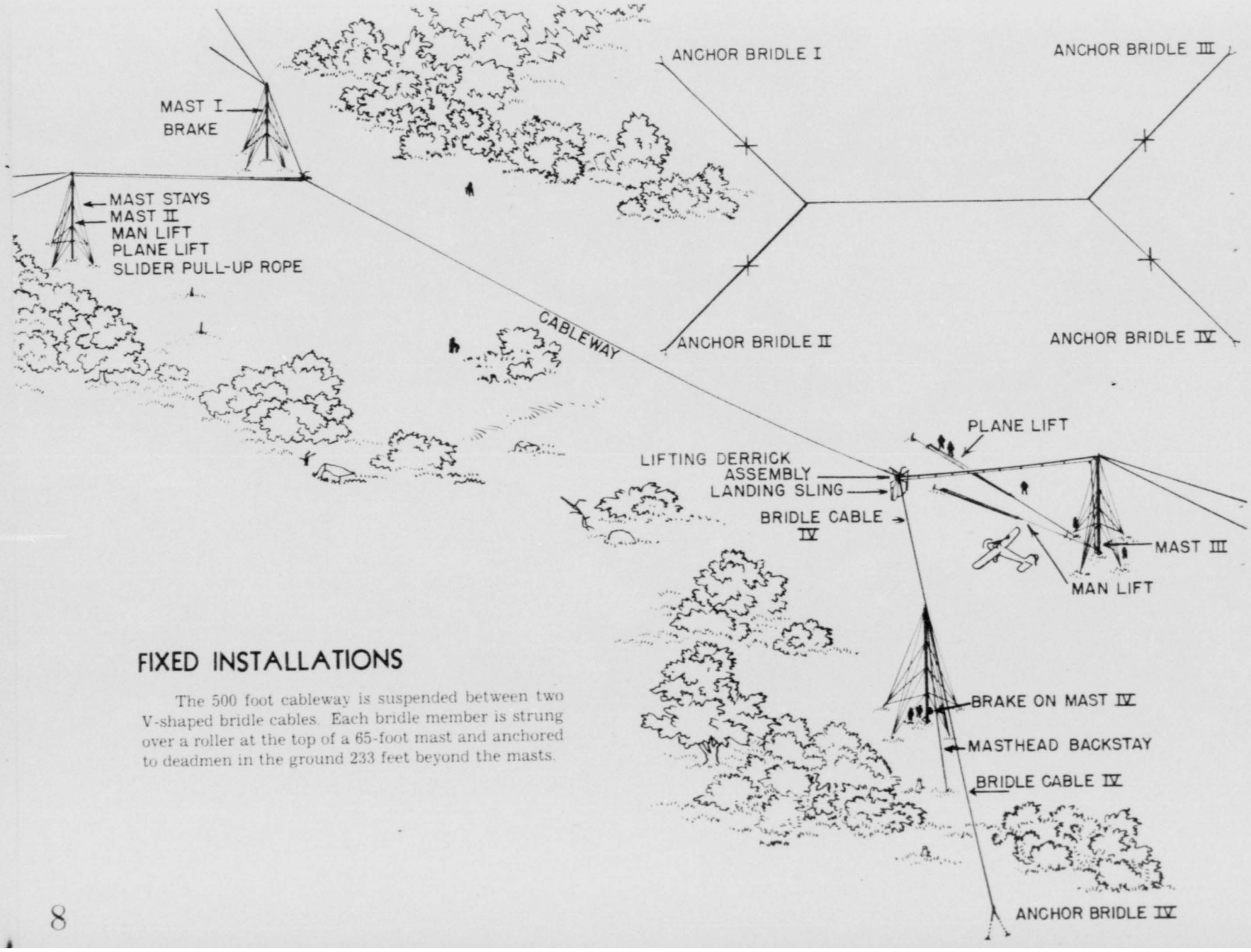
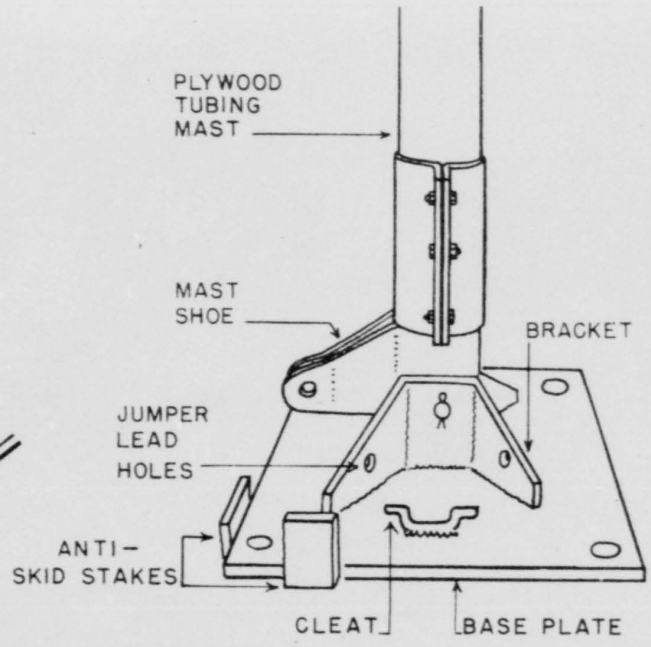
PART 1 APPARATUS

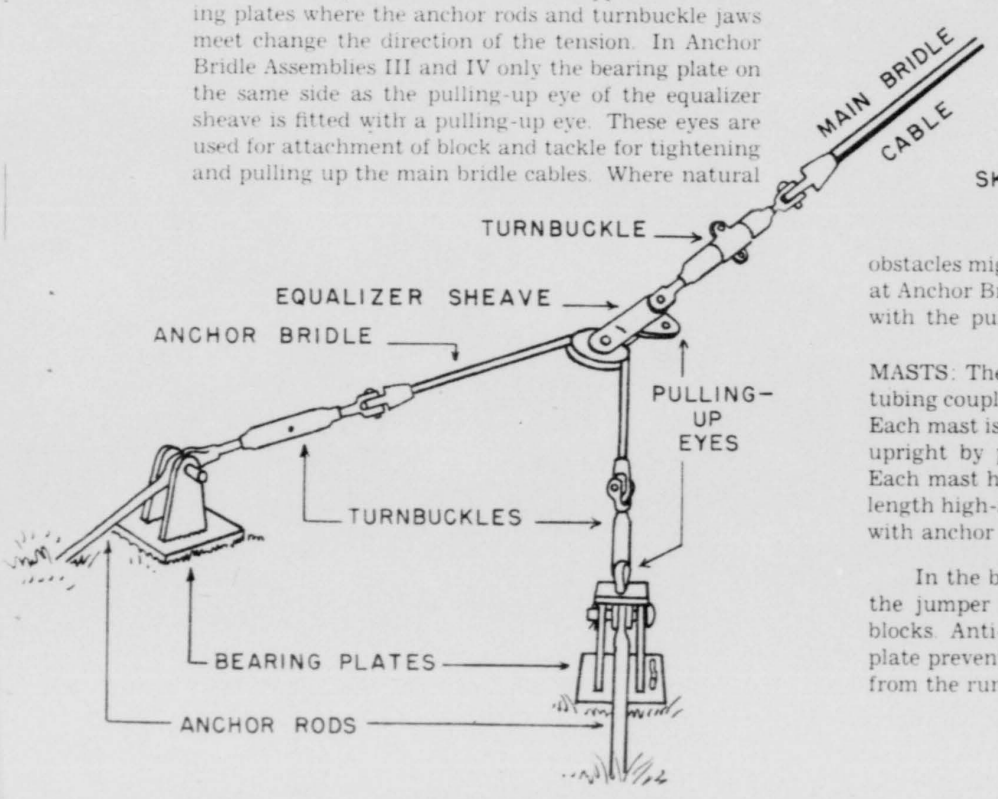


FIXED INSTALLATIONS

The 500 foot cableway is suspended between two V-shaped bridle cables. Each bridle member is strung over a roller at the top of a 65-foot mast and anchored to deadmen in the ground 233 feet beyond the masts.

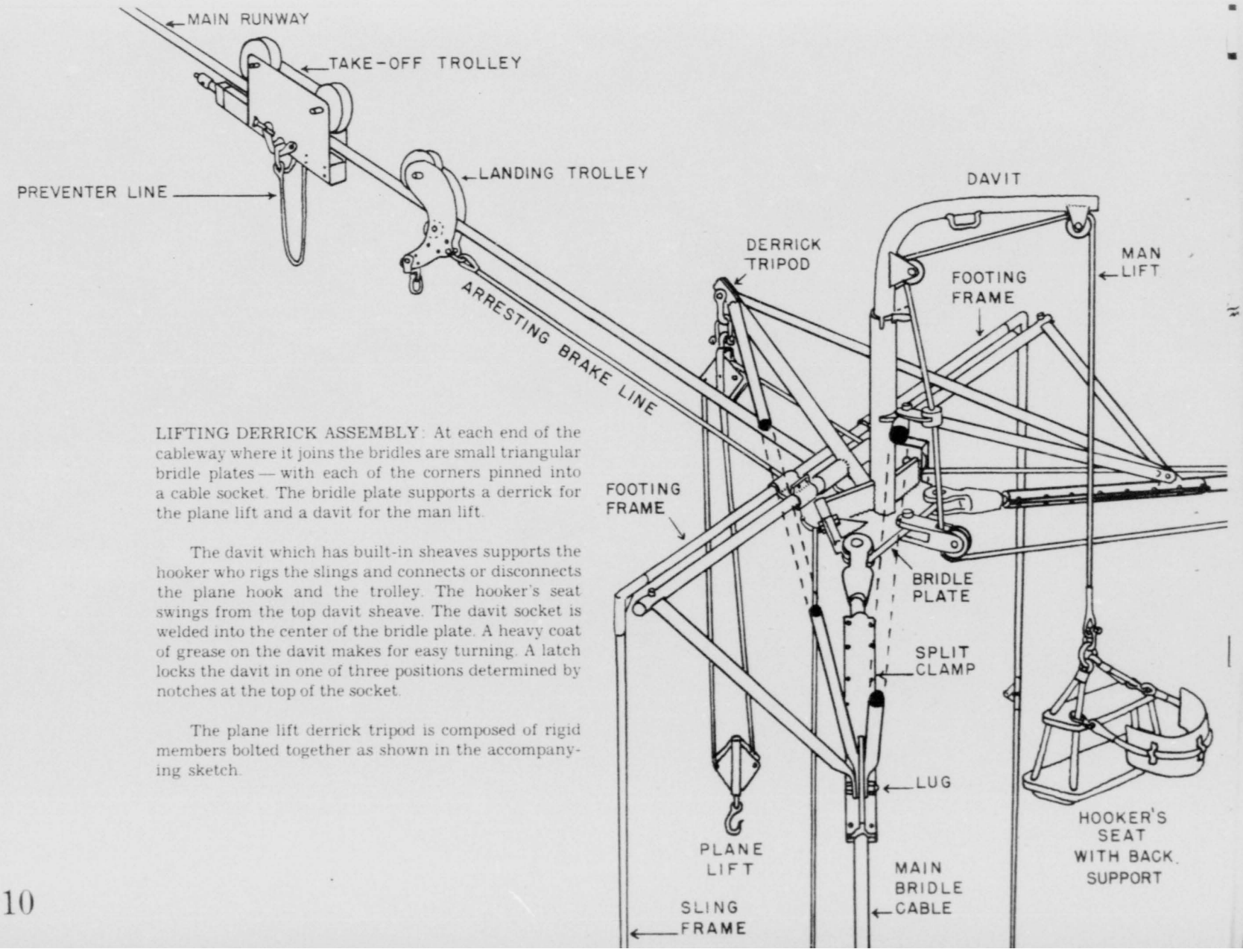


ANCHOR BRIDLE ASSEMBLIES: Connecting the deadmen and the main bridle cables are turnbuckles, anchor bridles, and equalizer sheaves—making up anchor bridle assemblies. The anchor bridle which runs over an equalizer sheave takes up the load of the main bridle cable and divides it between two 9-foot anchor rods. Anchor rods are secured by anchor plates which serve as deadmen. Turnbuckles at the cable ends permit tension adjustment of the entire apparatus. Bearing plates where the anchor rods and turnbuckle jaws meet change the direction of the tension. In Anchor Bridle Assemblies III and IV only the bearing plate on the same side as the pulling-up eye of the equalizer sheave is fitted with a pulling-up eye. These eyes are used for attachment of block and tackle for tightening and pulling up the main bridle cables. Where natural obstacles might interfere with the pulling up operation at Anchor Bridles III and IV, install the bearing plates with the pulling-up eyes at Anchor Bridles I and II



MASTS: The four masts are 8-foot sections of plywood tubing coupled together with 24-inch steel split sleeves. Each mast is supported by a pivot at the base and held upright by proper adjustment of the guys or stays. Each mast has four sets of four stays and one double-length high-strength masthead stay. Stays are secured with anchor rods locked by anchor plates.

In the base plate brackets are holes for shackling the jumper lead cables for man lift and plane lift blocks. Anti-skid stakes at the inner corner of the base plate prevent it from sliding due to horizontal tension from the running tackles of plane lift and man lift.

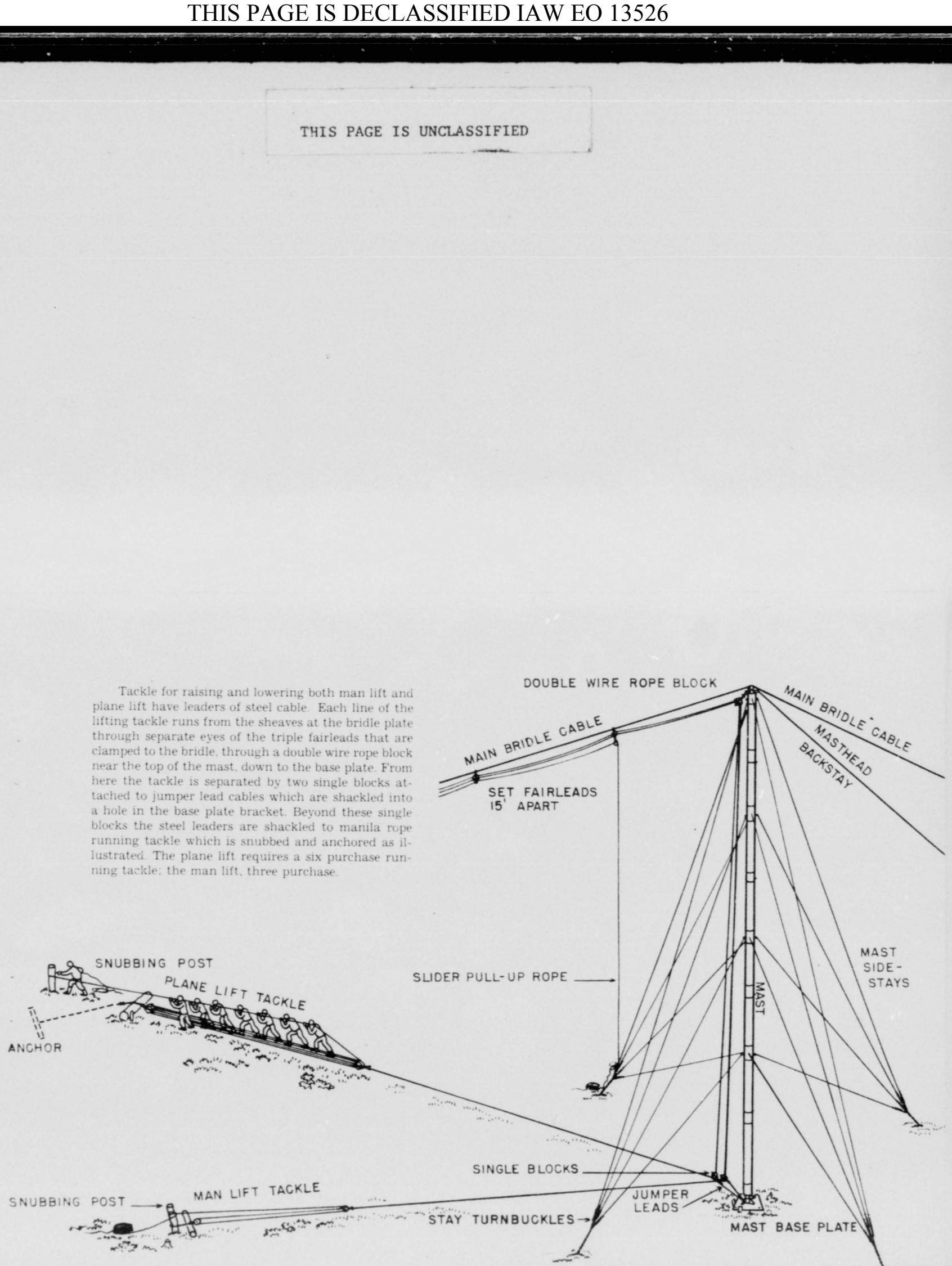


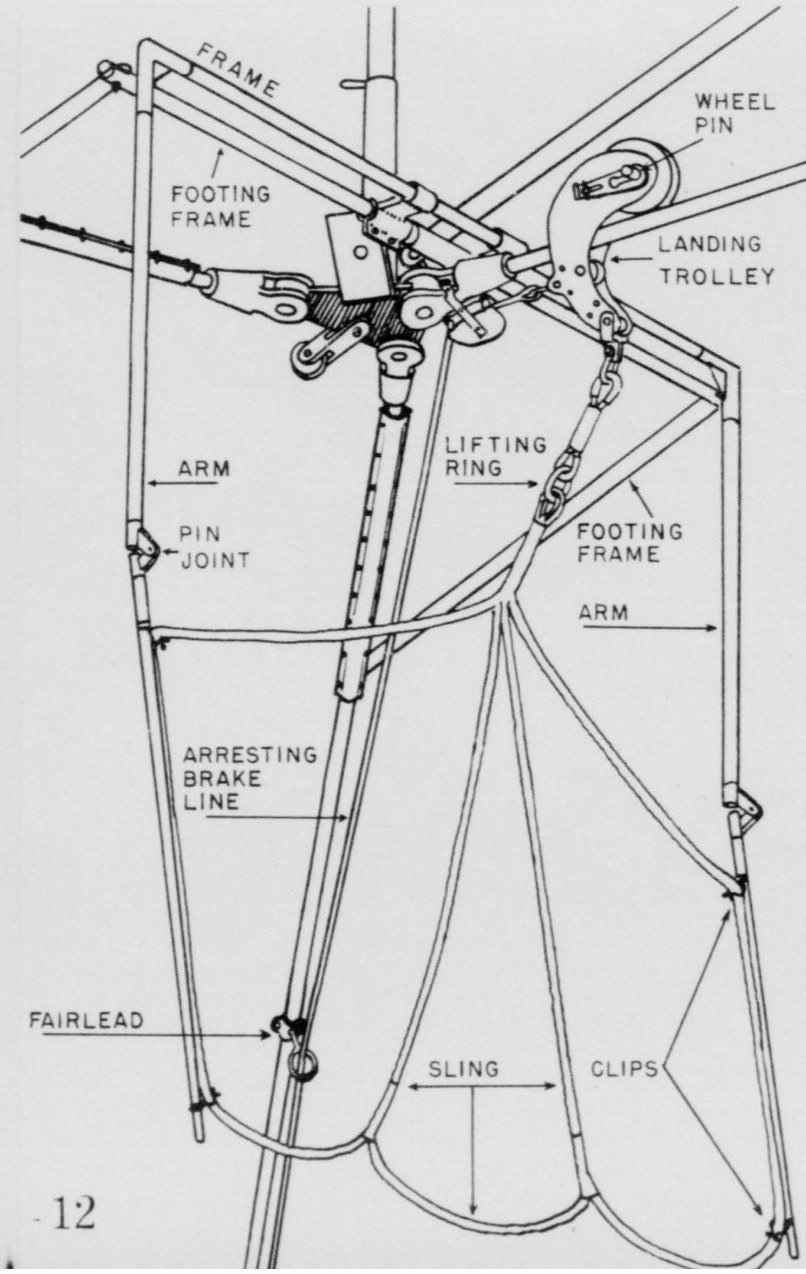
LIFTING DERRICK ASSEMBLY: At each end of the cableway where it joins the bridles are small triangular bridle plates — with each of the corners pinned into a cable socket. The bridle plate supports a derrick for the plane lift and a davit for the man lift.

The davit which has built-in sheaves supports the hooker who rigs the slings and connects or disconnects the plane hook and the trolley. The hooker's seat swings from the top davit sheave. The davit socket is welded into the center of the bridle plate. A heavy coat of grease on the davit makes for easy turning. A latch locks the davit in one of three positions determined by notches at the top of the socket.

The plane lift derrick tripod is composed of rigid members bolted together as shown in the accompanying sketch.

Tackle for raising and lowering both man lift and plane lift have leaders of steel cable. Each line of the lifting tackle runs from the sheaves at the bridle plate through separate eyes of the triple fairleads that are clamped to the bridle, through a double wire rope block near the top of the mast, down to the base plate. From here the tackle is separated by two single blocks attached to jumper lead cables which are shackled into a hole in the base plate bracket. Beyond these single blocks the steel leaders are shackled to manila rope running tackle which is snubbed and anchored as illustrated. The plane lift requires a six purchase running tackle; the man lift, three purchase.



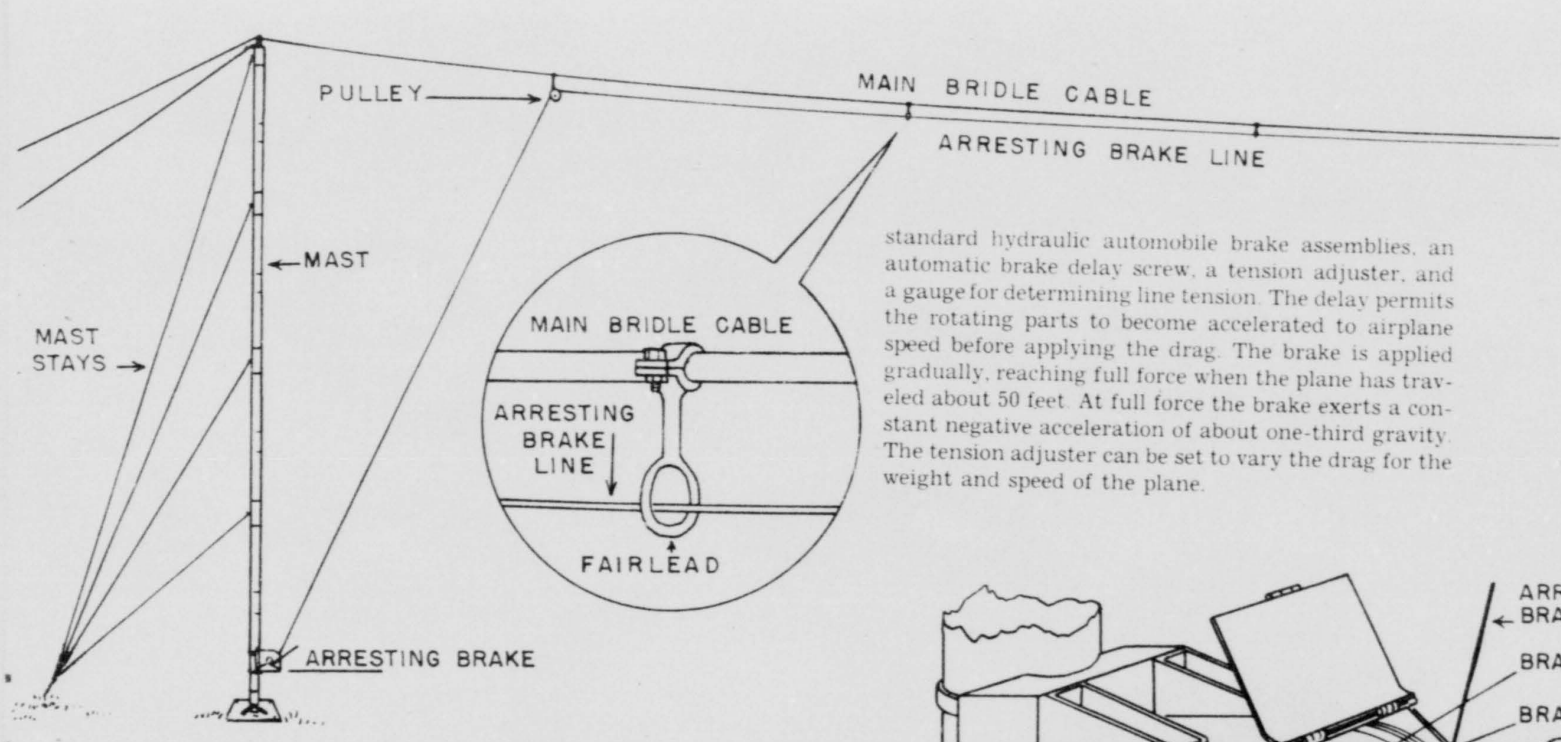


- LANDING GEAR

TROLLEY: The landing trolley has a single wheel for running on the cable. It is light and is designed to hang vertically and to give a pendulum effect on acceleration that reduces some of the inertia forces. The trolley can be removed or replaced by slipping out the wheel pin.

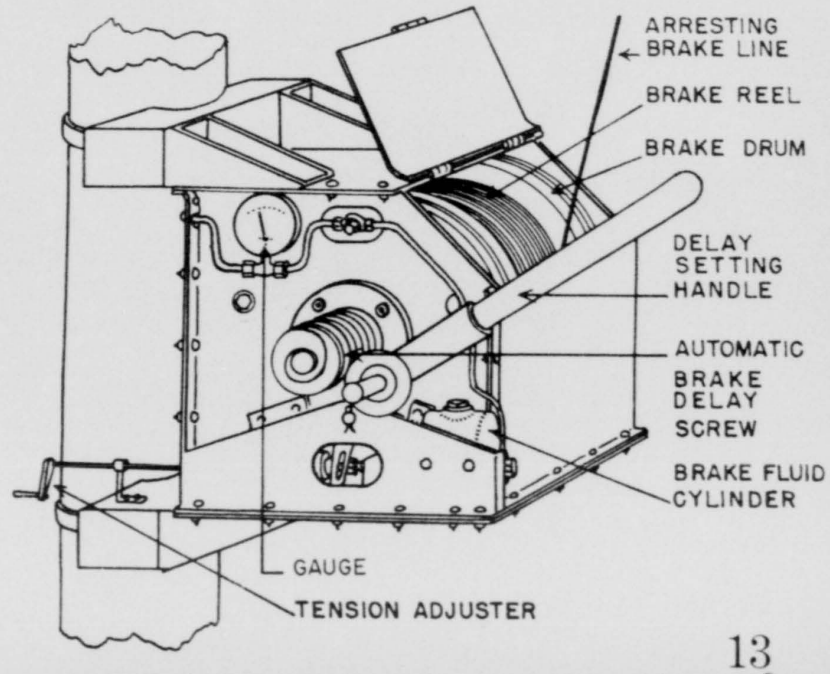
SLING: Shackled to the landing trolley is the landing sling. It offers a target 6 feet wide—consisting of three loops of 11/16-inch diameter nylon rope, any one of which may be caught by the plane hook for a successful landing.

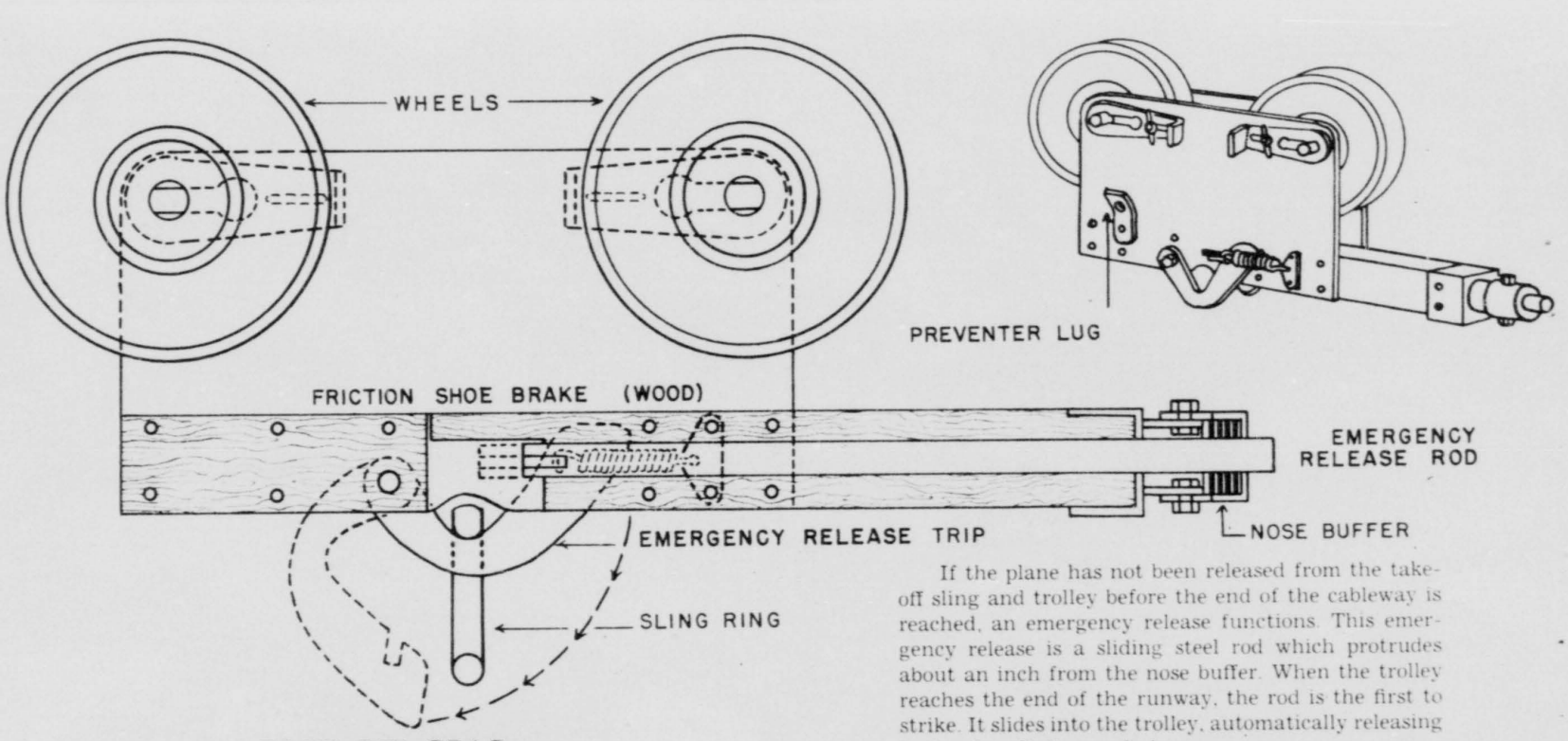
To extend the sling to its full width, the outer loops are clipped to a combination wood and steel frame. The frame is supported from the derrick arm and has two 9-foot pin-jointed arms. It swings freely with the sling when the plane makes contact. When the sling is engaged it pulls out of the clips and is free to travel with the trolley.



ARRESTING BRAKE: The arresting brake works on the principle of a giant fishing reel—resisting the momentum of the plane after the plane has engaged the sling. The line of the brake leads from the trolley through a pulley on the bridle plate (see pages 10, 12), then through single-eye fairleads along the bridle through a pulley 10 feet from the masthead, and down to a drum brake clamped to the mast about 4 feet above the base plate.

The brake unit consists of a magnesium reel, two standard hydraulic automobile brake assemblies, an automatic brake delay screw, a tension adjuster, and a gauge for determining line tension. The delay permits the rotating parts to become accelerated to airplane speed before applying the drag. The brake is applied gradually, reaching full force when the plane has traveled about 50 feet. At full force the brake exerts a constant negative acceleration of about one-third gravity. The tension adjuster can be set to vary the drag for the weight and speed of the plane.





TAKE-OFF GEAR

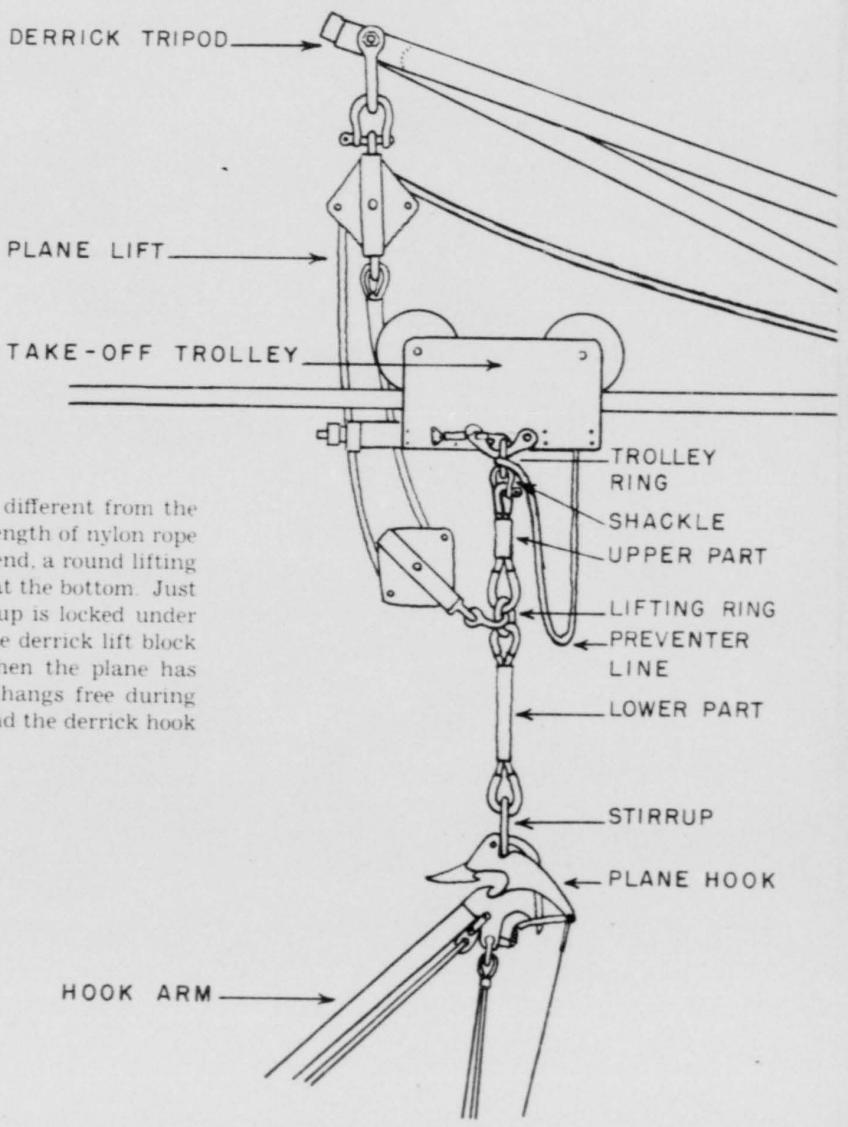
TROLLEY. The take-off trolley is designed for easy rolling. It has two 6½-inch wheels, a wooden friction shoe, and an emergency release.

The trolley is self-braking. When the plane is released from the cableway during a take-off, the top-heavy design of the trolley tips the trolley over and causes it to run on its shoe block. The friction of the wooden shoe on the cable slows the trolley down before it reaches the end of the cableway.

If the plane has not been released from the take-off sling and trolley before the end of the cableway is reached, an emergency release functions. This emergency release is a sliding steel rod which protrudes about an inch from the nose buffer. When the trolley reaches the end of the runway, the rod is the first to strike. It slides into the trolley, automatically releasing both take-off sling and plane.

When the emergency release is tripped the take-off sling is kept from falling and striking the plane by a 4-foot nylon rope of a ¼-inch diameter which acts as a preventer. The preventer is attached to one end of the take-off sling. If the plane should still be attached to the take-off trolley when the emergency release functions, the preventer breaks—allowing the plane to fly on with the sling still attached to the plane hook. The sling should be released as soon thereafter as convenient.

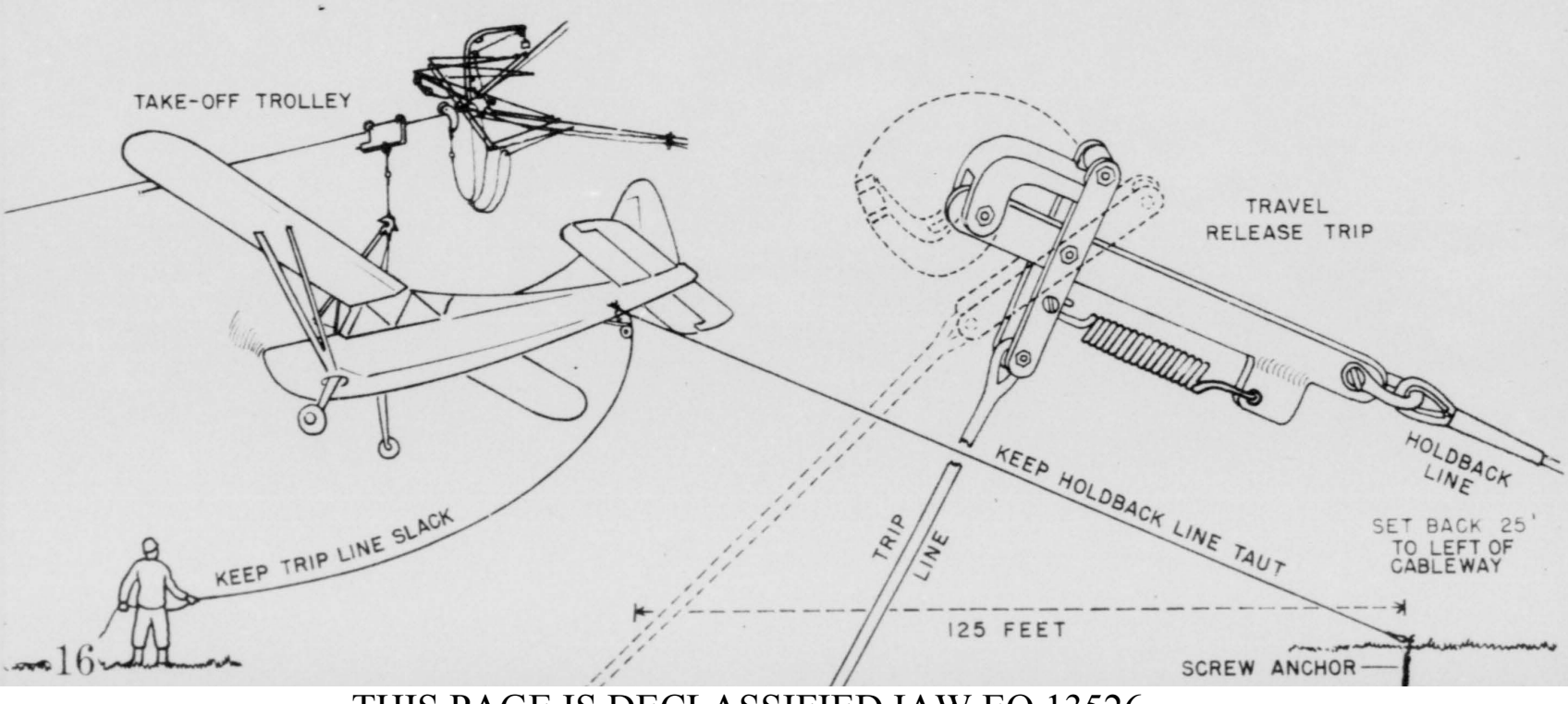
SLING: The take-off sling is quite different from the landing sling. It is simply a 4-foot length of nylon rope with an eye and shackle at the top end, a round lifting ring near the middle and a stirrup at the bottom. Just before the plane is raised the stirrup is locked under the finger of the plane hook and the derrick lift block is hooked into the lifting ring. When the plane has been lifted the top shackle which hangs free during hoisting is fastened to the trolley and the derrick hook is removed.

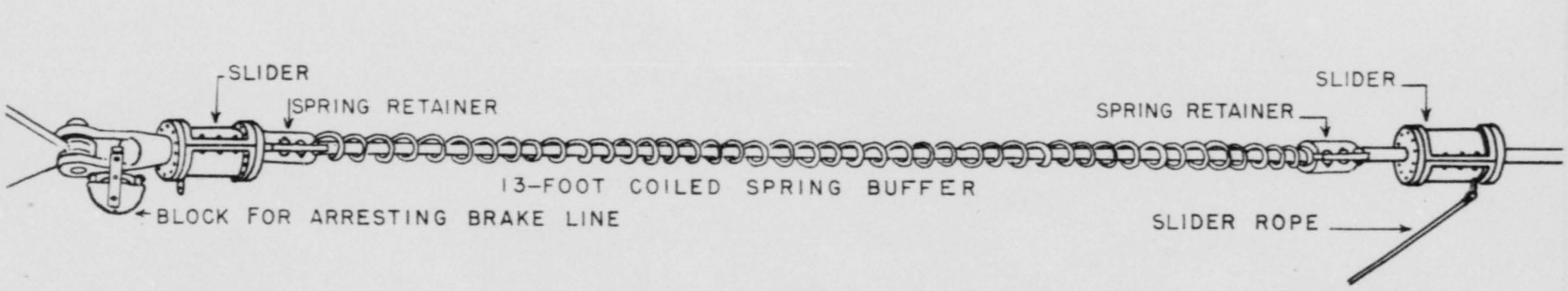


TRAVEL RELEASE: A travel release prevents the plane from starting its run until the engine is sufficiently revved up. The device is a sturdy bar with a spring-loaded trip lever at one end and a long holdback line at the other.

The holdback line is held fast by a large screw anchor in the ground. The anchor is set 125 feet behind the plane and 25 feet to the left side of it. The holdback line not only prevents a premature run but also keeps the plane headed in the proper direction.

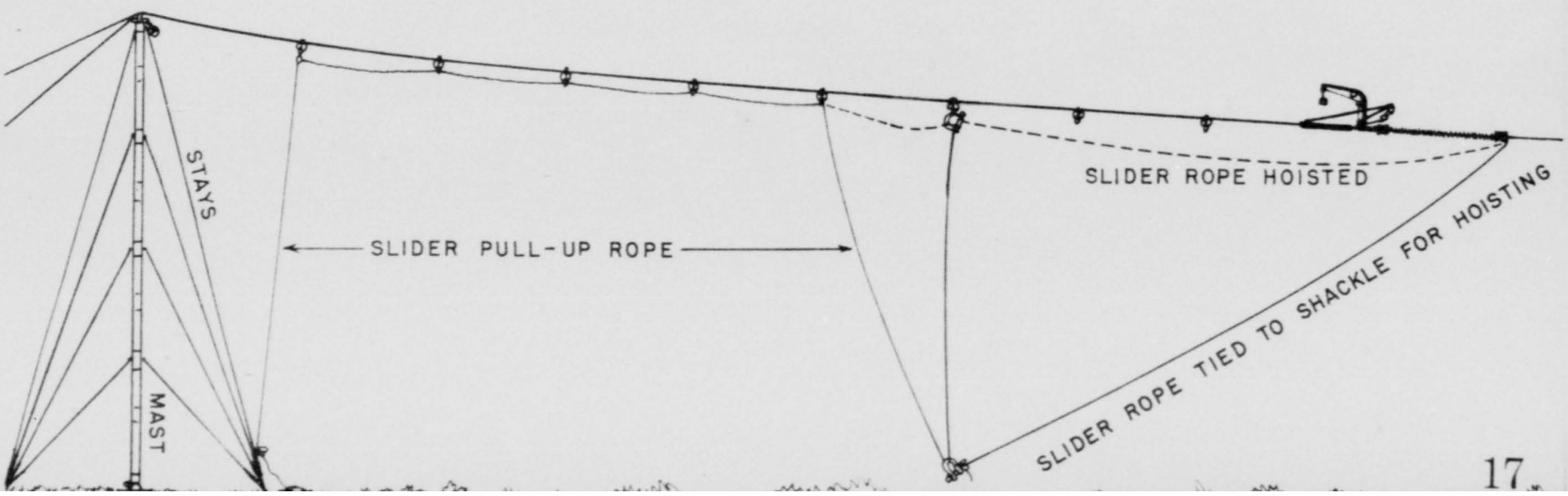
The trip is clipped to a wire loop fastened to the tail-lifting handle on the plane. A pull on the light lanyard attached to the lever trips the release and the entire device falls to the ground—permitting the plane to start its take-off run.

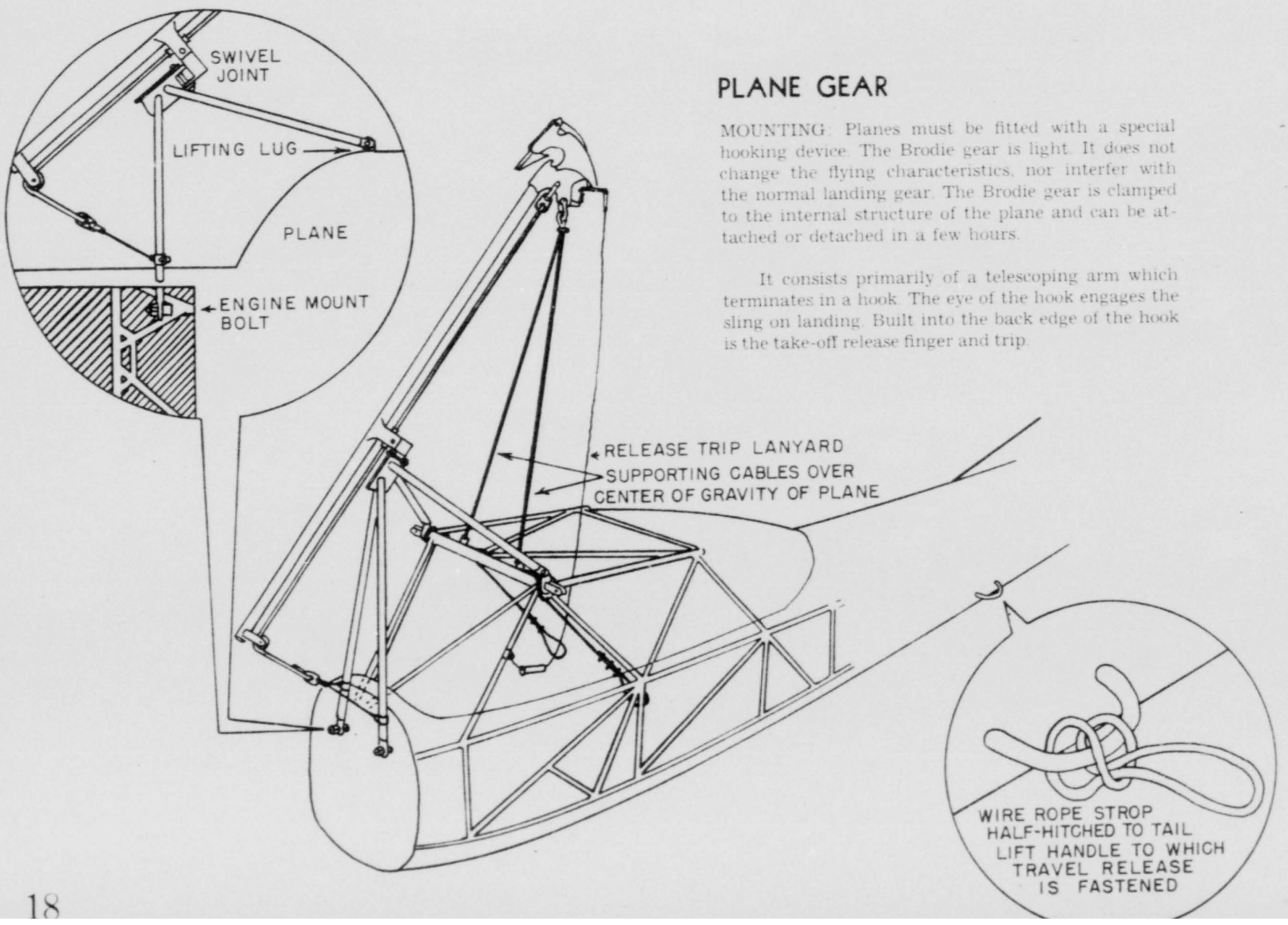




BUFFER AND SLIDER: If the trolley should travel to the end of the cable it is stopped by a 13-foot buffer spring coiled around the cableway and ending in spring retainers. At each end of the spring is an aluminum slider. The slider comes in two halves which are bolted together when they are attached to the cable. Each slider has a lug for attaching a rope which reaches to the ground. This device is used for sliding the trolley back for the next take-off.

When not in use the slider rope is tied to a shackle suspended from a light supporting or pull-up rope between two fairleads. As in the illustration the supporting rope runs through the small eye in the triple fairleads, through a pulley at the last fairlead down to an anchor chain where it can be easily handled.

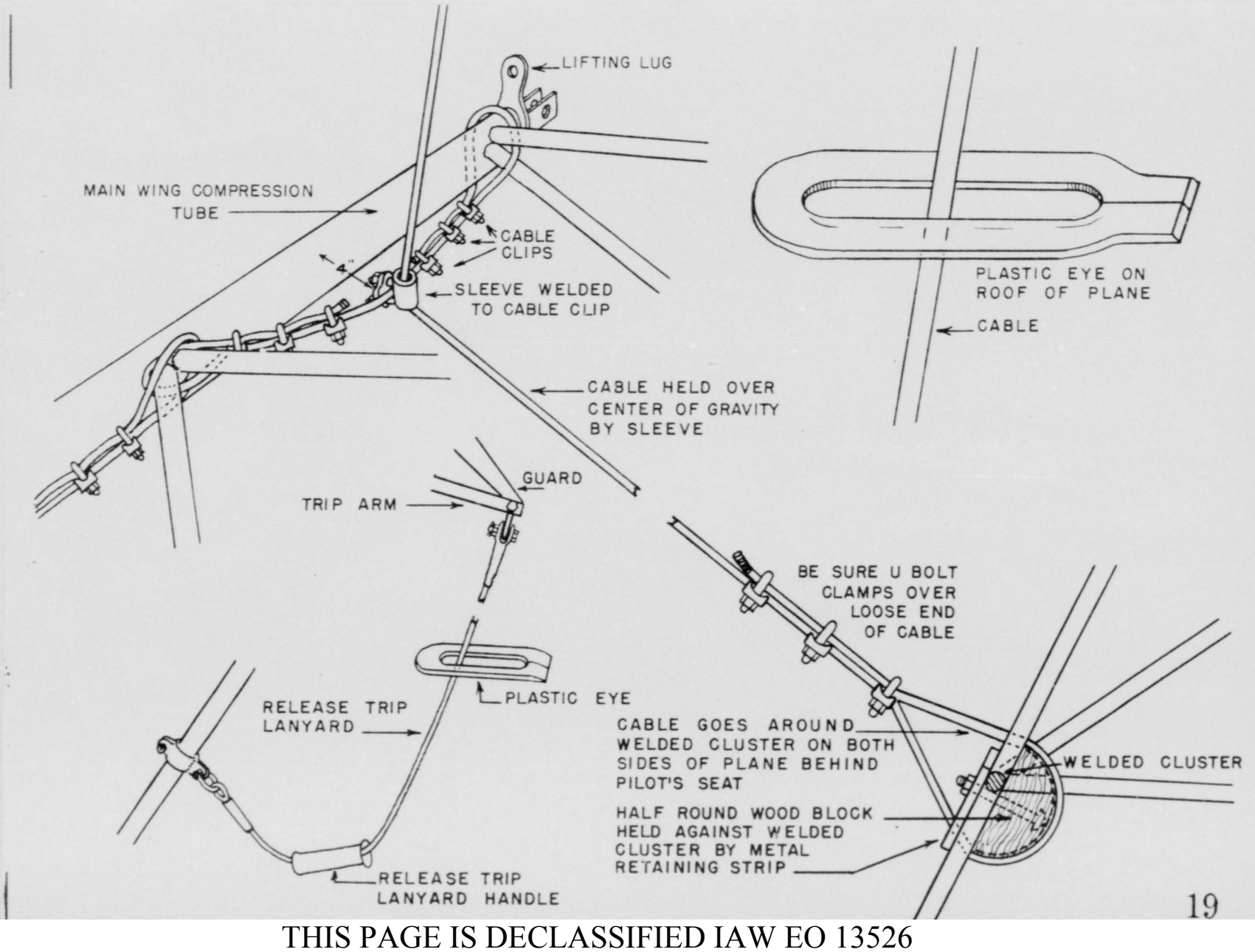




PLANE GEAR

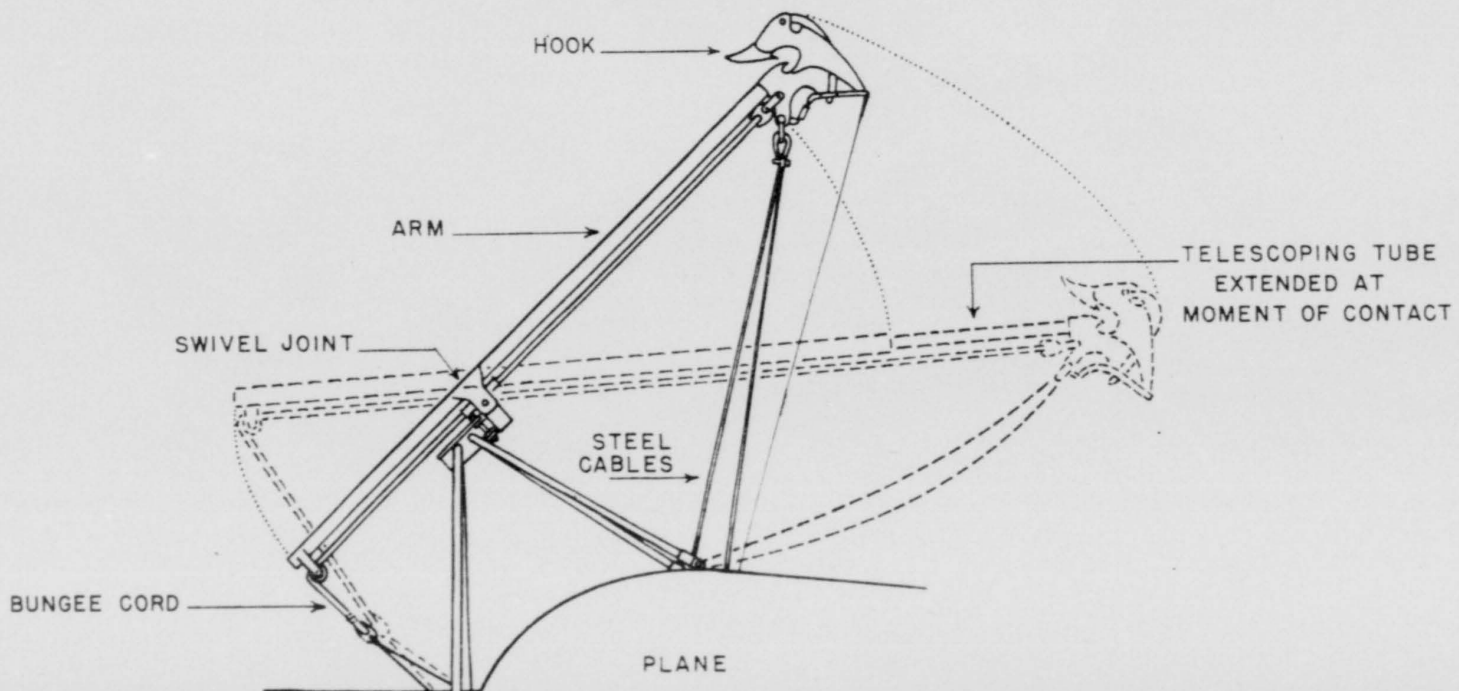
MOUNTING: Planes must be fitted with a special hooking device. The Brodie gear is light. It does not change the flying characteristics, nor interfer with the normal landing gear. The Brodie gear is clamped to the internal structure of the plane and can be attached or detached in a few hours.

It consists primarily of a telescoping arm which terminates in a hook. The eye of the hook engages the sling on landing. Built into the back edge of the hook is the take-off release finger and trip.



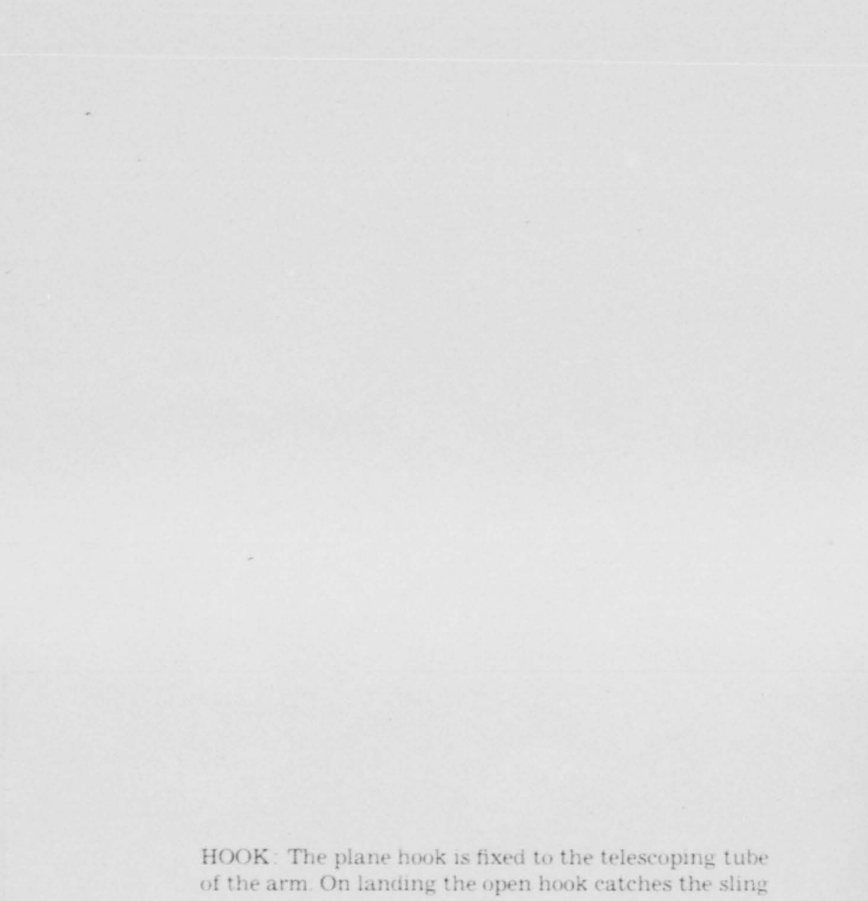
THE ARM: The arm is fastened by a swivel joint which gives flexibility to the entire assembly. Running under the length of the arm is a bungee or shock cord which supports it in a 45° position during flight and takes up some of the acceleration loads at the moment of contact. Two $\frac{3}{8}$-inch steel cables take up the major load of accelerating the trolley and supporting the plane.

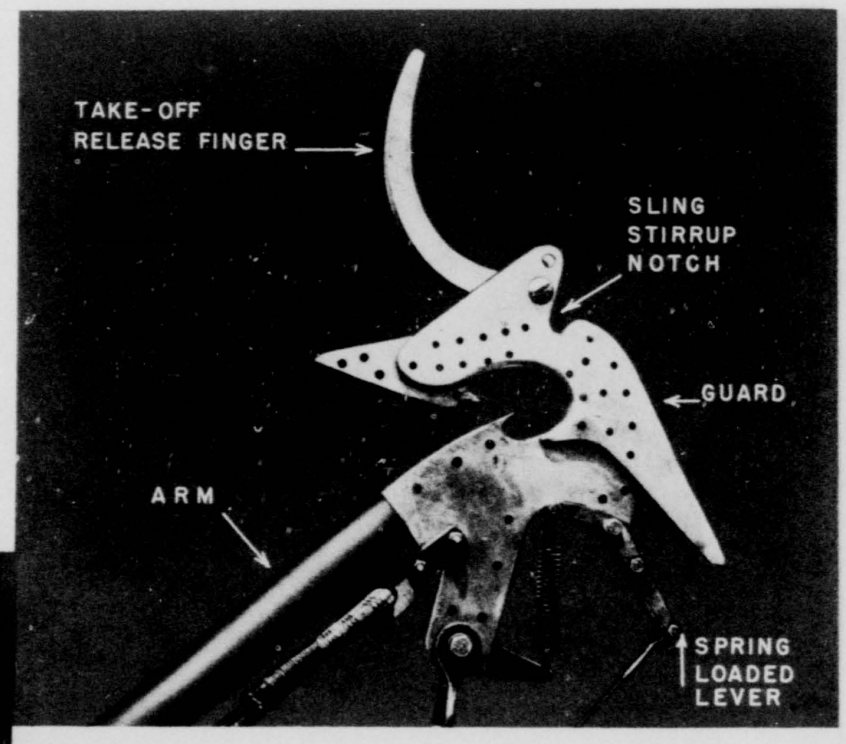
When the sling is caught on landing the arm swivels to a horizontal position and a tube telescopes out of the arm about 24 inches. This action transmits the full load along the two supporting cables directly into the two points on either side and just above the plane's center of gravity. It eliminates a large force couple which would tend to nose the plane up when landing, and incidentally relieves some of the acceleration loads which result when the trolley is activated from a static position.



HOOK: The plane hook is fixed to the telescoping tube of the arm. On landing the open hook catches the sling in its barbed mouth and holds it securely until removed by hand.

CLOSED





OPEN

The take-off release resembles a long finger. When locked it fits snugly along the top and back of the hook, where it holds the sling stirrup in a small notch. The finger is unlocked by a lanyard which leads from the cockpit to the hook. A tug on this lanyard pulls down a spring-loaded lever and unlocks the finger, which lifts — releasing the sling stirrup.

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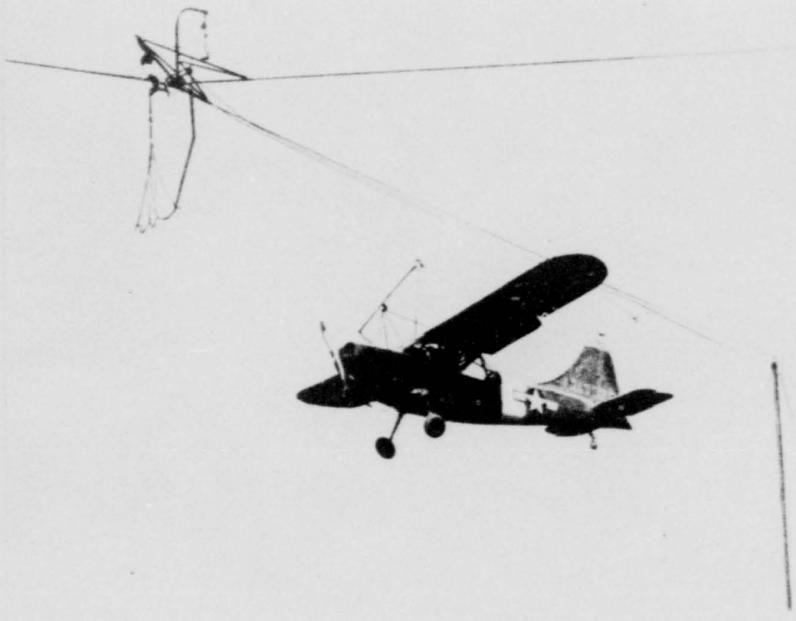
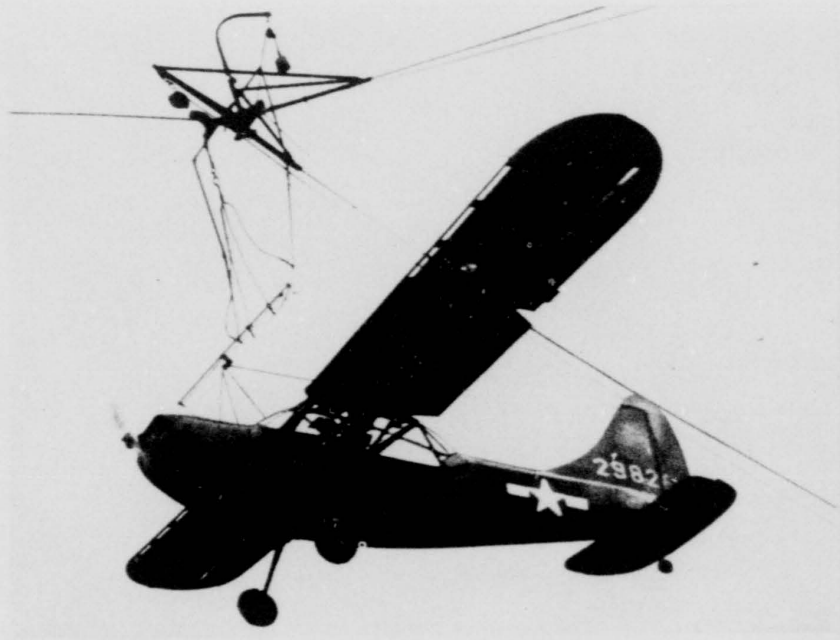
PART 2 OPERATION



APPROACH



CONTACT

LANDING

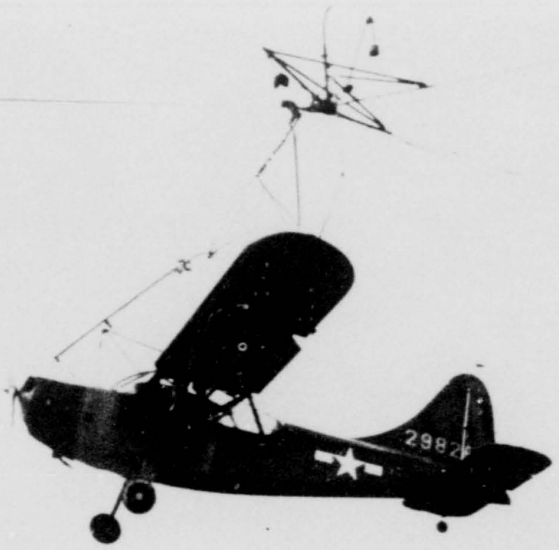
The loop of the sling is caught just a few feet above the pilot's line of vision, making contact highly accurate. Once hooked to the sling the plane is brought to a gradual stop with no danger of ground looping or nosing over.

If, however, the pilot should miss the sling, he should throttle back on his motor allowing the plane to sink slightly and clear the cableway sag. Near the end of the cableway the pilot should apply full throttle, continue on, circle around, and come in again. Since the plane is traveling at a speed high enough to prevent stalling it is under full control at all times.

APPROACH: The plane with flaps down comes in at about 50 or 60 miles per hour air speed. It flies a straight level course parallel with the cable for approximately 2000 feet. Last adjustments in position of the plane are made about 100 feet from the catch sling.

CONTACT: If the arm makes contact anywhere between its swivel and hook, the loop of the sling slips into the barbed mouth of the hook and is secured. The shock of accelerating the trolley is absorbed by the nylon sling and by the telescoping feature of the hook arm.

STOP: As soon as the pilot connects with the sling he throttles his engine to idling speed. As the plane carries the sling and trolley along the cableway, the arresting brake with its line attached to the trolley



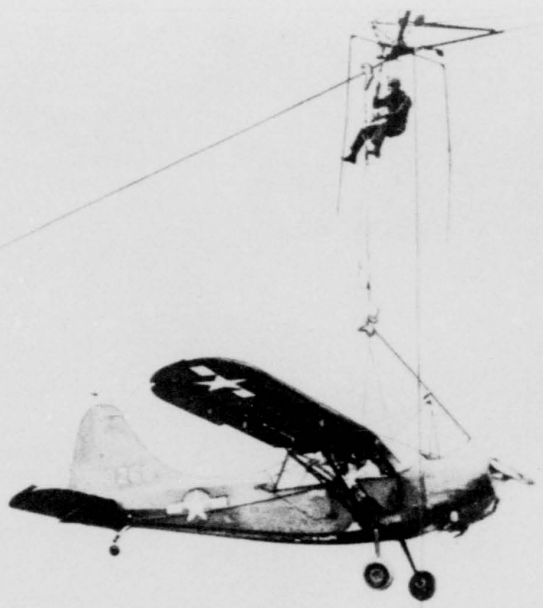
CONTACT

slows the plane down (see pages 10, 12, and 13).

Only a trained brake operator should attempt to control a landing.

The proper setting of the tension adjuster must be determined before a landing is made. The delay allows two free turns of the drum before any tension is applied. Drag is then applied gradually until the tension reaches the point determined by the adjuster and indicated on the gauge.

The line tension will be determined by the approach speed of the airplane. Under fair conditions with about a 10-mile headwind, 500 pounds will be ample. If the plane is approaching with no wind or with a tailwind, a tension up to 700 pounds may be required to stop the plane within the correct distance.

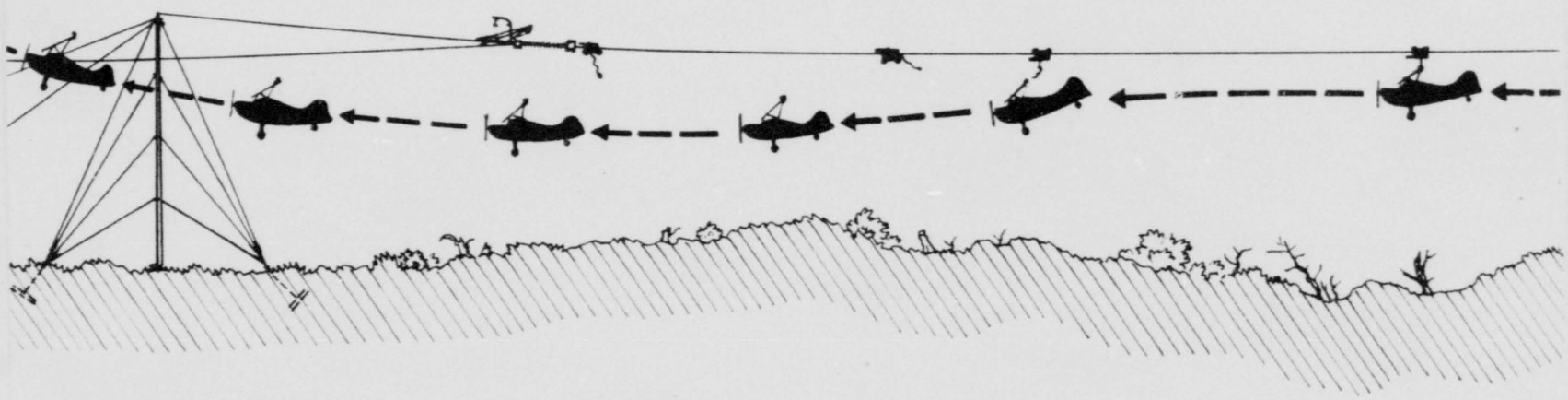


GROUNDING

Additional tension can be applied during the arresting of the plane by quickly manipulating the tension adjuster.

GROUNDING: When the plane is stopped, the pilot turns it around and taxis back slowly to the derrick. If the wind is strong he drops a rope permitting several men to pull the plane back or to guide the tail of the plane in the proper direction for taxiing. During flight the rope is tied to the tail lift, carried taut along side of the fusilage, and led in through the door where it is coiled.

At the derrick the hooker attaches the sling lifting ring to the plane lift hook. Then the plane is raised slightly so that the hooker can unshackle the sling from the trolley before the plane is lowered to the ground.



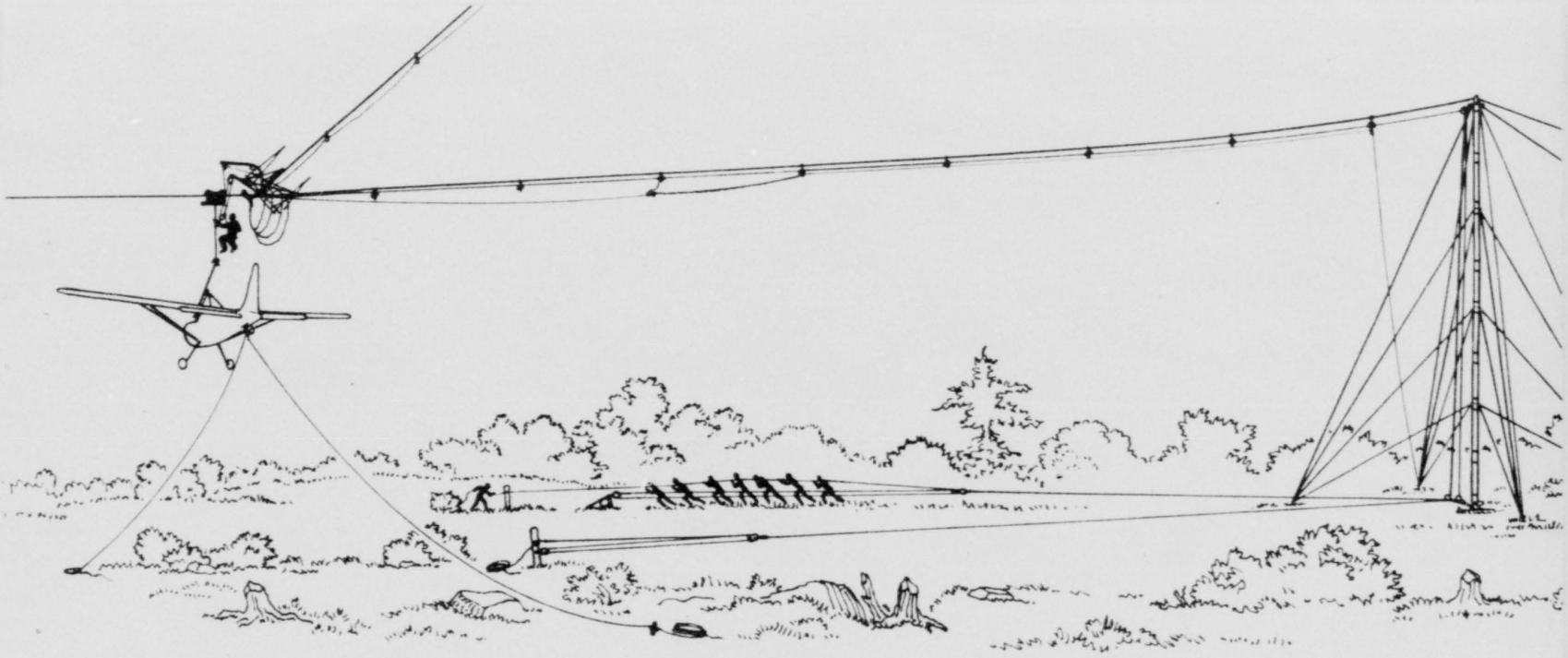
TAKE-OFF

Tests show that the take-off run is slightly over half the distance required for the normal take-off from the ground. This fact is partially accounted for by low rolling friction, by the downward roll of the plane for the maximum length of the run, and by the fact that the plane is in flight attitude over the full length of the run.

PRELIMINARIES: While the plane is still on the ground the engine is warmed up, the take-off sling is locked under the finger of the hook, and the travel release is fastened (see pages 14, 15, and 21). Then the plane is hoisted until it is high enough to permit transfer from the derrick to the trolley. After the hooker makes the transfer, he is lowered to the ground and his man lift line is held back clear of the plane.

RUN: The pilot revs his motor to full speed and signals to the ground men to pull the travel release lanyard. The release falls to the ground permitting the plane to travel along the cable, gradually picking up speed.

RELEASE: When flying speed is reached the pilot pulls the lanyard which leads from his cockpit to the finger release lever on the hook. This disengages the plane from the cable, trolley, and sling. The pilot drops the plane a few feet to make sure of clearing the cable, flies level until clear of the bridles, and then assumes a normal climb. Partial flaps are strongly recommended during the take-off run.

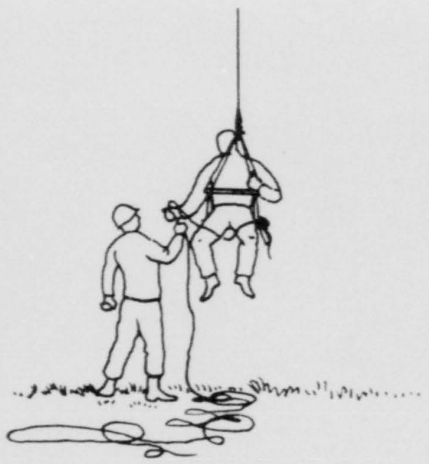


GROUND CREW

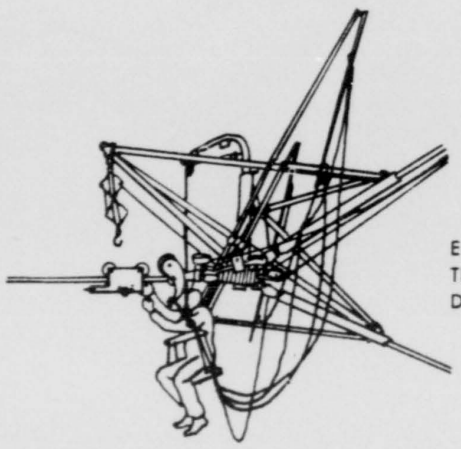
Time for take-offs and landings can be reduced to a minimum if each man in the ground crew knows his job thoroughly. This calls for complete coordination of every crew member. If time is available the crew should make several dry runs before the first landing and take-off.

In addition to setting up the rig and keeping the equipment ready for use, the chief job of the majority of the crew is lifting or lowering the plane and the hooker. Transfer of the plane from the landing trolley to the derrick or from the derrick to the take-off trolley involves still another sequence of liftings and lowerings. It is important that all signals called by the hooker be followed quickly and correctly by the men on the ground. *Be certain to snub the man lift and the plane lift between pulls.*

Each crew member is designated by a number. On the following pages is an itemized list of operational procedures. The numbers before each operation indicate specific crew members assigned to it.



RAISE HOOKER.



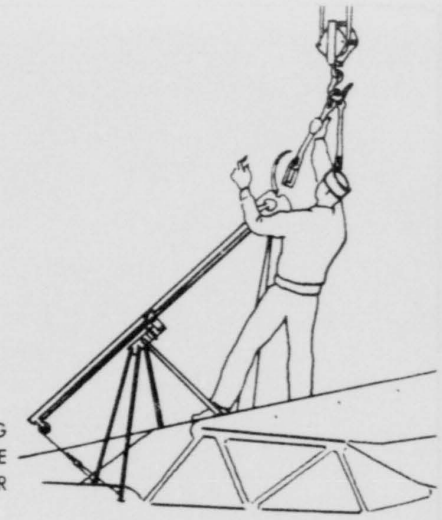
EXAMINE TAKE-OFF TROLLEY FOR POSSIBLE DAMAGE.

LANDING

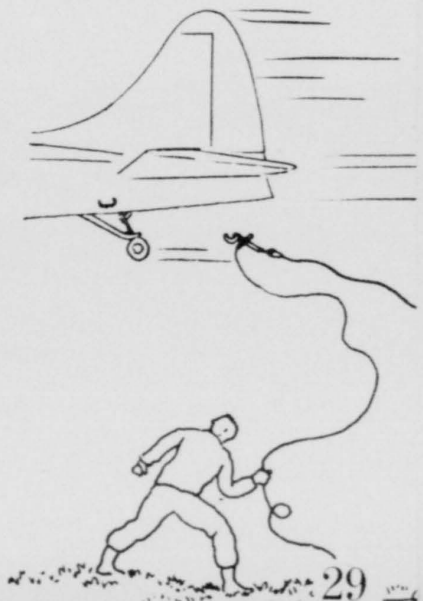
MEN	OPERATION
1-3-4-5	Check all items as noted on page 30.
6-7-8	Raise hooker man =2.
2	Rigs landing sling, checks brake pulley.
6-7-8	Lower =2.
4	Unsnaps =2 from harness, hooks weight.
6-7-8	Raises man lift overhauling weight.
1	Mans arresting brake, checks rope, and handles brake during landing.
4	Stands by brake to wind in line after landing.
Pilot	Lands and taxis back to derrick.
6-7-8	Raise =2.
2	Transfers plane from landing trolley to derrick hook.
1-3-4-5-6-7	Lowers plane to ground.
1	Unhooks plane from sling.
4-6	Rewind brake for next landing.
5-7-8	Push plane out of way.
1	Attaches sling to pull-up line.
2	Rerigs for landing.
8	Gets slider and brings back take-off trolley.
2	Examines take-off trolley for possible damage.
6-7-8	Lower =2.
4	Unsnaps =2.

TAKE-OFF

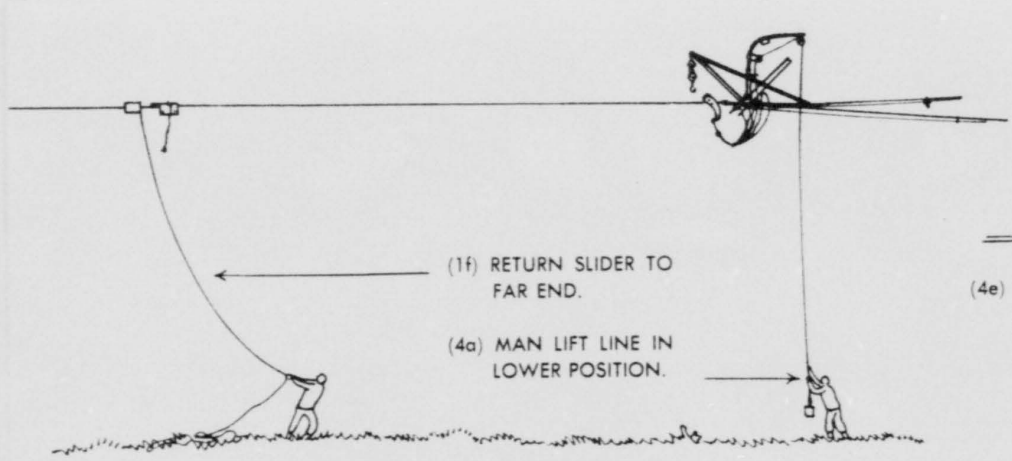
MEN	OPERATION
1-3-4-5	Check all items, page 30.
1-Pilot	Position plane.
4	Secures #2 in seat.
6-7-8	Raise #2.
1	Attaches travel release.
Pilot	Inserts take-off sling in plane hook. Checks travel release and hook.
1-3-4-5-6-7-8	Raise plane at direction of #2.
2	Hooks plane to trolley.
1	Checks holdback line on travel release stands by release lanyard.
6-7-8	Lowers #2.
4	Unsnaps #2 from harness and pulls man lift out of way of plane.
1	Calls "All Clear" to pilot.
Pilot	Revs motor, checks mags, etc., signals for release.
1	Trips travel release.

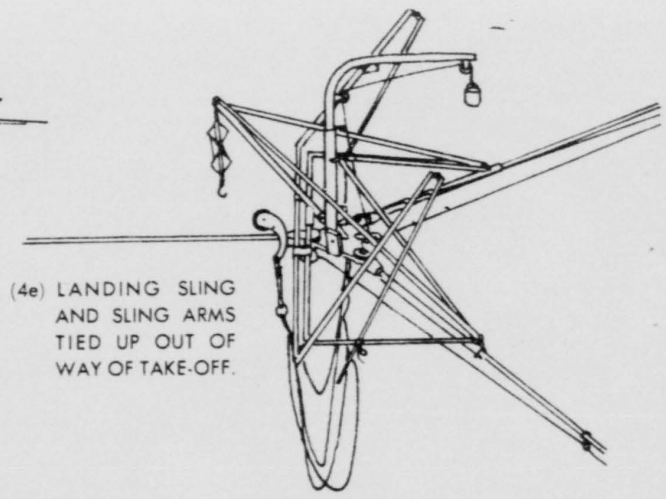


LOCK TAKE-OFF SLING STIRRUP IN PLANE HOOK NOTCH UNDER FINGER.



TRIP TRAVEL RELEASE.





CHECK LIST

CHECK FOLLOWING ITEMS BEFORE TAKE-OFFS AND LANDINGS

1
- (a) Brakes set for landing, check brake pulleys, splices, delay setting drag, and wrapping on reel (see pages 13, 25).
- (b) Brake ropes all clear.
- (c) Landing trolley pulled all the way back, brake rope tight.
- (d) Take-off trolley in good condition.
- (e) Take-off trolley at near end within reach for take-off; at far end for landing.
- (f) Slider returned to far end.
- (g) Travel release lanyard secure.

3
- (a) Slider line out of way and tight. No sag.
- (b) All lines on opposite end from take-off clear and pulled tight.

4
- (a) Man lift line down in lower position.
- (b) Twists out of plane lift lines.
- (c) Take-off sling on ground ready for attachment to plane.
- (d) Hooker's seat ready and clear.
- (e) Landing sling and sling arms tied up out of the way of take-off.

5
- (a) Six part lift tackle run out.
- (b) Lines all clear and free, pulleys oiled.
- (c) Snubbing posts firm in ground.

Pilot
- (a) Engine warmed up, plane O.K.

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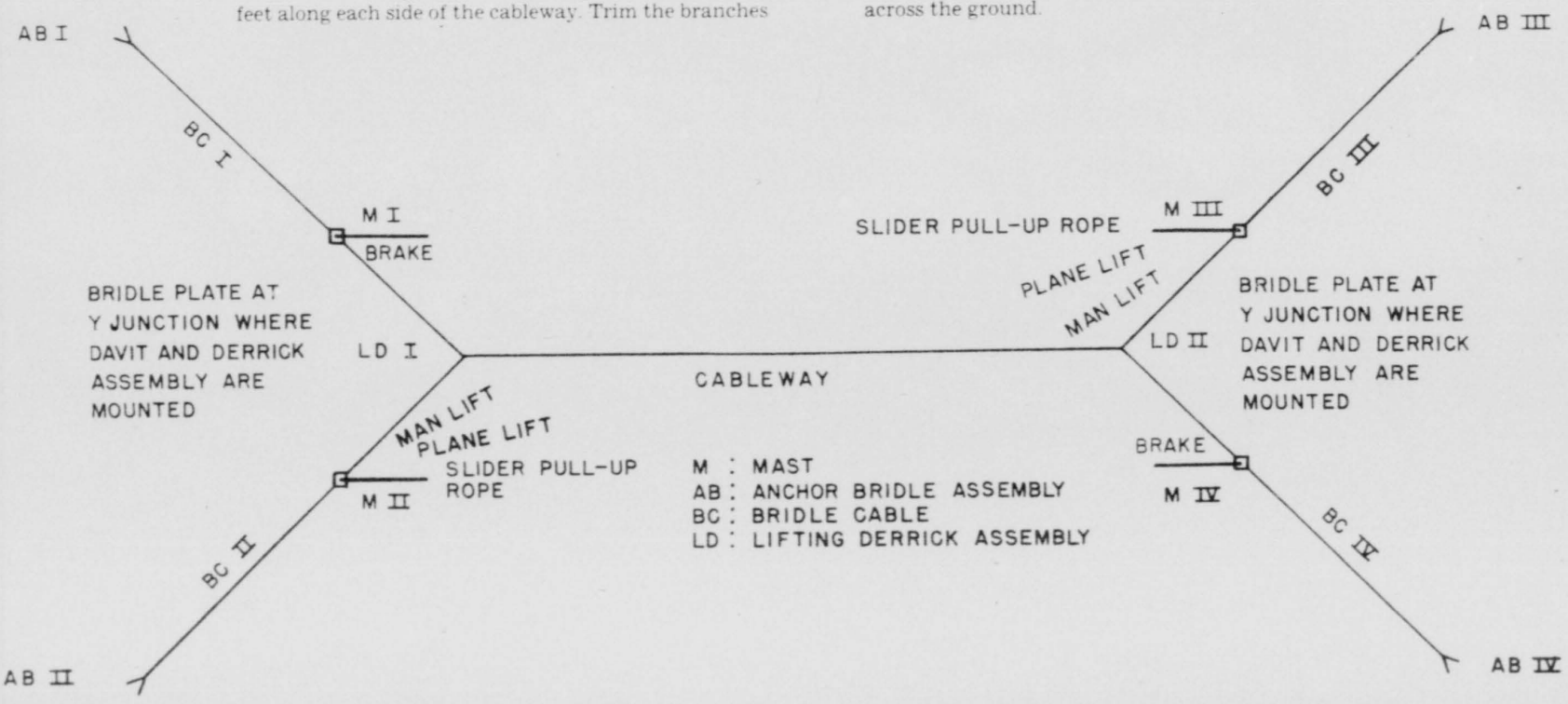
PART 3 ERECTION

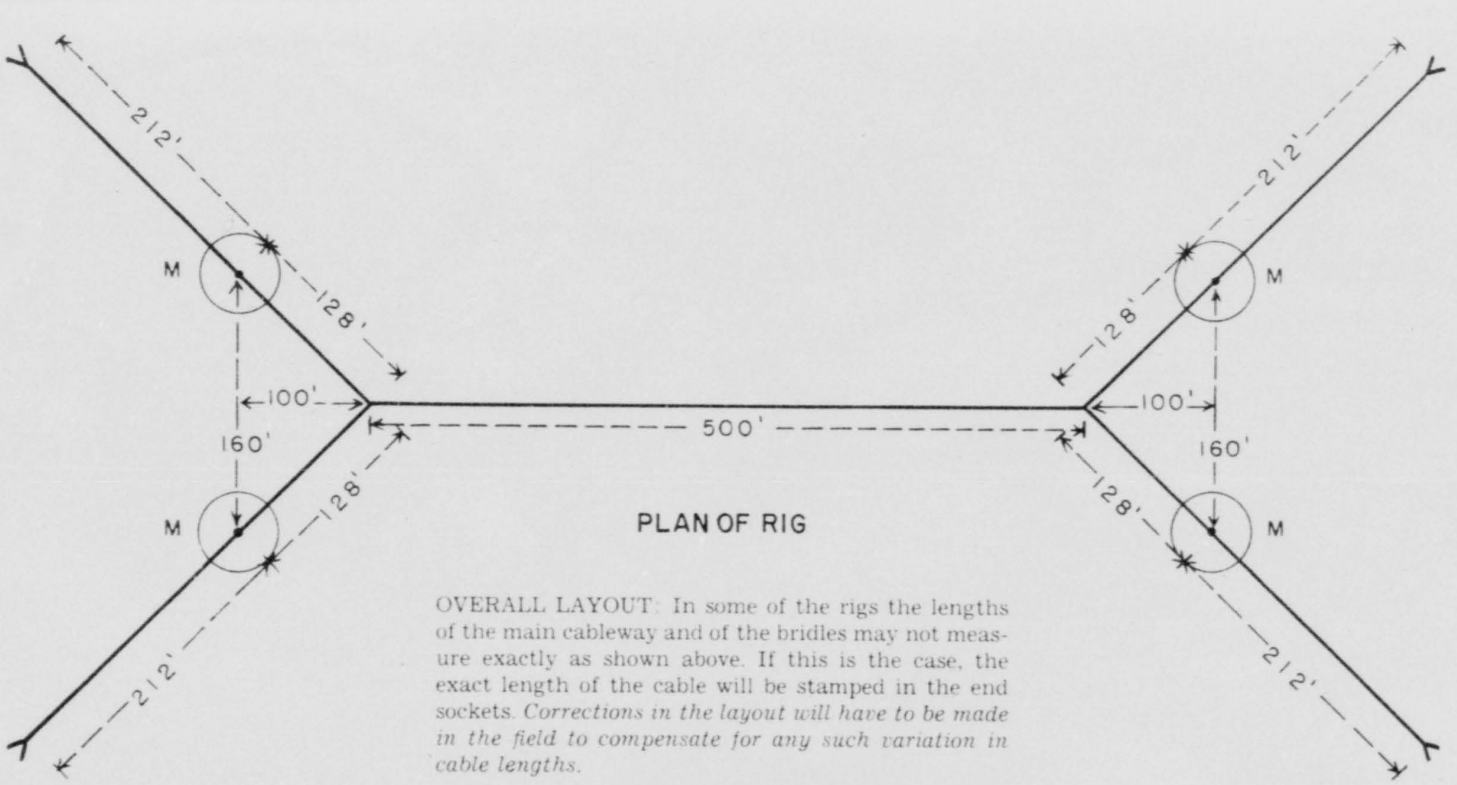
LAYING OUT THE FIELD

Generally, the site will have been surveyed from the air and plans for laying out the field indicated beforehand. However, final determination of the exact position for the cableway, bridles, masts, anchor rods, and anchor plates must be made by the ground crew after landing.

The approach should be clear of trees for several hundred feet. Top off trees and high branches for 50 feet along each side of the cableway. Trim the branches of tall trees beyond this limit if they might obstruct the passage of the plane. The top branches, if 10 or more feet above the cableway, may serve as camouflage. Low brush that cannot interfere with the plane serves as excellent camouflage.

The layout below indicates the most desirable arrangement of the field. However, the brake line and the leads on the plane lift and man lift can be transposed to the opposite mast in the same pair if terrain or natural obstructions interfere with easy operation of the lift running tackles when they are stretched across the ground.



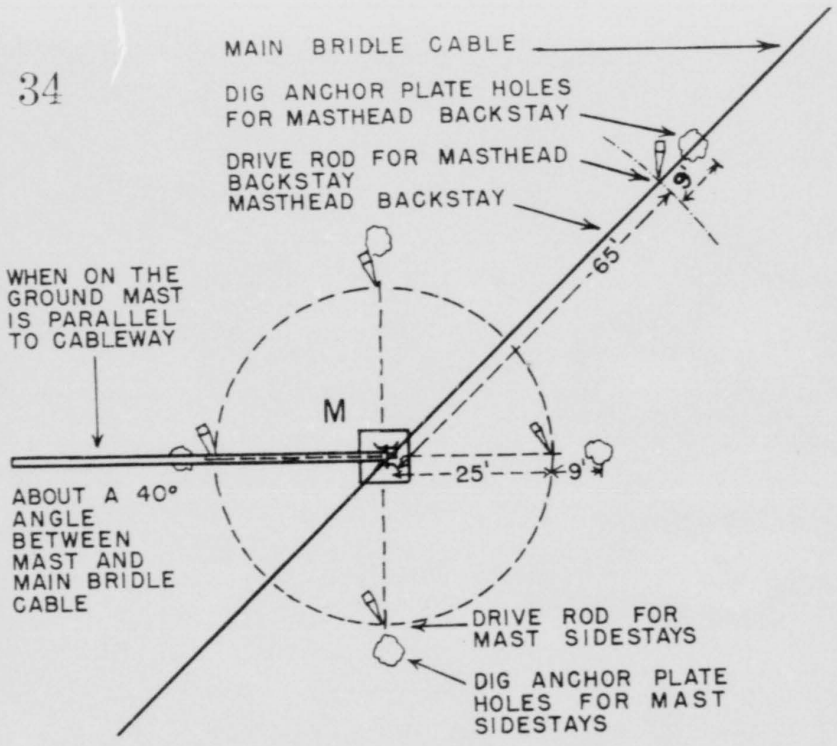


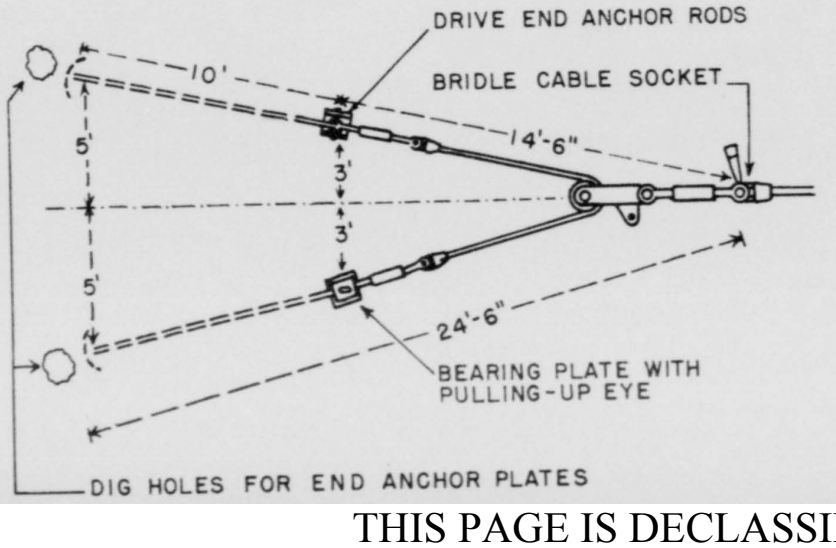
PLAN OF RIG

OVERALL LAYOUT: In some of the rigs the lengths of the main cableway and of the bridles may not measure exactly as shown above. If this is the case, the exact length of the cable will be stamped in the end sockets. *Corrections in the layout will have to be made in the field to compensate for any such variation in cable lengths.*

To lay out the field, first establish the ends of the cableway then determine the bridle pathways. Along the bridle pathways stake the mast sites 128 feet from the ends of the runway. *Use a steel tape for measuring all points.*

ELEVATION OF RIG





ANCHOR LAYOUT: Using the steel measuring tape as though it were a radius line considerably shortens the time necessary for spotting all anchor rod eye positions and anchor plate holes.

For marking the mast anchors, first set the base plate at the point M with the brackets parallel to the cableway course and with the bridle cutting diagonally across the plate. Using the center of the bridle plate as a pivot, swing a 25-foot arc and spot the positions for the four anchor rod eyes at the center of each side of the base plate. With an arc 9 feet longer mark the anchor plate holes beyond each anchor rod eye. Slight variation in anchor spotting may be necessary if obstructions to digging are encountered.

For the anchor rod eye positions of the strong masthead backstay, measure 65 feet along the bridle pathway from the same base plate pivot point. Add another 9 feet for the anchor plate hole.

To get the correct positions for the end anchors in the anchor bridle assemblies use the bridle cable socket position as a pivot. Swing a 14½-foot arc 3 feet either side of the projected bridle cable pathway and spot the anchor rod eye positions. In a direct line through the anchor rod eye mark the anchor plate holes 24½ feet from the cable socket position.

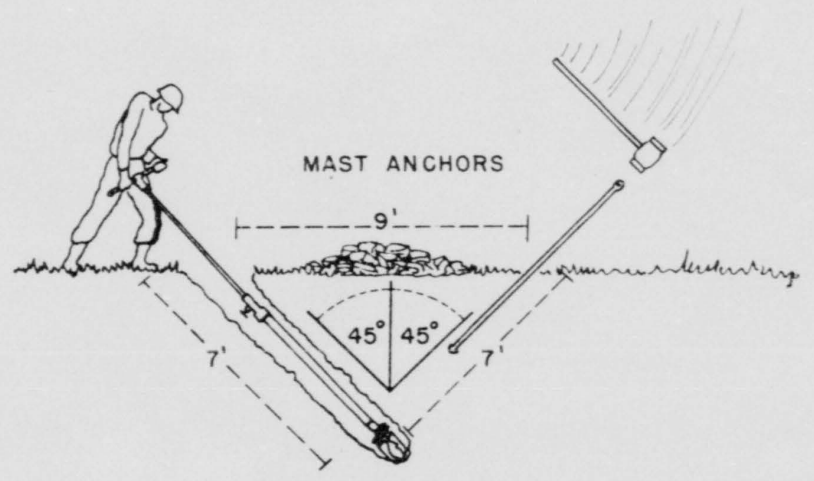
INSTALLING THE ANCHORS

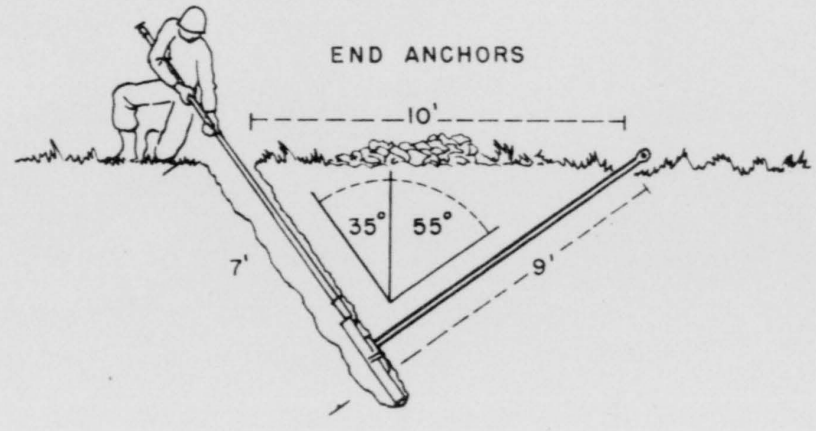
The process of installing anchor rods is the same regardless of the size of the anchor. It involves digging a hole, driving the anchor rod to meet the hole, and placing the anchor plate which serves as a deadman over the spear head of the rod so that it permanently locks the rod. An installing bar is provided.

The length of the rod and the angle at which it is driven determine the depth of the hole as well as the distance of the hole from the anchor eye.

For the mast stay anchors both the hole and the rod should enter the ground at a 45 angle, forming a right angle where they meet. A *slight* deviation from the angle is not serious. If correctly driven the rod will hit the hole when the eye is flush with the ground. These 7-foot rods require 7-foot holes 9 feet from the rods.

Drive the end anchor rods at the angles shown in the diagram. Set the eye of the end anchor rod in the bearing plate while driving it into the ground. Check whether the bearing plate must have a pulling-up eye (see pages 8-9). The anchor rod eye should have about 6 inches clearance above the ground. The end anchors are 9 feet long and require 7-foot holes 10 feet from the rod.



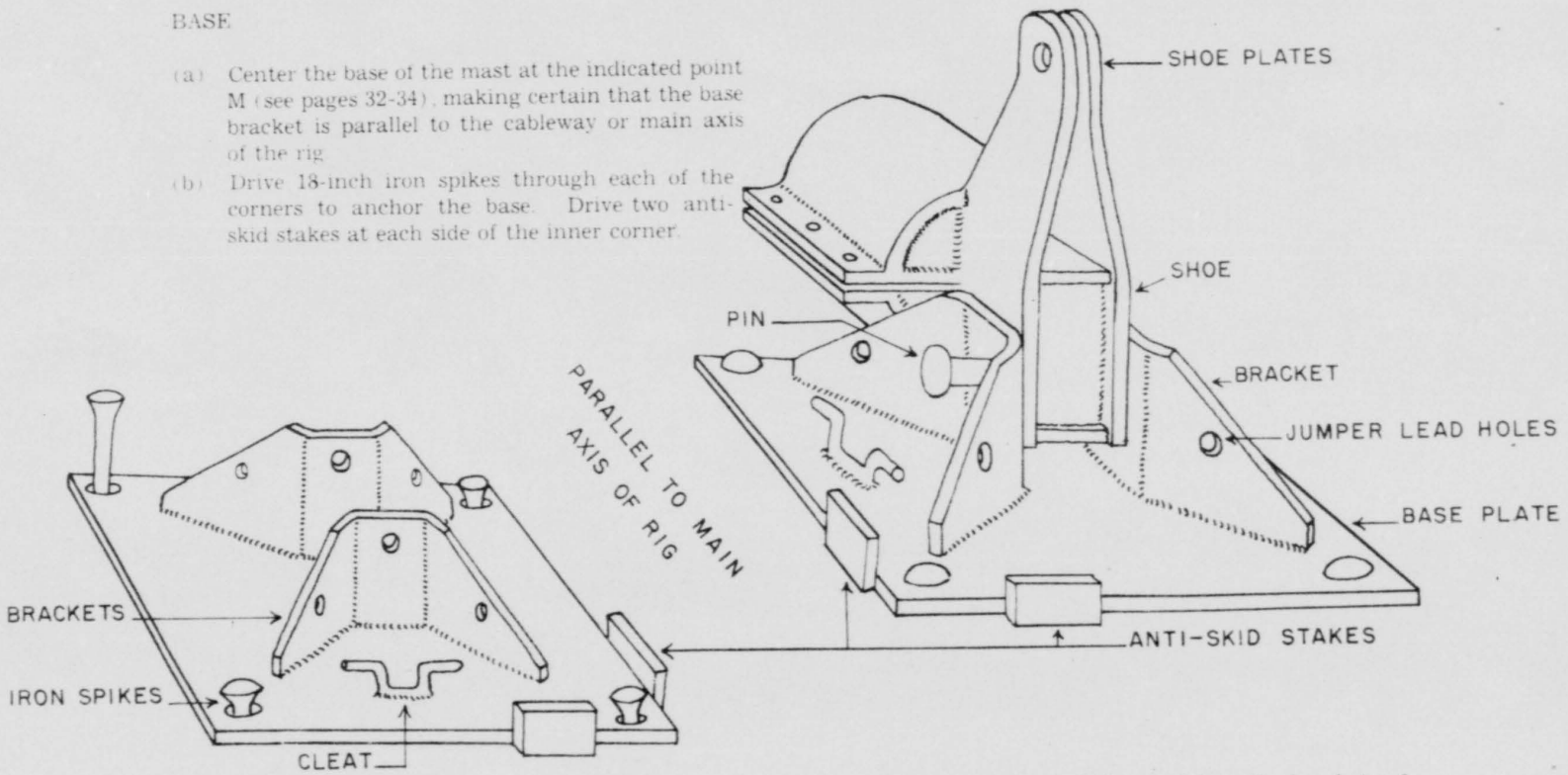


ERECTING THE MAST

BASE

(a) Center the base of the mast at the indicated point M (see pages 32-34), making certain that the base bracket is parallel to the cableway or main axis of the rig.

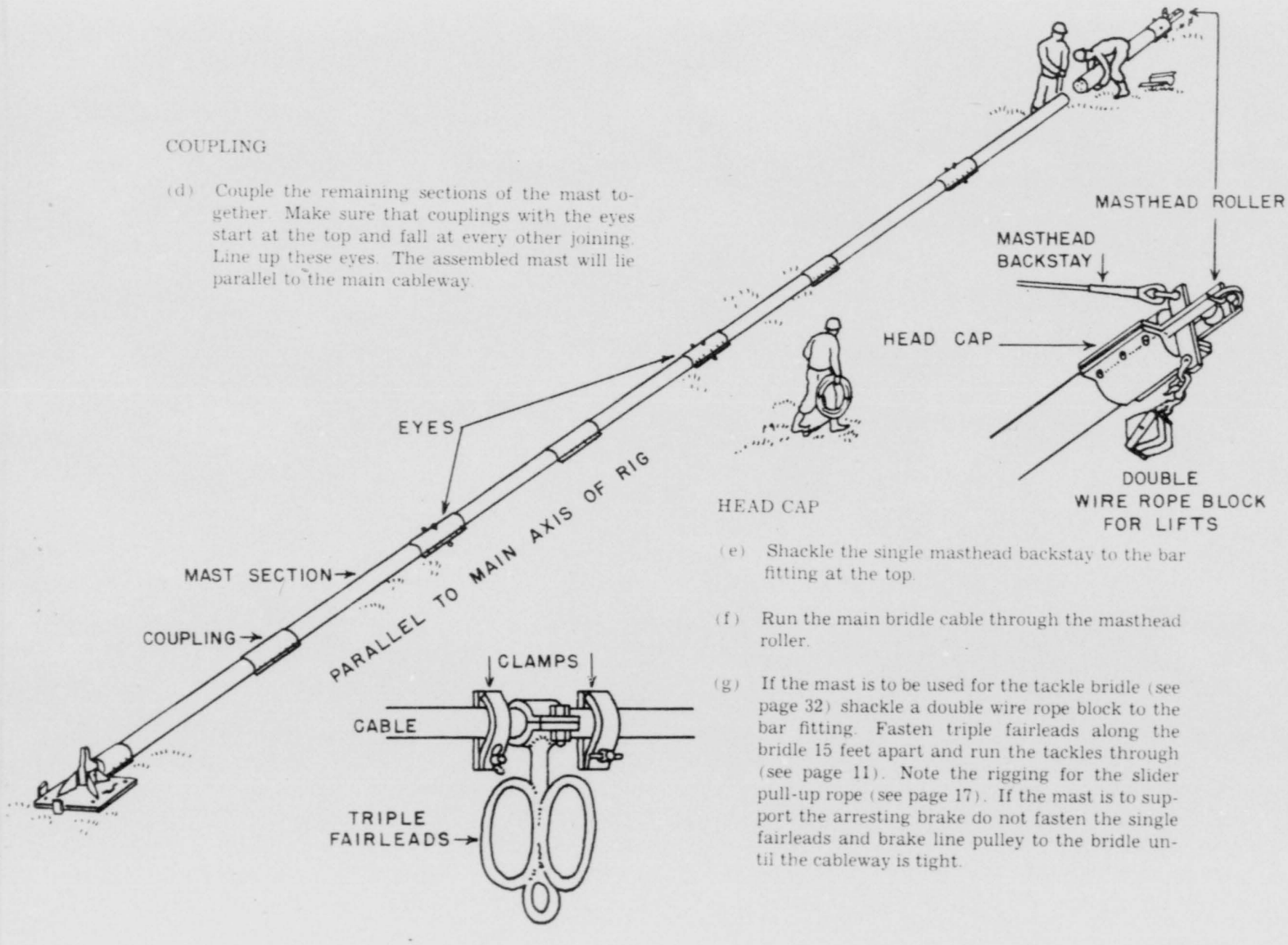
(b) Drive 18-inch iron spikes through each of the corners to anchor the base. Drive two anti-skid stakes at each side of the inner corner.



(c) Insert the shoe of the mast into the brackets of the base and secure with pin and cotter key.

COUPLING

(d) Couple the remaining sections of the mast together. Make sure that couplings with the eyes start at the top and fall at every other joining. Line up these eyes. The assembled mast will lie parallel to the main cableway.

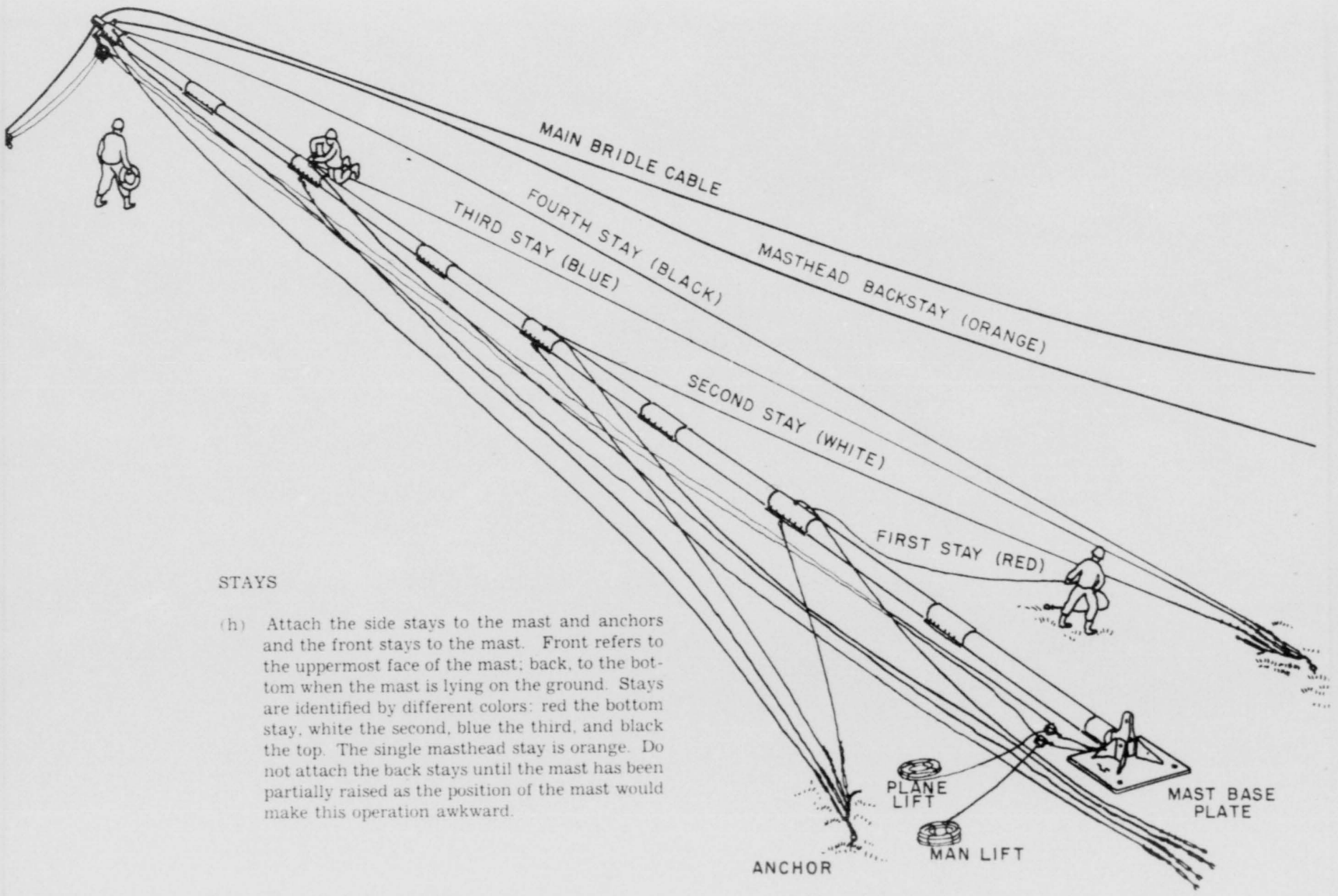


HEAD CAP

(e) Shackle the single masthead backstay to the bar fitting at the top.

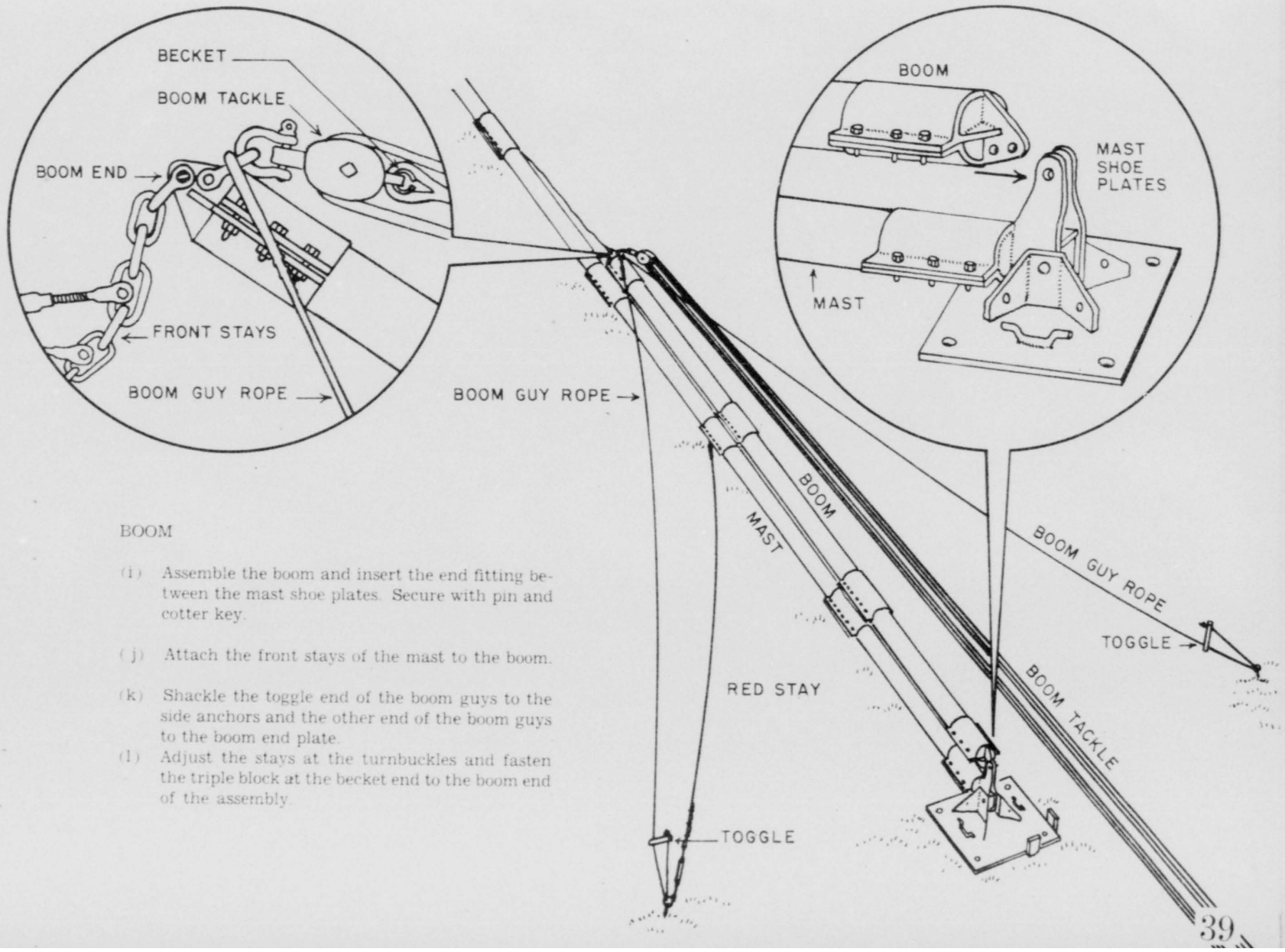
(f) Run the main bridle cable through the masthead roller.

(g) If the mast is to be used for the tackle bridle (see page 32) shackle a double wire rope block to the bar fitting. Fasten triple fairleads along the bridle 15 feet apart and run the tackles through (see page 11). Note the rigging for the slider pull-up rope (see page 17). If the mast is to support the arresting brake do not fasten the single fairleads and brake line pulley to the bridle until the cableway is tight.



STAYS

(h) Attach the side stays to the mast and anchors and the front stays to the mast. Front refers to the uppermost face of the mast; back, to the bottom when the mast is lying on the ground. Stays are identified by different colors: red the bottom stay, white the second, blue the third, and black the top. The single masthead stay is orange. Do not attach the back stays until the mast has been partially raised as the position of the mast would make this operation awkward.



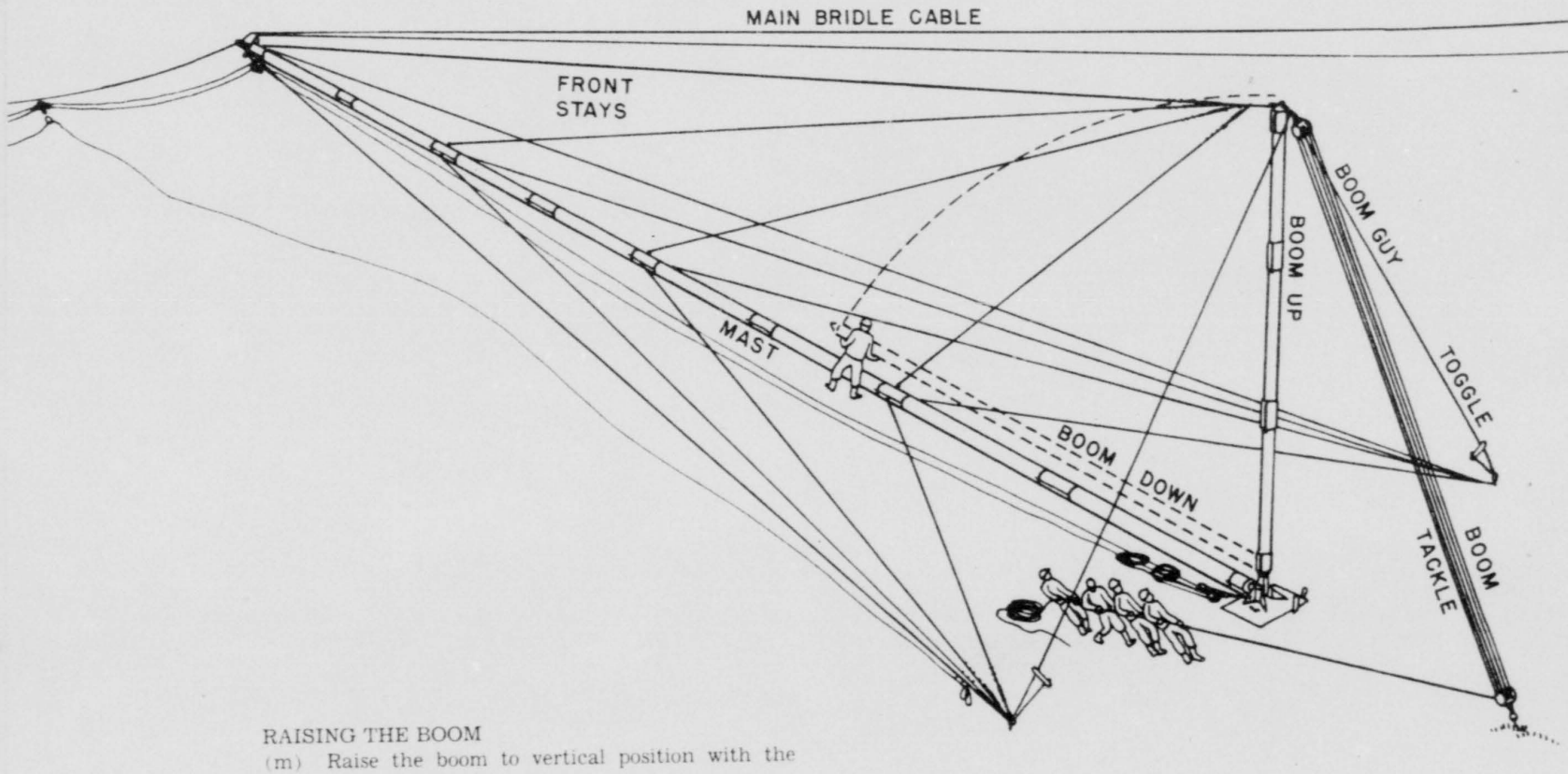
BOOM

(i) Assemble the boom and insert the end fitting between the mast shoe plates. Secure with pin and cotter key.

(j) Attach the front stays of the mast to the boom.

(k) Shackle the toggle end of the boom guys to the side anchors and the other end of the boom guys to the boom end plate.

(l) Adjust the stays at the turnbuckles and fasten the triple block at the becket end to the boom end of the assembly.



RAISING THE BOOM

(m) Raise the boom to vertical position with the block and tackle.

(n) Fasten and adjust the side stays to the proper anchor rods and chains.

RAISING THE MAST

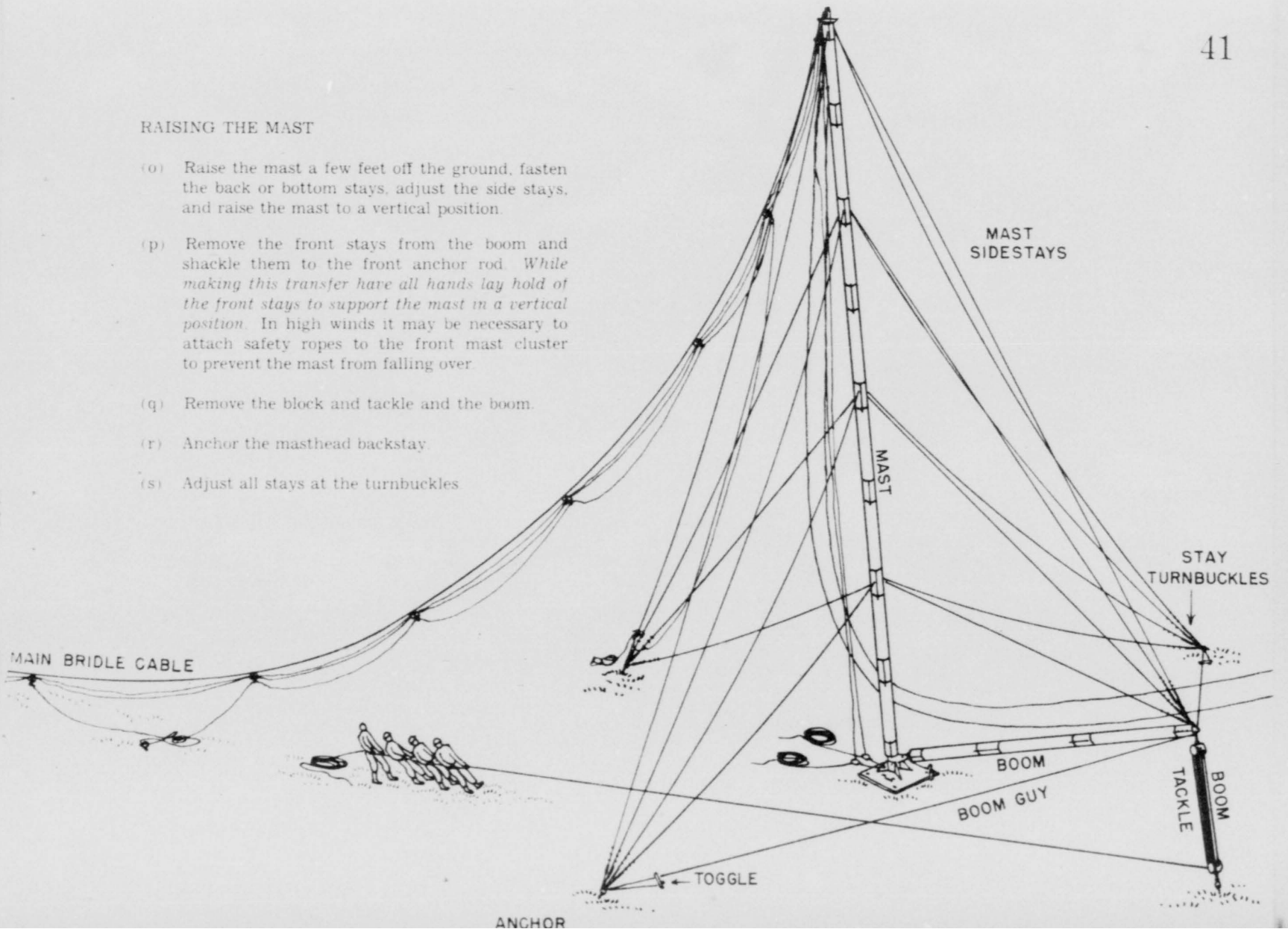
(o) Raise the mast a few feet off the ground, fasten the back or bottom stays, adjust the side stays, and raise the mast to a vertical position.

(p) Remove the front stays from the boom and shackle them to the front anchor rod. *While making this transfer have all hands lay hold of the front stays to support the mast in a vertical position.* In high winds it may be necessary to attach safety ropes to the front mast cluster to prevent the mast from falling over.

(q) Remove the block and tackle and the boom.

(r) Anchor the masthead backstay.

(s) Adjust all stays at the turnbuckles.



RAISING THE CABLEWAY

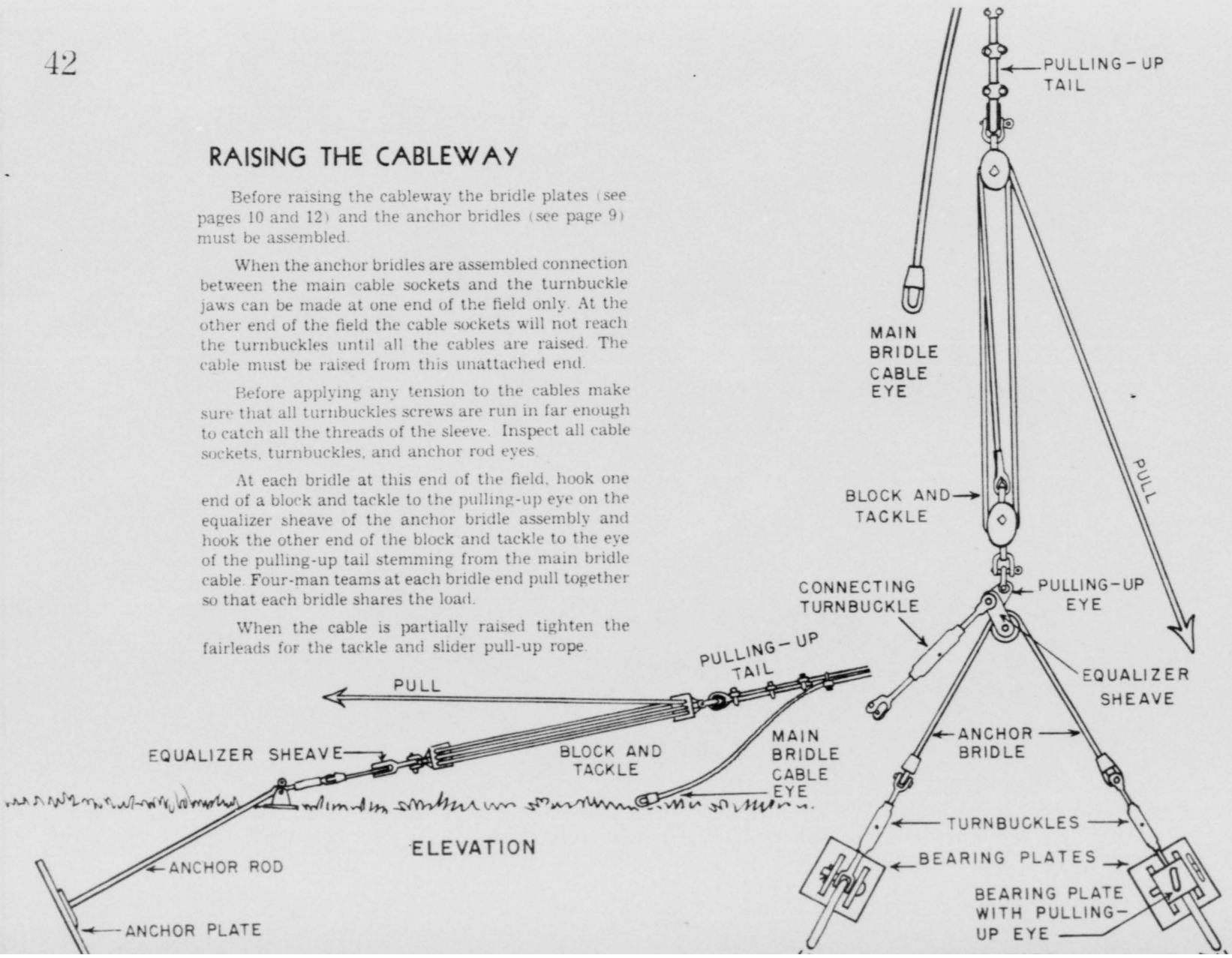
Before raising the cableway the bridle plates (see pages 10 and 12) and the anchor bridles (see page 9) must be assembled.

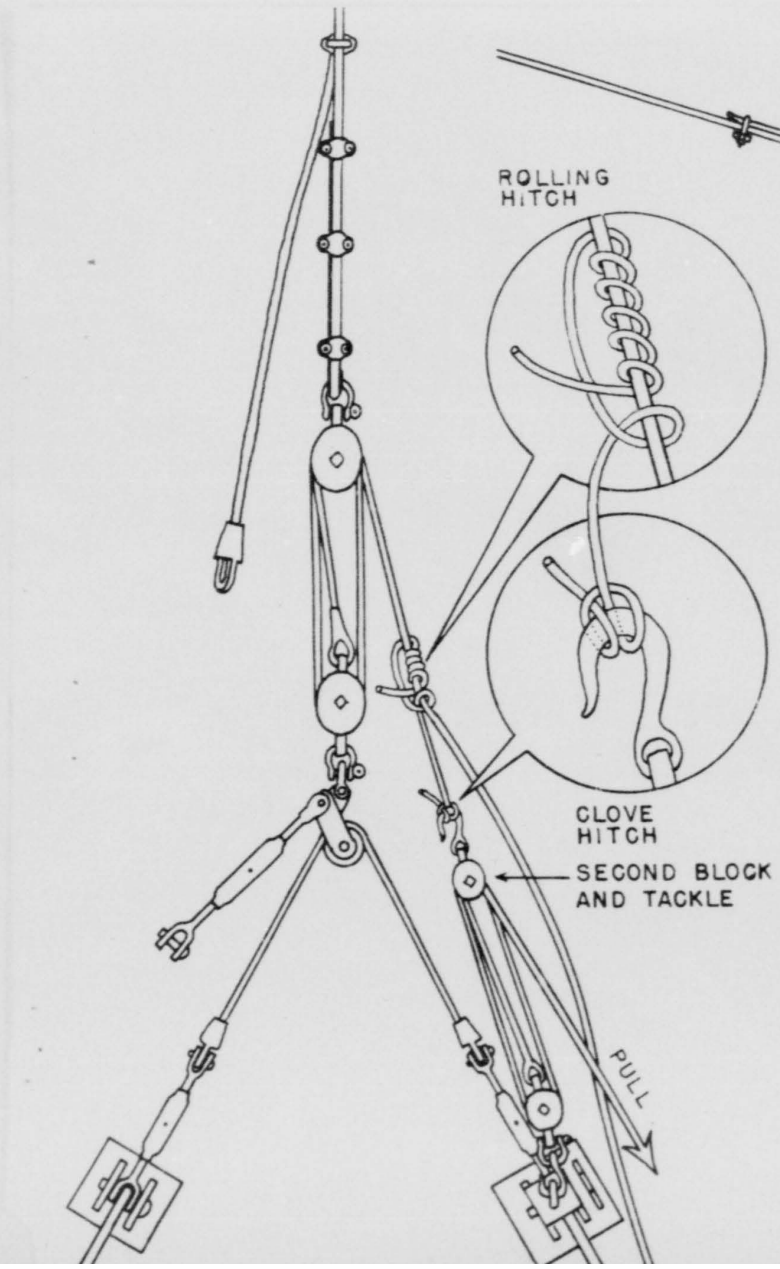
When the anchor bridles are assembled connection between the main cable sockets and the turnbuckle jaws can be made at one end of the field only. At the other end of the field the cable sockets will not reach the turnbuckles until all the cables are raised. The cable must be raised from this unattached end.

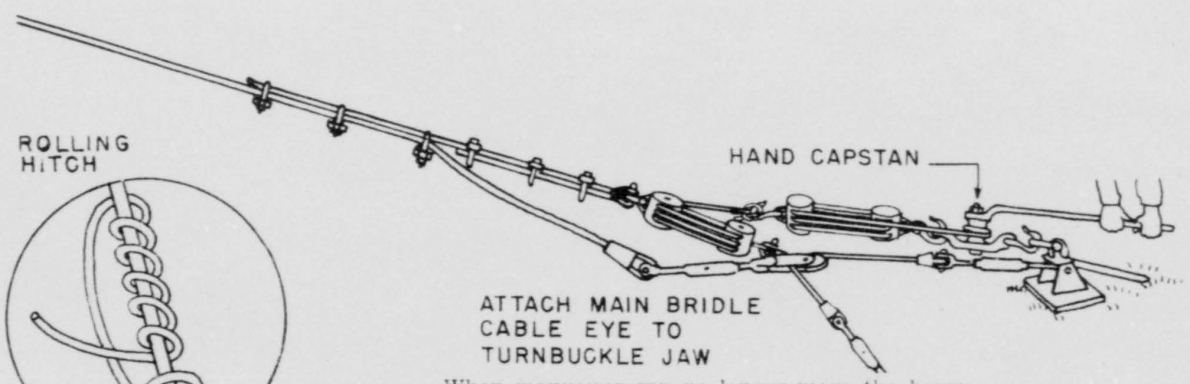
Before applying any tension to the cables make sure that all turnbuckles screws are run in far enough to catch all the threads of the sleeve. Inspect all cable sockets, turnbuckles, and anchor rod eyes.

At each bridle at this end of the field, hook one end of a block and tackle to the pulling-up eye on the equalizer sheave of the anchor bridle assembly and hook the other end of the block and tackle to the eye of the pulling-up tail stemming from the main bridle cable. Four-man teams at each bridle end pull together so that each bridle shares the load.

When the cable is partially raised tighten the fairleads for the tackle and slider pull-up rope.







When manpower can no longer move the heavy cables attach a second block and tackle to pull the first. When 4-man teams can no longer move the cable even with the secondary block and tackle, snub the loose end of the secondary block at one of the bridles and transfer all men over to the other bridle. The entire crew pulls on the secondary block and tackle of this bridle until the turnbuckle connection can be made. Then slack off the block and tackle and send all the men to the other bridle where the operation is repeated. A small hand capstan accompanies each set to take up the final few inches of slack.

At this point the entire rigging is in the air. Only final adjustment of turnbuckles to correct the cableway sag (see page 56 for formula), fastening of arresting brake line fairleads and pulley (see page 13), and installation of anchors for tackle of lifting devices (see page 11) and for the travel release holdback line (see page 16) remain to be done before the cableway is ready.

The brake line fairleads must be attached to hang vertically and clamped tight to avoid danger of their being whipped around the cable and fouling the brake line on landing. This operation must be done by a man in the hooker's seat which is attached to a shackle so that he can slide along the bridle cable.

WORK SCHEDULE

Setting up the rig with the hand-operated tools provided is a simple process. A crew of nine men—trained to erect and operate the system—can land, measure the field, assemble the equipment, erect the masts, stretch the cable, and have the cableway ready for use in less than 24 hours after landing. This time estimate assumes soft soil where it is easy to dig and a comparatively clear, level, open field. Heavy undergrowth and large trees, of course, will considerably increase the time necessary for clearing the field and unreeling the cables.

For most efficient use of manpower follow the time and work schedule illustrated in the following pages. Careful study of the diagrams and detailed instructions in pages 32 to 43 will avoid time-consuming errors.

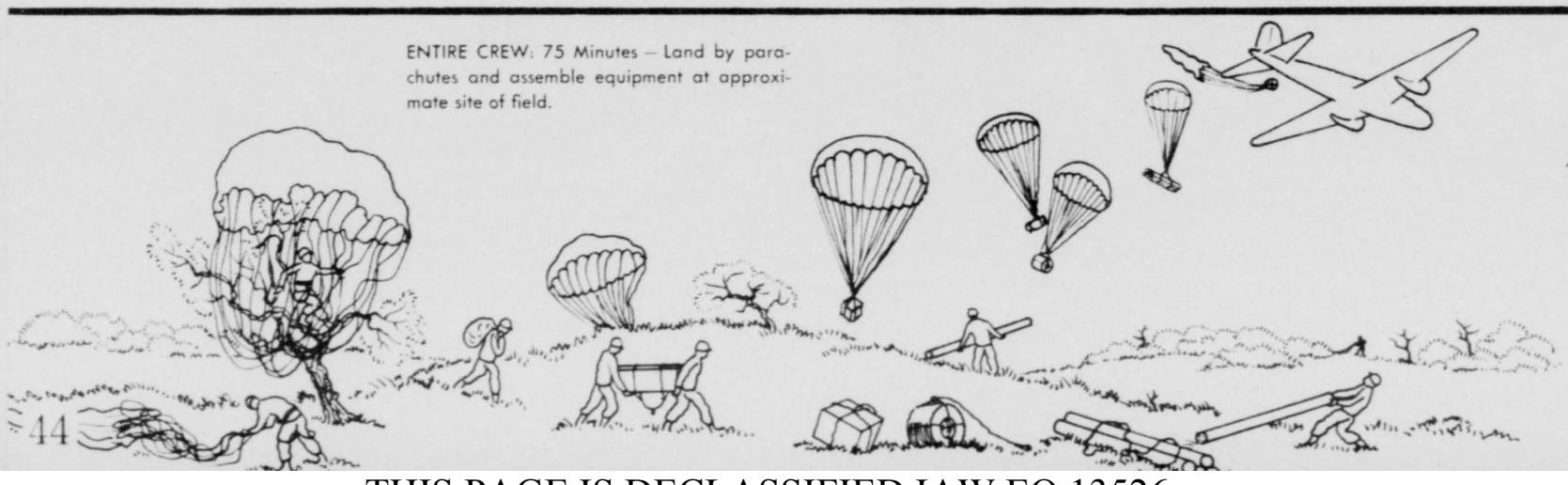
Split the 9-man crew into two teams; TEAM ONE —four diggers; TEAM TWO—three riggers. The supervisor and assistant measure the field and direct the teams—after which the supervisor works with the riggers and his assistant with the diggers. The riggers assemble all equipment, connect stays, rig tackle, and lend a hand wherever needed. One rigger should be an expert splicer. The diggers install the anchor rods and plates, raise the masts, and clear the field. Use every extra man-minute on the digging as it sets the pace for the entire job.

The schedule illustrated here is flexible. An untrained crew will take longer to prepare the field but will have no technical difficulties. With favorable conditions, suitable terrain, increased manpower, or power-driven tools, erection time can be considerably reduced.

STEP 1 00:0 to 1:15 75 MINUTES

TEAM ONE: ASSISTANT SUPERVISOR AND FOUR DIGGERS
TEAM TWO: SUPERVISOR AND THREE RIGGERS

ENTIRE CREW: 75 Minutes — Land by parachutes and assemble equipment at approximate site of field.



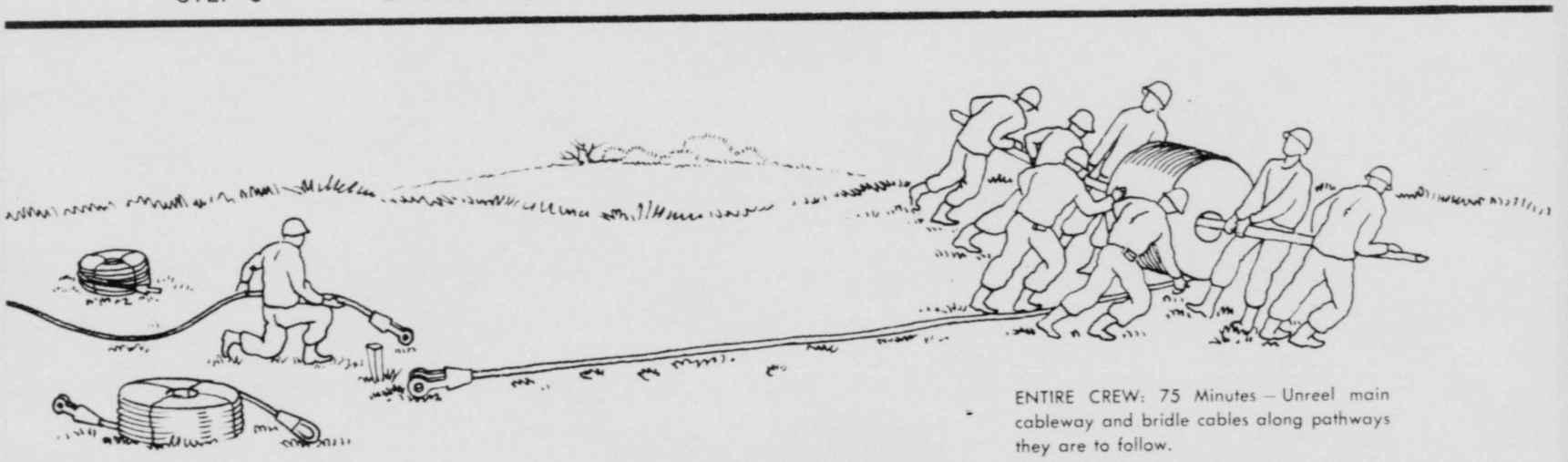
STEP 2 1:15 to 2:15 120 MINUTES ENTIRE CREW

SUPERVISOR AND ASSISTANT: 120 Minutes — Stake out cableway points and positions of first two masts (see pages 32-33).

TEAM ONE: 120 Minutes — Clear field.

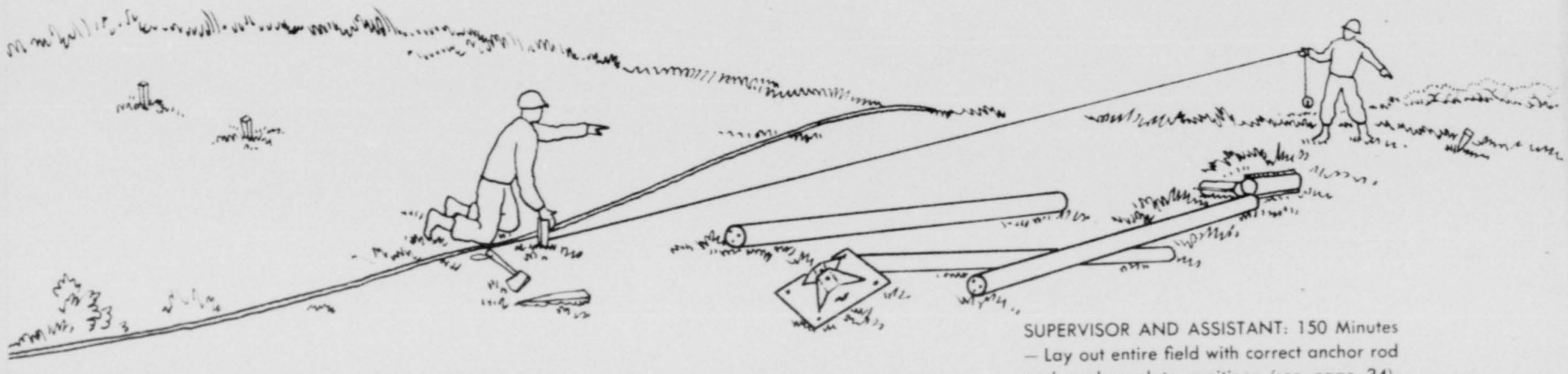
TEAM TWO: 120 Minutes — Sort equipment and carry it to proper locations for ready use.

STEP 3 2:15 to 3:30 75 MINUTES ENTIRE CREW



ENTIRE CREW: 75 Minutes — Unreel main cableway and bridle cables along pathways they are to follow.

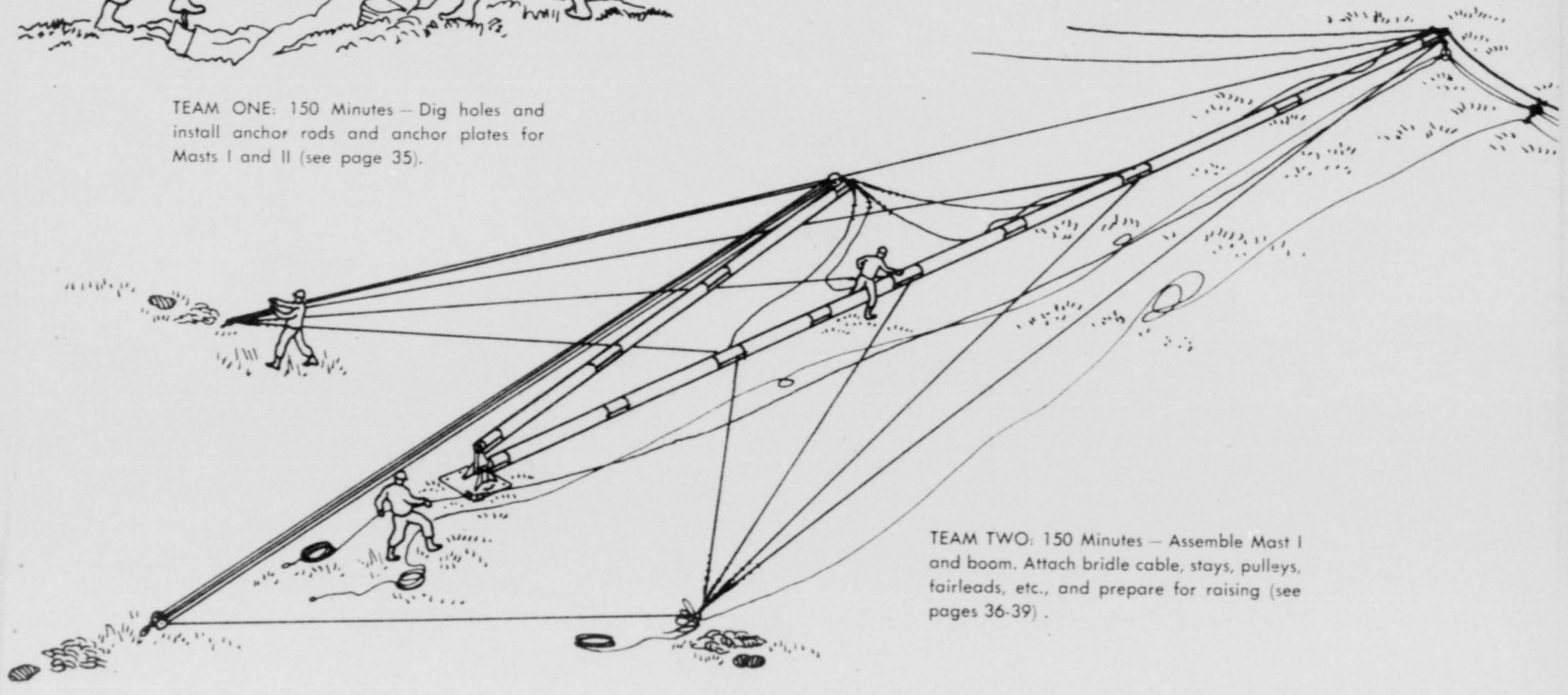
STEP 4 3:30 to 6:00 150 MINUTES ENTIRE CREW



SUPERVISOR AND ASSISTANT: 150 Minutes — Lay out entire field with correct anchor rod and anchor plate positions (see page 34); instruct and assist in all other operations.

STEP 4 3:30 to 6:00 (CONTINUED) ENTIRE CREW

TEAM ONE: 150 Minutes — Dig holes and install anchor rods and anchor plates for Masts I and II (see page 35).

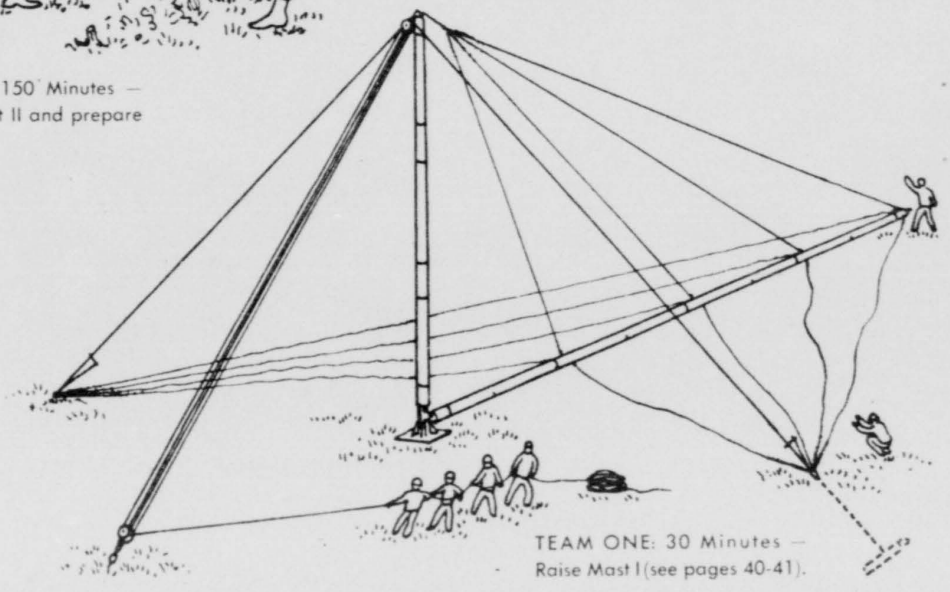


TEAM TWO: 150 Minutes — Assemble Mast I and boom. Attach bridle cable, stays, pulleys, fairleads, etc., and prepare for raising (see pages 36-39).

STEP 5 6:00 to 8:30 150 MINUTES ENTIRE CREW

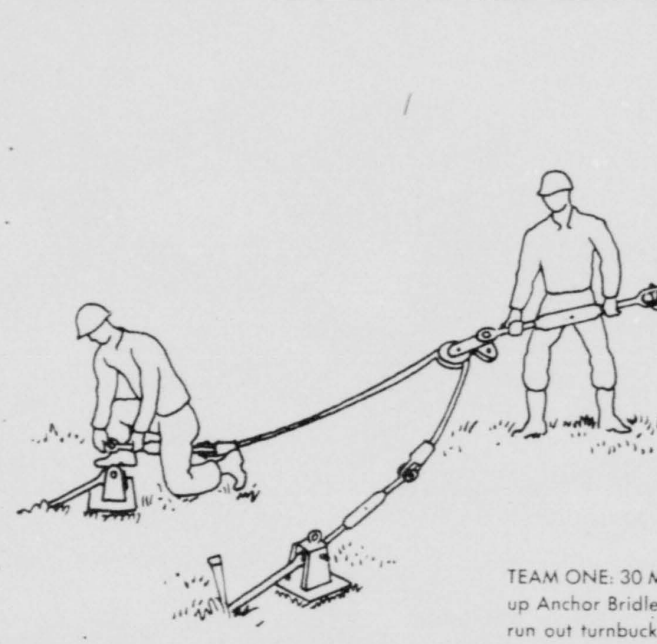
TEAM ONE: 120 Minutes—Dig anchor holes and install anchor rods and anchor plates for Anchor Bridles I and II (see page 35).

TEAM TWO: 150 Minutes — Assemble Mast II and prepare all rigging.

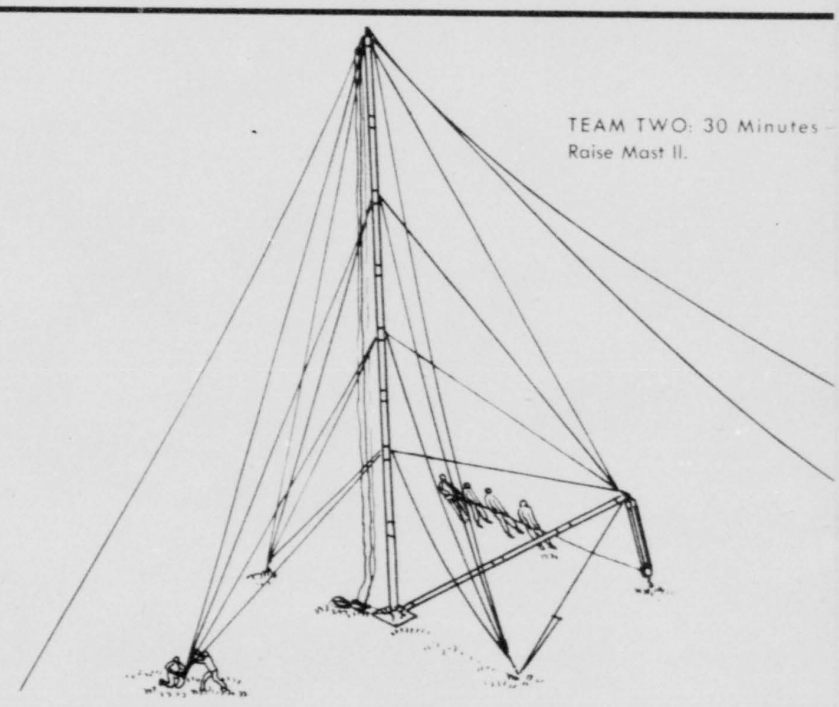


TEAM ONE: 30 Minutes — Raise Mast I (see pages 40-41).

STEP 6 8:30 to 9:00 30 MINUTES ENTIRE CREW

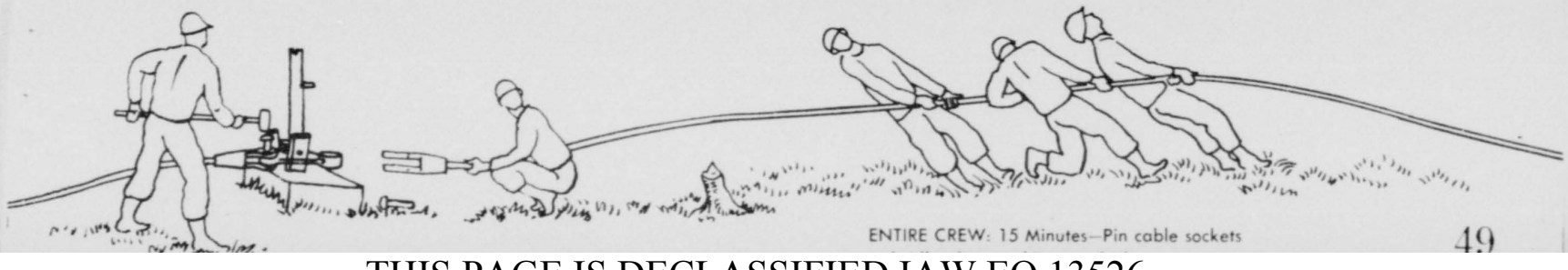


TEAM ONE: 30 Minutes—Hook up Anchor Bridles I and II and run out turnbuckles (see page 9).



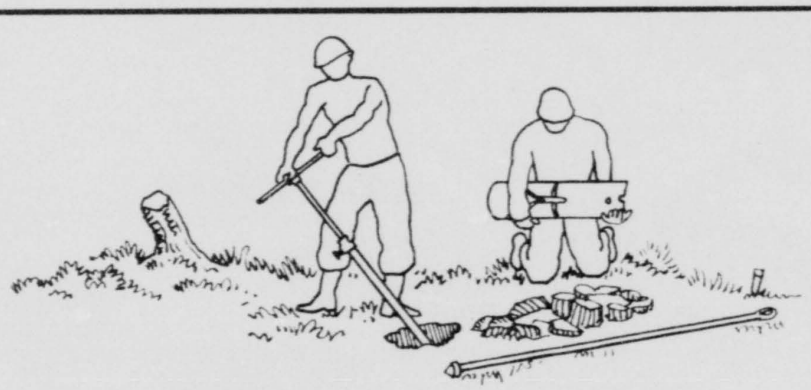
TEAM TWO: 30 Minutes—Raise Mast II.

STEP 7 9:00 to 9:15 15 MINUTES ENTIRE CREW

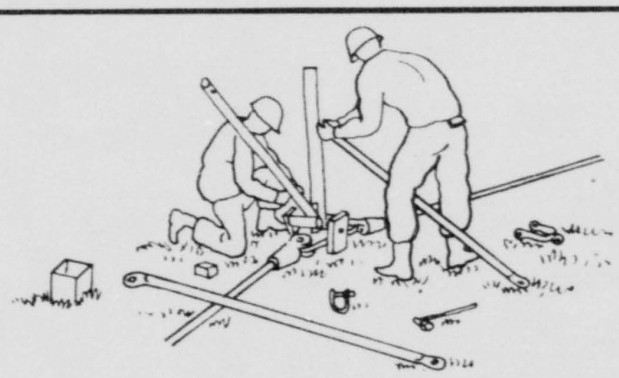


ENTIRE CREW: 15 Minutes—Pin cable sockets

STEP 8 9:15 to 10:15 60 MINUTES ENTIRE CREW



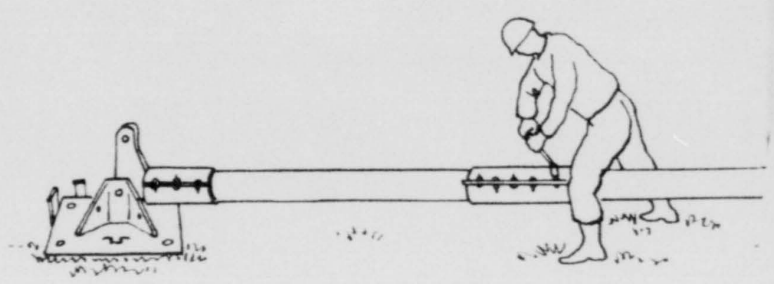
TEAM ONE: 60 Minutes — Dig holes and install anchor rods and plates for Mast III.



TEAM TWO: 60 Minutes — Assemble Bridie Plate I with derricks, davit, blocks, clamps, etc. (see pages 10,12).

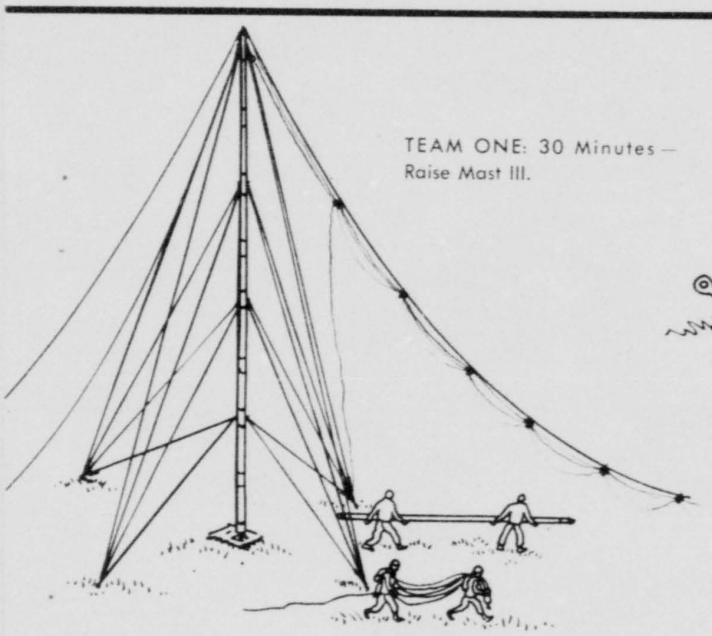
STEP 9 10:15 to 12:15 120 MINUTES ENTIRE CREW

TEAM ONE 120 Minutes—Dig holes and install anchor rods and plates for Mast IV and Anchor Bridle III.

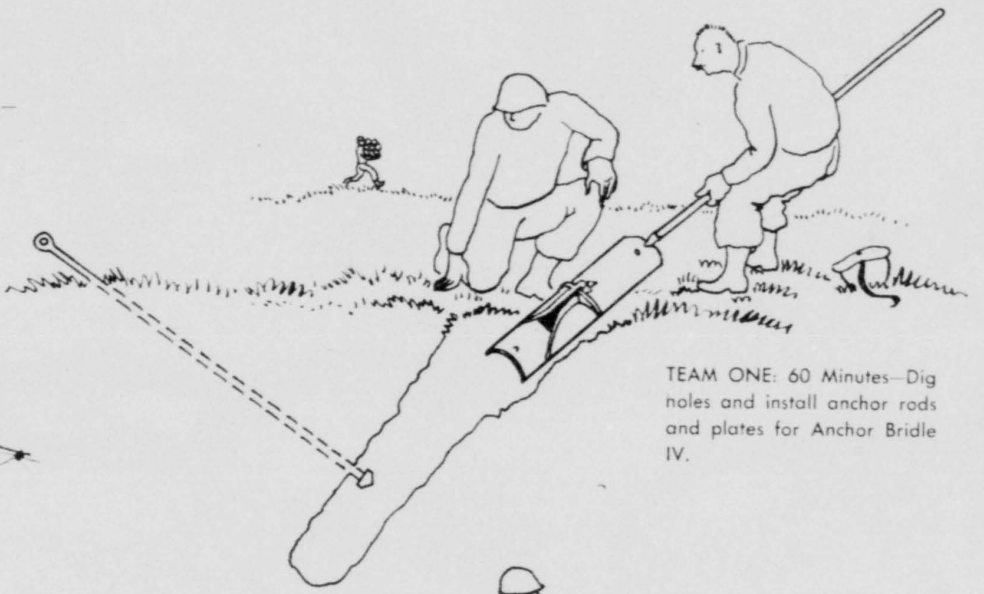


TEAM TWO: 120 Minutes — Assemble Mast III and prepare all rigging.

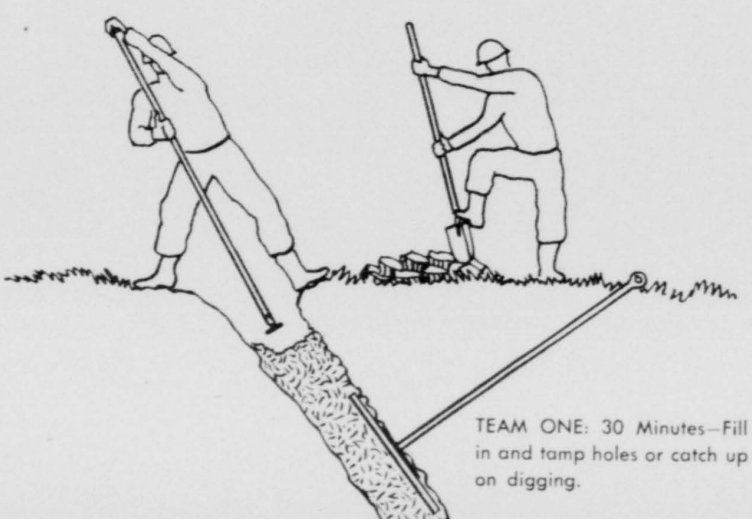
STEP 10	12:15 to 14:15	120 MINUTES	ENTIRE CREW



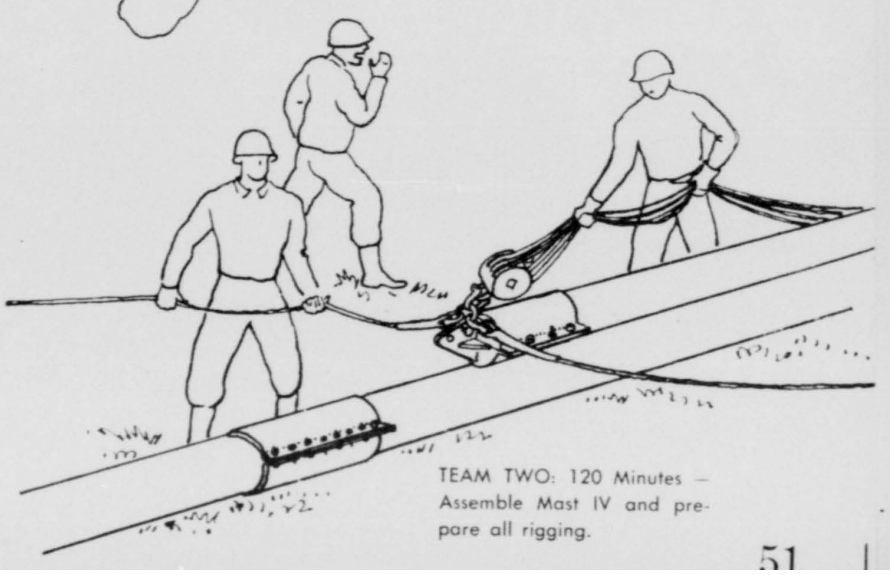
TEAM ONE: 30 Minutes — Raise Mast III.



TEAM ONE: 60 Minutes—Dig holes and install anchor rods and plates for Anchor Bridle IV.

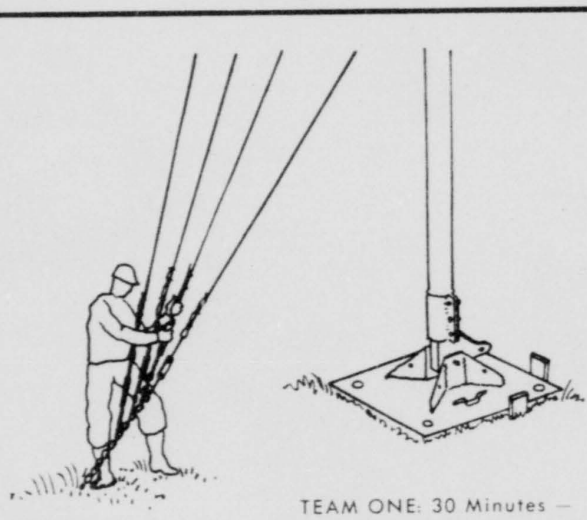


TEAM ONE: 30 Minutes—Fill in and tamp holes or catch up on digging.

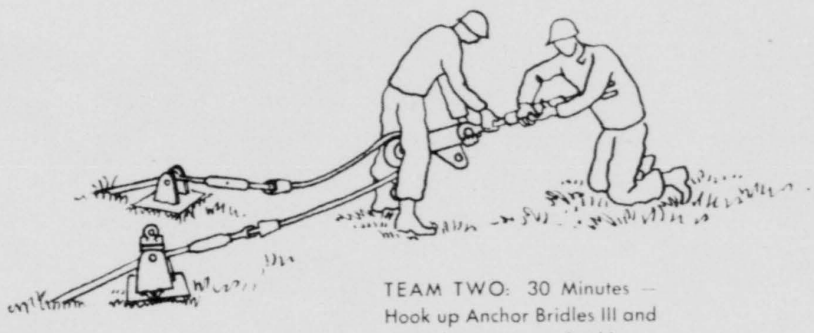


TEAM TWO: 120 Minutes — Assemble Mast IV and prepare all rigging.

STEP 11 14:15 to 14:45 30 MINUTES ENTIRE CREW

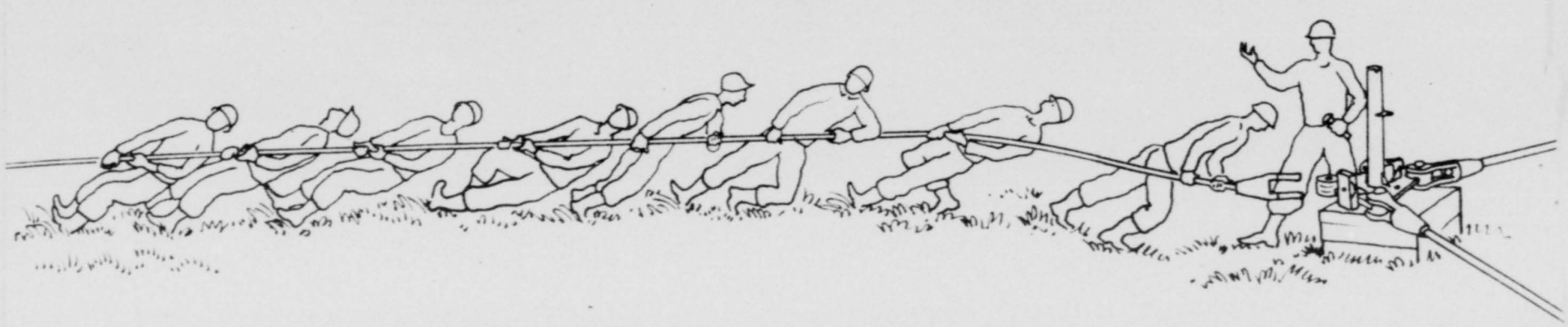


TEAM ONE: 30 Minutes — Raise Mast IV.



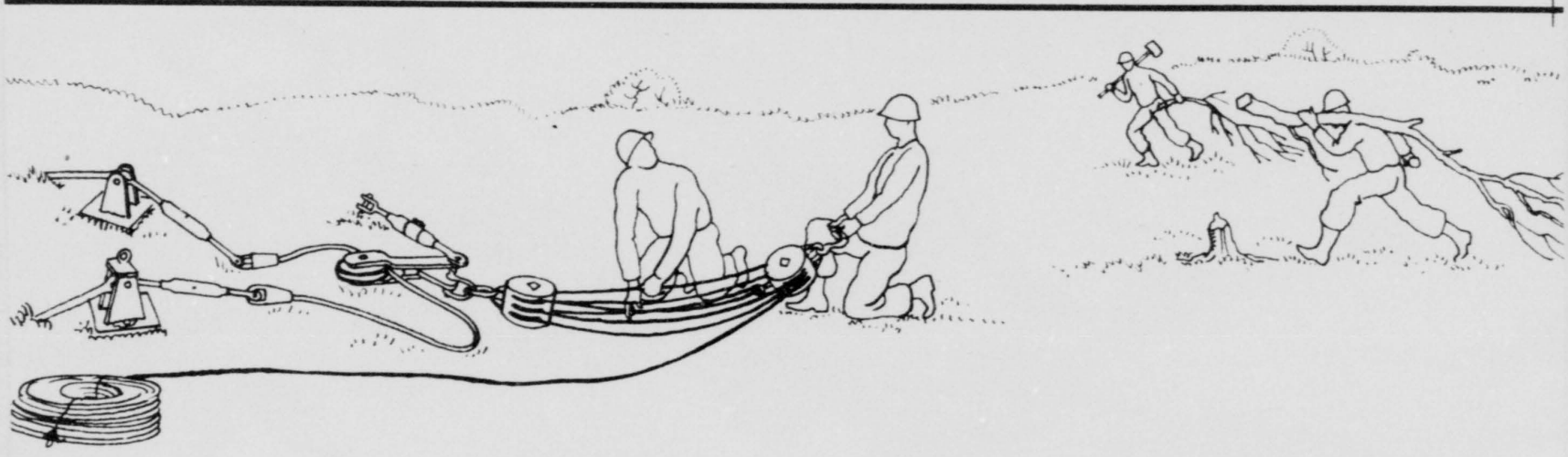
TEAM TWO: 30 Minutes — Hook up Anchor Bridles III and IV and run out turnbuckles.

STEP 12 14:45 to 15:00 120 MINUTES ENTIRE CREW

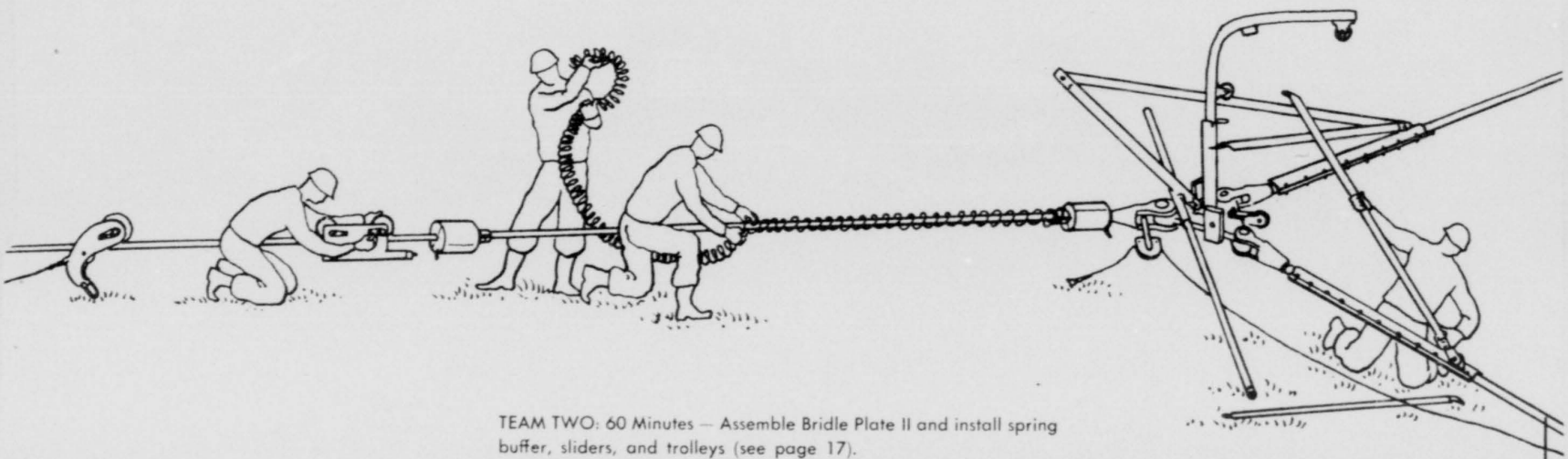


ENTIRE CREW: 15 Minutes — Pin cable sockets to Bridle Plate II with all men pulling up slack.

STEP 13	15:00 to 16:00	60 MINUTES	ENTIRE CREW

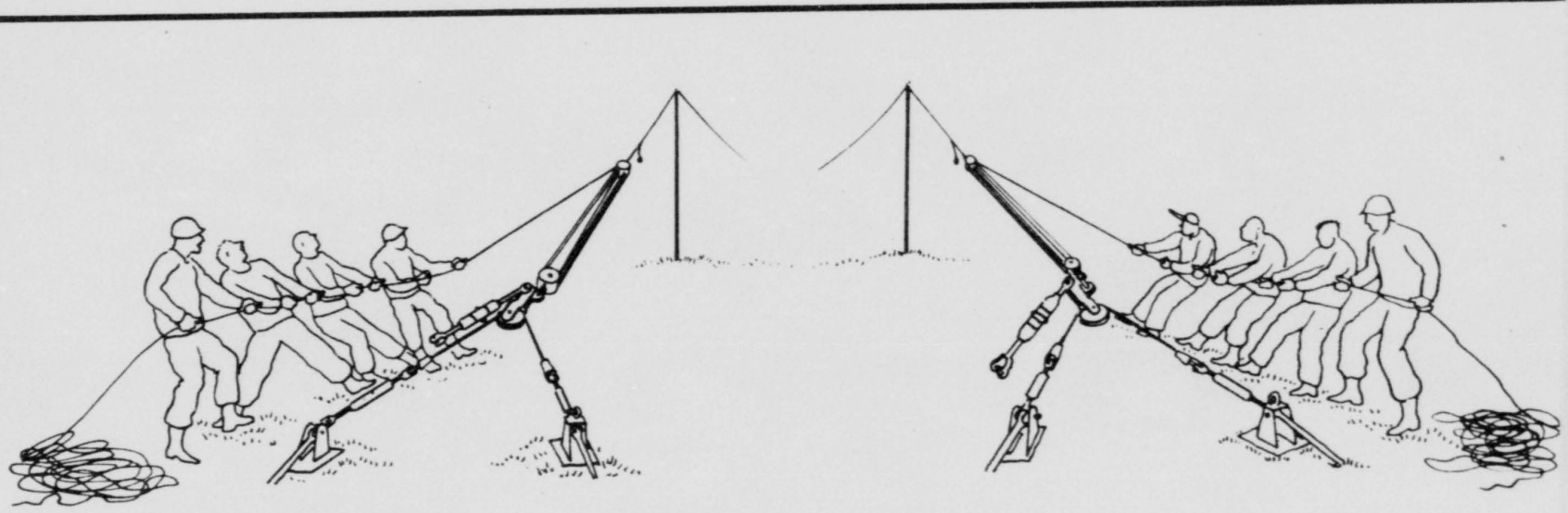


TEAM ONE: 60 Minutes — Lay out block and tackle for pulling up main cable. Fill in and tamp mast anchor holes, clear field, etc.

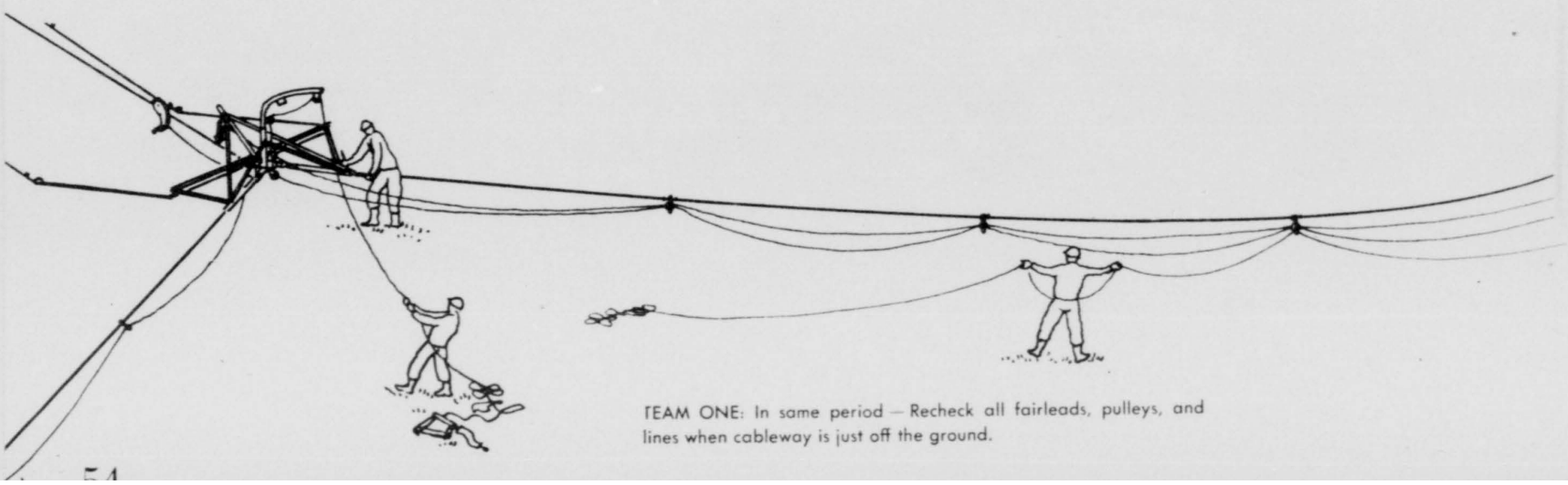


TEAM TWO: 60 Minutes — Assemble Bridle Plate II and install spring buffer, sliders, and trolleys (see page 17).

STEP 14 16:00 to 18:00 120 MINUTES ENTIRE CREW

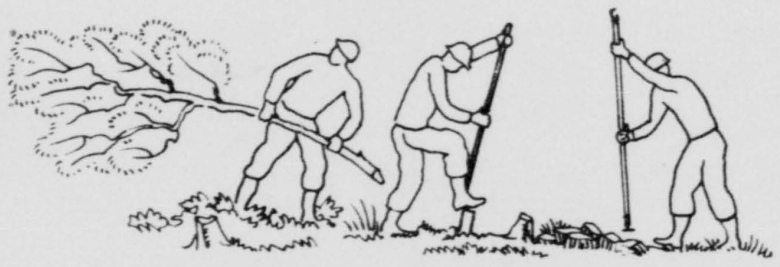


ENTIRE CREW: 120 Minutes — Pull up main cables and attach bridle cables to main turnbuckles at the anchor bridles.

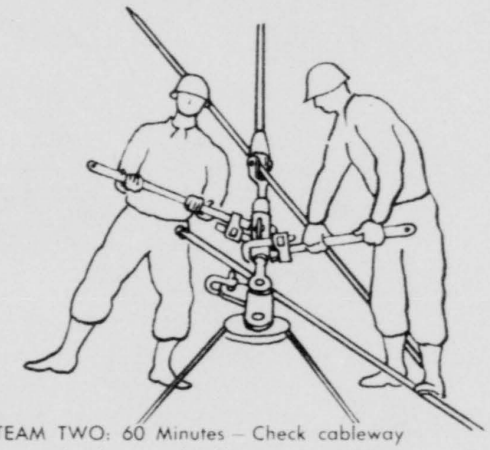


TEAM ONE: In same period — Recheck all fairleads, pulleys, and lines when cableway is just off the ground.

STEP 15 | 18:00 to 19:00 | 60 MINUTES | ENTIRE CREW



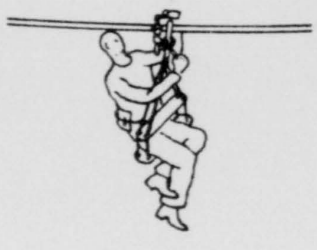
TEAM ONE: 60 Minutes — Fill up and tamp remaining holes, clear ground, prepare camouflage, etc.

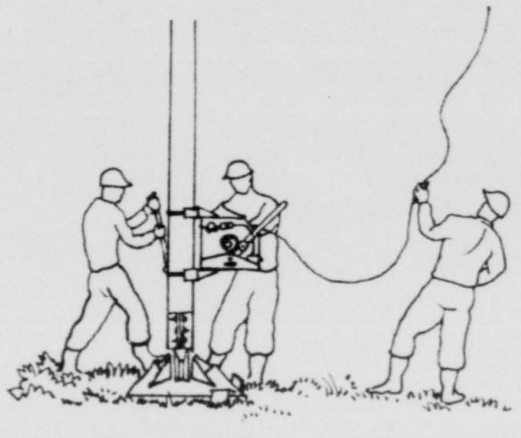


TEAM TWO: 60 Minutes — Check cableway sag and tighten turnbuckles (see page 56).

STEP 16 | 19:00 to 21:00 | 120 MINUTES | ENTIRE CREW

TEAM ONE: 120 Minutes — Clear out plane parking space, clear path for tackle leads,





TEAM TWO: 120 Minutes — Attach arresting brake and fairleads for brake line (see page

FORMULA FOR CABLEWAY SAG

To check the cableway for proper tension it is necessary to find the difference between the cableway at the bridle plate assemblies and the sag at the center of the span. This difference should be 3 feet. If the sag is less than this amount an airplane will apply dangerously high stresses to the rig on landing. If the sag is greater it offers flying hazards to the pilot.

The following method of measuring this difference is very simple:

(a) Set a stake in the ground at each end and at the center of the cableway span.

(b) Sight across the stakes in a direct horizontal line —leveling off the stakes to the sighting line.

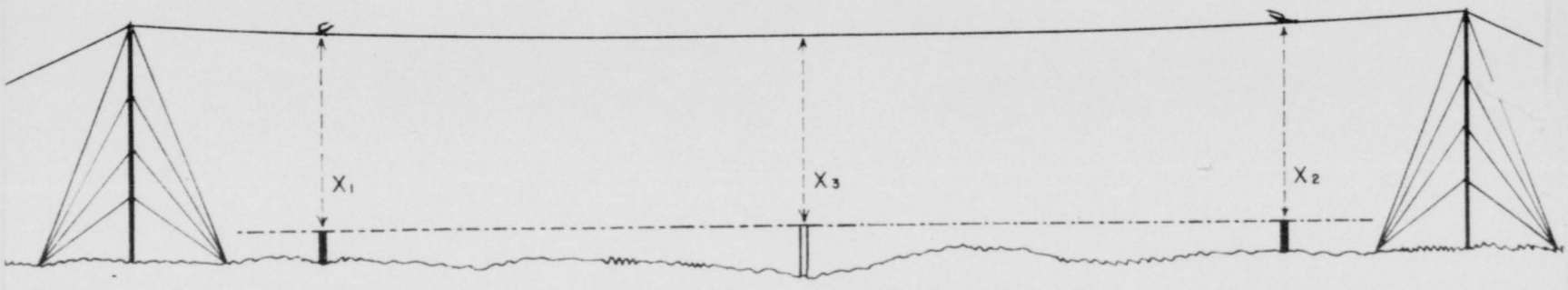
(c) Attach the steel measuring tape to the landing trolley and run the trolley to the stakes—measuring at each point the distance from the trolley to the top of the stake.

(d) Calling the distance from cableway to stake x_1 at the near end, x_2 at the far end, and x_3 at the center check the measurements by the following formula which takes into account any variation at the ends:

$$\frac{x_1 + x_2}{2} - x$$

$$x - 3 \quad x_3$$

Correct the sag by adjusting the turnbuckles at the anchor bridles. When the cable is tight it is easier to adjust the small turnbuckles than the large ones. Therefore, it is advisable to take up the first slack with the large turnbuckles before the stress increases, making the large turnbuckles difficult to turn.



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Auth: C.G. ATSC
Initials: CMT
Date: 31 OCTOBER 1945

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1. (S) Ltr. 4 Oct. 1943
Fr: Major H. L. Ahl
Ass't. to AC/S, A-3,
Hdqs. II Tactical
Air Div., Barksdale
Field, La.
To: AC/S, A-3, Hdqs.
II Tactical Air Div.
Barksdale Field, La.
(File: M&S)

Lt. J. H. Brodie, Water Div., Transportation Corps, PE, New Orleans, developed the idea of landing and take-off of Liaison type airplanes on a wire cable approximately 600' in length. The device was for use in restricted areas, and on decks of ships. Major H. L. Ahl, Ass't. to AC/S, A-3, Hdqs. II Tactical Air Div., Barksdale Field, La., in "Report of Activities of Liaison Pilot and Airplane Attached to Port of Embarkation, New Orleans", 4 Oct. 1943, stated that he had witnessed tests of the Brodie method of landing and launching liaison aircraft and believed it had many possible uses. Major Ahl described the device and its operation and commended the test pilot, Sgt. R. A. Gregory, 115th Liaison Sqdn., 3d AF, Tampa, Fla., who had made 30 to 40 successful landings and take-offs. Major Ahl's report was forwarded to the CG, 3d AF, who sent it to the AC/AS, MM&D (Wash.).

2. (R) Report on First Tests of Suspension Landing Apparatus Installed on Ship, 22 Dec. 1943
Submitted by: Lt. J. H. Brodie, Transportation Corps
To: Chief of Transportation War Dept., Wash.
(File: Equip. Lab., Eng. Div.)

Under date of 22 Dec. 1943, Lt. Brodie submitted to the Chief of Transportation, War Dept. (Wash.) a Report on First Tests of Suspension Landing Apparatus Installed on Ship which covered trials performed in the Mississippi River and Gulf of Mexico by the New Orleans Port of Embarkation. The apparatus was recommended chiefly for anti-submarine patrol work but additional uses were suggested. Further recommendation was made for erection of a land based research installation for the purpose of investigating further ramifications of the system. Lt. Brodie pointed out in this connection that the system was not limited to ships but had extensive possibilities for strategic tactical use on land installations.

3. (C) Memo, 31 Dec. 1943
Fr: Maj. Gen. C. P. Gross
Chief of Transportation
ASF, Wash.
To: CG, AAF, Wash.
(File: M&S)

Maj. Gen. C. P. Gross, Chief of Transportation, Army Service Forces (Wash.) forwarded to CG, AAF (Wash.) a report of the completed tests of the Brodie System. Gen. Gross stated that since the practicability of Lt. Brodie's ideas had been demonstrated, it was not considered appropriate that the project be carried any further by the Chief of Transportation. However, the Transportation Corps would be glad to turn over equipment on hand and make available the services of Lt. Brodie in any further exploitation of his ideas by the AAF. Gen. Gross stated that the services of Sgt. Gregory, AAF, pilot for the test airplane, were appreciated and that Sgt. Gregory deserved the highest commendation.

SECRET

CONFIDENTIAL

4. (C) R&R 4 Jan. 1944
Fr: Mat. Div., MM&D, Wash.
To: Req. Div., OC&R, Wash.
(File: M&S)

4 Jan. 1944, Mat. Div., MM&D (Wash.) asked Req. Div., OC&R (Wash.) whether a requirement existed for the Brodie method of launching light aircraft. Mat. Div. had not participated in the development of the system and had no knowledge of authorization for construction of the launching device for tests.

5. (C) R&R-2, 13 Jan. 1944
Fr: Req. Div., OC&R Wash.
To: Mat. Div., MM&D Wash.
(File: M&S)

Req. Div., OC&R (Wash.) stated that since AAF were no longer charged with Anti-Submarine Warfare and protection of convoys, no requirement existed for the Brodie device. As far as use in restricted areas was concerned, an air strip could just as easily be cleared. Req. Div. suggested that further development of the device be turned over to the Navy. A pencilled note on the document states: "Navy has rejected the idea."

6. (C) 1st Ind. 19 Jan. 1944
(Dispatched 25 Jan. 1944)
Fr: Col. J. W. Sessums Exec., MM&D, Wash.
To: Chief of Transportation ASF, Wash.
(File: M&S)

Col. J. W. Sessums, Exec., MM&D, (Wash.) notified Chief of Transportation, Army Service Forces (Wash.) that since AAF were no no longer engaged in anti-submarine activity, AAF had no requirement for the Brodie device and would take no further action.

7. (C) IDM 22 Jan. 1944
Fr: Col. E. R. Heiberg, Exec. Office of Air Engineer, MM&D, Wash.
To: Col. J. W. Sessums Exec., MM&D, Wash.
(File: M&S)

Col. E. R. Heiberg, Exec., Office of Air Engineer, (Wash.) suggested that reconsideration be given to the proposed 1st Ind. dated 19 Jan. 1945 (subsequently dispatched 25 Jan. 1945). While it was realized the principal use of the Brodie equipment was in anti-submarine activity, Col. Heiberg stated it was visualized that there were other conditions under which a cable landing rig would be useful. He suggested that the theaters be contacted for their reactions to the proposed landing apparatus before a statement was made that AAF had no interest in the installation.

8. (U) IDM 24 Jan. 1944
Fr: Col. R. C. Wilson, Chief, Develop. Eng. Br. Mat. Div., Wash.
To: Exec., MM&D, Wash.
(File: M&S)

Col. R. C. Wilson, Chief, Develop. Eng. Br., Mat. Div. (Wash.) did not concur with the Air Engineer for the following reasons: (1) The Brodie apparatus was not an improvised gear, (2) the parts required prefabrication, (3) parts were heavy and unwieldly, (4) the apparatus had to be erected with expert technical care and the required skill was not usually available at isolated stations, and (5) the equipment probably would not be available at all points in which case the effort expended in obtaining, transporting and erecting the equipment could better be spent in preparing

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a landing strip. For these reasons, Col. Wilson recommended that the Ind. as originally written be signed. [Ind. dispatched 25 Jan. 1944, although dated 19 Jan. 1944 under which date it is digested in this History.]

9. (U) Ltr. 6 Feb. 1944
Fr: Major R. J. Delacroix
Ass't. Ground Adj. Gen.
AGF, Wash.
To: Develop. Div.
Army Service Forces
Wash.
(File: M&S)

Army Ground Forces Hdqs. (Wash.) believed there was a definite Ground Forces requirement for the "Suspension Apparatus for Light Planes developed by the Office, Chief of Transportation" and requested that Army Service Forces (Wash.) adapt the apparatus to ground installations. Although the apparatus which Army Ground Forces representatives had seen was designed for use on cargo vessels it appeared that it could be constructed for ground use by substituting light metal towers for ship masts. Army Ground Forces suggested that Lt. Brodie, designer of the equipment, be consulted on the development since he was acquainted with the problems and requirements for ground installation.

10. (U) 1st Ind. 8 Feb. 1944
Fr: Director, Req. Div.
Army Service Forces Hdqs.
Wash.
To: CG, AAF, Wash.
(File: M&S)

Army Service Forces Hdqs. (Wash.) concurred with Army Ground Forces Hdqs.' (Wash.) request for development of the Brodie equipment for ground installation and requested the comments and recommendations of AAF Hdqs. (Wash.) on the most expeditious means of developing the item.

11. (U) 2nd Ind. 11 Feb. 1944
Fr: Hdqs., AAF, Wash.
To: Hdqs., Army Service
Forces, Wash.
(File: M&S)

For the same reasons listed in the 24 Jan. 1944 IDM (in this Case History), Chief, Develop. Engr. Br., Mat. Div. (Wash.) notified Army Service Forces Hdqs. (Wash.) that the AAF recommended that the development of the Brodie apparatus not be undertaken.

12. (C) Ltr. 25 Feb. 1944
Fr: Chief, Eng. Div., WF
To: AC/AS, MM&D, Wash.
(File: M&S)

With reference to the report, "Tests of Suspension Landing Apparatus Installed on Ships," Chief, Eng. Div., (WF) asked MM&D (Wash.) for a determination of the requirement existing for the Brodie System and the need for the development of this equipment. By 1st Ind., 29 Feb. 1944, Chief, Develop. Eng. Br., Mat. Div. (Wash.) stated that OC&R (Wash.) had previously stated that no requirement existed for the Brodie system of launching aircraft; further, that Lt. Brodie had submitted the device to the Navy who had also stated that no requirement existed.

13. (C) Memo. 24 May 1944
Fr: Brig. Gen. T. D. White
AC/AS, Intelligence, Wash.
To: Dep. C/AS, Wash.
(File: M&S)

A series of demonstrations, presented by Office of Strategic Services (hereafter OSS), were held at Fort Belvoir, Va. on 23 May 1944 to acquaint Army, AAF and Navy personnel with the Brodie System of launching aircraft from a suspended cable and landing

14. (C) R&R-1, 26 May 1944
Fr: Brig. Gen. W. E. Hall
Dep. C/AS, Wash.
To: AC/AS, OC&R, Wash.
(File: M&S)

15. (C) Memo. 29 May 1944
Fr: Maj. Gen. H. A. Craig
AC/AS, OC&R, Wash.
To: CG, AAF, Wash.
(File: M&S)

16. (S) R&R-1, 15 June 1944
Fr: Col. G. Mayo
Air Engineer
MM&D, Wash.
To: AC/AS, OC&R, Wash.
(File: M&S)

17. (S) R&R-2, 23 June 1944
Fr: Brig. Gen. M. E. Gross
Req. Div., OC&R, Wash.
To: Air Engineer, MM&D, Wash.
(File: M&S)

the aircraft by hook on the same cable at completion of flight. Brig. Gen. T. D. White, AC/AS, Intelligence (Wash.) in reporting the event to Dep. C/AS, 24 May 1944, included a brief description of the operation of the Brodie System. He stated that the entire apparatus, weighing 9,500 pounds, could be dropped unassembled by parachute from transport or cargo airplanes and could be erected by nine men in about 20 hours. The equipment was also said to be nearly invisible from the air and highly invulnerable to enemy air attack.

Brig. Gen. W. E. Hall, Dep. C/AS (Wash.) forwarded Gen. White's 24 May 1944 Memo to AC/AS, OC&R (Wash.) and stated: "If General Arnold does not already know about this it should be presented to him." Gen. Hall suggested AC/AS, OC&R, do this since he would know whether an AAF requirement existed.

AC/AS, OC&R (Wash.) reported the OSS demonstrations of the Brodie System to CG, AAF (Wash.), stated the advantages and disadvantages of the System, and concluded that no AAF requirement was indicated for the following reasons: 500 foot flight strips for liaisor aircraft could usually be prepared in 20 hours except in remote instances where no level terrain was available and helicopters capable of operating from unprepared areas would be available before 1945.

While it was the opinion of some AAF representatives present at the OSS demonstrations of the Brodie device that a flight strip could be as easily prepared and that the helicopter would obviate necessity for a device such as Brodie's, Col. G. Mayo, Air Engineer (Wash.) believed there were occasions when a theater would require a device of the kind. Col. Mayo cited cases in general and one in particular which would profit by the availability of the Brodie System (see Document), and stated further that helicopters were not in production whereas a temporary surplus of liaison planes existed. He recommended to OC&R (Wash) that (1) the System be further investigated by AAF Bd. and (2) the device be approved to the extent that AF Commanders would know of its possibilities should the occasion arise for its need.

Brig. Gen. M. E. Gross, Req. Div., OC&R (Wash.) reiterated OC&R's previous opinions that landing strips for liaison aircraft could be constructed as easily as the Brodie device could be erected and that the forthcoming helicopters would fill any possible need

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for liaison aircraft in restricted areas. Gen. Gross concluded his reply to the Air Engineer, MM&D (Wash.) with the statement that it was contemplated no further consideration would be given to developmen of the Brodie System and that helicopters would be utilized in restricted areas where conventional liaison aircraft could not operate.

18. (C) Ltr. 24 June 1944
Fr: Lt. Col. R. A. Meredith
Ass't. Ground Adj. Gen.
AGF Hdqs., Wash.
To: Research and Develop. Div.
ASF, Wash.
(File: M&S)

24 June 1944, Army Ground Forces (Wash.) requested Army Service Forces (Wash.) to procure 22 complete Suspended Cable and Landing Apparatuses, each to have 3 Conversion Kits for the L-4 Airplane and 2 of the above 22 to have in addition 3 Conversion Kits for the L-5 Airplane. The 2 apparatuses with both Conversion Kits were to go to the Field Artillery School, Fort Sill, Okla. for service test and training. Disposition of the remaining 20 units would be given by separate action. By 1st Ind. 30 June 1944 Chief of Engineers, Army Service Forces (Wash.) was charged with this procurement and requested to coordinate with Lt. Col. R. S. Quinn, OSS (Wash.) and Lt. Brodie, Army Ground Forces. These two officers were studying design revisions for the device and latest modifications were desired in the units to be procured.

19. (S) R&R-1, 5 July 1944
Fr: Lt. Gen. B. M. Giles,
C/AS, Wash.
To: Maj. Gen. O. P. Echols
AC/AS, MM&D, Wash.
(File: M&S)

Lt. Gen. B. M. Giles, C/AS (Wash.) saw a description of the /Brodie/ device in the Minutes of the General Council dated 3 July 1944 and believed the Corps of Engineers was performing work that AAF should be doing. He therefore asked Maj. Gen. O. P. Echols, AC/AS, MM&D (Wash.) to get full information on the project from Army Service Forces Hdqs. (Wash.) and determine whether or not it was advisable for the AAF to take over the project.

20. (U) Memo. 6 July 1944
Fr: Brig. Gen. E. M. Powers
Dep. AC/AS, MM&D, Wash.
To: Col. J. F. Phillips
Chief, Mat. Div., Wash.
(File: M&S)

Brig. Gen. E. M. Powers, Dep. AC/AS, MM&D (Wash.) directed Col. J. F. Phillips, Chief, Mat. Div., (Wash.. to obtain full information on the Brodie System from Ground and Service Forces and to make plans to take over and carry on the experiment. This was based on Gen. Giles' telephone statement to Gen. Powers that Gen. Arnold had directed that the AAF take over all experimental work on the /Brodie device/ and if the Ground Forces objected, the case was to be presented to Gen. Arnold who would take the matter up with Gen. Marshall to effect a change in responsibility.

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21. (S) R&R-2, 8 July 1944
Fr: Maj. Gen. O. P. Echols
AC/AS, MM&D Wash.
To: Lt. Gen. B. M. Giles
C/AS, Wash.
(File: M&S)

Gen. Echols stated that the project of launching light airplanes to which Gen. Giles referred in his 5 July R&R was brought to attention of MM&D (Wash.) some time before by the proponent of the idea, a Naval Officer on duty with the Transportation Corps, and on subsequent occasions by the Army Ground Forces and the Corps of Engineers. Gen. Echols reviewed the steps taken by AAF in the matter and stated that the basis of Army Ground Forces' request to Chief of Engineers, Army Service Forces, to develop the equipment was that the device "was essentially a landing and take-off device for synthetic 'air field' and therefore came under the purview of the Engineers." However, Gen. Echols stated that action was being initiated for AAF to take over development and procurement of the Brodie system to meet Army Ground Forces requirements.

22. (U) Ltr. 13 July 1944
Fr: Maj. Gen. O.P. Echols
AC/AS, MM&D, Wash.
To: Requirements Sect.
Army Ground Forces, Wash.
(File: M&S)

Because it was understood Army Ground Forces were formulating a requirement for the Brodie System and since the AAF were charged with development of such equipment, Gen. Echols notified Army Ground Forces that the AAF were anxious to render any assistance possible and were prepared to procure whatever number of items the Ground Forces desired.

23. (R) 3rd Ind. 19 July 1944
Fr: Col. R. M. Osborne
Dir., Research & Develop.
Div., Army Service Forces
Wash.
To: AC/AS, MM&D, Wash.
(File: M&S)

Responsibility for procurement of the Brodie Apparatus was transferred by Army Service Forces Hdqs. (Wash.) to AAF Hdqs. (Wash.) on 19 July 1944 in accordance with verbal agreement between Gen. Echols and Maj. Gen. L. O. Clay, Army Service Forces Hdqs. (Wash.).

24. (R) Ltr. 21 July 1944
Fr: Chief, Develop. Eng. Br.,
Mat. Div., Wash.
To: CG, Mat. Com., WF
(File: M&S)

Mat. Div. (Wash.) notified Mat. Com. (WF) of the Army Ground Forces request for procurement of 22 complete suspended cable launching and landing items of equipment with conversion kits (the same request previously submitted to Army Service Forces, see letter 24 June 1944). OSS had already taken action to procure some of the equipment for their own use and would make one unit available to Mat. Com. to expedite development testing. OSS had engaged Maryland Engineering Company Pikesville, Md. (hereafter Maryland Engineering) and All American Aviation Company, Wilmington, Delaware (hereafter All American) for production of their units. Mat. Div. (Wash.) suggested that Mat. Com. obtain the service of Lt. Brodie, inventor of the apparatus and directed that Mat. Com. take over the development and test of the equipment and make the procurement requested by Army Ground Forces.

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25. (R) 4th Ind., 26 July 1944
Fr: Maj. Gen. O. P. Echols
AC/AS, M&S, Wash.
To: CG, Army Ground Forces, Wash.
(File: M&S)

Gen. Echols notified CG, Army Ground Forces (Wash.) that AAF had taken action to comply with the request [for Brodie apparatus] as set forth in basic letter (24 June 1944). Copy of the directive (Ltr., 21 July 1944) to Wright Field was enclosed.

26. (R) CTI-1791, 27 July 1944
Fr: Col. T. A. Sims
Dep. C/S, Mat. Com., WF
To: Eng. Div., WF
(File: Central Files)

CTI-1791 dated 27 July 1944 initiated action at Wright Field to develop, test and procure the Brodie Suspended Launching and Landing Apparatus in accordance with the authority and provisions of the 21 July letter from Mat. Div. (Wash.).

27. (R) 6th Ind. 15 Aug. 1944
Fr: Col. J. F. Phillips
Chief, Mat. Div., Wash.
To: CG, Army Ground Forces
Wash.
(File: M&S)

In reply to Army Ground Forces 5th Ind. inquiry, 4 Aug. 1944, concerning progress of development and procurement of the Brodie apparatus, Chief, Mat. Div. (Wash.) stated that the first two apparatuses would probably be ready for shipment to Fort Sill in 30 days. Chief, Mat. Div., requested that Lt. Brodie assist Mat. Com. (WF) in acceptance of the devices at the manufacturer's plant and in installation at Fort Sill. It was understood Lt. Brodie would not be available until about 30 August 1944.

28. (S) TT 18 Aug. 1944
Fr: Equip. Sect., Mat. Div.
Wash.
To: Eng. Div., WF
(File: M&S)

Mat. Div. (Wash.) directed Eng. Div. (WF) to disassemble and prepare for shipment the Brodie unit located at Fort Belvoir. This directive resulted from an urgent cable request from ASC India-Burma Sector (Calcutta, India). The theater had been advised that the equipment would be ready for shipment by 1 Sept. 1944 and Mat. Div. urged that the date be met. Priority 1B was assigned.

29. (S) Ltr. 19 Aug. 1944
Fr: AC/S, U.S. Fleet
Navy Dept., Wash.
To: CG, AAF, Wash.
(File: M&S)

Navy Dept. (Wash.) asked AAF for one Brodie land installation with three L-4 airplane kits and one L-5 kit for the Pacific Fleet to make comparative tests and evaluate the Brodie System vs. the jet catapult for launching lightweight airplanes. (See attached document for details). The equipment would be returned on completion of the tests.

30. (S) Ltr. 30 Aug. 1944
Fr: Brig. Gen. P.W. Timberlake
Dep. C/AS, Wash.
To: Comm. in Chief, U.S. Fleet
Navy Dept., Wash.
(File: M&S)

AAF (Wash.) notified Navy Dept. (Wash.) that arrangements had been made to send the only available Brodie type land installation to the CBI Theater by air. However, AAF were procuring 22 units of the equipment for the Army Ground Forces and one of the first two built would be released to the Navy by agreement with the Ground Forces. The assemblies were expected to be available by 15 Sept. 1944 and Mat. Com. (WF) had been instructed to divert one of the first two and ship it to [the Naval Supply Office at San Diego, California] as the Navy had requested. The equipment was to be shipped to Mat. Com. on completion of tests.

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31. (R) Ltr. 15 Sept. 1944
Fr: Col. J. F. Phillips
Chief, Mat. Div.
To: Comm. in Chief,
U. S. Fleet, Navy Dept.,
Wash.
(File: M&S)

15 Sept. 1944, AAF notified the Navy that it would be impossible to supply the promised Brodie system before approximately 30 days because of difficulties with the masts.

32. (R) 7th Ind. 1 Sept. 1944
Fr: Hdqs. Army Ground Forces,
Wash.
To: AC/AS, [M&S], Wash.
(File: M&S)

Army Ground Forces agreed to Lt. Brodie's assignment to AAF for special duty and requested information as to where, when and how long he would be wanted.

33. (S) Ltr. 2 Sept. 1944
Fr: Col. J. F. Phillips
Chief, Mat. Div., Wash.
To: CG, Army Ground Forces
Wash.
(File: M&S)

As a result of cable requests (attached) from AAF, Calcutta, India, for a Brodie Device and trained operating crew for use in China by Y Forces, Col. Phillips, Chief, Mat. Div. (Wash.) requested Army Ground Forces to have nine Engineer personnel report to Fort Belvoir to receive instruction on operation of the device. He asked also that Sgt. Gregory and Lt. Brodie be made available as instructors. A two weeks' training course on the erection and operation of the equipment was to be held at Fort Belvoir preparatory to sending a crew to the theater to give instructions there. By 1st Ind. 9 Sept. 1944 Army Ground Forces agreed to make available the 9 personnel requested, 2 to be available for overseas (as stipulated in the request) and the remaining 7 to be used as ground crew at Fort Belvoir for thirty days.

34. (R) Ltr. 7 Sept. 1944
Fr: Mr. M. I. McHugh
Ass't. Chief, Proc.
& Supply Br., OSS, Wash.
To: All American Aviation Co.
Wilmington, Del.
(File: Contract File)

OSS notified All American Aviation Inc. that the AAF would be responsible for the supervision of OSS Contract 592 and the subsequent testing of units. Further, the AAF would be responsible for the redesign of the article and incorporation of all new devices or changes. OSS would remain financially responsible for any charges resulting therefrom.

35. (R) 8th Ind. 9 Sept. 1944
Fr: Col. J. F. Phillips
Chief, Mat. Div., Wash.
To: Eng. Div., ATSC, WF
(File: M&S)

Mat. Div. (Wash.) understood that Army Ground Forces Hdqs. (Wash.) had assigned Lt. Brodie to Mat. Com. (WF) for 30 days, effective 9 Sept. 1944. Because he would be needed for a considerably longer period, Mat. Div. recommended that Eng. Div., ATSC (WF) take action to have him transferred permanently to AAF, prior to expiration of the Temporary Duty orders.

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36. (C) Ltr. 14 Sept. 1944
Fr: Rear Admiral E. W. Mills
Actg. Chief, Bureau of
Ships, Navy Dept., Wash.
To: CG, AAF, Wash.
(File: M&S)

Navy LST-776 had been equipped with the Brodie system* and assigned to the San Diego Area for training of the crew in operation of the Brodie Device. Since Lt. Brodie was best qualified in operation of the apparatus, Bu. Ships, Navy Dept. (Wash.) requested that he be detailed to assist during a 3 weeks training period in San Diego, Cal. By 1st Ind. 19 Sept. 1944, AAF forwarded the request to Army Ground Forces since Lt. Brodie was on temporary duty orders to AAF from the Ground Forces. By 2nd Ind., 23 Sept. 1944, Ground Forces agreed and subsequently (27 Sept.) AF notified Bu. Ships.

* By telephone conversation with Capt. Brodie, Sept. 1945, the following information was disclosed: The parts of this particular system which were incidental to handling the airplane were fabricated from existing OSS drawings by Gulf Port Army Air Base. The remaining items were furnished by the Navy.

37. (R) Ltr. 15 Sept. 1944
Fr: Col. J. F. Phillips
Chief, Mat. Div., Wash.
To: CG, Army Ground Forces
Wash.
(File: M&S)

Because of difficulties with the production type masts in tests of the Brodie device at Fort Belvoir, AAF (Wash.) notified Army Ground Forces (Wash.) that the first two devices would not be ready for shipment to Fort Sill in the 30 days promised on 15 Aug. Results of further tests would be known in a few days. If the tests made it necessary to return to the hexagonal type mast of the original design, two weeks would be required to produce the items.

38. (C) Memo. for Record
15 Sept. 1944
By: R. W. Jones
Mat. Div., Wash.
(File: M&S)

An extract from Equip. Lab. (WF) Daily Information Report, 8 Sept. 1944 stated: Personnel of OSS visited Equip. Lab. to discuss future plans for the Brodie System. It was arranged that OSS would continue present contracts for 18 complete units; Equip. Lab. would test a pilot model, initiate desirable modifications if required, package assemblies for aerial delivery, and take action to ship the 18 units as directed by higher authority.

39. (R) Ltr. 27 Sept. 1944
Fr: R. I. McHugh
Actg. Chief, Proc. &
Supply, OSS, Wash.
To: ATSC, WF
(File: Central Files)

In confirmation of arrangements reached at WF 6 Sept. 1944 between AAF and OSS representatives, Mr. R. I. McHugh, OSS (Wash.) listed the following conclusions in a letter to WF 27 Sept. 1944: (1) OSS would continue its contract with All American to the extent of $93,000.00; (2) AAF would accept immediate responsibility for supervision of production, testing, engineering and redesigning, including technical supervision of the All-American contract; AAF would develop a means of dropping the Brodie Device by parachute and make information of the results available to OSS; OSS would transfer to AAF 9 complete

sets of the equipment on completion of the project, without reimbursement, in consideration of the services rendered by AAF, and would retain 9 sets for its own purposes. [This accountability for 18 sets is inconsistent with the contract which called for 19 sets.] OSS requested that WF handle suitable inspection specifications for the equipment and stated that All American had been notified of the request. (Copy of letter to All American, 7 Sept., was enclosed.)

40. (S) Cable, 27 Sept. 1944
Fr: Chief, Mat. Div., Wash.
To: CG, AAF,
India-Burma Sector
Calcutta, India
(File: M&S)

Chief, Mat. Div. (Wash.) cabled AAF, India-Burma Sector (Calcutta, India) on 27 Sept. 1944 that the Brodie equipment and a trained crew were ready for shipment as soon as theater priority assignment was made. 29 Sept. 1944 a cable from the Theater requested that the equipment and personnel be shipped by first available water transportation.

41. (U) TG 30 Sept. 1944
Fr: Equip. Lab.
Eng. Div., WF
To: OSS, Wash.
(File: Central Files)

In order to facilitate handling of Brodie project, Equip. Lab., Eng. Div. (WF) requested OSS to authorize All American and Maryland Engineering to honor government bills of lading as issued by ATSC (WF) from time to time.

42. (R) IDM 9 Oct. 1944
Fr: Col. R.C. Wilson
Chief, Develop. Eng. Br.
Mat. Div., Wash.
To: Col. J. F. Phillips
Chief, Mat. Div., Wash.
(File: M&S)

Col. Wilson reported to Col. Phillips that the future availability and tactical use of the Brodie System depended on quick concentration of activities in one spot, Wright Field, and on Lt. Brodie's presence at Wright Field for a substantial period of time for the following reasons: Certain originals of drawings were missing or were decipherable only by Lt. Brodie; engineering changes were necessary to eliminate certain hazardous faults; record of procurement and undelivered items was "in Lt. Brodie's head"; and training program for required pilots and ground crew was dependent on Lt. Brodie's presence. The fact that Lt. Brodie was being detained on the West Coast by the Navy had been discussed with Lt.Col.H.F.Vincent, Army Ground Forces(Wash.) who thought that Brodie should stay on the Coast at least until certain [Navy] maneuvers with the system were completed about 14 Oct., "in order to avoid irritating the Navy men involved." Col. Wilson proposed asking the Navy to release Brodie promptly after the maneuvers or not later than 16 Oct. 1944. Col. Phillips' concurrence with this idea is indicated in pencil on the document.

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43. (C) TT 10 Oct. 1944
Fr: Maj. F.C. Oakley
Equip. Sect.
Mat. Div., Wash.
To: Equip. Lab.
Eng. Div., WF
(File: M&S)

Equip. Sect., Mat. Div. (Wash.) understood that Eng. Div. (WF) was giving first priority to getting one complete system with 6 months' maintenance parts and necessary airplane kits on the way to CBI Theater. 8 each L-4 and L-5 kits were to be sent if possible but if this number would delay movement, as low as 3 L-5 kits and 2 L-4 kits would be satisfactory. Mat. Div. wanted to be notified as soon as supply people could give firm estimate of when the equipment would be available on west coast so that general overseas movement order could be written. Mat. Div. stated it was important that determination of the availability date be expedited.

44. (C) Report on Observation of Brodie System Demonstration at Coronado, Cal. 5 & 6 Oct. 1944 - Rpt. dated 10 Oct. 1944
By: Capt. L. M. Bernstein
Field Artillery
(File: M&S)

A demonstration was held 5 and 6 Oct. 1944 at Coronado Cal. to present the Brodie system to the Navy Dept. and other interested agencies. Comparison of the Brodie system (both land and sea rigs) was made with a Jet Catapult device which was actually not comparable as it was capable of launching only. As reported by a Field Artillery Officer, the demonstration indicated that the Brodie sea rig, with minor refinements, offered a positive means of providing spotter and liaison aircraft for future amphibious operations. This Officer stated that the general opinion concerning the Brodie land rig seemed to be that it was "merely a complicated method of providing a landing area for a light airplane"; however, that while a landing strip was preferable, the Brodie device could be relied upon to provide spotter and liaison aircraft with an operational base in remote places where a ground strip could not be prepared.

45. (U) Informal Diary Record of Project MX 561 (Brodie System) 10 Oct. 1944
(File: M&S)

/Equip. Lab. (WF)/ recorded informally the major activity on project MX-561 (Brodie System) from the original CTI-1791, 27 July 1944 through 6 Oct. 1944. The record concludes with a statement that the Tow Target and Aerial Pick-up Unit, /Equip. Lab. (WF)/ had "been able to do only a very poor job on coordination" because of the continued absence of Lt. Brodie and Sgt. Gregory. That Unit had been unable to secure the following: (1) Complete list of contractors who supplied equipment, blueprints, (2) specifications, (3) status of equipment, (4) location of various sub-assemblies, (5) information on conversion kits, (6) status of test work, and (7) bills of material.

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46.(R) Ltr. 14 Oct. 1944
Fr: Col. J. F. Phillips
Chief, Mat. Div., Wash.
To: CG, Army Ground Forces, Wash.
(File: M&S)

Mat. Div. (Wash.) believed that 6 months' supply of maintenance parts for the 22 Brodie Systems requested by the Army Ground Forces should be procured at once because the devices would undoubtedly be in use for some time before standardization of the system could be completed. Mat. Div. called attention to a discrepancy in the number of conversion kits to be procured as originally requested and those specified for the one system shipped to the CBI Theater. If the requirements had changed, appropriate additional procurement should be made at once. Army Ground Forces (Wash.) concurred by 1st Ind., 27 Oct. 1944, with Mat. Div. on the procurement of maintenance parts and recommended procurement of conversion kits in the following quantities: five L-4 kits and five L-5 kits for each of twenty-one of the systems and eight of each of the kits for one system (the one for CBI). This constituted a change in requirements from those specified in the basic request of 24 June 1944.

By 2nd Ind., 28 Oct., Mat. Div. forwarded the recommendation to Eng. Div. (WF). By 3rd Ind., 16 Nov. 1944, Eng. Div. stated that procurement was being made in accordance with the recommendation.

47. (C) Ltr. 23 Oct. 1944
Fr: Col. W. F. McKee
Acting AC/AS, OC&R
Wash.
To: President, AAF Bd.
Orlando, Fla.
(File: M&S)

23 Oct. 1944, OC&R (Wash.) requested the AAF Bd. (Orlando, Fla.) to conduct a project for the purpose of determining a military requirement for the Brodie System of launching and landing aircraft. OC&R stated that previous tests had been conducted by OSS and further tests would be made for the CG, Army Ground Forces, by the Field Artillery School, Fort Sill, Okla.

48. (R) TP 28 Oct. 1944
Fr: Major F.C. Oakley
Equip. Sect., Mat. Div.
Wash.
To: Equip. Lab., Eng. Div., WF
(File: M&S)

Equip. Sect., Mat. Div. (Wash.) informed Equip. Lab., Eng. Div. (WF) of the Army Ground Forces' increased requirements for Brodie maintenance parts and kits. Six months' supply of maintenance parts and 5 L-4 kits and 5 L-5 kits were to be procured for each of the 22 systems AAF was procuring for the Ground Forces except for 1 system which had already been shipped to the theater with 8 kits of each type. These requirements amended those stated in 21 July 1944 letter from Mat. Div., (Wash.).

49. (C) Cable 24 Nov. 1944
Fr: CG, Air Service Command
Calcutta, India
To: War Dept., Wash.
(File: M&S)

Air Service Command (Calcutta, India) cabled War Dept. (Wash.) on 24 Nov. 1944 that the Royal Air Forces (hereafter RAF) wanted a Brodie device for use of their troops in the India-Burma Theater. By return cable 25 Nov., Mat. Div. (Wash.) stated that normal Lend Lease procedure would have to be followed to obtain

the Brodie device for RAF. Mat. Div. would contact British Air Commission in Wash. but suggested RAF (India) wire RAF Delegation (Wash.) and give basis of request as means of expediting the matter.

50. (C) Cable 28 Nov. 1944
Fr: Allied Force Hdqs. Caserta, Italy
To: War Dept., Wash.
(File: M&S)

Allied Force Hdqs. (Caserta, Italy) requested two Brodie devices for demonstration and test; also, one training team, personnel of which could be absorbed on completion of their training mission. It was understood this "portable airfield for liaison planes" was beyond development stage and available for use. According to a 16 Dec. 1944 Memo. for Record the two devices requested were to be available about 1 March 1945.

51. (U) Ltr. 4 Dec. 1944
Fr: Maj. Gen. R.T. Pennell, Commandant, Field Artillery School, Fort Sill, Okla.
To: Capt. J. H. Brodie, Equip. Lab., Eng. Div., WF
(File: Central Files)

Field Artillery School, Fort Sill, Okla., stated that two Brodie Devices were in daily use at that school and directed the attention of ATSC (WF) to a number of deficiencies which had developed in operation and which it was believed should be corrected. ATSC replied by 1st Ind. 14 Dec. 1944 with a detailed explanation of the measures which had been or would be accomplished to correct the deficiencies the Field Artillery School had encountered.

52. (U) TT 5 Dec. 1944
Fr: Eng. Br., Mat. Div. Wash.
To: Equip. Lab., Eng. Div. WF
(File: Equip. Lab., Eng. Div.)

By teletype 5 Dec. 1944, Eng. Br., Mat. Div. (Wash.) confirmed instructions to Capt. Brodie to ship five L-5 Conversion Kits by fastest method to Naval Air Transport Service, Alameda, California. These kits and the ones shipped to Amphibious Training Command, Coronado, Cal., would be added to Army Ground Forces requirement by paper work then in process. Capt. Brodie was therefore authorized to replace the kits shipped by matching procurement and to change priority of the project from 1B to 1A if necessary to accomplish the procurement in time for an anticipated need.

53. (S) Ltr. 9 Dec. 1944
Fr: Col J. F. Phillips, Chief, Mat. Div., Wash.
To: Chief, Eng. and Proc., WF
(File: M&S)

Chief, Mat. Div. (Wash.) directed that ATSC (WF) give cooperation to the Navy in the development, procurement and production of the ship type Brodie device; and forwarded a letter from the Army Ground Forces which requested AAF Hdqs. to cooperate on Naval production as the Ground Forces were anxious for the ship type Brodie device to be available for all future amphibious operations. By 1st Ind., 9 Dec. 1944, Chief, Mat. Div. had suggested to the Ground Forces that purchase orders for items required for the ship type device be filed with ATSC as soon as possible.

54. (R) Ltr. 11 Dec. 1944
Fr: Lt. Col. R.S. Quinn
Air Officer, OSS
Wash.
To: Equip. Lab., Eng.
Div., WF
(File: Central Files)

11 Dec. 1944, OSS requested that emphasis be placed on completion of the air drop project for the Brodie rig at ATSC (WF). Lt. Col. R. S. Quinn, Air Officer, OSS (Wash.) pointed out that OSS had greatly assisted AAF in procurement of Brodie equipment and had understood that AAF would work out the air drop technique which OSS wanted before using the equipment in the theaters. It was understood that an A-1 priority had been assigned to the project and that a contract was to be let to Maryland Engineering but that little actual progress had been made. By 1st Ind., 18 Dec. 1944, Chief, Equip. Lab., Eng. Div. (WF) stated that delay in negotiations with Maryland Engineering had been occasioned by the necessity for a secrecy agreement prior to release of the air drop data to the Contractor. However, with that agreement made, a contract would be initiated on receipt of the Contractor's proposal.

55. (R) Ltr. 14 Dec. 1944
Fr: Col. J. F. Phillips
Chief, Mat. Div., Wash.
To: CG Army Ground Forces
Wash.
(File: M&S)

To expedite availability of maintenance parts and additional airplane kits requested by the Ground Forces 27 Oct. 1944, ATSC (WF) was arranging with OSS to procure the items for the rigs already fabricated by amending OSS Contract 645 with Maryland Engineering. It was estimated that the 10 OSS sets in storage could be supplied with the required kits and spare parts at the rate of 3 sets per week starting about 15 Feb. 1945. An AAF contract was being processed to cover the total Army Ground Forces requirement less those rigs "borrowed" from OSS, plus rigs required for experimental purposes. Deliveries on this contract at the rate of two complete systems per week were expected to begin about 1 March 1945. Chief, Mat. Div. (Wash.) suggested to the Ground Forces that the delivery estimates not be quoted to the theaters at that time as the figures were dependent on confirmation of the OSS "loan" and the impending ship rig procurement [for the Navy.]

56. (R) TT 17 Dec. 1944
Fr: Equip. Sect.
Mat. Div., Wash.
To: Eng. Div., WF
(File: Central Files)

Delivery estimates on complete Brodie systems were being used by New Develop. Div., Army Special Staff (Wash.) as a basis for theater planning of the Brodie device. Equip. Sect., Mat. Div. (Wash.) notified Eng. Div. (WF) that it would therefore be highly desirable to have the rigs at least one month earlier than WF had indicated. (In 12 Dec. TT attached.) It was imperative that schedules be met or bettered. Mat. Div. directed that a constant check be made on the manufacturer and his sub-contractors to see that progress was adequate to insure earliest possible delivery. Mat. Div. was trying to get confirmation from OSS on a temporary loan of nine existing sets.

57. (U) TT 21 Dec. 1944
Fr: Eng. Br., Mat. Div. Wash.
To: Equip. Lab., Eng. Div., WF
(File: Central File)

Mat. Div. (Wash.) notified WF that a meeting that day with OSS (21 Dec. 1944) indicated it was unsafe to rely on early completion of 10 OSS sets of Brodie equipment to better deliveries to theaters. Therefore, Mat. Div. directed that emergency measures be taken to procure the 18 Brodie Systems on AAF Contract if such action was necessary to insure delivery of at least two Systems per week beginning not later than 1 March 1945. Mat. Div. understood that Maryland Engineering was in best position to deliver complete systems quickly because of experience with OSS procurement. 30 Dec. 1944, WF replied that immediate action would be taken to procure the equipment. A letter contract to Maryland Engineering was planned.

58. (U) Ltr., 23 Dec. 1944
Fr: Brig. Gen. F. O. Carroll Chief, Eng. Div., WF
To: Presentation Br., OSS Wash.
(File: Central Files)

Chief, Eng. Div. (WF) commended the Presentation Br., OSS (Wash.) on the preparation of the Brodie System instruction manual and stated that it was of great benefit in the training of personnel in the use of the equipment. It had received wide comment and approval and would probably be used as a basis for an AAF technical order on the equipment. (Copy of this manual is included with this history.)

59. (R) 1st Ind. 24 Dec. 1944
Fr: Hdqs., Army Ground Forces Wash.
To: Eng. Br., Mat. Div., Wash.
(File: M&S)

In view of current theater requirements and the contemplated Navy requirement for the Brodie apparatus, Army Ground Forces (Wash.) requested that Mat. Div. (Wash.) make every effort to improve the schedule of deliveries (both dates and quantities) previously quoted. Army Ground Forces considered the equipment important and believed its early delivery was urgent.

60. (R) 2nd Ind. 30 Dec. 1944
Fr: Col. J. F. Phillips Chief, Mat. Div., Wash.
To: CG, Army Ground Forces Wash.
(File; M&S)

The availability of the 10 Brodie systems [to be "borrowed" from OSS] was uncertain because of difficulties with getting the OSS contract amended. Chief, Mat. Div. (Wash.) told Army Ground Forces (Wash.) in reply to their 24 Dec. 1944 request, that everything would be done to improve delivery dates, but that it was unsafe to rely on anything better than 2 systems per week beginning March 1, 1945. Army Ground Forces reiterated in 3rd Ind., 14 Jan. 1945, that they wanted every means possible employed to expedite delivery of the equipment and asked to be kept advised of the progress.

61. (U) Memo Rpt. TSEPL-3H-662-16-C, 2 Jan. 1945
(File: Equip. Lab., Eng. Div.)

Capt. Brodie reported results of conferences in Wash. with OSS officials regarding amendments to OSS contracts with Maryland Engineering and All American.

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ATSC (WF) wanted an amendment to OSS contract 645 with Maryland Engineering to allow purchase of spare parts and conversion kits. OSS tentatively agreed if ATSC would agree to: (1) transfer funds on formal requisition for 9 sets of Brodie equipment plus the first pilot model which was in use for testing work at ATSC; (2) expedite the air drop project; and (3) furnish OSS with reports on progress of all phases of the project to date. An amendment to OSS Contract 592 with All American was discussed since that Company had incurred costs beyond those originally planned. ATSC considered the costs excessive but it was decided that OSS would conclude the contract and make payment subject to an audit. Details of the All American situation are contained in an attached letter from the Contractor to OSS. Capt. Brodie recommended that the air drop project be expedited in conformance with original agreement with OSS 27 Sept. 1944.

62. (U) TI-2137, 3 Jan. 1945
Fr: Col. T. A. Sims
Chief, Admin., WF
To: Proc. Div. and Eng. Div., WF
(File: Central Files)

TI-2137, dated 3 Jan. 1945, superseded CTI-1791 and 2 Addendums, and outlined a new program for the procurement and future development of the Brodie System based on authority of the 21 /December/ 1944 teletype from Mat. Div. (Wash.). Proc. Div. (WF) was to procure: (1) 22 sets of Brodie equipment with 6 months maintenance parts - 4 of the total 22 could be available through OSS; (2) 6 months maintenance parts for 16 sets of the equipment currently on OSS Contract; and 6 each L-4 and L-5 Conversion Kits for each of the 22 sets. 1-A priority was assigned and delivery of the equipment was to start 1 March 1945 and be completed 6 weeks thereafter. Eng. Div. (WF) was charged with continuance of research for the improvement of the design of the apparatus.

63. (R) AFP 411647, 5 Jan. 1945
(File: Contract Files)

AFP 411647, initiated by Misc. Br. Prod. Sect. (WF) 5 Jan. 1945, provided for 18 Brodie Systems, 204 each L-4 and L-5 Conversion Kits, and 34 sets of spare parts at an estimated total cost of $721,506.60. Maryland Engineering was recommended as sole source of supply as that Company was already in production on the same System for OSS and delivery requirements would not permit time to establish new sources. This procurement was to be made in accordance with CTI-2137, dated 3 Jan. 1945, and /Mat. Div. (Wash.)/ teletype dated 21 December 1944.

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64. (S) 1st Ind. 6 Jan. 1945
Fr: Chief, Equip. Lab.
Eng. Div., WF
To: [Chief, Mat. Div.]
Wash.
(File: Central Files)

Chief, Equip. Lab., Eng. Div. (WF) stated 6 Jan. 1945 that ATSC (WF) was prepared to take immediate action on procurement of Brodie items for the Navy in compliance with the directive from Mat. Div. (Wash.) dated 9 Dec. 1944. However, it was understood that no directive had yet been issued by the Navy Dept. to equip landing ship tanks in conformance with recommendations. Results of further sea tests were being awaited.

65. (R) Ltr. 22 Jan. 1945
Fr: Chief, Equip. Lab., WF
To: OSS, Wash.
(File: Central Files)

Chief, Equip. Lab. (WF) reported to OSS (Wash.) the progress of ATSC (WF) activity on the OSS procurement of Brodie Systems. Details of development and testing progress as well as contractual status are included. All Maryland Engineering equipment on OSS Contracts had been accepted and shipped to Misc. Equip. Depot, Columbus, Ohio, for storage. The 9 sets to be retained by OSS were included in this storage and were available for OSS disposition at any time. A portion of the equipment supplied by All American on OSS Contracts had been shipped directly to field organizations; some complete sets had been cannabalized to furnish spare parts; and the remainder ofthe total equipment on contract was in storage at the Contractor's plant awaiting AAF shipping instructions. ATSC thought spare parts for six months field operation should be obtained and had arranged to procure such equipment on AAF Contract with Maryland Engineering. ATSC was obtaining complete sets of documents for evidence of shipment from both contractors on OSS contracts. Chief, Equip. Lab., Eng. Div. (WF) stated there was nothing from the standpoint of technical inspection and acceptance of the equipment manufactured by both companies which should delay processing of final OSS Contracts. However, All American costs appeared excessive in general and it was believed a detailed post payment audit should be made.

66. (U) Ltr. 20 Jan. 1945
Fr: Chief, Equip. Lab.
Eng. Div., WF
To: All American Aviation, Inc.
(File: Central Files)

Chief, Equip. Lab., Eng. Div. (WF) requested All American to furnish photostat copies of all documents evidencing shipment of equipment on OSS Contract No. 592. This information was wanted to determine the amount of material delivered to date which All American should be paid for. The same request was made to Maryland Engineering for the two contracts OSS had with that Company for Brodie equipment (Document attached.)

67. (U) TT 10 Feb. 1945
Fr: Eng. Br., Mat. Div.
Wash.
To: Prod. Sect., Proc. Div.
WF
(File: Central Files)

Eng. Br., Mat. Div. (Wash.) in teletype to Prod. Sect. Proc. Div. (WF), 10 Feb. 1945, stated that every effor should be made to have firm schedule of complete Brodie systems available not later than 15 Feb. This schedule would be used by Army Ground Forces as basis for issuing movement orders covering equipment and trained personnel then awaiting orders.

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68. (U) TI-2137, Ad. I
14 Feb. 1945
Fr: Col. P. A. Sims
Chief of Administration
ATSC, WF
To: Eng. Div., WF
(File: Central Files)

TI-2137, Ad. I, dated 14 Feb. 1945, directed that Eng. Div. (WF) develop a method of dropping the Brodie gear from a C-46 or C-54 aircraft by parachute. Two complete equipments were to be fabricated and shipped to Field Artillery Board, Fort Bragg, N.C., for service test. This TI was based on authority contained in a 9 Feb. TT from Chief, Eng. Br., Mat. Div. (Wash.). A 22 Jan. R&R from Chief, Equip. Lab., Eng. Div. (WF) to Chief of Administration (WF) states that this project for air drop of the Brodie device was agreed upon at the meeting between OSS and ATSC representatives on 6 Sept. 1944 but was not included in CTI-2137 which provided for procurement and development of the Brodie device.

69. (S) R&R-1, 15 Feb. 1945
Fr: Dir., New Develop. Div.
War Dept. Special Staff
Wash.
To: AC/S, Operations Division,
WDGS (Wash.)
(File: M&S)

Dir., New Develop. Div., War Dept. Special Staff, (Wash.) cited two messages from USAFMTO, one 28 Nov. 1944 and one 3 Feb. 1945, which requested two Brodie Devices and one team of personnel. Dir., New Develop. Div., told AC/S, Operations Div., WDGS (Wash.) that no Brodie Devices were available when the first cable was received but that M&S, AAF (Wash.) had indicated that date (15 Feb. 1945) that the first two from production would be available 1 March 1945. Due to the peculiarity of the terrain in MTO, personnel of Army Ground Forces, Operations Div., and New Develop. Div. had agreed that the first two devices should go to MTO. The Theater had been informed of the availability of the first two devices and had been requested to send shipping instructions.

70. (U) TT, 15 Feb. 1945
Fr: Prod. Sect.
Proc. Div., WF
To: Eng. Br., Mat. Div.,
Wash.
(File: Central Files)

15 Feb. 1945, Prod. Sect., Proc. Div. (WF) stated that two complete Brodie systems with spares, export packed, would be available at the Columbus Depot 1 March. No shipping instructions had been received. Further availability of these systems would be determined by ability of ATSC (WF) and WPB (Wash.) to fill raw material requirements of the contractor. If the contractor could receive critical items by 1 March, complete equipment with spares could again start flowing at rate of two sets per week by 15 or 20 March. ATSC was putting forth every effort to expedite deliveries.

71. (U) TT, 21 Feb. 1945
Fr: Eng. Br., Mat. Div.
Wash.
To: Prod. Sect., Proc. Div.
WF
(File: Central Files)

Eng. Br., Mat. Div. (Wash.) stated that Army Ground Forces had been requested to process shipping instructions for the two Brodie systems available 1 March 1945 but estimate on availability of remaining units was still required. Eng. Br. fully appreciated difficulties referred to by ATSC (WF) but believed they

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were no different than those affecting every rush item. Eng. Br. asked if ATSC could state that complete equipment would begin to flow about 15 March and if not when could firm statement be expected. Advance schedule was necessary to allow for personnel and equipment movement order preparation. 7 March 1945, ATSC replied that one complete system would be ready 31 March but flow of two systems per week would be delayed until 16 April unless sheave casting delivery could be improved.

72. (R) Ltr., 14 March 1945
Fr: Brig. Gen. J. F. Phillips
Chief, Mat. Div., Wash.
To: Field Artillery Br.,
Army Ground Forces
Wash.
(File: M&S)

Chief, Mat. Div. (Wash.) notified Army Ground Forces (Wash.) 14 March 1945, that one complete Brodie system, packed for export, would be available at Maryland Engineering approximately 1 April 1945. Two more systems were expected to be available the week of 16 April and each week thereafter until the contract was completed. Chief, Mat. Div., requested shipping instructions and stated that unless these instructions were received prior to the availability dates quoted, the equipment would be moved to the 843d AAF Specialized Depot, Columbus, Ohio. It would then be available for reshipment about two weeks later. By 1st Ind. 10 April 1945, Army Ground Forces requested that the first four systems be shipped to ETO. Further shipping instructions would be furnished later.

73. (R) Ltr. 27 March 1945
Fr: Chief, Eng. Br.,
Mat. Div., Wash.
To: Prod. Sect., Proc.
Div., WF
(File: Central Files)

Chief, Eng. Br., Mat. Div. (Wash.) informed ATSC (WF) that the one Brodie system scheduled for completion 1 April 1945 was to be shipped overseas from an east coast port; and should therefore be held at Maryland Engineering for shipping instructions which would be available about 1 April 1945.

74. (U) Ltr. 10 April 1945
Fr: Chief, Equip. Lab.
Eng. Div., WF
To: Maj. F. C. Oakley
Eng. Br., Mat. Div.
Wash.
(File: Equip. Lab., Eng. Div.)

Both Maryland Engineering and All American were short on aluminum alloy sheet required for certain parts of the Brodie equipment. As a result, by 10 April 1945, Equip. Lab., Eng. Div. (WF) did not expect delivery of complete sets of equipment until about 1 May 1945 and notified Eng. Br., Mat. Div., (Wash.) to that effect.

75. (R) 1st Ind. 12 April 1945
Fr: Chief, Eng. Br., Mat. Div.
Wash.
To: Equip. Lab., Eng. Div.
WF
(File: Equip. Lab., Eng. Div.)

Chief, Eng. Br., Mat. Div. (Wash.) stated in 1st Ind. to ATSC (WF), 12 April 1945, that it was understood that in spite of the [aluminum alloy] difficulties one complete Brodie device would be ready for overseas shipment approximately 25 April and three more devices by 1 May 1945. These four articles were to be held

at Maryland Engineering for shipping instructions. 12 April, Chief, Eng. Br., Mat. Div. forwarded a copy of this 1st Ind. to Army Ground Forces to supplement the information contained in the 14 March letter on the availability of Brodie equipment and stated it was understood the slight change in availability dates had already been reflected in movement orders in process.

76. (S) Ltr. 16 April 1945
Fr: Major J. S. Kriegsman
Air Officer
Hq., 77th Div. Artillery
To: Lt. Col. Wolfe, Dir.
Dept. Air Training
F.A. School, AGF,
Ft. Sill, Okla.
(File: Equip. Lab., Eng. Div.)

Major J. S. Kriegsman, Air Officer, Hq., 77th Div. Artillery, in a report entitled "The Brodie LST" described in detail the first tactical use of the Brodie System on shipboard. The LST 776 equipped with the Brodie ship rig was employed in air observation activity off Okinawa in the spring of 1945. Those committed to the use of the Brodie ship device at first viewed the equipment with strong misgivings but on seeing the launching and landing device in operation all forebodings were dispelled and they "saw what a valuable piece of equipment was [theirs]."

77. (U) Ltr. 26 April 1945
Fr: Chief, Proc. and Supply
Br., OSS, Wash.
To: Capt. J. H. Brodie
Equip. Lab., Eng. Div.,
WF
(File: Equip. Lab., Eng. Div.)

Chief, Proc. & Supply Br., OSS (Wash.) asked Capt. Brodie to sign a file copy of the purchase order for Contract OSS-592 to show receipt of 19 Brodie systems and parts. This would enable OSS to make payment to All American for the work on subject contract.

78. (R) Contr. W 33-038 ac-7741
Maryland Engineering Co.
Pikesville, Ind.
27 April 1945
(File: Contract File)

Contract W 33-038 ac-7741 entered into 19 April 1945 by Proc. Div., ATSC (WF) with Maryland Engineering, approved 27 April 1945, provided for: 18 Brodie systems at $13,606.28 each or a total of $244,913.04; 204 L-4 Conversion Kits at $667.79 each or total of $136,229.16; 204 L-5 conversion kits at $667.79 each or total of $136,229.16; 34 sets of Spare Parts at a unit price of $5,099.00 or total of $173,366.00. Total amount of contract: $690,737.36. This formal contract superseded an amended letter Contract of 10 Jan. 1945.

79. (U) 1st Ind., 11 May 1945
Fr: Chief, Equip. Lab.
Eng. Div., WF
To: OSS, Wash.
(File: Equip. Lab., Eng. Div.)

As only a portion of the Brodie equipment was actually received by personnel of ATSC (WF), Chief, Equip. Lab., Eng. Div. (WF) stated it was not considered proper to have the purchase order copy signed by ATSC as suggested by OSS (See basic letter dated 26 April 1945). It could be said, however, that ATSC had knowledge that all the equipment had been delivered to either Army, Navy or OSS organizations. Deliveries were made over a long period of time and on several different vouchers. Chief, Equip. Lab., suggested

that delivery receipts be obtained from accountable officers to whom the equipment was shipped.

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80. (R) Report of Staff Study of the Brodie System
29 May 1945
Project No. 4100A373.1
AAF Bd., Orlando, Fla.

The AAF Bd. (Orlando, Fla.) conducted a staff study of the Brodie system and on 29 May 1945 issued a detailed report which included accounts of the experience of the following branches of the Services in testing the apparatus: Field Artillery, Army Ground Forces, Navy, and 3d AF. (Accounts not reproduced in this History.) AAF Bd. concluded that: (1) AAF did not have a requirement but Army Ground Forces might. (2) Brodie System permitted liaison plane operations where landing strips were not feasible. (3) Training of pilots in use of the System would not be difficult. (4) The System was a complicated method ... (5) More time would be required for erection of the Brodie Rig than for preparation of a landing strip. (6) Brodie Sea Rig would provide launching and landing facilities for liaison aircraft during amphibious operations. (7) Night use of the System would be hazardous. AAF Bd. recommended that (a) the AAF not adopt the Brodie System, (b) the AAF procure only a sufficient number of Brodie land rigs to fulfill Army Ground Forces requirements, and (c) should the equipment be procured for Army Ground Forces, the serviceability of the rig be improved and weight reduced. 30 June 1945, AC/AS, OC&R (Wash.) stated that the AAF Bd. report had been approved and action was being taken to implement recommendations.

81. (U) R&R-1, 8 June 1945
Fr: Acting Chief, Prod. Sect., Proc. Div., WF
To: Equip. Lab., Eng. Div., WF
(File: Contract Files)

Acting Chief, Prod. Sect., Proc. Div. (WF) requested that Capt. Brodie be authorized to visit Maryland Engineering for the purpose of modifying current Brodie equipment to meet Naval requirements. Seven Brodie systems together with spare parts and conversion kits were to be supplied the Navy and there were no drawings available for the modifications. Capt. Brodie was the only person possessing sufficient knowledge to enable the Contractor to accomplish the necessary changes, and it was therefore requested that he explain the modifications to the Contractor. 16 June 1945 Chief, Equip. Lab., Eng. Div. (WF), R&R-2, stated that Capt. Brodie had departed for Maryland Engineering and from there he would proceed to New Orleans to modify the Arresting Unit of the device for ship use.

82. (R) Memo. Rpt. TSHPR4-M-43
16 June 1945
By: R. N. Meisinger
Prod. Supvr.
Service & Maint. Br.
Prod. Sect., WF
(File: Contract Files)

Mr. R. N. Meisinger, Prod. Supvr., Service & Maint. Br., Prod. Sect. (WF) contacted Maryland Engineering in person in collaboration with Capt. Brodie to determine nature and extent of modifications specified by Capt. Brodie to the Contractor in order that seven Brodie Systems, with spares, could be converted for

Navy use. The cable would be shortened, the masts

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omitted and some modifications and additions to other subassemblies would be made. Contract W 33-038 AC-7741 would be amended to cover these changes. Fourteen [of the 18?] Systems on the contract had been completed by the Contractor and accepted by the AAF. Of the fourteen, two had not been shipped and four were currently being completed. It was therefore planned to convert the two sets on hand plus the four in process of completion and make up the seventh set for the Navy from existent spares. Modifications determined by Capt. Brodie and conveyed to the contractor orally and in sketch form had been noted and supplied to Prod. Sect. in order that a Contract Change Notification could be activated. Immediate installation on waiting ships was required for four of the Navy sets and progressive shipment of components was desired to allow completion of installation prior to sailing dates of the ships.

83. (C) Ltr. 4 July 1945
Fr: Mr. M. I. McHugh
Chief, Proc. & Supply
Br., OSS, Wash.
To: CG, [ATSC], WF
(File: Central Files)

OSS had been unable to clear payment vouchers of All American on Contract OSS-592 because of lack of evidence that all the equipment had been delivered. OSS requested that ATSC (WF) take immediate action to obtain complete sets of documents showing evidence of shipment. ATSC had stated in the 22 Jan. 1945 letter that this would be accomplished. OSS pointed out that AAF had control of all shipments except the first one on subject contract and therefore OSS could not be expected to contact accountable officers to whom the equipment was shipped, as suggested in letter from ATSC dated 11 May 1945 (in this History). OSS felt that information on All American shipments should be available in the same manner as that for Maryland Engineering on contracts OSS-584, 585 & 654 which had been cleared quickly on information from ATSC that all the equipment had been delivered.

84. (C) Ltr. 18 July 1945
Fr: Chief, Equip. Lab.
Eng. Div., WF
To: OSS, Wash.
(File: Central Files)

Chief, Equip. Lab., Eng. Div. (WF) notified OSS that Traffic Section, ATSC (WF) was obtaining a complete set of shipping documents as requested in the 4 July letter from OSS. Chief, Equip. Lab. stated that the requisitioning of Brodie System equipment from OSS was being handled by Prod. Sect., Proc. Div. (WF) and the OSS letter was being referred to Proc. Div. for action and forwarding of required information to OSS.

85. (U) R&R-1, 26 July 1945
Fr: Chief, Prod. Sect.
Proc. Div., WF
To: Aerial Pick-Up Unit
Equip. Lab., Eng. Div., WF
(File: Contract Files)

Following a conference in Prod. Sect., Proc. Div. (WF) on 24 July 1945 concerning Contract OSS-592 with All American, Chief, Prod. Sect. listed pertinent points which records indicated: (1) On or about 6 Sept. 1944 OSS had offered to turn over to AAF the production of Brodie Systems on subject contract. (2) At a conference at WF 6 Sept. the offer was accepted by Eng. Div. (WF). (3) Confirmation of the agreement that the AAF would administer the contract was contained in a letter dated 12 Dec. 1944. (4) Shipping instructions were issued by Eng. Div. from time to time "thus dissapating in whole or in part, all the material furnished under subject Contract." Chief, Prod. Sect. recommended that Eng. Div. ask AAF Supply Office (WF) to requisition the material which Eng. Div. took over from the OSS contract. It was not considered that Prod. Sect. was involved in the transaction but Chief, Prod. Sect. requested notice of action taken by Eng. Div. in order that files could be closed. R&R-2, 10 Aug. 1945, Chief, Equip. Lab. (WF) stated that Eng. Div. had received and accepted 5 of the 19 OSS Brodie Systems referred to. The 5 were used for experimentation. Eng. Div. had no additional requirement and it was not considere appropriate for Eng. Div. to initiate action to requisition the remaining sets obtained from OSS.

86. (U) R&R-1, 13 Aug. 1945
Fr: Aerial Pick-Up Unit
Equip. Lab., WF
To: Misc. Br., Equip.
Lab., WF
(File: Equip. Lab., Eng. Div.)

13 Aug. 1945, Chief, Aerial Pick-Up Unit, Equip. Lab., Eng. Div. (WF) recorded the history of procurement and the disposition of the Brodie Systems procured by OSS. OSS had established a project in Jan. 1944 to develop the Brodie System for portable ground use. One experimental set was procured for testing and training purposes; thereafter 18 more sets were procured for OSS use in the CBI Theater. Structural portions were manufactured by Maryland Engineering and mechanical portions by All American. After the Ground Forces established a requirement in June 1944, the project to procure and further develop the equipment was taken over by AAF. By Sept. 1944 the two contractors had almost finished fabrication of the 18 sets for OSS but by that time the OSS requirement had diminished. Subsequently, OSS asked the AAF to take over supervision of the contracts. It was agreed at that time that OSS was to give the AAF nine of their sets without cost. Chief, Aerial Pick-Up Unit listed the destinations, shipping dates and use of all 19 sets on OSS Contracts.

87. (U) Ltr. 29 Aug. 1945
Fr: Chief, Equip. Lab., Eng. Div., WF
To: Chief, Proc. & Supply Br. OSS, Wash.
(File: Equip. Lab., Eng. Div.)

ATSC (WF) had obtained copies of the documents which gave evidence of shipment of 19 sets of Brodie equipment as described in OSS Contract 592 [with All American]. ATSC (WF) sent a complete set of the documents to OSS (Wash.) 29 Aug. 1945, and stated that the evidence had been examined and found correct. Certification was therefore made that all equipment involved in subject contract had been delivered to agencies of the Government.

88. (U) Ltr. 4 Sept. 1945
Fr: All American Aviation
To: OSS, Wash.
(File: Contract Files)

Sept. 4, 1945, All American notified OSS that they had supplied WF with photostat copies of shipping documents which showed that the 19 sets of Brodie equipment on Contract OSS-592 had been delivered. All American urgently requested that the remaining 10% due on this contract be paid in accordance with invoices previously submitted. The last delivery on the contract had been made more than six months before and All American felt that ample time had elapsed to allow full payment. 10 Sept. 1945, Chief, Equip. Lab., Eng. Div. (WF) asked OSS for a report of action taken regarding final payment of this contract.

O-Brodie
[illegible] Sect. [illegible]
[illegible]

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SECRET TAD
[illegible]
Date 10-4-43

HEADQUARTERS II TACTICAL AIR DIVISION
Office of the Ass't Chief of Staff A - 3.
Barksdale Field, La.

4 October 1943

SUBJECT: Report of Activities of Liaison Pilot and Airplane Attached to Port of Embarkation, New Orleans.

TO : Assistant Chief of Staff A - 3, Headquarters II Tactical Air Division, Barksdale Field, Louisiana.

1. Under authority of Third Air Force TWX Number X 928, this Division attached one (1) Liaison pilot and one (1) L-5 type airplane from the 115th Liaison Squadron to the PE, New Orleans for the purpose of conducting tests "involving landing the L-5 type airplanes in limited areas and on decks of ships".

2. 1st Lt. James H. Brodie, Water Division of the Transportation Corps, PE, New Orleans developed the idea of landing and take-off of Liaison type airplanes on a wire cable approximately 600' in length. The undersigned visited the scene of the tests and the following is a general description of the manner in which they were performed:

a. The device upon which the ship is landed and from which it takes off consists of a 1 1/4" steel cable approximately 600' long stretched tightly approximately 25' above the ground. In order to erect this cable, two (2) steel masts were set up with an arm approximately 20' long sticking off near the top of each mast. The cable stretches from the end of one arm on the first mast to the end of the arm on the second mast approximately 600' away. On this cable, they have mounted a small trolley from which hangs a wire rope sling about 30" in diameter. The bottom of the wire rope is held in a horizontal position by either bending the wire or inserting a stick in the loop. This trolley is connected by means of a rope over to the mast and down to a drum which is free running, but which can be braked.

The airplane has a hook connected to the top by means of a nylon rope running freely through the eye in the hook and connected to the top of the airplane in two places near the center of gravity. The hook is held in place to engage the wire rope sling by a piece of tubing which slants from its connection to the engine mounting to a point above the center of gravity of the ship. The airplane then is flown so that this slanting tubing will strike the wire rope swing and guide it on up to the hook, and immediately after the wire rope swing is engaged by the hook the man on the ground begins to apply the brakes and slow the ship down. This ordinarily uses up about 300 to 350' of space.

THIS PAGE IS DECLASSIFIED IAW EO 13526

[illegible] Brodie
[illegible] Sect. 2B.
2 (7/4 [illegible])

53 SECRET

L[illegible]. II TAD 3 Oct 43 to [illegible] of S. A-3, subj: Rpt on Activities on Lan[illegible] [illegible] and as Attached to [illegible], continued:

2. In order to take off from the cable, the airplane is connected to the [illegible] rope [illegible] by a device similar to a glider release and as soon as it obtains flying speed the pilot pulls a lever in the to[illegible] of the cockpit which releases the glider tow release mechanism and allows the airplane to continue on its way. Attached are a few rough sketches, with notes, which will probably better explain the operation.

3. The pilot, Sgt. Raymond A. Greggory, from the 1[illegible] Liaison Squadron, appears to be unusually proficient and has made thirty (30) to forty (40) successful landings and take-offs from this device. He is very [illegible] and appears to be a very capable Liaison pilot and insists that the flying of the airplane is very simple and that with little training and instruction that any Liaison pilot could operate successfully from this [illegible] cable.

4. On 27 September, a group of officials from the [illegible], the Navy, and Air Service Command witnessed three (3) successful take-offs and landings and were very much impressed. In the meantime, moving pictures were taken and [illegible] developed and will later be sent to Washington.

5. The originator of this device, [illegible] Lt. James H. Brodie, first approached his superior in the [illegible], who went to the Chief of the Office of Transportation in Washington for funds to erect the mast and cable. The Chief of Transportation approached General Arnold who believed the [illegible] possibilities and [illegible] the airplane and pilot available through the Third Air Force. The plane that is actually being used for the test, however, does not belong to this command. We have an L-[illegible] on hand, but they are using an L-2 that belongs to the Sub Depot at the AAB, New Orleans. The location of the cable is at the [illegible] airport approximately fifteen (15) miles [illegible] of New Orleans.

6. It is believed that this method of landing and take-off of Liaison airplanes has many possibilities, particularly on ships of the transport and [illegible] types which are in great need of aerial observation during [illegible] of the [illegible]. The cable could be mounted by the use of the [illegible] already on the ship or additional masts mounted along the ship with the heavy steel cable stretched from the ends of arms protruding out [illegible] beyond the side of the ship. This would then give the plane [illegible] in which to maneuver between the water and the cable. By using this device, the landing wheels are no longer necessary and could be removed. In this manner, any one ship could carry several Liaison [illegible] as they could be stacked and would take up very little deck space.

1 Incl:
[illegible]

Earl L. Ahl (signature)

EARL L. AHL,
Major, Air Corps.

SECRET

HEADQUARTERS II TACTICAL AIR DIVISION
Office Of The Commanding General
Barksdale Field
Shreveport, Louisiana

A:1

4 OCT 1943

II TAD [illegible].1 (4 Oct 43)

SUBJECT: Report of Activities of Liaison Pilot and Airplane Attached to Port of Embarkation, New Orleans.

TO : Commanding General, Third Air Force, Tampa, Florida.

1. Attached herewith is a copy of report made by Major Harl L. Ahl, Assistant to Assistant Chief of Staff A-3, this headquarters.

2. From information received by Major Ahl, it is believed that plans are being made to remove wheels from liaison aircraft and to erect mechanism of this character on tankers, freighters, and transports for the purpose of using liaison airplanes for reconnaissance against submarines.

For the Commanding Officer:

CHARLES H. CAMPBELL
LT COL, A G D
ADJUTANT

1 Incl:
Ltr fm Maj. Ahl,
4 Oct 43, same subj.

SECRET

SAF 452.1 (4 Oct 43)General 1st Ind. (3AFE-33L)
HEADQUARTERS THIRD AIR FORCE, Tampa, Florida.

TO: Commanding General, Army Air Forces, Washington, D. C.
(Attention: Assistant Chief of Air Staff, MM&D)

The attached report is forwarded as a matter of interest and/or use by your headquarters.

For the Commanding General:

B B Brueksch

1 Incl -
n/c

This has been re-classified 2 2 to "Restricted"

~~CONFIDENTIAL~~

REPORT ON FIRST TESTS

OF

SUSPENSION LANDING APPARATUS INSTALLED ON SHIP.

Conducted From

NEW ORLEANS PORT OF EMBARKATION.

All trials performed in
Mississippi River and Gulf of Mexico

Submitted To

CHIEF OF TRANSPORTATION
WAR DEPARTMENT
WASHINGTON, D. C.

Date, - 22 December, 1943

by

JAMES H. BRODIE
1st. Lt. T.C.

~~CONFIDENTIAL~~

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REPORT ON FIRST TESTS OF SUSPENSION LANDING APPARATUS INSTALLED ON SHIP.

1. The ship used for these tests was the M.S. CITY OF DALHART, a 5,800 gross ton ship, length over all 420 ft. powered with a 3000 h.p. Diesel Engine, capable of a speed of eleven knots. The ship is owned by the U.S. Lines, and operated by the W.S.A. with Lykes Bros. Steamship Lines acting as the Owner's Agent. The ship was built during World War 1, and converted to Diesel power in 1927. It is a typical slow speed cargo ship.

2. The same rig as that used in the preliminary tests with apparatus erected on land was modified and rebuilt for fitting to this ship. (The report on results of land tests, addressed to Chief of Transportation, dated 3 October, 1943, accompanies this report.) Photographs No. 1 through No.7 illustrate the arrangement of rig on the ship. The main booms are built of standard 12" x 45 lb./ft. steel pipe, 30'-6" long. The main stiffler braces are the same size pipe as booms, and the support braces are 10" x 32 lb./ft. standard pipe. All connections are pin jointed for quick erection and dismantling. (Photos. No. 6, 7, 11 & 12.) The "A" frames on the bow and stern of the ship are 12" x 45 lb./ft. standard pipe welded solid to the decks. (Photo No. 9). All king posts and stiffler fastings are braced under the deck with large flanged steel brackets.

3. The swinging boom on the aft king post of the rig is for handling the airplane to hang it for takeoff and to swing it on deck after landing. This boom is made to swivel on the king post. It is fitted with a cat walk and a working platform on the end for the men to stand on while hooking and unhooking the airplane to the takeoff and landing trolleys and for rigging landing sling in position. The boom is built of 10" x 32 lb./ft. standard pipe with a stiffener bar 3/4" x 4" welded on the bottom. Lifting plate and swinging boom in and out is accomplished with cables leading over sheaves leading to the ship's aft cargo winches. (Photos No. 13, 15, 21 & 29.)

4. The rig is designed to accommodate an airplane of not over 8,000 lb. gross weight. With the ship in a loaded condition the booms are 46 ft. clear of the water line. With the airplane hanging on the landing sling at the center of the span, landing gear removed, it will be 18 ft. clear of the water, hanging on the takeoff sling it will be 21 ft. clear at the lowest point.

5. The maximum cable tension under 8000 lb. airplane, considering static loading conditions, is as follows:

$$T = \frac{\text{Loading moment}}{\text{Sag}}$$

$$T = \frac{wl^2}{8} + \frac{Wl}{4} \div H$$

Where H = bending moment
w = wt. per ft. of cable
W = wt. of airplane
l = cable length
H = sag
T = tension in cable

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$$T = \frac{(2.5 \times \frac{367^2}{3} + \frac{3000 \times 367)}{4}}{26} \div 6$$

$$= (42,000 + 275,000) \div 6 = 52,800 \text{ lbs.}$$

X

or 26.4 tons. With a 2000 lb. airplane, weight of the L-5 used, this tension is 37,600 lbs. or 18.8 tons. The cable used on this test is 1-1/4" diameter, 6 x 19 hemp center, improved plow steel, having a breaking strength of 105 tons.

6. Through graphical analysis of stresses, the different members were designed so that none are stressed over the allowable limit in compression or tension and so that no compression member has a length/radius of gyration ratio of more than 120, all allowable stresses being governed by standard structural engineering practice.

7. The shipboard trials were conducted with a standard U.S. Army Air Force type L-5 air craft, manufactured by the Stinson Division of Vultee Aircraft, Inc. This airplane is of the liaison type, capable of carrying two men at a speed of 120 mph. for a duration of approximately three hours. Power is provided by a 6 cylinder air cooled engine delivering 185 horsepower through a fixed pitch wooden propeller.

8. The hook, release, arm support and telescoping arm on the airplane are illustrated by Photos No. 17, 18 & 19. This apparatus is designed so that a catch will be effected if the sling contacts the arm anywhere between the swivel and the hook. The swiveling feature is for flexibility of arm after contact with catch sling. The nylon ropes supporting the airplane from the hook are elastic to a certain degree and serve to absorb the shock of accelerating the trolley at the instant of contact with the sling. The telescoping feature of the arm is only to allow the full load of accelerating the trolley and of supporting the weight of the airplane to be applied through the point just above center of gravity of the airplane, through the nylon ropes. Attachment of the supporting ropes to plane is shown in Photo No. 20. Upon engaging the landing sling, the nylon rope of the sling, (Photo No. 28) slips into the hook on the airplane where it is held from coming out by the barbed shape of the hook eye. (Photo No. 18).

9. The takeoff release device functions similar to a pelican hook. The locking roller is pulled down by a tug on a wire leading from the cockpit to the release lever on the hook, unlocking the finger and allowing the sling ring to release. (Photo No. 18).

10. The trolleys are used, one for landing and the other for takeoff. (Photos No. 24, 29 & 32). The landing trolley has a single wheel and is lightly constructed. It is designed to hang vertical and stable and so that the pendulum effect will assist in eliminating high accelerating forces. The takeoff trolley is designed for easy rolling, both wheels 9 inch diameter, having ball bearings. It also has the feature of self braking. When the plane is released, the trolley immediately tips over and runs on the wood shoe on the under side which slows it down before it hits the end of the cable. (Photo No. 27). A coil buffer spring fitted with buffer disks on the ends, is wrapped around the cable at the forward end, to stop the trolley if it should travel that far. A sliding steel sleeve is fitted around the cable with a small rope attached to slide the trolley aft to make ready for another takeoff (Photo No. 5)

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11. The landing sling is made of three loops of 11/16" diameter nylon rope, joined with tape and spliced into a steel ring, which is shackled to the landing trolley. This sling is hung in position directly under the aft boom and held extended with two pin jointed arms made of aluminum tubing having steel clips attached at the lower extremities into which the corners of the outside sling loops are clipped. The clips are tight enough to only hold the sling extended and release the ropes when sling is engaged by plane hook. The nylon ropes are elastic and absorb the force of accelerating the trolley. The sling hangs down 9 feet below the boom and is extended 6 ft. wide (Photo No. 28).

12. Negative acceleration of the airplane is accomplished by a brake, designed and manufactured by the All American Aviation Co.Inc. Their standard Model 15 pickup unit which is in extensive use for glider and cargo pickup by the Army, is used. (Photo No. 14). The brake unit is secured to the poop deck adjacent to the aft king post. The drum of the unit is wrapped with 3/8" diameter nylon which is run through guides and two fairleads to the landing trolley. Previous to a landing, the brake unit is adjusted so that no braking action is affected until the reel attains airplane speed when the brake application comes on providing a constant preset torque. The brake torque may be adjusted to allow for variations in airplane weights and speeds. At no point in these tests were the negative accelerations greater than 10 feet./second/second or the forces greater than 0.30 G.

13. At the time of this report, seven landings and takeoffs have been made from the ship. Conditions and results were as follows:

	Date	Time	Operation	Speed of ship	Wind velocity	Location	Distance of run	Load
1	Dec. 7	15:00	Landing	10 knots	15 mph	River	175 ft.	None
2	Dec. 8	16:00	Takeoff	10 knots	10 mph	River	220 ft.	None
3	Dec. 8	17:00	Landing	10 knots	5 mph	River	175 ft.	None
4	Dec. 9	11:00	Takeoff	10 knots	5 mph	River	230 ft.	None
5	Dec. 13	17:00	Landing	10 knots	3 mph	River	175 ft.	None
6	Dec. 14	10:30	Takeoff	10 knots	18 mph	Gulf	200 ft.	None
7	Dec. 14	11:30	Landing	10 knots	18 mph	Gulf	150 ft.	None
8	Dec. 14	15:00	Takeoff	10 knots	13 mph	Gulf	220 ft.	None
9	Dec. 14	16:30	Landing	10 knots	13 mph	Gulf	150 ft.	None
10	Dec. 17	13:30	Takeoff	10 knots	5 mph	River	230 ft.	42 lb.
11	Dec. 17	14:30	Landing	0 knots	10 mph	River	200 ft.	42 lb.
12	Dec. 17	16:34	Takeoff	10 knots	5 mph	River	230 ft.	117 lb.
13	Dec. 18	16:40	Landing	10 knots	5 mph	River	175 ft.	117 lb.
14	Dec. 17	17:22	Takeoff	10 knots	5 mph	River	240 ft.	170 lb.

14. On all these tests landings and takeoffs were made with 30° flaps. Landing approaches were made at about 55 to 60 mph air speed. On takeoff there was no uncontrolled drop at the time of disengagement from the trolley. (Photos No. 26 & 27). On landing approaches the plane was flown on a straight level course parallel with the cable for about 2000 ft. Last adjustments in position of the plane were made about 100 ft. from the catch sling. Catches were effected on first approach on all landings but two (Photo No. 31). One miss was experienced with the ship in calm water, the plane was flown in about four inches too low to engage the sling. All other landings with

the ship in the river were routine.

15. When the ship was taken out into open water, moderate to fresh winds and waves of about seven foot height were encountered. This was evidenced by the fact that personnel aboard a 63 foot Army Crash Boat escorting the ship, could not see the ship over the waves when the boat was in the trough of waves. The sea was estimated rougher than average, excepting winter North Atlantic, in other words, the sea was rough enough to give an indicative test. The U.S. "City of Dalhart" was light, being ballasted only with fuel oil in double bottom tanks and water in peak tanks. The motion of the ship under this condition had no adverse effect on the landing or takeoff operations. No difficulty in handling the airplane for swinging in or out on the boom was encountered. To simulate heavy yawing in seas, the ship was zig zagged sharply giving rudder alternate hard port and hard starboard at about 30 second intervals, causing the stern to swing over an arc of about 150 ft. width during its forward motion. One miss was experienced under this condition, the hook passing outside the sling about 2 ft. On the next approach a landing was made. The pilot's statement on this was that a little practice on timing was required to make last position adjustment when the ship was yawing broadly. This simulated condition would seldom, if ever, be encountered with a ship headed into waves, and was done only to demonstrate it was possible.

16. Rain and low visibility terminated tests in open water on the day of these tests and the ship was brought back to anchorage in the river. Prevailing bad flying weather ended the sea trials and tests and the ship proceeded back to New Orleans for further tests on airplane landing and takeoff performance with increasing loads. The results of these tests are tabulated. No apparent change in takeoff run required was found with an additional load of 170 lbs. over that of the plane light. Due to lack of proper ballasting equipment, loadings were limited to this weight. The pilot stated that at least another 100 lbs. could be added to that weight without appreciably increasing the takeoff run on the cable. By removing the landing gear from this airplane about 350 pounds of bombs or other combat devices could be safely flown from this apparatus in its present stage of development.

17. It has been found from tests with the L-2 and L-5 airplanes that the takeoff run required for flight is slightly over half the distance required for takeoff from the ground. This fact is partially accounted for by less rolling friction, a downward roll for the maximum length of takeoff run, and also that the airplane is in a flying position over the full length of takeoff run.

18. The recommended application of the suspended cable system of operating air craft from shipboard, [illegible] as follows:

19. For anti-submarine patrol work it is felt that the most effective use of this scheme would be in having a plane scout an area of about ten mile radius around the ship over its course of travel during the daytime and to scout a track of about 100 miles ahead of the ship just before darkness.

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20. Depth Charge Delivery: In its present state of development this rigging and apparatus will accommodate an Army Air Forces L-5 airplane equipped with a combat load of 350 pounds. Either one depth charge or several contact bombs could be carried for use against enemy submarines.

21. It is further felt that a combination of two airplanes working as a team would be the most effective defense against submarine attack. One of these airplanes would carry either one depth charge or several contact bombs. The other airplane would carry besides the pilot, a gunner seated in the rear cockpit, this cockpit fitted with two .30 or .50 flexible aircraft machine guns firing through the floor of the rear cockpit of the airplane, which would be used for strafing the decks of a surfaced submarine in order to keep the gun crews of the submarine under cover, or to silence anti-aircraft guns mounted on the submarine's deck.

22. Used as a single scout, this type airplane would be very effective in spotting shots fired from the ship's armament in cases where the ship was firing at a surfaced submarine or raider at considerable range.

23. Another use is the laying of smoke screens, either to cover a protected ship should it be under fire from an enemy raider or submarine or to lay smoke screens on or to windward of enemy craft in order to obscure their visibility. Under this condition an enemy vessel would be a safe target for bombing by the airplane. Smoke screening could also be used as defense against air attack on the ship.

24. The availability of this type plane on a merchant ship would be of great value in spotting mines, submarine nets, shoals and reefs, sunken hulls and other underwater hazards in either friendly or enemy waters.

25. The use of these planes as couriers would be a valuable feature to merchant or naval vessels traveling in convoy for transfer of messages during radio silence or during periods when use of blinkers would be unsafe. They would also be used in locating ships lost from convoy or in locating survivors from ships sunk. These planes could be used to fly battle casualties to hospital ships or to ships carrying medical personnel; and also to carry small repair parts to ships with disabled equipment and to carry skilled repairmen to ships needing service. Further, these planes would be valuable in carrying to port in advance of the ship's arrival, manifests bearing detailed data in regard to strategic material in the cargo or equipment that would require special handling or special unloading facilities at the port of debarkation. An L-5 airplane would be able to make port in a minimum of 30 hours before the arrival of a ship or convoy. By use of auxiliary gas tanks these planes could be given a flying radius of over 700 miles. This feature would be valuable in calling assistance to a vessel torpedoed and not in immediate danger of sinking or a vessel otherwise disabled.

26. From experience gained by a commercial firm doing mail and cargo pick-up, on a scheduled nightly basis using four bulls eye range lights, it is deemed entirely possible and safe to make night landings with this apparatus

27. The use of the type airplane herein described would provide all the possibilities for combat service entailed with the helicopter. It is felt that operations of landing and taking off from ships would be safer using this type of apparatus than in the use of helicopters and also that this type of landing and taking off could be accomplished under more severe weather conditions.

28. Sufficient evidence is at hand to warrant the installation of several complete systems for actual service at sea. It is here proposed that five ships be fitted out immediately and be sent on their normal missions equipped with airplanes. The only reservation desired is that none of these vessels operate in the North Atlantic during the winter months until sufficient experience is gained to cope with such weather conditions.

29. Any five vessels the Bureau of Ships designated with speeds of not less than 10 knots and providing clear cable runs of 350 feet would be acceptable. The installations would be engineered so as not to interfere with the operation of the vessel's guns, the handling of cargo or the docking of the ships. For the initial voyages it would be recommended that U.S. Army Air Force L-5 aircraft be utilized. The slight modifications necessary to the arming and fitting out of these aircraft could be completed while the installations were being made on the ships.

30. In addition to the five installations proposed above it is further proposed that an immediate experimental installation be made on either C-2, C-3, Defense Tanker or any vessel capable of attaining a speed not less than 16 knots and providing a clear cable run of 375 feet, this ship to accommodate an aircraft of the U.S. Navy type SNC or equivalent. Results from these tests would indicate the practicability of operating heavier and faster aircraft from cargo ships.

31. Finally, it is recommended that a land based research installation be erected for the purpose of investigating the further ramifications of this system. The immediate objective of this organization being to pursue a course leading to the operation of an 8000 lb. airplane from a cable. From a technical standpoint based on existing knowledge this is entirely feasible requiring only increased cable length and proportionally heavier supporting members. As to the question of required flying technique, this type of precision flying is daily exceeded by Army Air Force pilots picking up gliders with 28,000 lb. airplanes. The possibility of short distance launching using initial rocket impulse or an accelerating winch presents itself as a practical method of overcoming a required long cable span. Arresting a heavy airplane presents no problem as brake units similar to that used in these tests here reported, having a suitable capacity are already in daily use for heavy glider pickup operations by the U.S. Army Air forces.

32. In its present design or slight modification thereof, the cost of building and erecting one of these rigs on a ship, complete with operating brake and rigging will not exceed seven thousand dollars ($7000.00).

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33. The use of this system of landing and launching planes is not limited to ships. It has extensive possibilities for strategic tactical use on land installations. The structure of this type apparatus for land setup would be simple. Fundamentally it would consist of four masts, two at each end of the runway cable with a V shaped bridle cable leading from the runway cable to the tops of each mast and down to dead men in the ground, with the masts set wide enough apart so that an airplane could fly in between the masts, and under the bridle parallel with the cable. Catch sling, trolleys and arresting brake would be designed on the same principles as those for ship use. This type rig could be made any size within practical limitations to accommodate planes as large as fighters or light bombers.

34. This type of apparatus would be adaptable for erecting over terrain such as desert, jungle, marsh, rocky ground or mountains where the construction of runways would be difficult or impossible. It could be completely camouflaged and would withstand bombing without being damaged.

35. The whole apparatus could be made portable by using bolted truss work masts, capable of easy assembly and disassembly and could be made to be carried by large cargo airplanes when disassembled. In this way, a landing rig could be flown over a certain location, dropped from large planes by parachutes, erected by a crew on the ground who could also be dropped by parachute, and made ready for other airplanes to land in a short time. No single part of the apparatus would have to be made too heavy to handle by hand, or with hand operated tools and tackle, or too bulky to stow in a large cargo carrying airplane or glider.

36. The value of the features of this apparatus is apparent. It has many possibilities as to variety of uses for both liaison type aircraft and for fighter planes, including the Army P 51, the Navy Wildcat, and for light bombers including the Douglass Dauntless or equivalent.

37. In its application for use of light liaison airplanes, all the equipment for erecting a landing and launching setup could be made to weigh not over 7000 lbs. including all tools, tackle, and crew of men to do the erecting work on the ground. All this could be packed, knocked down in one cargo carrying airplane and flown and dropped anywhere desired, undetected by enemy observation. Extension of this plan using procedures already developed would be possible but because of their secret nature, shall not be herein discussed.

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PILOT'S REPORT.

38. As pilot on Lt. Brodie's Launching and Landing System, I have been requested to submit a pilot's opinion of it.

39. The rigging on the plane is very light and does not change the flying characteristics appreciably. It is much lighter than the conventional type of landing gear, therefore permitting greater loads to be carried. For takeoffs the plane hangs in a normal flying position, eliminating the drag that occurs in a ground run from a three point position. Due to the smooth operation of the trolley there is less friction than on the planes wheels on the ground. By this method of taking off, ground runs can be cut almost 50%. When flying speed is gained, a release is tripped, freeing the plane for flight.

40. The landing operation, generally considered by those not familiar with this apparatus to be the most difficult, is really the easiest part of the system. The landing is accomplished by flying the plane under the loop at slow speed, catching it with the hook. The plane is never allowed to reach a stall, therefore complete control is maintained at all times. After landing, the plane is brought to a gradual stop. To ground loop or nose over is impossible. Special pilot training for this type of system would not be necessary. Any pilot capable of handling a plane in normal flight would have no difficulty in landing a plane with this system.

41. The technique which I use to engage the hook in the sling does not depend on a steady parallel relative position of the plane with the ship, as final positioning of the airplane for the catch is accomplished immediately previous to actual contact with the sling.

R. A. GREGORY
S/Sgt. A.C.

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REPORT BY EXECUTIVE OFFICER OF SHIP.

42. I have been requested by Lieutenant Brodie to submit my views on this experiment that is taking place on this vessel.

43. I think there is an actual need for this type of ship-carried plane. In the larger convoys where a carrier is part of the escort, it would be superfluous, but in the smaller, slow ship convoys with a small escort, a plane that could scout ahead and detect waiting submarines in time for the convoy to avoid the danger would be a great help.

44. I also think that this plane would be a big advantage to the faster ship that is accustomed to traveling alone in that it would enable the vessel to utilize her speed to affect an escape before she could be fired upon.

45. In both instances, the fact that the whereabouts of hostile undersea craft was detected and radioed to the proper authorities to facilitate safer routing, or to enable warships to be sent to intercept and eliminate the danger is a strong point in its favor.

46. The apparatus is simple in construction and can be very readily installed or removed in any shipyard or alongside a dock.

47. The apparatus, with a few changes, which Lieutenant Brodie says could be easily effected, would not interfere with the loading or discharging of cargo.

48. This vessel during the trials made here was light, with no cargo, but with all fuel and water tanks full. The actual operation of landing and taking off had no effect on the vessel's stability, causing no heel.

49. As to its practicability on a deeply laden vessel, or any vessel that was rolling, pitching and yawing, I could not venture an opinion, but the experiment was obviously successful under the present conditions.

Respectfully submitted,

KARL LARSEN,
Executive Officer,
M.S. "CITY OF DALHART."

60

CONFIDENTIAL

SPTOC (AA) 31 December 1943.

SUBJECT: Brodie System of Launching and Landing Air Craft.

TO: Commanding General, Army Air Forces, Washington, D. C.

1. Inclosed is a report of the completed tests of the subject project. This system was devised and has been carried to its present stage of completion by Lt. J. H. Brodie, TC, with the cooperation of the United States Navy and the United States Army Air Forces.

2. Representatives of the Navy and the Army Air Forces have attended many of the tests and have indicated that certain phases of this experiment have already proved of value to both services. From a non-technical viewpoint, the results of the test indicate that Lt. Brodie's recommendations (Pars. 16 - 27) deserve careful consideration in order that any ideas of value to the war effort may be exploited to the fullest extent.

3. The preliminary stages of this experiment were carried through as a part time project, and in addition to his regular duties, by Lt. Brodie with the assistance of the Air Forces in material and the services of a pilot. Now that the practicability of his ideas has been demonstrated, it is not considered appropriate that further development of this project be carried out under the auspices of the Chief of Transportation. However, the Transportation Corps will be glad to turn over any equipment now on hand and to make available the services of Lt. Brodie in any further exploitation of his ideas by the Army Air Forces.

4. The services of Staff Sergeant R. A. Gregory, AAF, in acting as pilot for the test airplane used in this project are appreciated. He deserves the highest commendation.

C. P. [illegible]

Major General,
Chief of Transportation.

Incl. - Report

CONFIDENTIAL

CONFIDENTIAL

Brodie System of Launching and Landing Aircraft

AC/AS, O.C.& R., Requirements Division — 4 January '44

AC/AS, M.M.& D., Materiel Division — 1

RGG:hbr/71150

1. The attached brochure, outlining subject tests, is forwarded for review and advice as to whether there exists a requirement for this method of launching light aircraft.

2. The Materiel Division has no part in the development of subject system of launching aircraft, and has no knowledge of authorization for construction of the launching device for tests.

R. C. WILSON
Colonel, Air Corps
Chief, Development Engineering Branch

Attach:
#1--Ltr fr ASF dtd 31 Dec.'43, subj as above
#2--Rpt on tests of suspension landing apparatus installed on ship, dtd 22 Dec.'43

HQ. AAF
M.M.& D. MAIL SECTION

*Comeback Copy
Return to Room ...

THIS PAGE IS DECLASSIFIED IAW EO 13526

~~CONFIDENTIAL~~

SUBJECT: Brodie System of Launching and Landing Aircraft

5

TO: Asst C/AS, MRAD, (Materiel Division)

FROM: Asst C/AS, OCS (Requirements Division)

DATE 13 Jan 1944

COMMENT NO. 2
Col.Mears/mlb-73045

1. Since the Army Air Forces is no longer charged with Anti-Submarine Warfare and protection of convoys, no requirement exists for this method of landing light aircraft. As for use in restricted areas, to clear obstruction for land or launching an air strip is just as easily cleared.

2. Since the Navy Department has interest in this project it is thought best to turn further developments over to them.

NORMAN D. SILLIN
Colonel, Air Corps

Incl. n/c

~~CONFIDENTIAL~~

1

57

SUBJECT: Brodie System of Landing and Leaving [illegible]

1st Ind.

Hdq., Army Air Forces, Washington, D. C.

TO: Army Service Forces, Office of the Chief of Transportation, Washington 25, D. C.

In view of the fact that the A.A.F. is [illegible] marine activity, there is no requirement for [illegible] time or in the foreseeable future. Therefore, no action will be taken by the A.A.F. with respect to the subject matter.

RAG:hbr
AFDMA-2

6.

AFDAS-1A
KE:dmk

Colonel T. K. Sorensen
TO: Executive Officer, WDAD

SUBJECT: Bradis System of Launching and Landing Air Craft

1. Prior to the dispatch of the proposed 1st Ind., it is suggested that reconsideration be given to the views expressed therein. This office considers a possible use of subject equipment for the reasons outlined below.

2. It is realized that the principle use of this piece of equipment is in anti-submarine activity. However, it is visualized that there are other conditions under which a cable landing rig would be useful. Particularly, it is believed that unaccessible locations on land where landing strips would be impractical might serve as ideal locations for such an installation. A small island, a hillside or swampy terrain where the work involved in constructing a landing strip would be prohibitive lend themselves as suitable sites for the simple cable mount involved in the proposed installation. Such sites as enumerated above might be the locality of look-out stations or of Radar or anti-aircraft installations. The ability to accommodate a plane at such isolated spots would enable supplies or documents to be delivered, and wounded or sick personnel to be evacuated.

3. In view of the foregoing, it is suggested that the theatres be contacted for their reaction with regard to the proposed landing apparatus prior to making a final statement that the Air Force has no interest in the installation.

4. It is recommended, therefore, that an indorsement substantially as is indicated below be submitted in place of that prepared in the inclosure.

"The AAF is no longer engaged in anti-submarine activity and can visualize no requirement for this equipment mounted on shipboard. However, in view of the possible demand for such an installation by one of the theatres for operation on land, a description is being sent to suitable theatre commanders requesting their views. Upon the receipt of answers to these requests for information, a further reply will be made to basic letter."

KELVIN P. HEYDRON
Colonel, AC
Executive Officer

Incl - Basic Ltr dtd 12/31/43,
w/report inclosed.
1st Ind. dtd 1/19/44

55

Inter-Desk Memorandum

Date [illegible]

TO: [illegible]

SUBJECT: [illegible]

[illegible]

① Above concurred in

② [illegible]

[illegible]

From R. C. Wilson
[illegible], Colonel.

THIS FORM WILL NOT BE USED OUTSIDE THE AC/AS, M. M. & D.

M. M. D. #211 8.

THIS PAGE IS DECLASSIFIED IAW EO 13526

COPY

49

COPY

HEADQUARTERS
ARMY GROUND FORCES, ARMY WAR COLLEGE
Washington, D.C.

6 February 1944

SUBJECT: Suspension Landing Apparatus for Light Planes.

TO: Commanding General, Army Service Forces, Washington, D.C.
Attn: Development Division).

1. It is believed that there is a definite requirement, in connection with the operation of Liaison plants by Ground Forces, for the Suspension Landing Apparatus for Light Planes developed by the Office, Chief of Transportation.

2. The apparatus shown to representatives of this Headquarters was designed for use on cargo vessels. It appears that the apparatus could also be constructed for ground installation by substituting light metal towers for ships masts.

3. It is therefore requested that development be immediately undertaken to adapt the subject apparatus to ground installations and that this adaption as well as the original ship installation be submitted to this Headquarters for test.

4. It is suggested that 1st Lt. J. H. Brodie, the designer of the subject apparatus be consulted in connection with the desired development, as this officer has discussed the matter with interested Ground Force officers and is acquainted with the problems and requirements connected with ground installation.

For the COMMANDING GENERAL:

/s/
R. J. DELACROIX
Major, A.G.D.
Asst. Ground Adj. Gen.

48

SUBJECT: Suspension Landing Apparatus for Light Planes.

SPSMD 452.11 (6 Feb 44) 1st Indorsement JHA/eet 71795

10

Headquarters, Army Service Forces, Washington, D. C. 8 FEB 1944

To: The Commanding General, Army Air Forces

1. The subject device was developed by 1st Lieutenant J. H. Brodie, Transportation Corps, now stationed at the New Orleans Port of Embarkation.

2. This Headquarters concurs in the request contained in paragraph 3, basic letter.

3. Your comments and recommendations are requested as to the most expeditious means of developing the subject equipment.

For the Commanding General:

LEE A. DENSON
Colonel, General Staff Corps,
Director, Requirements Division.

R. M. CROSSEN
Colonel, General Staff Corps
Chief, Development Branch

SUBJECT: Suspension Landing Apparatus for Light Planes.

2nd Ind.

AF 9A-2

11 February 1944

Hq., Army Air Forces, Washington, D. C.

TO: Headquarters, Army Service Forces, Washington, D. C.

1. The Brodie system of launching light aircraft has recently been reviewed by the Army Air Forces. After much consideration, the A.A.F. recommend that no further consideration be given to the Brodie method for the following reasons:

a. The Brodie launching apparatus is not as improved gear.

b. Its parts must be prefabricated.

c. Due to weight and size, these parts are difficult to handle and transportation to remote areas in which this launching system would be applicable would be extremely difficult.

d. The apparatus must be erected with expert technical care, and the technical skill necessary for this purpose is not ordinarily available in isolated locations.

e. The equipment would not be available at points where required but delay in receipt of parts and erection of the apparatus must be expected.

f. The effort to obtain and transport through the jungle or to other remote areas and erect the equipment would be spent to better advantage in locating and preparing the landing strip as near as possible to the station served.

g. The operation of aircraft from any station necessarily establishes the requirement that service facilities be set up in close proximity. It then follows that, if the terrain is such that service facilities can be established and an operating base maintained, sufficient additional area would likely be available from which to improvise a runway.

2. For the reasons given above, the Army Air Forces recommend that the development of the Brodie landing apparatus not be undertaken.

For the Commanding General, Army Air Forces:

HQ AAF

[illegible]
Colonel, Air Corps
Chief, Devel. Engr. Br., Materiel Div.
Office, Asst. Chief of Air Staff
Materiel, Maintenance & Distribution

[illegible]
AF/9A-2

Addr[illegible]ply & ENVELOPE to:

Commanding General
AAF Material Command
Engineering Division
Reference: PJR:vb:5L-5
Wright Field, Dayton, Ohio

Suspension Landing Apparatus (Brodie System)

Commanding General
Army Air Forces
Washington 25, D. C.

Attention: Asst C/AS, RE&D

1. Reference is made to the inclosed copy of the report "Tests of Suspension Landing Apparatus Installed on Ship." It is requested that this report be transmitted to the Assistant Chief of Air Staff, Operations, Commitments and Requirements for a determination of the requirement existing for the subject landing system.

2. It is further requested that this office be informed as to the need for the development of this equipment.

For the Commanding General:

F. O. CARROLL,
Brig. General, U.S.A.,
Chief, Engineering Division.

1 Incl.
Report dtd 12-22-43

Subject: Suspension Landing Apparatus (Brodie System)

1st Ind. AFDMA-2

Hq., Army Air Forces, Washington, D. C. 29 February 1944

To: Commanding General, Material Command, Wright Field, Dayton, Ohio

The subject device has been previously considered by Requirements Division, O.C.A.F. It has been stated by that office that no requirement exists for the Brodie System of launching aircraft. For the information of Material Command, subject device has been submitted to the Navy Department by Lt. Brodie. The Navy has also stated that no requirement exists for this equipment.

By command of General ARNOLD:

R. C. WILSON
Colonel, Air Corps
Chief, Devel. Engr. Br., Materiel Div.
Office, Asst. Chief of Air Staff
Materiel, Maintenance & Distribution

Incl: n/c

20649

RRG:hbr
AFDMA-2

2

CONFIDENTIAL

WAR DEPARTMENT

HEADQUARTERS OF THE ARMY AIR FORCES

WASHINGTON, D. C.

24 MAY 1944

MEMORANDUM FOR DEPUTY CHIEF OF AIR STAFF

Subject: The Brodie System

1. A series of demonstrations were held at Fort Belvoir, Va., throughout the day on 23 May 1944 to acquaint personnel of the Army, the Army Air Forces and the Navy with the potentialities of the Brodie System of launching aircraft from a suspended cable and landing the aircraft by hook upon the same cable after completion of flight.

2. Description: The Brodie System utilizes a heavy steel cable 1½" in diameter, supported by steel bridles from 50-foot masts set at the four corners of a retangular area forming the take-off and landing space. The straight-a-way length of the runway cable is 500 feet between the bridles. Clearance between the supporting masts is 160 feet. The airplane (in this demonstration, an L-5), is suspended by a releasable hook from a carrier running on the main cable. It travels along the cable under its own power and is released by the pilot as it reaches the end of the cable. With flaps down, the L-5 sagged about half way to the ground, but remained in the air and continued its flight without further difficulty.

Upon return for a landing, the pilot flew the hook into a series of three nylon loops suspended on a frame at the downwind end of the cable. The loops were attached to the same carrier by which the airplane was launched. A snubbing line was attached to the carrier and to a hand-operated braking system, controllable on the ground. The airplane came to rest in about two-thirds of the length of the cable.

The supporting masts are made of plywood in eight-foot sections. The entire apparatus weighs at present 9,500 pounds, and can be dropped unassembled by parachute from transport or cargo airplanes. A crew of nine men can erect the system in approximately twenty hours. It is considered feasible for use in areas where landing strips would be difficult or impossible to construct. It has additional advantages of being nearly invisible from the air and is considered highly invulnerable to enemy air attack.

3. The demonstration was presented by the Office of Strategic Services.

1 Incl.
Diagram of
Brodie System

THOMAS D. WHITE
Brigadier General, U. S. Army
Assistant Chief of Air Staff, Intelligence

CONFIDENTIAL

ROUTING AND RECORD SHEET

SUBJECT: The Brodie System

TO: AC/AS, OCR

DATE 5-26-44

FROM: Deputy Chief of the Air Staff

COMMENT NO. 1

WEH:JT 5246

If General Arnold does not already know about this it should be presented to him. It is believed that you should do this since you know whether or not it is an Air Force development, whether or not there is an Air Force requirement, etc.

1 Incl.
Memo from Gen White
w/ Incl.

WILLIAM E. HALL,
Brigadier General, U. S. Army,
Deputy Chief of the Air Staff.

14.

RC-3944

TO: Secretary of Air Staff

DATE 30 May 1944

FROM: Asst C/AS, Operations, Commitments, and Requirements

COMMENT NO. 2

CWH/hn/3487

In accordance with the directive of Comment No. 1, a memorandum to General Arnold is attached for forwarding through the Chief of Air Staff.

2 Incls
Incl 1. n/c
Added 1 Incl
Incl 2. Proposed memo for
CG, AAF, 29 May 44,
subj as above

/s/ Craig
H. A. Craig
Major General, U. S. Army
Asst. Chief of Air Staff
Operations, Commitments & Requirements

Incls 1 & 2 forwarded to Gen Arnold

File

mak

D, AAF -

A

Maj Greenleaf/ns 5452
Airborne & Liaison Branch

COPY

~~C O N F I D E N T I A L~~

29 May 1944

15

MEMORANDUM FOR THE COMMANDING GENERAL, ARMY AIR FORCES

Subject: The Brodie System

1. On 23 May 1944 at Fort Belvoir, Virginia, the Office of Strategic Services presented a series of Brodie system demonstrations consisting of launching and landing an L-5 airplane on a five hundred foot cable suspended approximately fifty feet in the air on four supporting masts. The air transportable ground equipment weighs approximately 9500 pounds and can be erected in twenty hours by nine men equipped with hand tools. The liaison airplane is modified to provide an overhead hook with release mechanism.

2. a. Advantages

(1) System can be erected in terrain or on vessels where impossible to provide 500 foot landing strip.

(2) System may be capable of more complete camouflage than normal 500 foot landing strips currently being utilized in theaters.

b. Disadvantages

(1) Tactical application presents problems involving development, training, and modification of aircraft.

(2) Relatively few aircraft per hour can utilize system as compared with a landing strip.

3. No AAF requirement is indicated for following reasons:

a. Five hundred foot flight strips can usually be prepared for operation of liaison aircraft within twenty hours except in remote instances where no level terrain is available.

b. Currently standard liaison aircraft can be operated from five hundred foot flight strips.

c. Helicopters will be available before 1945 that will be capable of operating from unprepared areas.

1 incl.
Diagram of Brodie System

H. A. CRAIG
Major General, U.S. Army
Asst. Chief of Air Staff,
Operations, Commitments & Requirements

7

HEADQUARTERS ARMY AIR FORCES

ROUTING AND RECORD SHEET

CALL NO. OUTGOING
FILE NO.
18 JUN 1944

SUBJECT: Brodie System of Launching and Landing Aircraft

DATE 15 June 1944

TO: AC/AS, Operations, Commitments & Requirements

FROM: AC/AS, M&D, Air Engineer

COMMENT NO. 1
AFDAE-1A/EEH:hk/72650

1. On 23 May a demonstration of subject system was held at Fort Belvoir, Va., at which a number of representatives of the Air Forces were present. Included were representatives of your office as well as of the Air Engineer and the Materiel Division.

2. The device consists of a 500-foot cable suspended from four poles with two trolleys riding the cable, one for launching and one for recovering. The plane is suspended from the launching trolley on the cable and when in position for launching is approximately 20 feet from the ground. The plane travels the length of the cable and when flying speed is reached the pilot releases the plane from the trolley. On recovery, the pilot engages the hook on the top of the plane with a rope device on the recovering trolley on the cable. The trolley moves down the suspension cable and is decelerated by a braking device. It requires approximately 20 hours for a nine-man crew to erect the device which weighs from 8,000 to 9,000 lbs.

3. While it was the opinion of some AAF representatives present that a flight strip could be prepared in time to erect the Brodie mast and cable device, and OC&R considers the helicopter will obviate the necessity for launching and recovering light planes on rough terrain, the undersigned believes that there are occasions when a theater would require such a device for the following reasons:

a. There are cases where it would be essential for a light plane to visit a location from time to time where the ground is either too rough or too rocky to prepare a flight strip without enormous effort.

b. Helicopters are not in production and there is temporarily a surplus of the lighter types of liaison plane.

c. The particular case that I have in mind was the radar station at Webbs Cove in the Galapagos Archipelago. This radar station was on Albemarle Island, approximately 70 miles from the main base at a location where there was not an ounce of soil overlying the lava rock within 10 to 20 miles. Weather conditions consistently prevent surface craft landing for periods of from two to three weeks at a time. This location would have been ideal for the erection of the Brodie device at small cost and expense in transportation of materials or manpower, and would have been a splendid insurance for the occasional emergencies that arise at an isolated station.

4. It is recommended:

a. That this system be further investigated by the AAF Board. AC/AS, M&D, concurs in this recommendation.

R-7454

16.

HEADQUARTERS ARMY AIR FORCES

ROUTING AND RECORD SHEET

SUBJECT NO.	
FILE NO.	

Subject: Brodie System of Launching and Landing Aircraft

Date: 15 June 1944

TO: AC/AS, Operations, Commitments & Requirements

COMMENT NO. 1

FROM: AC/AS, OC&D, Air Engineer

AFDAS-LA/EAE:hk/77650

1. That this device be approved to the extent that its description be brought to the Air Force Commanders so that should occasion arise in a particular case the Aviation Engineers can erect the device and Service Groups prepare the necessary modification of a liaison plane.

George Hays
GEORGE HAYS
Colonel, AC
Air Engineer

16.

DATE: 23 June 1944

TO: Asst C/AS, OC&D (Air Engineer)

COMMENT NO. 2

FROM: Asst C/AS, OCR (Requirements Division) Maj Greenleaf/ajf 5662

1. Demonstration of Brodie System, sponsored by Office of Strategic Services, was attended by representatives of Requirements Division, OC&R (Col. Rogers and Major Greenleaf) at Fort Belvoir on morning of 23 May 1944.

2. Demonstration consisted of launching and landing an L-5 airplane on a five hundred foot cable suspended approximately fifty feet in the air on four supporting masts. Equipment weighing between 8000 and 9500 lbs can be erected by nine men, equipped with hand tools, within twenty hours. The L-5 airplane has been modified by providing an overhead hook with release mechanism. Further description of Brodie System is presented on page 7, Operations Division Information Bulletin (attached).

3. Discussion:

a. System provides advantage of takeoff and landing facilities where conditions will not permit a landing strip (ie; swampy terrain, rough terrain or shipboard).

b. Although it is unnecessary to clear a smooth landing strip, it is necessary to provide clear approaches.

c. Landing and launching operation from the Brodie System consumes much time as compared to operations from a landing strip.

d. Standard liaison aircraft are utilizing 500 foot landing strips in tactical theater operations.

17.

O-Brodie
4 AF-CF 452.1-B
12 (1/3 pp)

29

HEADQUARTERS ARMY AIR FORCES

ROUTING AND RECORD SHEET

TALLY NO.
FILE NO.

SECRET

SUBJECT: Brodie System of Launching and Landing Aircraft X452.1 Gen

DATE 23 June 1944

TO: Asst C/AS, MM&D (Air Engineer) 7X373.1

COMMENT NO. 2 (cont'd)

FROM: Asst C/AS, OCR (Requirements Division)

Maj Greenleaf/ojf 5652

e. The tactical necessity for equipment which will enable certain types of aircraft to operate from restricted areas is recognized. Effort has been expended to develop the helicopter to fill this need.

f. The first tactical employment of a helicopter in any theater has already proven successful.

g. It is anticipated that a limited number of tactical type helicopters will be available in 1945.

4. It is recommended that:

a. No further consideration be given to the development of the Brodie System at this time.

b. In situations where tactical necessity requires operation of aircraft from areas beyond the capabilities of conventional liaison aircraft, the utilization of helicopter type aircraft, which will be available in 1945, be anticipated.

MERVIN E. GROSS
Brigadier General, USA

1 Incl:
Operations Div Inf Bulletin

Airborne & Liaison Branch __________
Asst For M & E G.W. Rogers
REQ/T

AFDAF
SEND TO CENTRAL FILES

Copy to Brodie

MHC/mah
695

HEADQUARTERS ARMY GROUND FORCES
ARMY WAR COLLEGE
WASHINGTON 25, D.C.

452.1 (8)(24 JUN 1944)GNRCT-10/85553

24 JUN 1944

SUBJECT: Suspended Cable Launching and Landing Apparatus (Brodie Design).

TO : Commanding General, Army Service Forces, Att: Research and Development Division, Room 4E-C17, The Pentagon.

1. Request limited procurement of twenty-two (22) complete Suspended Cable and Landing Apparatuses subject to test as provided below. Each complete apparatus to include three (3) Conversion Kits for the L-4 Liaison Plane, except as provided below.

2. It is further requested that two (2) complete apparatuses from the total above, each with three (3) Conversion Kits for the L-4 Liaison Plane and three (3) Conversion Kits for the L-5 Liaison Plane, be sent to the Commandant, Field Artillery School, Fort Sill, Oklahoma, for service test and training. Disposition of the remaining twenty (20) units will be given by separate action.

3. Informal arrangements have been made by this headquarters (Brig. Gen. Cowles) with the Office of Strategic Services (Lt. Col. Quinn) to add one unit to the number produced for the Office of Strategic Services in order to expedite Ground Forces' tests and training. The second apparatus intended for assignment to the Field Artillery School should therefore come from early production. Request that these arrangements be confirmed.

FOR THE COMMANDING GENERAL:

/s/ R. A. MEREDITH
Lt. Col., A.G.D.,
Asst. Ground Adj. Gen.

FOR RECORD ONLY:

Suspended Cable Launching and Landing Device was demonstrated to members of Ground Forces and others at Ft. Belvoir. The success of the device appears to warrant an extended test by Ground Forces. Nineteen (19) units of this apparatus have been ordered by O.S.S. Informal arrangements have been made to add to the production for O.S.S. in order to obtain units for Ground Forces.

Carlton Brodie
Eng. Sec. TS-1941

41

RESTRICTED

SUBJECT: Suspended Cable Launching and Landing Apparatus (Brodie Design)

SPRGO (24 Jun 44) 1st Ind. 30 Jun 1944

Headquarters, Army Service Forces, Washington 25, D. C.

To: The Chief of Engineers
Attention: Engineering and Development Division

1. All the requests contained in basic letter are approved.

2. The item Apparatus, Suspended Cable, Launching and Landing, is classified as:

Required type
Development type
Limited procurement type

3. It is desired that twenty-two (22) units of subject apparatus be procured at the earliest practicable date. It is further desired that procurement be coordinated with the Office of Strategic Services (Lt. Colonel Quinn) and with the Commanding General, Army Ground Forces (Mr. Brodie). Revisions in design are now being studied by the two (2) offices mentioned and it is desired that the latest modifications be incorporated in the units procured.

For the Commanding General:

/s/ Lucius D. Clay

LUCIUS D. CLAY
Major General, General Staff Corps
Director of Materiel

RESTRICTED

THIS PAGE IS UNCLASSIFIED

HEADQUARTERS ARMY AIR FORCES

ROUTING AND RECORD SHEET

[illegible] NO.	4
[illegible] NO.	

SUBJECT: [illegible] launching and landing small aircraft.

TO: [illegible] DATE 5 July 1944

FROM: [illegible] 1

[illegible] 4/3373

1. [illegible] of the minutes of the General Council dated 3rd July, 1944. [illegible] of launching and landing liaison type aircraft utilizing 500 foot [illegible] feet above the ground by means of a system of demountable [illegible]. [illegible] from the cable on a trolley and can take off or [illegible] regardless of wind direction.

1X337

2. [illegible] that the Engineer Corps is performing work that we [illegible]. It is desired that you contact Colonel [illegible] in the Army Service Forces, [illegible] Headquarters, and obtain full information on this project and [illegible] it is advisable for the Air Forces to take this [illegible].

3. [illegible] a report within the next two or three days.

[illegible]
Lieutenant General, U. S. Army
Chief of the Air Staff

19

O-Gorrie
Chief, Mat Div - 13 50 32 12

ADDRESS REPLY TO
COMMANDING GENERAL, ARMY AIR FORCES
WASHINGTON, D. C.

WAR DEPARTMENT
HEADQUARTERS OF THE ARMY AIR FORCES
WASHINGTON, D. C.

6 July 1944

20

MEMORANDUM FOR COLONEL PHILLIPS
THRU: GEN ECHOLS

1. General Giles called at 1500 July 6 reference to Army Air Forces taking over all experimental work on cable landing procedure for Army Ground Forces L-5 and L-4 aircraft. It was his understanding that certain testing is being done to perfect this type of landing, and the project officer seems to be an officer named Osborne in the Army Service Forces.

2. General Giles stated that General Arnold directed that the Air Forces take over all experimental work in connection with this project, and if the Ground Forces objected to this, all facts in the case are to be presented to General Arnold in writing, at which time he will take the matter up with General Marshall to effect a change in responsibility.

3. It is directed that immediate steps be taken to contact the Ground and Service forces personnel involved, obtain the whole information regarding the work they have done and make plans to take over and carry on the experiment.

E. M. POWERS
Brig. General, U. S. A.
Deputy Asst. Chief of Air Staff,
Materiel, Maintenance, & Distribution.

20.

O-Brodie
AAF-CF-373.1-D
2(1-24-44)

HEADQUARTERS ARMY AIR FORCES

ROUTING AND RECORD SHEET

TALLY NO.

FILE NO. X471.82

SUBJECT: Apparatus, Suspended Cable, Launching and Landing Small Aircraft.

TO: General Giles

DATE 8 JUL 194

FROM: General Echols

COMMENT NO. 3

Col. Wilson/hbr/8716

mED
Surg

1. The project of launching light airplanes, referred to in Comment 1, was brought to the attention of this office about eight months ago by the proponent of the idea (a Naval officer on duty with the Transportation Corps) and upon various occasions subsequent to that time, by the Army Ground Forces and the Corps of Engineers. When first proposed, the project officer envisaged its application to sea-going vessels for employment in combating submarine activity. Later, its application to land operation was envisaged.

2. A report on first tests conducted at New Orleans Port of Embarkation and submitted by the Chief of Transportation, Washington, D.C., dated 22 December 1943, was submitted to the Requirements Division, AC/AS, OC&R on 4 January 1944 for review and opinion as to AAF requirements for such a method of launching light aircraft. The reply, dated 13 January 1944, from the Requirements Division was in the negative. The lack of AAF requirements for the subject equipment was indicated to the Chief of Transportation, 19 January 1944, and again to the Army Service Forces, 11 February 1944.

3. Subsequent to the above action the Army Service Forces were requested by the Army Ground Forces to develop the Brodie equipment and to procure a quantity for Ground Force use. The basis for the request to the Chief of Engineers rather than to the Army Air Forces was that the equipment was essentially a landing and takeoff device for synthetic "air field" and therefore came under the purview of the Engineers.

X452.04 Lent

4. Preliminary discussions have taken place with Colonel Heiberg, Office of the Air Engineer, and in the absence of Colonel Osborne, with personnel of his office. Action is being initiated to take over the development and procurement of the Brodie system by the Army Air Forces to meet Army Ground Force requirements.

5. A conference has been called for 8 July 1944 between the Army Service Forces, as represented by personnel in Colonel Osborne's office, and AC/AS, MM&D, at which the details of the transfer are expected to be arrived at. A report of the action taken by this conference will be rendered on or before 10 July 1944.

O P ECHOLS
O P ECHOLS
Maj General, U S A.
Asst Chief of Air Staff
Materiel, Maintenance & Distribution

21.

(AFDRA-2A) 9.100
Col. Legg/afn/8330

SUBJECT: Development of Aircraft and Armamental Equipment.

TO: Commanding General
Army Ground Forces
Washington, D. C.

Attention: Requirements Section
Room 1003, Bldg. T-7

1. This office has been advised informally that the Army Ground Forces are in the process of formulating a requirement for Cook Assemblies of Italian airplanes (Breda System).

2. The Army Air Forces are charged with the development of such equipment by Army Regulations 95-15, Paragraph 20. The Army Air Forces are willing and anxious to render any assistance possible, and are prepared upon receipt of such a requirement to develop the equipment and to procure the desired number of items for the Army Ground Forces.

For the Commanding General, Army Air Forces:

AFDRA-2

39

SUBJECT: Suspended Cable Launching and Landing Apparatus (Brodie Design).

SPRAG (24 Jun 44) 3rd Indorsement WJN/hlf
6047

Headquarters, Army Services Forces, Washington 25, D. C. 19 Jul 1944

TO: Commanding General, Army Air Forces
Attn: Assistant Chief of Air Staff, M&SD

1. In accordance with a verbal understanding reached between Major General Echols and Major General Clay, this correspondence is transferred as a matter of primary interest to Army Air Forces.

2. In view of the above, it is recommended that the requests of Army Ground Forces, as set forth in the basic letter, be accomplished by your Headquarters and that the Commanding General, Army Ground Forces be advised of action taken.

For the Commanding General:

/s/ R. M. Osborne

R. M. OSBORNE
Colonel, General Staff Corps
Director, Research and Development Division

23

43

RESTRICTED

Col. R.C. Wilson/mm/6716

10

AFDMA-2
21 July 1944

Suspended Cable Launching and Landing Apparatus
(Brodie Design)

Commanding General, Material Command,
Wright Field, Dayton, Ohio.

1. A communication has been received from the Army Ground Forces requesting limited procurement of twenty-two (22) complete suspended cable and landing equipments subject to test as provided below. Each complete equipment is to include three (3) conversion kits for the L-4 liaison plane except as provided below.

2. It is further requested that two (2) complete equipments from the total above, each with three (3) conversion kits for the L-4 liaison plane and three (3) conversion kits for the L-5 liaison plane, be sent to the Commandant, Field Artillery School, Fort Sill, Oklahoma, for service test and training. Disposition of the remaining twenty (20) units will be given by separate action. This office should be notified when the latter twenty (20) units will be available in order that the Ground Forces may in turn be notified.

3. The Office of Strategic Services has already taken action to procure a number of these equipments on their own initiative and for their own use. One set will be made available to the Material Command in order to expedite development testing. This unit is at present located at Fort Belvoir, and arrangements for its delivery to the Army Air Forces may be made directly with Lt. Colonel Quinn of the Office of Strategic Services.

4. The Army Ground Forces are anxious to begin training on this equipment at the earliest possible date and have asked the Office of Strategic Services to add one unit to the number already on contract for that office. It is understood that the unit in question actually will be the one now located at Fort Belvoir. It is requested, therefore, that such tests as the Material Command deems necessary on this equipment be expedited, and that it then be turned over to the Field Artillery School.

5. For your further information, the mast cable and stays are presently being produced for Office of Strategic Services by the Maryland Engineering Company at Pikesville, Maryland. All other special items of equipment, such as the launching trolleys, arches, couplings and aircraft fittings are being produced for Office

C.G., Matcom., P...., Dayton, Ohio
dtd 21 July 1944

of Strategic Services by the All American Aviation Company. Office of Strategic Services has located tentative sources for limited production of these requirements at Taylorcraft and at the White Aircraft Company of Palmer, Massachusetts.

6. The inventor of this apparatus is First Lieutenant Vance A. Brodie, Field Artillery, Army Serial No. [illegible]. At the present time this officer is assigned to the Field Artillery Replacement Pool at Fort Sill, Oklahoma, and is on temporary duty with the Army Ground Forces for the purpose of following this project. It appears that all of the items of equipment have not been perfected, and that Lieutenant Brodie's services are still being utilized for the development of this device. It is suggested that action be taken by the Material Command to obtain the services of this officer who has the greatest knowledge and personal experience with the equipment.

7. The Material Command is directed to take over the development and test of this equipment and to make the procurement requested by the Army Ground Forces.

By command of General ARNOLD:

[illegible],
Colonel, Air Corps,
Chief, Gen'l. Engr. Br., Material Div.,
Office, Assistant Chief of Air Staff,
Material and Services.

Encl.
Cy. ltr. fr. Army Ground Forces
dtd 24 June 44, w/4 indorsements

AFMAS-2

RESTRICTED

Col.R.C.Wilson/mm/6716
Written 21 July 1944

Subject: Suspended Cable Launching and Landing Apparatus (Brodie Design).

4th Ind.

Hq. Army Air Forces, Washington 25, D. C. 26 JUL 1944 AFDAS-2

To: Commanding General, Army Ground Forces, Army War College, Washington, D. C.

Action has been taken by the Army Air Forces to comply with the request of the Army Ground Forces as set forth in the basic letter. For your information, a copy of the directive from this office to the Material Command is attached hereto.

25

For the Commanding General, Army Air Forces:

O. P. [illegible],
Major General, U.S.A.,
Asst. Chief of Air Staff,
Material and Services.

HQ AAF
26 JUL 1944
MESSAGE SECTION

AFUMA-2 AFUMA-1 AFMSD-2 AFMSD-1

RESTRICTED

Capt. Jon H. Ober
JJb/MCT (2-8139)
Wright Field, Dayton, Ohio.
27 July 1944

COM. GEN.	
TECH. EXC.	9480
ADM. EXC.	
C. O.	
BUD. OFF.	
EXP. ENG.	
CONTRACT	
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PROD. DIV.	
PROD. ENG.	
PROD. CONT.	
I. P. S.	
C.	
TECH. DATA	
CIV. PERS.	
OTHERS	

CFI-1791

413.6

Suspended Cable Launching and Landing Apparatus (Brodie Design)

Engineering Division

X-413.6 - Launching Equipment

1. Problem Presented:

a. To develop, test and procure subject equipment.

2. Factual Data:

a. The Office of Strategic Services has already taken action to procure a number of these equipments on their own initiative and for their own use. One set will be made available to the Materiel Command in order to expedite development testing. This unit is at present located at Fort Belvoir, and arrangements for its delivery to the Army Air Forces may be made directly with Lt. Colonel Quinn of the Office of Strategic Services.

b. The Army Ground Forces are anxious to begin training on this equipment at the earliest possible date and have asked the Office of Strategic Services to add one unit to the number already on contract for that office. It is understood that the unit in question actually will be the one now located at Fort Belvoir. Therefore, such tests as are deemed necessary on this equipment should be expedited, and the equipment then turned over to the Field Artillery School.

c. For information, the mast, cable and stays are presently being produced for Office of Strategic Services by the Maryland Engineering Company at Pikesville, Maryland. All other special items of equipment, such as the launching trolleys, brakes, couplings and aircraft fittings are being produced for Office of Strategic Services by the All American Aviation Company. Office of Strategic Services has located tentative sources for limited production of these equipments at Taylorcraft and at the White Aircraft Company of Palmer, Massachusetts.

RESTRICTED

CTI-1791 (Cont'd)

Suspended Cable Launching and Landing Apparatus (Brodie Design).

Engineering Division

d. The inventor of this apparatus is First Lieutenant James H. Brodie, Field Artillery, Army Serial No. 0-361050. At the present time this officer is assigned to the Field Artillery Replacement Pool at Fort Sill, Oklahoma, and is on temporary duty with the Army Ground Forces for the purpose of following this project. It appears that all of the items of equipment have not been perfected, and that Lieutenant Brodie's services are still being utilized for the development of this device. It is suggested that action be taken by the Engineering Division to obtain the services of this officer who has the greatest knowledge and personal experience with the equipment.

3. Authority:

a. Commanding General, Army Air Forces. By restricted letter, dated 21 July 1944, subject as above, received from Chief, Development Engineering Branch, Materiel Division, Office, ACAS/R&S.

4. Action Desired:

a. To develop and test the subject device and procure twenty-two (22) complete suspended cable and landing equipments subject to test as provided herein. Each complete equipment is to include three (3) conversion kits for the L-4 liaison plane except as provided below.

b. Two (2) complete equipments from the total above, each with three (3) conversion kits for the L-4 liaison plane and three (3) conversion kits for the L-5 liaison plane, are to be sent to the Commandant, Field Artillery School, Fort Sill, Oklahoma, for service test and training. Disposition of the remaining twenty (20) units will be given by separate action. ACAS/R&S is to be notified when the latter twenty (20) units will be available in order that the Ground Forces may in turn be notified.

By Command of Brigadier General [illegible]:

T. A. [illegible],
Colonel, Air Corps,
Deputy Chief of Staff.

cc: Production Division
Air Service Command (3)

RESTRICTED

66

RESTRICTED

Subject: Suspended Cable Launching and Landing Apparatus (Brodie Design)

5th Ind AFDAA-20
Headquarters, Army Air Forces, Washington 25, D. C. 15 August 1944

To: Commanding General, Army Ground Forces, Washington, D. C.

1. It is anticipated that the two first apparatuses will be ready for shipment to Fort Sill by thirty days from this date.

2. It is understood that Lt. Brodie will not be available until approximately 30 August 1944. At that time it is requested that he assist the Materiel Command both in acceptance of these devices at the manufacturers plant, and in installation of the equipment at Fort Sill.

3. For your information, the Materiel Command plans to use the article now at the Engineer Board for the preparation of suitable procurement drawings, and for test and continued development.

For the Commanding General, ARMY AIR FORCES:

J. F. PHILLIPS
Colonel, Air Corps
Chief, Materiel Division
Office, Asst. Chief of Air Staff
Materiel and Services

Incl. n/c

RESTRICTED

452.1(8)(24 Jun 44)CMHQT-18/92742 5th Ind.

HEADQUARTERS ARMY GROUND FORCES, Army War College, Washington, D. C.

4 AUG

TO: Commanding General, Army Air Forces, (Attn: Assistant Chief of Air Staff, MMAD).

Request that this headquarters be advised as to progress of development and procurement of the subject apparatus. Information is particularly desired as to when the two (2) apparatuses complete with Kits for the L-4 and L-5 Liaison Planes will be ready for tests and training as set forth in paragraph 2, basic letter.

For the COMMANDING GENERAL:

R. A. MERRITT
Lt. Col., A.G.D.
Asst. Secretary

1 Incl. n/c.

B

P A R A P H R A S E

SECRET

Ho AAF AFDMA-2C
Mr R W Jones/fw 3671

18 August 1944

Commanding General
AAF Materiel Command
Wright Field, Layton Ohio

Number: WAR 82761

AFDMA-2C attention Engineering Division from Phillips signed Arnold.

Reference telephone conversation with Captain C B Webb of equipment laboratory this date. This headquarters has received urgent cable request from Air Service Command India - Burma Sector for 1 Brodie device to be shipped by air. It is directed that the unit at Fort Belvoir be disassembled and prepared for shipment. The theater has been advised that this equipment will be ready for shipment by September 1, 1944, and requested to furnish theater priority assignment. Your office will be advised on receipt of the shipping priority. Every effort should be made to meet the date promised. Priority 1 B is assigned to this work.

End

AF 2501

ORIGINATOR: CG AAF

CM-OUT-82761 (18 Aug 44) 18162 ejm

SECRET

13628

COMINCH FILE

UNITED STATES FLEET
HEADQUARTERS OF THE COMMANDER IN CHIEF
NAVY DEPARTMENT
WASHINGTON 25, D. C.

8/22/44

:002374

SECRET

From: Commander in Chief, United States Fleet.
To: Commanding General, Army Air Force
(Att: Material and Maintenance Division).

Subject: "Brodie" System for Launching and Recovering Airplanes - Request for.

Enclosure: (A) Cominch secr ltr FF1/86 Ser 002368 of 10 August 1944.

1. It is desired to conduct tests of the Brodie system for launching and recovering airplanes, as outlined in enclosure (A).

2. It is requested that the following equipment be made available to Commander Amphibious Training Command, Pacific Fleet, at an early date:

One (1) - Brodie type land installation for launching and recovering airplanes.

Three (3) - L-4 type airplane kits for the Brodie system.

One (1) - L-5 type airplane kit for the Brodie system.

On completion of the tests, the equipment will be returned to such addressee as may be designated.

3. If approved, the above equipment should be consigned to:

Supply Officer,
Naval Landing Force Equipment Depot,
San Diego, California.

W. S. DeLANEY,
Assistant Chief of Staff.

Copy to: (less enc)
ComPhibTrnPac
ComFAirWestCoast
CO NLFED San Diego
Op-03
BuAer

7 13617

4INCH FILE

UNITED STATES FLEET
HEADQUARTERS OF THE COMMANDER IN CHIEF
NAVY DEPARTMENT
WASHINGTON 25, D. C.

FF1/F6
Serial: 002368

SECRET

From: Commander in Chief, United States Fleet.
To: Commander Fleet Air, West Coast.
Commander Amphibious Training Command, Pacific Fleet.

Subject: "Brodie System" and Jet Catapult - Comparative test and evaluation of.

Reference: (a) CNO secr disp 311705 of July 1944.

1. It is directed that a project be established by Commander Fleet Air, West Coast, and Commander Amphibious Training Command, Pacific Fleet, for the early comparative test and evaluation of the Brodie (overhead wire) shipboard system for launching and recovering Sub type airplanes versus the jet catapult for launching similar lightweight airplanes. It is desired to determine the system that will best meet the requirements of the Amphibious Forces during future operations in the Pacific.

2. In accordance with reference (a), Brodie type gear is being installed on LSD-776 at New Orleans, which should arrive and report to Commander Amphibious Training Command, Pacific Fleet, at San Diego about 21 September 1944. A jet catapult installation is being shipped by rail from Norfolk, consigned to the Supply Officer, Naval Landing Force Equipment Depot, San Diego, California, and should arrive about 8 September 1944. This catapult should also be installed on LSD-776.

3. A Brodie type land installation will be requested from the Army Air Forces for demonstration ashore at the same time as the above tests.

4. It is desired that the Commander in Chief, United States Fleet, be informed of the readiness date for conducting the subject tests in order that representatives may be present.

R. S. EDWARDS,
Chief of Staff.

Copy to:
CinCPac
ComAirPac
ComPhibPac
VCNO (Op-05)
BuAer
CG ASF (Att Requirements Sec)
CG AAF (Att Mob & Maint Div)
CO LSD-776

HOWARD E. GREEN,
Flag Secretary.

B-531

AAF-CG-373.1-0 (1-19-44)

SECRET

Written 25 August 1944
AFDMA-2C

Mr R W Jones/fw-3832
30 AUG 1944

SUBJECT: Brodie System for Launching and Recovering Airplanes

SECRET

By Authority of
The Commanding General
Army Air Forces

8/25/44 M. C. D.

TO: Commander in Chief
United States Fleet
Navy Department
Washington 25, D. C.

1. Reference is made to your letter of 19 August 1944, subject as above.

2. Arrangements have been made recently to ship the only Brodie type land installation presently available, to the China-Burma-India Theater by air. A quantity of twenty-two (22) of these equipments are being procured, however, by the Army Air Forces for the Army Ground Forces. The Army Ground Forces has agreed to release one of the first two built, to the Navy. These are now expected to be available by 15 September 1944.

3. The Materiel Command, Wright Field, Dayton, Ohio, has accordingly been instructed to divert one of the first two assemblies and ship it to the address shown in paragraph 3 of your letter. It is requested that it be shipped to the Materiel Command on completion of tests.

For the Commanding General, ARMY AIR FORCES:

PATRICK W. TIMBERLAKE
Brigadier General, U. S. A.
Deputy Chief of Air Staff

SECRET

OFFICE SYMBOL	1 AFDMA-2	2 AFDMA-1	3 AFDSD	4	5	6
SIGNATURE OF RESPONSIBLE OFFICER						
INTERNAL OFFICE COORDINATION						

76

RESTRICTED

Mr R W Jones/fe-3831

AFDMA-2C
15 September 1944

Brodie System for Launching and Recovering Airplanes

Commander in Chief
U. S. Fleet
Navy Department
Washington, D. C.

1. Further reference is made to your letter of 19 August 1944, and to reply of this Headquarters in letter dated 30 August 1944, subject as above.

2. Recent load tests of the production type masts have resulted in compression failure at too low a load factor. It is, therefore, regretted that it will be impossible to supply the Navy with one of these systems for approximately thirty (30) days. Every effort will be made, however, to reduce that time.

For the Commanding General, ARMY AIR FORCES:

J. F. PHILLIPS
Colonel, Air Corps
Chief, Materiel Division
Office, Asst. Chief of Air Staff
Materiel and Services

RESTRICTED

Carter - Brodie
Legion Sect
Ord Div

74

7th Ind.

452.1(24 Jun 44)GNGCT-10/99054

HEADQUARTERS ARMY GROUND FORCES, Army War College, Washington, D. C.

TO: Commanding General, Army Air Forces, (Attn: Assistant Chief of Air Staff, M&D).

1. There is no objection on the part of this headquarters to the assignment of Lt. Brodie as requested in paragraph 2, 6th Indorsement. He will be available after 4 September 1944.

2. Request detailed information as to where and when it is desired Lt. Brodie should report, and expected duration of the special duty.

For the COMMANDING GENERAL:

1 Incl n/c

32

O-Brodie

ADDRESS REPLY TO
COMMANDING GENERAL, ARMY AIR FORCES
WASHINGTON, D. C.

AAF-CC-
373.1-D-
5(1/4pp)

SECRET

RQT

WAR DEPARTMENT
HEADQUARTERS OF THE ARMY AIR FORCES
WASHINGTON, D. C.

AFTMA-2C
2 September 1944

SUBJECT: Brodie Device for CBI Theater.

TO: Commanding General, Army Ground Forces,
Washington 25, D. C.

Attention: Colonel M. H. Cox, GNRQT-10.

1. Attention is invited to the attached paraphrases of Messages CASX 8466 dated 16 August 1944 and CAB 5223 dated 29 August 1944.

2. In accordance with the request contained in the first of these messages the Materiel Command disassembled the Brodie installation at Fort Belvoir. In view of the request for a trained crew it is planned to conduct a two weeks' training course on the erection and operation of this equipment at Fort Belvoir.

3. It is understood that Sgt. Gregory and the L-5 airplane equipped with the Brodie installation are available on short notice. Tentative arrangements have been made for two Wright Field test pilots to take the training course. It is the opinion of this office that two trained riggers and one of these pilots would constitute a sufficient crew to proceed to the theater and give instruction there.

4. It is requested that arrangements be made by your office to have nine Engineer ~~Board~~ personnel (of which only two would go to the theater) report to Fort Belvoir as soon as practicable to receive this instruction. It is also requested that Sgt. Gregory and Lt. Brodie be made available as instructors. It is further requested that this office be notified by telephone as to the date when the ground crew can be made available.

For the Commanding General, Army Air Forces:

J. F. PHILLIPS
Colonel, Air Corps
Chief, Materiel Division, Office
of Assistant Chief of Air Staff,
Materiel and Services.

2 Incls. -
1. cy CASX 8466
2. cy CAB 5223

SECRET

33

Carton - Brodie
AAF - CC - 373.1 - D
5(3'4'pp)

12

SECRET

PARAPHRASE

Fr: CG, ASC, Calcutta, India.

To: WD, CG, ASC Patterson Fld, Ohio
CG, 14th AF, Kunming, China

No. CASX 8466 16 Aug 44

To Arnold info McMullen, Dorn for Middleton, and Talbot from Hadley CASX 8466 AMSC.

Brodie Device subject. One each device urgently needed in China by Y Forces. One each requested if available for procurement and shipment to Chabua by air marked for CG China Air Service Area Command at Kunming for onward delivery to Y forces. Desire information when device available for shipment, exact weight involved. Advising of priority given upon receipt of information on above.

END

CM-IN-15106

SECRET

Carlson-Brodie
ABF-CF-370.1-D
5(W)(M)

~~SECRET~~

PARAPHRASE

Fr: CO Army Air Forces, India-Burma Sector,
Calcutta, India.

To: War Dept.
CO AAF, India, Burma and China, Theater Hqs., New Delhi, India.

No. CAB 5223 29 Aug 44

Arnold forPhillips info Sultan fr Stratemeyer CAB 5223 AAOO.

India-Burma Sector anxious to avoid delaying receipt and use of Brodie device but equipment unknown in this theater and valuable time will be lost if trained crew does not accompany equipment. Information requested on availability of trained crew of 8 plus pilot to be shipped same vessel as equipment, responsible for equipment and placed on temp. duty to this Headquarters to train other crews for six months. Headquarters will assign shipping priority upon receipt of approval of above plan and readiness date.

END

CM-IN-27292

~~SECRET~~

~~SECRET~~

452.11(S)(2 Sept 44)GNGCT-15 1st Ind.

HEADQUARTERS ARMY GROUND FORCES, Army War College, Washington 25, D. C.

TO: Commanding General, Army Air Forces, Washington 25, D. C.

In accordance with request in paragraph 4, of basic communication, nine (9) Engineer personnel will report to the Commanding Officer, 1114th Engineer Combat Group, Fort Belvoir, 7 September 1944. Two of these personnel will be available for shipment overseas for the purpose of acting as instructors on the Brodie device. The remaining seven (7) are available for a period of thirty days and are to be used as ground crew in the erection and operation of the Brodie device at Fort Belvoir.

For the COMMANDING GENERAL:
Holman Hamilton

HOLMAN HAMILTON
1st Lt., A.G.D.
Asst. Ground Adj. Gen.

2 Incls.
n/c

FILE

37311 Section

- 2 -

~~SECRET~~

2

7 September 1944

All American Aviation, Inc.
210 Greenhill Avenue
Wilmington, Delaware

CONFIDENTIAL

Attention: Mr. D. E. Minor
Reference: Contract OSS-592

Gentlemen:

Confirming our conversation of this date, you will receive formal contract for the units involved within the week.

I have arranged for a conference with Lt. James Brodie today, and the problems raised by you on your recent visit to this office are expected to be settled.

The Army Air Corps will be responsible for the supervision of the subject contract and for all testing of All American units. In order that no holdup will develop over testing, a formal request is being directed to Wright Field so that the resident inspector at your factory may be vested with proper authority.

Further, the Army Air Corps will be responsible for the redesign of the unit and the incorporation of all new devices or changes to the satisfactory performance of the unit. The Office of Strategic Services will remain financially responsible for any charges resulting therefrom.

Captain Weiner, Office of Strategic Services, will arrange to pick up one unit at your plant about 8 o'clock tomorrow morning. Your cooperation will be appreciated.

Very truly yours,

M. I. McHugh
Assistant Chief
Procurement & Supply Branch

JK:jm
1 courtesy copy
cc McHugh
cc OSS-592
cc file
cc Wright Field
Mailed-

MX-56

RESTRICTED

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[illegible]STRICTED

Mr R [illegible] Jones/[illegible]

Subject: Suspended [illegible] Apparatus (Brodie design)

[illegible] Ind. AFDMA-[illegible]

Headquarters, Army Air Forces, Washington 25, D. C., [illegible] September 1944.

To: Director, [illegible] Air Technical Service Command, Wright Field, Dayton, Ohio. Attention: Materiel Command, Engineering Division.

1. Attention is invited to the [illegible] Indorsement. It is understood that the Headquarters, Army Ground Forces has issued temporary duty orders for Lt. Brodie, effective this date, assigning him to the Materiel Command for thirty (30) days.

2. In view of the uncertain status of this officer, his value to the Army Air Forces on this work, and the fact that he will be needed for a considerably longer period than now covered, it is recommended that your office take action to have him permanently transferred to the Army Air Forces and assigned to your Command, prior to expiration of the present temporary duty orders.

By command of General ARNOLD:

[illegible] PHILLIPS
Colonel, Air Corps
Chief, Materiel Division
Office, Asst. Chief of Air Staff
Materiel and Services

Incl. n/c

[illegible]
[illegible] 1944
[illegible]

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AFDMA-2 AFDMA-1

RESTRICTED

Coordinate Copy
Return to Room [illegible]

- 2 -

THIS PAGE IS DECLASSIFIED IAW EO 13526

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Dred 13J

FROM NAVY DEPARTMENT
BUREAU OF SHIPS

Section 519
REFER TO FILE NO.

LST776/S17(519d)

NAVY DEPARTMENT
BUREAU OF SHIPS
WASHINGTON 25, D. C.

14 SEP 1944

AFDAA-1

To: Commanding General, Army Air Forces
Attention: Assistant Chief of Air Staff Material and Services.

Subj: 316' Landing Ship, Tank, LST-776 - "Brodie" Device, Training in Use of.

1. The "Brodie" system of landing and launching light airplanes was installed on LST-776 at New Orleans. The LST-776 has now been assigned to the San Diego Area for approximately three weeks in order to train the crew in the operation of the "Brodie" device.

2. Since Lt. Brodie was instrumental in the development of the subject device and is the one most fully qualified in its operation, it is requested that he be detailed to assist the Commander, Amphibious Training Command, U. S. Pacific Fleet during training period mentioned in paragraph 1 above.

3. It is expected that LST-776 will arrive in San Diego the third week in September. The addressee will be informed of the exact date when known.

CC:
CNO
ComPhibTraPac
CINCPAC
Commd.Gen. Material Command,
Wright Field, Dayton, Ohio.
Hdqs. Army Ground Forces, Air Support Branch
Office of the Chief of Transportation,
War Dept.

E.W. Mills
Rear Admiral, U.S.N.
Acting Chief of Bureau

FROM BUREAU OF SHIPS, NAVY DEPARTMENT, WASHINGTON

AAF.CF-373.1-0
6(3/4/44)

X560

16

CONFIDENTIAL

9

Mr R W Jones/fw-3831

Subject: ~~The~~ Landing Ship, Tank, LST-776 - "Brodie" Device, Training in Use of.

1st Ind. AFDMA-2C

Headquarters, ARMY AIR FORCES, Washington 25, D. C., 19 Sept 1944

TO: Commanding General, ARMY GROUND FORCES, Washington, D. C.
Attention: GNGCT-10.

(X201-0 / 370.453

1. Basic communication is forwarded as a matter pertaining to your office, since Lt. Brodie is now on temporary duty orders from your Headquarters, dated 8 September 1944, assigning him for 30 days to the AAF Air Technical Service Command (Materiel Command).

2. The request contained in basic communication is concurred in except that the three weeks assignment at San Diego should be shortened as much as practicable, in order to reduce to a minimum, interference with the rest of the project.

For the Commanding General, ARMY AIR FORCES:

J. F. PHILLIPS
Colonel, Air Corps
Chief, Materiel Division
Office, Asst. Chief of Air Staff
Material and Services

HQ AAF
2 OCT 1944
CLASSIFIED SECTION

373.1 Landing

1st

CONFIDENTIAL

A 20114

OFFICE SYMBOL	1. AFDMA-2	2. AFDMA-1	3.	4.	5.
GRADE AND SURNAME OF COORDINATING	Clinton	[illegible]			

CONFIDENTIAL

201 Brodie, James H (Off)(C) 2nd Ind.
(14 Sept 42) ONGAP-P

HQ, ARMY GROUND FORCES, Army War College, Washington 25, D. C.
21 Sept. 1942.

To: CG, AAF, Pentagon Bldg. Washington, DC. (Attn: ACAS, M&S)

Necessary orders will be issued by this headquarters, effective on or about 25 September, relieving Lt. Brodie from present temporary duty at Wright Fiel. and assigning him to temporary duty at San Diego, California for approximately three weeks and upon completion of this duty, to return to Wright Field for further temporary duty.

For the COMMANDING GENERAL:

ELIAS KARBAN
Capt, A. G. D.
Asst Ground Adj General

COPY

CONFIDENTIAL

14

CONFIDENTIAL

Mr R W Jones/fw-3831

Subject: 316' Landing Ship, Tank, LST-776 - "Brodie" Device, Training in Use of.

3d Ind. AFDMA-2C

Headquarters, Army Air Forces, Washington 25, D. C., 27 Sept. 1944.

To: Chief, Bureau of Ships, Navy Department, Washington, D. C.

1. Forwarded inviting attention to the second indorsement.

For the Commanding General, ARMY AIR FORCES:

E. C. WILSON
Colonel, Air Corps
Chief, Devel. Engr. Br., Mat. Div.
Office, Asst. Chief of Air Staff
Materiel and Services

Basic dtd 14 Sept 44 w/1 Ind already in files.

2d Ind dtd 23 Sept..attached

CONFIDENTIAL

OFFICE SYMBOL	AFDMA-2	2.	3.	4.	5.
GRADE AND SURNAME OF COORDINATING					

77

RESTRICTED

Mr R W Jones/fw-3831

AFDMA-2C
15 September 1944

Brodie Airplane Launching and Landing Device

Commanding General
Army Ground Forces
Washington, D. C.

Attention: Colonel M. R. Cox, GNRAT-1D

1. Reference is made to 6th Indorsement dated 15 August 1944, to your office, in which it was stated that the first two of subject devices would be ready for shipment to Fort Sill in thirty days.

2. In recent load tests of the production type mast at Fort Belvoir, this article failed in compression at a too low a load factor, although carefully rigged. It is hoped that reducing the height of the present mast will overcome this defect. Results on this further test will be known in a few days. If failure is still obtained it will be necessary to return to the heavier hexagonal type mast of the original design. Approximately two weeks will be required before any of these can be produced.

3. Your office will be further advised as this work progresses.

For the Commanding General, ARMY AIR FORCES:

J. F. PHILLIPS
Colonel, Air Corps
Chief, Material Division
Office, Asst. Chief of Air Staff
Material and Services

HQ AAF
SEP 18
MATERIEL SECTION

RESTRICTED

AFDMA-2 AFDMA-1

Cornbook Copy

Office, Asst. Chief Air Staff, Materiel, Maintenance, and Distribution

AIR DEPARTMENT - ARMY AIR FORCES

Inter-Desk Memorandum

TO: [redacted] - MEMORANDUM FOR RECORD Date 15 Sept 1944

SUBJECT: BRODIE SYSTEM **CONFIDENTIAL**

Extract from
Equip. Lab.
Daily Information
Report, 8 Sept.

Personnel of the Office of Strategic Services visited this Laboratory to discuss future plans for the Brodie System. It was arranged that the Office of Strategic Services would continue present contracts for 18 complete units; that this Laboratory would test a pilot model; initiate desirable modifications if required; package or group assemblies for aerial delivery; and take action to ship the 18 units as directed by higher authority.

CONFIDENTIAL

From R. W. JONES

THIS FORM WILL NOT BE USED OUTSIDE THE AC/AS, M. M. & D.

M. M. D.- 111

RESTRICTED

TT

OFFICE OF STRATEGIC SERVICES
WASHINGTON, D. C.

27 September 1944

Restricted
~~CONFIDENTIAL~~

Commanding General
Materiel Command
Att: Dept. 54-5
Wright Field
Dayton, Ohio

Attention: Major Sherin

Dear Sir:

Reference: Contract [illegible]-592

This letter will confirm arrangements reached at Wright Field on [illegible] September 1944 between Air Corps representatives (Major Sherin, Major [illegible], and Captain Webb) and Lt. Col. Quinn and Mr. McHugh, Office of Strategic Services.

By way of recapitulation, the following conclusions were reached:

(a) Office of Strategic Services will continue its contract with All-American to the extent of the present maximum amount, $[illegible].00;
(b) The Air Corps will immediately accept responsibility for the supervision of production, testing, engineering, and redesigning of any part of the device as may be necessary; including technical supervision of the All-American contract;
(c) The Air Corps will develop a means of dropping the completed radio device by parachute, and information resulting from tests in connection with this work will be made available to Office of Strategic Services;
(d) The Office of Strategic Services will transfer to the Air Corps nine (9) complete sets upon completion of the project, without reimbursement, in consideration of the services rendered by the Air Corps, and will retain nine (9) sets for its own purposes.

It is, therefore, requested that your office handle suitable inspection specifications covering the manufacture of equipment on subject contract. You will note from attached copy of letter to All-American Aviation Company from the Office of Strategic Services that the former has been notified.

A copy of the contract is being forwarded for your records and information.

Very truly yours,

[signature]

R. I. McHugh
Acting Chief, Procurement & Supply
~~XXXXXXXXX~~

Enclosure

RESTRICTED

MX-561

X

Carbon Brodie
Foreign Sect. 85-22
Part 1

80

SECRET

27 SEPTEMBER 1944

3831

ROUTINE

Mr R W Jones/fw

SECRET

COMMANDING GENERAL
ARMY AIR FORCES
INDIA-BURMA SECTOR
CALCUTTA, INDIA

COMMANDING GENERAL
U S ARMY FORCES, CHINA BURMA AND INDIA
THEATER HEADQUARTERS
NEW DELHI, INDIA

40

BRODIE DEVICE REFERENCE OUR WARX THREE ZERO THREE THREE THREE DATED THIRTEEN SEPTEMBER ONE NINE FOUR FOUR PD PAREN TO STRATEMEYER INFORMATION SULTAN FROM PHILLIPS SIGNED ARNOLD PAREN TRAINED CREW AND EQUIPMENT READY FOR SHIPMENT PD AGAIN REQUEST THEATER PRIORITY ASSIGNMENT FOR SHIPMENT BY WATER PD WEIGHT TEN THOUSAND POUNDS CUBAGE SEVEN HUNDRED CUBIC FEET

When priority received send to WF for necessary action. Direct name of ship and sailing date be obtained for use by AGF in sending crew on same ship

J. F. PHILLIPS, Colonel, AC
Chief, Materiel Division

40

~~SECRET~~

IN REPLY TO CARS

From: [illegible] Army Forces, China, Burma and India, Theater
Headquarters, New Delhi, India

To: War Department
[illegible] AAF, India-Burma Sector
Calcutta, India

Ur: [illegible] 1424 29 Sept 1944

Profile device personnel and equipment desired to be shipped by first available water transportation. Advan to Arnold for Phillips Info Stratemeyer reread [illegible] 27th Sept.

[illegible] (29 Sept 44) 1442 bja

~~SECRET~~

AAFMC-14-A-WF-6-18-42-500M sets of 8

PRIORITY

TELEGRAM

OFFICIAL BUSINESS—GOVERNMENT RATES

FROM: WAR DEPARTMENT
BUREAU Air Technical Service Command
Wright Field, Dayton, Ohio

Capt. C. H. Webb:fb 151777
Ext: 2-5241

September 1943 4:00 P.M.

F. O. CARROLL
Brig. General, U.S.A.

MX-561

OFFICE OF STRATEGIC SERVICES
ROOM 106, SOUTH BUILDING
25TH AND E STREETS, NORTHWEST
WASHINGTON 25, D. C.

TSHLA-HC-61 . . . IN ORDER TO FACILITATE HANDLING OF BRODIE PROJECT IT IS REQUESTED THAT ALL AMERICAN AVIATION AND MARYLAND [redacted] COMPANY BE INSTRUCTED TO MOTOR GOVERNMENT BILLS OF LADING FOR SHIPMENT AS ISSUED FROM THIS COMMAND FROM TIME TO TIME. END. AATSC.

Wolfe-Meyers, AIR TECHNICAL SERVICE COMMAND, [redacted]

GOVERNMENT PAID

AGO TRANSMISSION

12:53

COORDINATION	Adm.	Budget	Contract	Exp. Eng.	A. F. S.	Insp.	I. P. S.	Prod.Eng.	Exec.
				Carl Cl[illegible]					
				Wal. F. B. Johnston					
				[illegible]					

Commander Williams 84

RESTRICTED

AFDMA-2C
Maj F C Oakley/fw-2831

HEADQUARTERS ARMY AIR FORCES
Office, Asst. Chief of Air Staff, Material and Services

Inter-Desk Memorandum

TO: Colonel E. Phillips Date 9 October 1944

SUBJECT Brodie Suspended Cable Launching and Landing Device.

1. Sgt. Gregory of the Brodie team has returned from the West Coast and reports that "they" may keep Lt. Brodie out there for another month. On 5 October Lt. Brodie stated over the telephone that he thought both he and Gregory would be able to return by 8 October.

2. The future availability and tactical use of the Brodie system is believed to be strongly dependent upon quick concentration of the activities in connection with the system in one spot, Wright Field. Steps have been taken to accomplish this but they are dependent upon Lt. Brodie's presence at Wright Field for a substantial period of time for the following reasons:

a. Contract has been let for Air Corps drawings but certain originals are missing or are decipherable only by Lt. Brodie.

b. Certain engineering changes must be made to eliminate faults that constitute a hazard when the equipment is used by other than the Brodie team.

c. Record of procurement made to date and undelivered items is in Lt. Brodie's head.

d. Two Wright Field pilots have been assigned for indoctrination at Wright Field and their training program and the training of a Wright Field ground crew are dependant upon Lt. Brodie's presence.

e. Sgt. Gregory cannot handle the above.

3. The above was discussed with Lt. Colonel Vincent, Army Ground Forces. He agreed that Lt. Brodie's presence at Wright Field is highly desirable but believes that Brodie must stay on the West Coast at least until certain maneuvers using the system are completed approximately 14 October, in order to avoid irritating the Navy men involved.

4. Unless otherwise instructed, this office will contact the key Navy men at the West Coast installation by telephone and try to get him to concur in Brodie leaving promptly after the maneuvers mentioned in paragraph 3, or 16 October, whichever is earlier.

R. C. WILSON
Colonel, Air Corps
Chief, Development Engineering Branch

RESTRICTED From

CONFIDENTIAL

408 IAF ACCNA-20
Major [illegible] Oakley/sw
3831

10 October 1944

Director
AAF Air Technical Service Command
Wright Field, Dayton Ohio

Number: WAR 44759

Attention Engineering Division, TSELA-3C 8 from Wilson signed Arnold

Subject is Brodie stetem. In confirmation of recent telephone conversations with Captain C F. Webb, it is understood that first priority is being given to getting one complete system with maintenance parts for 6 months and necessary airplane kits on the way to CBI theater 8 L-5 and 8 L-4 kits are to be sent if possible but if getting 8 each type together will delay movement sending as low as 3 L-5 kits and 2 L-4 kits will be satisfactory. All movements of items necessary to get required equipment to appropriate in transit depot or other location where it can be called for by the port is to be your responsibility. As soon as qualified supply people can give a firm estimate of when equipment will be available on west coast this estimate should be telephoned to this headquarters and confirmed by teletype so that general overseas movement order can be written by OPD covering equipment and personnel. It is important that determination of this date by expedited. It is understood that 2 systems have been ordered shipped to Ft Sill. Mr. Schaff is mailing set of L-4 prints today. Major Dinsmore at Bolling will expect shipping instructions on L-4 kits also telephone call from Capt Webb about Thursday 12 October this year.

AF 1442

End

ORIGINATOR: CG AAF

CM- OUT-44759

(11 Oct 44) 1547Z 1s

CONFIDENTIAL

Carbon - Brodie

AAF CF- 373.1-11
7(2/5/44)

19

10 October 1944

Report on Observation of Brodie System Demonstration at Coronado, California, 5 and 6 October 1944

Purpose:

The prime purpose of subject demonstration was to present the Brodie System to the Navy Department and other interested agencies.

Equipment:

One Brodie Land Rig. (Complete description available in instruction manual published by OSS.

One Brodie Sea Rig. This rig differs from the land rig in that it is erected on an LST by means of two vertical masts with horizontal booms which support the 300 feet of cable run over the port side of the LST.

One Jet Catapult device. This device was constructed by the Navy Department (experimental) and consists of a double wooden shell track and a steel I beam runner, all 100 feet long. The main wheels of the aircraft roll in the shell track. The catapult device rides the I beam runner and supports the tail wheel of the aircraft. The aircraft is attached to the catapult by a loosely looped cable that attaches to the rear of the main landing gear cabane vee and by a metal case that fits loosely over the rear half of the tail wheel. The jet bottle which is similar to those used to assist takeoff of heavier aircraft, is mounted at the rear under structure of the catapult. The jet bottle is ignited by an electric ignition device which can be controlled at any reasonable distance from the device.

Four L-4 type aircraft modified for use with both the Brodie rig and the catapult device.

Personnel:

Two officers and three enlisted men were provided by AGF to supervise the erection and operation of the Brodie rigs and to do the required flying.

Two officers were provided by the Navy Department to supervise the erection and operation of the catapult device.

ΠΩΓΙ

Incl 1-

Sufficient Naval enlisted personnel were furnished locally at the Amphibious Training Base to man the various devices.

Inspecting Parties:

The Commander of the Amphibious Training Base and his Staff; several officers representing Hq AAF and several officers representing the Marine Corps.

Conduct of Demonstrations:

5 October 1944, 1000 - 1200. Brodie Sea Rig and Catapult Device.

Three takeoffs and three landings were made by the Brodie System and two launchings by the jet catapult device. Several minor mechanical difficulties were encountered with the Brodie device. The total time required to complete the various operations follows:

Method	Take off	Land	Time
Brodie	x		15
"	x		12
"	x		10
"		x	8
"		x	8
"		x	6
Catapult	x		8
"	x		10

Note: Time required for hoisting airplanes into position for takeoff and lowering to the deck after landing is included.

For the above demonstrations, the LST was anchored in the bay, the water was calm and wind 14 m.p.h., slightly cross.

All takeoffs by the Brodie System were made without using more than 75% of the available cable run (75% of 300 ft). Landings were made in as little as 50% of available cable run and not exceeding 75%.

Takeoffs by the catapult device were made in 75% of the available runway space (75% of 100 ft). It is estimated that the airplanes launched on the catapult attained a forward speed of 50 m.p.h. with a 75 foot take off run.

5 October 1944. 1330 - 1630. Brodie Land Rig.

Three landings and three takeoffs were made on the Brodie land rig. The operation of the land rig was delayed by mechanical

Carbon - Brodie
CF. AAF-373.1-0
7(4 15 pp)

difficulties and was unnecessarily slow because of the untrained crew.

8 October 1944. 0830-1300. Brodie Sea Rig.

The LST moved from anchorage to the open sea for further demonstrations. It was hoped that rough water could be found so as to demonstrate the comparative ease of operation under those conditions. However, the sea was quite calm and the operation was merely a repetition of the demonstration of the preceding day. Rough water demonstration will be made for the benefit of the local Naval personnel when conditions are right.

Conclusions:

Brodie Sea Rig

This system, although it requires several minor refinements, offers a positive means of providing spotter and liaison aircraft for all future amphibious operations. By this system, the aircraft can maintain close contact with their respective units and thereby provide air observation the moment the artillery lands and is ready to take on targets.

Preparation of landing strips during the initial stages of an amphibious operation would be unnecessary as the aircraft would return to the LST for refueling, etc.

Counter proposals were made, such as using aircraft carriers to base the spotter and liaison aircraft. The Marines have used carriers for this purpose but they maintained that the close contact which is required between the gun batteries and the spotter aircraft is almost always lost by this method because of the wide separation between the guns and the airplanes, resulting in a great loss of efficiency at the exact moment when every detail of the operation should be progressing without a hitch.

The coming amphibious operations in the Pacific will require a method of getting spotter aircraft in the air as soon as the guns hit the beach. The Brodie sea rig will satisfactorily accomplish that mission.

Jet Catapult Device

This method of launching the light airplane is extremely good. However, the launching is only half the battle. When its fuel is gone the airplane must sit down, whether or not the beach has been secured.

Brodie land rig

Minor mechanical refinements will also have to be made on the land rig so as to perfect its operation.

The general opinion concerning the Brodie land rig seems to be that it is merely a complicated method of providing a landing area for a light airplane. In other words, a substitute for a landing strip.

Whenever it is efficiently possible to hack out a ground strip with engineer equipment, that method is certainly preferred. However, there are places on this earth where this war will be fought where building a ground strip quickly will be an utter impossibility. For example, jungles, mountains, and rice paddies. In areas such as these, the Brodie system can be relied upon to provide spotter and liasion aircraft with a place from which they can operate and maintain close contact with their ground units.

LLOYD M. BOSTROM
Captain, F. A.

SECRET

MX-561 (BRODIE SYSTEM)

Original CTI-1791 dated 27 July 1944.

CTI-1791 dated 21 August 1944, Addendum No. 1, 1-B Priority as per Miscellaneous Branch Instruction dated 2 September 1944.

Call to Office of Assistant Chief of Air Staff, Materiel and Services, to have Lt. Brodie sent to Wright Field.

5 September 1944, Expenditure Order No. 662-76 received.

15 September, Office of Assistant Chief of Air Staff, Materiel and Services, called to have Captain Webb go to Bolling Field and pack experimental rig for shipment.

19 September 1944, Captain Webb returned to Wright Field and advised Lt. Brodie would be at Wright Field by 23 September 1944.

20 September 1944, Office of Strategic Services representative turns over to Wright Field administration of distribution of 18 rigs, the fabrication of which is under contract to them.

21 September 1944, Lt. Brodie arrives at Wright Field.

23 September 1944, Lt. Brodie went to Bolling Field at request of Office of Assistant Chief of Air Staff, Materiel and Services, to start school for ground forces.

28 September 1944, Lt. Brodie goes to San Diego from Washington to hold demonstration for Navy.

3 October 1944, Wright Field requested Office of Assistant Chief of Air Staff, Materiel and Services, to have Sgt. Gregory return to Wright Field so that information on prints and status of project could be obtained.

6 October 1944, General Powers cancelled Sgt. Gregory's return from San Diego.

28 September 1944, Office of Assistant Chief of Air Staff, Materiel and Services, called Wright Field and requested shipping date on one complete set of equipment to be sent to a Pacific theater, plus a complete materials list, list of spare parts, 8 conversion kits for L-4, 8 conversion kits for L-5. No drawings or list of manufacturers available - manufacturers of conversion kits unknown. 'Phone calls to Maryland Engineering, All American Aviation, and Office of Assistant Chief of Air Staff, Materiel and Services.

Due to the continued absence of Lt. Brodie and Sgt. Gregory, the Tow Target and Aerial Pick-Up Unit has been able to do only a very poor job on coordination. It has been unable to secure the following:

45

45.

Q-Bldg Equip Sect. 58-24 (2 pp)

MX-501 (BRODIE SYSTEM)

1. A complete list of contractors who supplied equipment.
2. Blueprints
3. Specifications
4. Status of Equipment
5. Location of various sub-assemblies
6. Information on conversion kits.
7. Status of test work
8. Bills of Material

RESTRICTED

Major F C Oakley/Dw-3831
AFDMA-2C
14 October 1944

Suspended Cable Launching and Landing Apparatus (Brodie Design)

Commanding General
Army Ground Forces
Army War College
Washington, D. C.

1. Reference is made to this office's 4th Indorsement to basic communication (452.1 (R) GNRQT-10/85553) dated 24 June 1944, subject as above.

2. Inasmuch as the twenty-two (22) systems procured in accordance with reference letter will undoubtedly be in use for some time before formal standardization of the system can be completed, it is the opinion of this office that at least six months supply of maintenance parts for the twenty-two systems should be procured now.

3. It is noted that in shipping one system to the CBI Theater equal numbers of L-4 and L-5 kits (8 of each type) were specified. Basic letter referred to in paragraph 1 specified only three L-4 kits for each system except for the two for Fort Sill. If L-5 kits are likely to be required for installations which are made prior to standardization and if L-4 kits are to be needed in larger quantity than previously indicated, it is believed that appropriate additional procurement of kits should be made now to match the systems already under procurement.

4. Your comments and recommendations are requested.

By Command of General ARNOLD:

J. F. PHILLIPS
Colonel, Air Corps
Chief, Materiel Division
Office, Asst. Chief of Air Staff
Material and Services

AFDMA-2 AFDMA-1

OCT 17 1944

RESTRICTED

452.1(8)(12 Oct 44)/Misc T-10/2506 1st Ind.

HQ, ARMY GROUND FORCES, Army War College, Washington, D. C.

[27 Oct. 1944]

TO: Commanding General, Army Air Forces, Attention: AC/AS, Materiel, Maintenance & Distribution, The Pentagon, Washington 25, D. C.

1. This Headquarters concurs in procuring now at least six (6) months supply of maintenance parts for the twenty-two (22) Suspended Cable Launching and Landing Apparatuses (Brodie Design) currently being procured.

2. It is recommended that five (5) of the L-4 kits and five (5) L-5 kits be procured for each of twenty-one (21) of the systems and that eight (8) of each the kits be procured for one (1) of the systems (the system for C.G.I.).

3. It should be noted that paragraph 2 is a change in requirements for kits from that expressed in letter AG 452.1(8)OR&T-10/8553, dated 24 June 1944.

For the COMMANDING GENERAL:

[Holman Hamilton
Capt., A.G.D.
Asst. Ground Adj. Gen.]

2d Ind.

Headquarters, Army Air Forces, Washington 25, D. C., 28 October 1944

To: Director, AAF Air Technical Service Command, Wright Field, Dayton, Ohio. Attention: Engineering Division - TSEEA-408

Approved and forwarded for necessary action.

By Command of General ARNOLD:

R. C. WILSON
Colonel, Air Corps
Actg. Chief, Engr. Br., Mat. Div.
Office, Asst. Chief of Air Staff
Materiel and Services

- 2 -

"Suspended Cable Launching and Landing Apparatus" (Brodie Design)

T-5-L5H2 (13705)
J. H. Brodie:vf
Extension: 2-5251

3rd Ind.

Hq., Air Technical Service Command, Wright Field,
Dayton, Ohio, 16 November 1944.

To: Commanding General, Army Air Forces, Washington, 25, D. C.
Attention: Asst C/AS, M & S, Engr. Br., Mat. Div.

1. Reference is made to previous indorsements. Action has been initiated to comply with this recommendation. Five of each L-4 and L-5 conversion kits and spare parts are being procured for sets now on hand and on all further procurements of complete sets, these shall be included as part of the sets.

For the Director:

C. V. HOLLOMAN,
Colonel, Air Corps,
Chief, Equipment Laboratory,
Propulsion and Accessories Laboratory Section,
Engineering Division.

COM. GEN.
CH. STAFF
DEP. CH. STAFF
TECH. EXEC.
ADJ. GEN.
EXEC. PROC.
AIR. INSP.
INTELL.
COMPTROLLER
C. O.
BUD. OFF.
PERS. SEC.
ENG. DIV.
J. H. Brodie
Copy to EA.
PROD. DIV.
INSP. DIV.
PROC. DIV.
OTHERS

AAFMC-190-WF-5-12-44-378M

CENTRAL FILES

Major Greenleaf/ag/8652
Rewritten 20 October 44

AFRE

23 OCT 1944

SUBJECT: Brodie System Launching and Landing Device

TO: The President,
Army Air Forces Board,
Orlando, Florida

1. It is desired that a project be conducted, either by reviewing inclosed literature and data available to the Field Artillery Board or by actual test, for the purpose of determining a military requirement for the "Brodie System" of launching and landing aircraft. Project should be conducted under fourth priority and restricted classification.

2. Previous tests have been conducted by the Office of Strategic Services and further tests will be conducted for the Commanding General, Army Ground Forces, by the Commandant, Field Artillery School, Fort Sill, Oklahoma.

3. Twenty-two (22) Brodie System equipments are under procurement to fulfill requirement indicated by the Commanding General, Army Ground Forces. Report on Observation of Brodie System Demonstration at Coronado, California on 5 and 6 October 1944 is inclosed as Inclosure No. 1.

4. The Field Artillery Board will collaborate with the Army Air Forces Board in completing this project. Direct communication with the Third Air Force, Field Artillery School, and Air Technical Service Command is authorized for this purpose.

By command of General ARNOLD:

3 Incls.
Incl 1 - Cy of Rpt on Brodie Demonstration, 10 Oct 44.
Incl 2 - Manual "The Brodie System"
Incl 3 - Photo of Gas Rig on [illegible]

Staff
Requirements

1637167

OFFICE SYMBOL	AFRE	AFRE	AFOOR			
SIGNATURE OF RESPONSIBLE OFFICER	Greenleaf					
INITIALS OF OTHER OFFICERS CONCURRING	Mac Bacon					

P A R A P H R A S E

RESTRICTED

H[illegible], AAF, AFDIA-2C
Maj F. C Carley/fw, 3631

[illegible] October 1944

Director
Air Technical Service Command
Wright Field, Ohio

Number: AAK 94158

AFDIA-2C Attention Engineering Division TSSIA-4C8 from Wilson signed Arnold.

Brodie system is subject.

This is to confirm telephone conversation with Captain C. [illegible] Webb TSSIA 4C8 regarding additional requirement for maintenance parts and kits. Army Ground Forces has formally requested that 6 months supply of maintenance parts, 5 I-4 kits and 5 I-5 kits be procured now for each of the 22 systems we are getting for them except the 1 already shipped to theater which had 8 kits of each type. Your attention is called to the fact that above amends requirements stated in letter from this headquarters dated 21 July 44 subject suspended cable launching and landing apparatus (Brodie design). Preliminary steps should be taken at once to get additional procurement under way. letter follows today.

End
4201

ORIGINATOR: CG AAF

CM-OUT-94158 (28 Oct 44) 23162 aj

RESTRICTED

PARAPHRASE

~~CONFIDENTIAL~~ IVI

FROM: CG, Air [redacted] Service Command, Calcutta, India

TO: War Department
Director Air Technical Service Command,
Wright Field, Ohio

Nr: CASX 20104 24 November 1944

To Arnold info Knudsen for Miller from Henley
CASX 20104 MSX.

Brodie apparatus as described in Operations Division informational bulletin number three volume two dated 10th June 1944 now moving per shipment number 2210 with crew this theater for tests and experiments is subject. Previously advised of the availability of five such devices for this theater now comes request for one each Brodie device for the RAF fore use their troops this theater. Shipment is requested for preferential water movement to destination BENT Air-S-17 and information as to date available, project or movement orders and any other pertinent data is desired. RAF plan to send their personnel for training to Brodie crew upon arrival in theater so that upon arrival device may be put into immediate use.

End

ACTION: CGAAF

INFO: OPD

CM-IN-24473 (25 Nov 44) 1056Z bem

~~CONFIDENTIAL~~

OO 2

F

P A R A P H R A S E

~~CONFIDENTIAL~~

ACAS/M&S Materiel Div Maj
R. J Bodine/fw 3831

25 November 1944

Commanding General
USAF India Burma Theater
New Delhi, India

Commanding General
Army Air Forces
India-Burma Sector
Calcutta, India

Commanding General
Tenth Air Force
Kanjipoah, India

Number: WARX 68583

Stratemeyer for Hanley to Sultan signed Arnold from Doubleday.

To obtain Brodie device for Royal Air Force normal lend lease procedure must be followed. Your radio CASX 20104. This will require filing of requisition through British Air Commission in Washington and processing through Munitions Assignments Board. We will contact British Air Commission here but suggest in order to expedite matter Royal Air Force India wire Royal Air Force Delegation Washington giving basis of request in full detail.

End.

AF 3783

ORIGINATOR: CGAFF

INFORMATION: ASF-CC; OPD

CM-OUT-68583 (25 Nov 44) 23392 Pjs

~~CONFIDENTIAL~~

~~SECRET~~

E A R T H E A S E

[redacted] CTL

From: Allied Force Headquarters, Caserta, Italy

To: War Department.

No. F 59363 28 November 1944

F 59363 signed McNarney cite WAGOT action AGWAR.

Portable airfield for liaison planes sometimes referred to as the Brodie device and similar to type described in OPDIB 1944, Volume II, number 3 of 16 June 1944, understood to be beyond development stage and is now available.

Request two Brodie devices be shipped this theater for demonstration and test along with one training team, personnel of which can be assigned here upon completion of their training mission.

Request advice action taken.

End

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ACTION: CG AAF

INFORMATION: OPD

CM-IN-27759 (28 Nov 44) 2002Z ajl

[redacted]

H-Brodie
Engr. Sec. 8-46
Plat. Sec.

97

RESTRICTED

AFMIA-20
20 Dec. 1944
Major F C Cahley/dv-3952

HEADQUARTERS ARMY AIR FORCES
Office, Asst. Chief of Air Staff, Material and Services

Inter-Desk Memorandum

TO: _____ Date 16 Dec. 1944

SUBJECT MEMORANDUM FOR THE RECORD - [redacted] Too late
No.

Meeting - Discussion of Brodie Device
Representatives of:
New Devel. Div.
Army Ground Forces
OPD
Material & Services

16 December 1944

Attended meeting called by New Developments Division, War Department Special Staff. General discussion of availability of Brodie landing and launching systems in relation to present theater requests. Tentatively decided to cable POA (first priority theater) that two land type systems would be available approximately 15 February 1945, unless requirement for ship type system with higher priority becomes firm in meantime. This cable will be sent only after OSO concurrence* is obtained by New Developments Division, OSO has control over the first nine systems completed because of previous borrowing to fill initial requirements. Also decided to tell MTO that the two land type systems requested would be available approximately 1 March 1945.

Navy approval of the ship rig has not been received and may require another month. Army Ground Forces (Col. McKibbon) will attempt to accelerate tests at Fort Sill so that standardization can be effected in time to cover most of the system now being procured on a limited basis.

F. C. CAHLEY
Major, Air Corps

* will probably not be obtained because of contractual difficulties that arose subsequent to this meeting. Result will be a set back of approximately two weeks, only.
F.C.

RESTRICTED

From _____

35

FIELD ARTILLERY SCHOOL
OFFICE OF THE COMMANDANT

452.-GNRFA

MX-561

FORT SILL, OKLAHOMA
4 December 1944

SUBJECT: Brodie Device - Land Rig.

TO: Commanding General, AAF Air Technical Service Command, Wright Field, Dayton, Ohio. (Attn: Captain Brodie, Engineering Division, TSEFL-8E)

1. Direct communication with your headquarters for the purpose of expediting modification, development and standardization of Brodie aircraft landing device, has been approved by the Commanding General, Army Ground Forces, by teletype dated 2 December 1944.

2. Two of these devices, land application, are in daily use at this school.

3. It is desired to direct attention to the following deficiencies which have developed in operation concerning which corrective action should be considered.

a. The standard arresting device furnished with the rig is the Model 20. Minimum retardation for which this arresting device can be set is 500 pounds. This is suitable for the L-5 airplane but is entirely too much for the L-4 type for which a braking pressure of 150 pounds is proper. The Model 15 arresting device is capable of adjustment for braking pressures between 100 pounds and 1500 pounds. Since the Model 20 arresting device is suitable for the L-5 type only, and since the Model 15 device will handle either the L-4 or the L-5, it is recommended that the standard rig be furnished with a Model 15 device only, in place of the Model 20.

b. The self-winder on the Model 15 device is not suitable for the size cable used. It is recommended that it be furnished with a self-winder of proper size for the arresting cable furnished.

c. On two occasions airplanes on take-off have been prematurely released before proper flying speed was attained. In one case the airplane struck the ground and was damaged. On one of these occasions premature release resulted from the airplane take-off release hook letting go without action on the part of the pilot, and on the other the automatic take-off release on the trolley let go. It is recommended that increased spring tension be provided both on the take-off release hook and on the automatic take-off release on the take-off trolley.

d. The safety wire on the take-off trolley plunger buffer collar should be increased in size to at least .05. The airplane lifting hook is too large to properly fit the lift ring. Its size should be reduced so that the hook is not over one inch in diameter at its largest cross-section.

e. Excessive wear has been noted in the landing trolley pulley. We attribute this wear to the fact that the pulley is constructed of material considerably softer than the main cable and is inadequately lubricated. On several occasions it was noted that when landing was made the pulley did not turn but slid along the cableway. It is believed that it should be grease lubricated. A grease cup has been installed to lubricate this pulley and the crewman gives it a twist prior to every landing.

f. Two landing slings are furnished with the kit. Rapidity of wear in training indicates that four such slings should be furnished.

g. Only one instruction manual is furnished with the rig. Twenty-four such manuals should be furnished.

h. A splicing tool should be included in the kit.

i. The kit does not include lubricating equipment or lubricants. It is recommended that these be furnished.

4. In reply to your teletype dated 29 November 1944 requesting advise as to whether or not three L-4 and three L-5 conversion kits had been received from Bolling Field, you were advised by teletype that these kits had been received less clevises for supporting cables and less bungee cords with fittings.

RALPH [illegible]T. PENNELL,
Major General, U. S. A.,
Commandant.

"Brodie Device - Land Mig"

TSEPL-3R2
Capt. James H. Brodie:bjb
Extension No. 2-5244

1st Ind.

Headquarters, Air Technical Service Command, Wright Field, Dayton, Ohio, 14 December 1944.

To: Commandant, Field Artillery School, Fort Sill, Oklahoma

1. In reply to recommendations listed in paragraph 3 of basic letter, the following shall be or has been accomplished:

a. The model 20 units now at Fort Sill were shipped out in error. The units which were shipped are not suitable for use in landing L4 airplanes. A slight modification is being performed on the units still at the manufacturer's plant. This modification will enable only one brake of the pair to be used for landing L4 airplanes. The unit has been thoroughly tested with this modification and is satisfactory. Modification kits with instructions will be sent to organizations now having the unmodified model 20 units on hand. The brake units can be modified by the mechanics handling the equipment. It is expected that modification kits will be available about 1 January 1945. It is expected that the model 20, with the necessary modifications included, will prove more suitable for use with the Brodie System than the model 15 unit due to its simplicity and utilization of standard parts.

b. As the model 15 unit was being furnished for use only as a substitute measure until the model 20 unit could be furnished as standard equipment with the apparatus, it was not considered desirable to undergo the complications which would be entailed in redesigning the level wind mechanism on the model 15 unit to accommodate 5/32" cable required. In using the model 15 unit, the level wind attachment should be entirely removed from the unit assembly. The cable should be guided by hand for winding.

c. It was found that the locking spring on the take-off release on the airplane conversion kits furnished from Bolling Field had not been made according to the proper design. The spring was much too weak. Complete design drawings on all parts including the spring are now available. A print was sent to Lt. W. G. Rhodes, Field Artillery School, Fort Sill, Oklahoma, showing the proper design for this spring. This error will not be found on future equipment. A modified design on the take-off trolley emergency release has been made. This is to eliminate the hazard as explained in basic letter. One modified trolley was shipped to Fort Sill from Air Technical Service Command on 27 November 1944. That trolley can be used as a model to modify those now on hand at Fort Sill. It is advised that the condition of the locking springs on the emergency release device be examined after every five take-offs over at least the first one hundred take-offs to determine whether the spring will satisfactorily stand the sudden applied shock in this function.

-3-

COM. GEN.
TECH. EXC.
ADM. EXC.
C. O.
BUD. OFF.
EXP. ENG. Capt J H Brodie
CONTRACT
INSP.
PROD. DIV.
PROD. ENG.
PROD. CONT.
I. P. S.
A. S. C.
TECH. DATA
CIV. PERS.
OTHERS

AAFMC-129-WP-5-20-42-2 Mil.

CENTRAL FILES

d. The safety wire size shall be made at least .05 on future manufactured trolleys as recommended.

e. The landing trolley design has been changed to include a grease cup in the pin. The wheels shall be of a hard alloy cast steel or case hardened steel. A quick attachment pin has been substituted for the screw shackle to attach and detach the sling.

f. At least four landings slings shall be furnished with each set of apparatus as recommended.

g. At present, there are not enought instruction manuals available to furnish twenty-four with each set. It will be necessary to print additional copies to conform with this recommendation.

h. A small steel cable splicing tool shall be included in tool kits on future delivered sets as recommended.

i. The contractor was instructed to include two quarts of S.A.E. No. 30 lubricating oil in all sets now being delivered.

2. In reply to paragraph 4 of basic letter, it appears that the bungee cords with fittings and clevises were omitted from shipments direct from Bolling Field Sub-Depot to Fort Sill. It is understood that those kits were shipped away from Fort Sill to supply an urgent Navy requirement on the West Coast. Should this be incorrect, this Command should be notified if these items are still desired or needed. They can be made in shops here if necessary.

For the Director:

[illegible] MENT BRANCH

G. V. HOLLOMAN
Colonel, Air Corps
Chief, Equipment Laboratory
Propulsion and Accessories Section
Engineering Division

12-H-173

WA278

UPI V WARA NR45 WD

FROM ARNOLD WASHINGTON DC 061828Z

TO DIRECTOR AAF ATSC WRIGHTFLD DAYTON OHIO ATTN ENGR DIV TSEPL-3H

GRNC

AFDMA-2C 1341 PD THIS CONFIRMS INSTRUCTION TO CAPTAIN BRODIE EQUIPMENT LABORATORY TO SHIP FIVE L-5 CONVERSION KITS BY FASTEST POSSIBLE METHOD TO SUPPLY OFFICER NAVAL AIR TRANSPORT SERVICE ALAMEDA CALIFORNIA ATTENTION LT KNOX THESE KITS AND THE THREE L-4 KITS SHIPPED TO AMPHIBIOUS TRAINING COMMAND CORONADO CALIFORNIA WILL BE ADDED TO REQUIREMENT OF ARMY GROUND FORCES BY PAPER WORK IN PROCESS YOU ARE THEREFORE AUTHORIZED TO REPLACE KITS SHIPPED BY MATCHING PROCUREMENT AT ONCE IF YOU ANTICIPATE NEED FOR THE KITS BEFORE THEY BECOME AVAILABLE FROM REGULAR PROCUREMENT YOU ARE FURTHER AUTHORIZED TO CHANGE PRIORITY OF BRODIE PROJECT FROM ONE B TO ONE A

1037Z

AFDMA-2C 1341 L-5 L-4 B A

WA130

LTC V WARD WR3R WD

11 CH ARNOLD WASHINGTON DC 0615427

TO DIR AAFATSC ATTN ENGR DIVN TSEPL-3H WRFLD

GRNC

AFLMA-20 1557 PD

TO EXPEDITE MODIFICATION AND STANDARDIZATION OF BRODIE AIRCRAFT LANDING DEVICE HQ ARMY GROUND FORCES HAS AUTHORIZED COMMANDANT FIELD ARTILLERY SCHOOL FORT SILL OKLAHOMA TO COMMUNICATE DIRECT WITH YOUR OFFICE YOU ARE AUTHORIZED TO DEAL DIRECTLY WITH FORT SILL ON BRODIE DURING TEST PERIOD

11 5087

Major F C Oakley/fw-3831

AFDMA-2C
9 December 1944

Ship Type Brodie Device

SECRET

By Authority of
The Commanding General
Army Air Forces:

M.C.D. 12/9/44

Director
AAF Air Technical Service Command
Wright Field, Dayton, Ohio

Attention: Chief, Engineering & Procurement - TSCEP

1. The attached copies of basic communication dated 6 December 1944, and 1st Indorsement dated 9 December 1944, subject as above, are forwarded to indicate progress on the project to acquire the ship type Brodie device in quantities for use in amphibious operations.

2. It is directed that full cooperation be given the Navy in the development, procurement, and production of the ship type Brodie device.

3. Captain J. H. Brodie, Equipment Laboratory, and Mr. C. Middlesworth, Procurement Division, are familiar with the development and procurement of the land type Brodie device.

By Command of General ARNOLD:

J. F. PHILLIPS
Colonel, Air Corps
Chief, Material Division
Office, Asst. Chief of Air Staff
Material and Services

Incls.
Cy ltr dtd 6 Dec 44
w/1 Ind. dtd 9 Dec 44.

AFDMA-2

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Return to Room 5D-676

Copy 10 of 10 Copies
OCT-GA 337.1-0
9(2-44)

SECRET

ARMY GROUND FORCES

452.11 (B) 6 Dec 44 GNRQT-B/6966

6 December 44.

MEMORANDUM FOR: Commanding General, Army Air Forces, Washington, D. C.

Subject: Ship Type Brodie Device

1. At a conference called by the Naval Bureau of Aviation and held at the Navy Building on 6 November 1944, the Army Ground Forces were requested to secure Army cooperation in the production details of the ship type Brodie device insofar as the parts thereof are common to the land type Brodie device.

2. This headquarters is greatly interested in the ship type Brodie device and is urgently anxious that they be available for all future amphibious operations.

3. It is requested that your headquarters cooperate in all feasible ways with the Naval production program for the ship type Brodie device.

4. A copy of a memorandum from this headquarters to the Commander-in-Chief, U.S. Fleet, subject as above, dated 6 December 1944, is herewith for your information.

For the Commanding General:

HOLMAN HAMILTON
Captain, A.G.D.
Asst Ground Adj General

1 Inal.
S/M CG/AGF to COMINCH, U.S. Fleet, subject above.

C
O
P
Y

24

SECRET

Major F C Oakley/fw-3831

SUBJECT: Ship Type Brodie Device

1st Ind. AFTSR-2C

Headquarters, Army Air Forces, Washington 25, D. C., 9 December 1944

To: Commanding General, Army Ground Forces, Washington, D. C.

1. The Air Technical Service Command, Wright Field, Dayton, Ohio, has been instructed to cooperate fully with the Navy in the development, procurement and production program for the ship type Brodie device.

2. It is suggested that purchase orders for the items required for the ship type device be filed with Air Technical Service Command through normal channels at the earliest possible date in order to avoid delay in delivery.

For the Commanding General, ARMY AIR FORCES:

J. F. PHILLIPS
Colonel, Air Corps
Chief, Material Division
Office, Asst. Chief of Air Staff
Material and Services

Incl. w/d

3731 / Technical

SECRET

A 1131

OFFICE SYMBOL	1.	2.	3.	4.	5.
GRADE AND SURNAME OF COORDINATING					

#4 COPY

OFFICE OF STRATEGIC SERVICES
WASHINGTON, D. C.

11 December 1944

SUBJECT: Air Drop of Brodie Equipment

TO: The Director
Air Technical Service Command
Wright Field, Dayton, Ohio

Attn: TSEPL 3H6

MX-561

THRU: Channels

1. The Office of Strategic Services is interested in the progress made and the current status of the air drop project of the Brodie rig being undertaken by Captain L. N. Nelson's department.

2. It is understood that an A-1 priority has been assigned the project but little actual progress has been made and that a contract is to be let to Maryland Engineering Company, Pikesville, Maryland, for development of the technical details and the technique to be employed.

3. It is respectfully pointed out that OSS has greatly assisted AAF in the procurement of this equipment by making available to them 10 of 19 sets procured and produced for OSS which conservatively saved the AAF six to nine months on the sets they are procuring on an AAF requirement. It was understood at this time that AAF would work out the air drop method and technique for this equipment, which is a requirement of this organization before employing this equipment in the theater of operations.

4. It is therefore requested that all possible emphasis be placed upon the completion of this air drop project so that this equipment can be usefully employed in the operations contemplated by this organization before the strategic value of this type of operation is jeopardized.

/s/ Robert S. Quinn
ROBERT S. QUINN
Lt. Colonel, A. C.
Air Officer

RESTRICTED

RESTRICTED

"Air Drop of Brodie Equipment"

TSEPL3H6
Capt. J. H. Nelson:vb
Extension 2-6213

1st Ind.

Hq., Air Technical Service Command, Wright Field, Dayton, Ohio. 18 December 19[illegible].

To: Office of Strategic Services, Room 106, North Building, 24th and E Street, N.W., Washington 25, D. C.

1. Reference is made to basic communication. The assistance of your Office in the procurement of the subject equipment is greatly appreciated by this Command.

2. As noted in Paragraph 2 of the basic communication, the Maryland Engineering Company, Pikesville, Maryland has been contacted in view of negotiating a contract for this development. However, prior to entering into negotiations with the Army Air Forces for this project, it is the desire of the Maryland Engineering Company to study the data gathered by the Army Air Forces regarding air drop of equipment. These data are of a classified nature and thus cannot be reviewed by the Maryland Engineering Company, until they have entered into a secrecy agreement with the Army Air Forces. Such a secrecy agreement is now being negotiated and on its completion the air drop data will be made available to that Company. On receipt of a proposal from Maryland Engineering Company for this development a contract will be initiated.

For the Director:

O. V. HOLLOMAN,
Colonel, Air Corps,
Chief, Equipment Laboratory,
Propulsion and Accessories Section,
Engineering Division.

Declassified
Cat. 12-11-44

ORIG FILE COPIES TO:	INITIALS
RECORDS BR. AGO	BMH-TSEPL-3H6
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VALUE OF PAPER-CHECK ONE: PERMANENT ☑ TRANSITORY ☐	

COM. GEN.
CH. STAFF
DEP. CH. STAFF
TECH. EXEC.
ADJ. GEN.
EXEC. PROC.
AIR. INSP.
INTELL.
COMPTROLLER
C. O.
BUD. OFF.
PERS. SEC.
ENG. DIV.
PROD. DIV.
INSP. DIV.
PROC. DIV.
OTHERS

AAFMC-190-WF-6-12-44-375M

- 2 -
CENTRAL FILES

RESTRICTED

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RESTRICTED

307

Major F C Oakley/fw-3831

AFDMA-2
14 December 1944

SUBJECT: Suspended Cable Launching and Landing Apparatus (Brodie Design)

TO: Commanding General
Army Ground Forces
Army War College
Washington, D. C.

1. Reference is made to your 1st Indorsement dated 27 October 1944, subject as above (452.1 (R)(14 Oct 44) [illegible]).

2. To expedite the availability of the maintenance parts and the additional airplane kits requested in referenced indorsement, the Air Technical Service Command is arranging with the Office of Strategic Services to procure these items for the rigs already fabricated by amending OSS Contract Number 645 with Maryland Engineering Company. On this basis it is estimated that the ten (10) "bare" sets now in storage belonging to OSS can be supplied with the required airplane kits and spare parts at the rate of three (3) sets per week beginning approximately 15 February 1945.

3. An AAF contract is being processed to cover the total requirement of the Army Ground Forces less those rigs acquired from OSS plus rigs required for experimental purposes. Deliveries on this contract are expected to begin about 1 March 1945, at the rate of two complete systems per week until 18 have been delivered.

4. Previous verbal estimates of availability of complete systems to fill theater requisitions have been based on an informal understanding that the ten (10) OSS sets could be borrowed and returned from later deliveries in time to meet OSS needs. An attempt is being made to confirm this. The delivery estimate in paragraph 2 above should not be quoted to the theaters until confirmation is obtained.

55

5. Before the delivery estimate in either paragraph 2 or 3 above is quoted to the theaters, due allowance must be made for the possible effect on these schedules of impending ship rig procurement which has not yet been made firm by issuance of purchase orders on the Air Technical Service Command for the items required.

For the Commanding General, ARMY AIR FORCES:

J. F. PHILLIPS
Colonel, Air Corps
Chief, Materiel Division
Office, Asst. Chief of Air Staff
Materiel and Services

AFDMA-2

cc: War Department Mtg.

ACTION INFOR. INFOR.

1944 DEC 17 11:34

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WA157

URD V WASH DC 54 WD

FROM ARNOLD WASHINGTON DC 1700147

TO DIRECTOR AAF AIR TECHNICAL SERVICE COMMAND

WRIGHTFIELD DAYTON OHIO

CRNC

/RESTRICTED/ 7 5 1 0

VAL SEVEN EIGHT FIVE ONE ZERO BRODIE AIRCRAFT LANDING DEVICE IS

SUBJECT REFERENCE YOUR MESSAGE ISEPL-3-12-86 DATED 12 DECEMBER

1944 GIVING DELIVERY ESTIMATES ON COMPLETE SYSTEMS /TO ANUSED

ATTENTION CHIEF ENGINEERING AND DEVELOPMENT - TAKE DUE BRODIE/

THESE ESTIMATES ARE BEING USED BY MEN DEVELOPMENTS DIVISION AIR

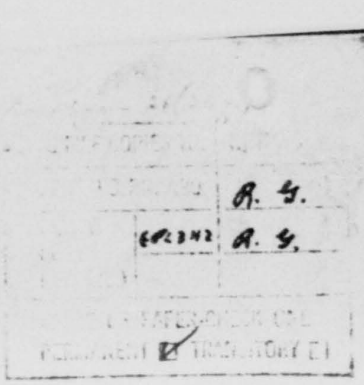
SPECIAL STAFF AND BY ARMY GROUND FORCES AS A BASIS FOR THEATER

PLANNING FOR USE OF THIS DEVICE IT WOULD BE HIGHLY DESIRABLE TO

HAVE THE RIGS AT LEAST ONE MONTH EARLIER THAN INDICATED IT IS

THEREFOR IMPERATIVE THAT YOUR SCHEDULES BE MET OR BETTERED

PRIORITY ONE A HAS ALREADY BEEN ASIGNED IT IS DIRECTED THAT



PAGE TWO

THE ARRANGEMENTS BE MADE TO PROVIDE CONSTANT CHECK ON THE MANUFACTURER AND HIS SUB CONTRACTORS TO SEE THAT EARLY PLANNING AND PROGRESS ARE ADEQUATE TO INSURE EARLIEST POSSIBLE DEL VERY

IT IS FURTHER DIRECTED THAT THIS HEADQUARTERS BE NOTIFIED BY TELEGRAM AT THE FIRST INDICATION OF UNSATISFACTORY PROGRESS ACTION IS BEING TAKEN HERE TO GET CONFIRMATION FROM OSS ON

REMOVAL OF WIRE TRAILING SETS YOU WILL BE NOTIFIED OF

ASHLEY [illegible] WRIGHT-PATTERSON PROCUREMENT DIVISION AISC AND

CAPTAIN J R DROLET EQUIPMENT LABORATORY ARE FAMILIAR WITH THIS

SUBJECT

1007

94

12 13 44

WA175

RB171

DMA-2

WOV V UERD DR35 WD PP

FROM KNUDSEN ATSC WRIGHTFIEL OHIO 121611Z

TO AC/AS IA S WASHDC

GRNC

TSEPL-3-12-86 PD FOR MAJOR OAKLEY PD RESULTS OF DISCUSSION AT THIS COMMAND DISCLOSE THAT O S S CONTRACT NO 645 WITH MARYLAND ENGINEERING COMPANY BE AMENDED TO INCLUDE MANUFACTURE OF 16 SETS OF SPARE PARTS AND L4 AND L5 CONVERSION KITS FOR 6 SETS NOW IN OPERATION AND 10 SETS IN STORAGE PD FIRST DELIVERIES EXPECTED 15 FEBRUARY 1945 AND RATE OF 2 SETS PER WEEK FOLLOWING PD CONTRACTOR CONTEMPLATING ACTION ON MANUFACTURE ABOUT 12 DECEMBER 1944 PD NEW CONTRACT FOR 16 SETS PLUS SPARES AND KITS EXPECTED LET ABOUT 1 JANUARY 1945 PD FIRST DELIVERIES EXPECTED 1 MARCH 1945 AND RATE OF 2 SETS PER WEEK FOLLOWING PD UNDER PRESENT A T S C ACTION O S S AIR DROP PROJECT CANNOT BE COMPLETED BEFORE 15 FEBRUARY 1945 PD THIS COMMAND RECOMMENDS THAT 9 OF EXISTING SETS NOW WITHOUT SPAR PARTS BE MADE AVAILABLE FOR SUPPLY TO ORGANIZATIONS NOT REQUIRING AIR DROP CMA AS SOON AS SPARES ARE AVAILABLE PD THIS WOULD ENTAIL ASSURANCE TO O S S THAT REPLACEMENT SETS WOULD BE AVAILABLE IMMEDIATELY UPON COMPLETION OF AIR DROP TESTS PD NO PRESENT AUTHORITY DEFINITELY DIRECTS SUCH ACTION PD SIGNED ENGINEERING DIVISION PD

18342

TSEPL-3-12-86 645 16 L4 L56 10 1945 3 12 1944 12 1 1945 1 1945

COPY

WA177

URD V WARH NR59 WD

FROM ARNOLD WASHINGTON DC 2100172 /21 Dec. 1944/

TO DIR AAF AIR TECH SERV COMD WRIGHT FLD DAYTON OHIO

GRNC

/RESTRICTED/

WAR EIGHT ZERO ONE THREE SEVEN BRODIE AIRCRAFT LANDING DEVICE IS SUBJECT REFERENCE YOUR MESSAGE TSEPL-3-12-86 DATED 12 DECEMBER 1944 GIVING DELIVERY ESTIMATES ON COMPLETE SYSTEMS ALSO ~~OUR WAR 78510~~ DATED 16 DECEMBER 1944 STRESSING URGENT NEED FOR MEETING OR BETTING SCHEDULES /TO KNUDSEN ATTENTION CHIEF ENGINEERING AND PROCUREMENT TSCEP FROM PHILLIPS/ MEETING WITH OSS TODAY INDICATES THAT IT IS UNSAFE TO RELY ON EARLY COMPLETION OF TEN OSS SETS TO BETTER DELIVERIES TO THEATERS IT IS THEREFORE DIRECTED THAT NORMAL PROCEDURE BE WAIVED AND EMERGENCY MEASURES BE TAKEN TO PROCURE THE EIGHTEEN SYSTEMS MENTIONED IN YOUR MESSAGE REFERENCED ABOVE IF SUCH ACTION IS NECESSARY TO INSURE DELIVERY ON OUR OWN CONTRACT OF AT LEAST TWO COMPLETE SYSTEMS PER WEEK BEGINNING NOT LATER THAN 1 MARCH 1945 IT IS UNDERSTOOD THAT MARYLAND ENGINEERING COMPANY IS CLEARLY IN BEST POSITION TO DELIVER COMPLETE SYSTEMS QUICKLY BECAUSE OF EXPERIENCE WITH THE OSS PROCUREMENT FULL ALLOWANCE FOR THIS FACT SHOULD BE MADE IN DETERMING ACTION NECESSARY TO INSURE DESIRED DELIVERY.

1005Z

TSEPL-3-12-86 12 1944 78510 16 1944 TSCEP 1 1945

THIS PAGE IS UNCLASSIFIED

CF-C-44

ATSC Form No. 43
(16 Sep 44)

10 C

COORDINATION
DIRECTOR OR DEP.
AIR INSPECTOR
MGT. CONTROL
CHIEF OF ADMN.
SPECIAL STAFF
CHIEF, ENG. & PROC.
CHIEF, SUPPLY & MAINT.
PERS. & BASE SERV. DIV.
MAINT. DIV.
SUPPLY DIV.
ENGINEERING DIV. Maj. R.B. Johnston FOC
PROCUREMENT DIV.
READJUST DIV.
OTHER.

Captain James H. Brodie:bj
Extension No. 72-5244
23 December 1944

Letter of Appreciation

Office of Strategic Services
Room 106, North Building
25th Street N.W.
Washington 25, D. C.
Attention: Presentation Branch

MX-561

1. This is to commend the Presentation Branch, O.S.S., and especially the personnel directly concerned, upon the excellent work performed by them in preparing the instruction manual on the "Brodie System".

2. The project of further development of the apparatus as originated by O.S.S. has been taken over by the Army Air Forces, Air Technical Command.

3. The existence of this manual is of great benefit in the instruction of personnel being trained in the use of this equipment. It has received wide comment and approval.

4. It is proposed that the information contained in this manual will be used as a basis for an Army Air Forces technical-order on this equipment.

For the Director:

F. O. CARROLL,
Brig. General, U.S.A.,
Chief, Engineering Division

RECORDS BR. AGO
LD23H2

WF. Area B-10-14-44-600M

CENTRAL FILE COPY

101

1st Ind.

452.11(R)(14 Dec. 44)GNRQT-10/9316.1

HEADQUARTERS, ARMY GROUND FORCES, Army War College, Washington, D. C.

24 DEC 1944

TO: Commanding General, Army Air Forces, Attn: AC/AS, Materiel and Services, Materiel Division, Engineering Branch (Major Oakley), AFDMA-3C, Washington 25, D. C.

1. References:

a. 1st Indorsement to Commanding General, Army Air Forces from Commanding General, Army Ground Forces, file 452.1(R) (14 Oct 44)GNRQT-10/2506, dated 27 October 1944, subject as above.

b. Letter to Commanding General, Army Air Forces from Commanding General, Army Ground Forces file 452.11/105(C), dated 11 December 1944, subject: Conversion Kits, L-4 and L-5, for use with Suspended Cable Launching and Landing Apparatus (Brodie Design).

2. In view of the present requirements of theaters for the apparatus and the contemplated urgent requirement from the Navy for this equipment it is requested that every possible effort be made to improve the schedule of deliveries quoted in basic letter, both as to dates and quantities. The Army Ground Forces consider this equipment of great importance and believe that its delivery at the earliest possible date is urgent.

3. It further is requested that this headquarters be kept advised as to the status of this equipment.

For the COMMANDING GENERAL:

THIS PAGE IS DECLASSIFIED IAW EO 13526

RESTRICTED

Major F C Oakley/fw-3831

Subject: Suspended Cable Launching and Landing Apparatus (Brodie Design)

2d Ind. AFDMA-2C

Headquarters, Army Air Forces, Washington 25, D. C., 30 December 1944.

To: Commanding General, Army Ground Forces, Washington, D. C.

1. The availability of the ten (10) Brodie systems mentioned in paragraph 2 and 4 of basic communication has been made uncertain by unforeseen difficulties which have arisen in connection with getting the Office of Strategic Services contract amended.

2. While everything possible will be done to improve the delivery dates, it is now believed to be unwise to count on anything better than the schedule shown in paragraph 3 of basic communication, i.e., deliveries beginning about 1 March 1945, at the rate of two systems per week.

3. The statement contained in paragraph 2 of 1st Indorsement is being forwarded to the Air Technical Service Command.

For the Commanding General, ARMY AIR FORCES:

J. F. PHILLIPS
Colonel, Air Corps
Chief, Materiel Division
Office, Asst. Chief of Air Staff
Materiel and Services

60

cc: New Developments Division

RESTRICTED

AFDMA-2 AFDMA-1

60

Suspended Cable Launching and Landing Apparatus (Brodie Design)

Basic Ltr dtd 14 Dec 44, from Hq AAF

1st Ind dtd 24 Dec 44

2d Ind dtd 30 Dec 44, from Hq AAF

452.1(R)(14 Dec 44)(GNR,T-10/10917 3d Ind.

HEADQUARTERS ARMY GROUND FORCES, Army War College, Washington, D. C.

[14 JAN 1945]

TO: Commanding General, Army Air Forces, Attention: Material Division, AFDMA-2, War Department, Washington 25, D. C.

1. Noted.

2. It is requested again that every means possible be employed to expedite the delivery of this equipment and that this headquarters be kept advised as to the status of this equipment.

For the COMMANDING GENERAL:

- 3 -

ARMY AIR FORCES
MATERIEL COMMAND

MEMORANDUM REPORT ON

James H. Brodie

Captain James H. Brodie:bjb
Extension No. 2-5244
Date 2 January 1944 [1945]

SUBJECT: Trip to Washington, D. C. for Conferences Regarding Contracts on Brodie System

OFFICE TSEPL-3H2 Contract or Order No.

SERIAL No. TSEPL-3H-662-16-C Expenditure Order No. 662-76

A. Purpose: To confer with officials of Office of Strategic Services regarding amendments to their Contracts Nos. 645 and 592 with Maryland Engineering Company and All American Aviation, Inc., respectively. Both these contracts are for the manufacture of different parts of equipment included with the Brodie System.

B. Factual Data:

1. The first conference was held with Lt. Col. Quinn, Air Officer, Office of Strategic Services, Major Oakley, Materiel and Services, A.A.F., Captain Brodie, Air Technical Service Command, Captain Hamilton, General Council, Office of Strategic Services, Mr. McHugh, Assistant Chief of Procurement, Office of Strategic Services, and Mr. McClelland, General Council, Office of Strategic Services. This was in regard to working out a scheme to amend O.S.S. Contract No. 645 with Maryland Engineering Company. It was the desire of Air Technical Service Command to have this letter contract amended to allow purchase of sixteen (16) sets of spare parts plus one hundred sixty (160) conversion kits for planes.

2. It was the opinion of Office of Strategic Services officials that, from their standpoint, this action desired by Air Technical Service Command and Materiel and Services was not in conformance with the agreement decided on and described in O.S.S. letter to Air Technical Service Command, dated 27 September 1944.

3. It was tentatively decided that if necessary to expedite action on procurement, Office of Strategic Services would perform the desired amendment if Air Technical Service Command would agree to the following by letter:

a. Amend the agreement to transfer funds on a formal requisition for nine (9) complete sets of Brodie equipment as of design for operational use plus the first pilot model of the equipment now being used for testing work by Air Technical Service Command.

Number of Pages - 5

b. Expedite the project for dropping equipment from cargo airplanes.

c. Furnish Office of Strategic Services with reports on progress of all phases of the project to date.

4. At another conference between Ensign Kelly, Contracting Officer, Mr. McClelland, General Council, Dr. Minor, All American Aviation, Inc., and Captain Brodie, Air Technical Service Command, amendment to O.S.S. Contract No. 592 was discussed. All American Aviation, Inc. has incurred costs over those existant on 27 September 1944 and mentioned in O.S.S. letter to Air Technical Service Command. It was stated by Air Technical Service Command representative that these and all costs involving this work by the contractor appeared excessive. It was decided that steps would be taken by Office of Strategic Services to conclude the contract and make payment subject to an audit by O.S.S. investigation. A letter, dated 20 December 1944, from All American Aviation, Inc. to Office of Strategic Services explains matters discussed and decisions reached. Copy of this letter is attached.

C. Conclusions:

1. Steps have been taken by Materieland Services, A.A.F., to direct procurement of all equipment on A.A.F. contracts to eliminate coordination difficulties in handling contracting work through Office of Strategic Services. It therefore appears that the subjects discussed in paragraphs 1, 2, and 3 above of this report will be handled directly by Air Technical Service Command.

2. Settlement of O.S.S. Contract No. 592 is the direct problem of Office of Strategic Services. All engineering and manufacture of equipment involved has been approved by Air Technical Service Command representative with the exception of the Model 20 brake unit. This is approved subject to satisfactory function of the torquemeter recently incorporated in the design.

D. Recommendations:

1. Air Technical Service Command should commence immediate action to expedite the air drop project in conformance with original agreement with Office of Strategic Services in letter, dated 27 September 1944.

James H. Brodie
Prepared by JAMES H. BRODIE, Captain, A.C.

Distribution:
AC/AS, M & S
Evaluation Br., Tech. Data Lab. (TSEAL-6D)

Frank B. Johnston Maj. AS
Approved by G. V. HOLLOMAN, Colonel, A.C.
Chief, Equipment Laboratory

Approved by .....

Concurrence: .....

APPENDIX I.

C-O-P-Y

ALL AMERICAN AVIATION, INC.
210 Greenhill Avenue
Wilmington, Delaware

December 20th, 1944.
(Wednesday)

Office of Strategic Services
25th and E Streets
Washington, D. C.

Attention: Mr. Wm. M. Mayo, Director of Procurement

Subject: Conference held on December 19, 1944, at the Office of Strategic Services Re Brodie Contract

1. The subject conference attended by Captain James M. Brodie of the Army Air Forces, Ensign Joseph Kelley of the Office of Strategic Services, Mr. Clland also of OSS, and Mr. E. E. Minor, All American Aviation, Inc., Wilmington, Delaware, on December 19, resulted in the following conclusions:

(a) That Captain Brodie's description of the Brodie System printed in July, supplemented by All American Aviation, Inc., Maintenance Manual, to be delivered under the contract would be used as the description of the system in the contract.

(b) The contract proposed would designate responsibility of the contractor as indicated in the letter of intent, wherein the contractor would be responsible to make all items of the Brodie System in accordance with Captain Brodie's design and sketches, which were reduced to drawings and approved by Captain Brodie. The contractor would assume full responsibility for the design and suitability of the Model 20 arresting gear unit.

(c) That OSS would prepare the contract on the long form type contract rather than the short form at the suggestion of the representative from the General Counsel's office, OSS. Description of Brodie Items, in addition to that noted in (a) above, to be covered by blue prints as approved by Captain Brodie and forwarded by the contractor.

(d) That the Contract could not make any billings until the contract is prepared.

(e) The OSS Representative from the General Counsel's office promised action but could not estimate a date for the preparation of the contract.

(f) It was agreed that the contract would cover the equipment as required as the result of tests and as described in the contractor's letters of July 7 and October 6, 1944.

Office of Strategic Services
Washington, D. C.

* * * 12-[illegible]-44

(g) It was pointed out by the contractor that all requests of Captain Brodie in regard to the system had been honored by the contractor and performed, and that, furthermore, the equipment has been on hand awaiting shipping instructions since August.

(h) Captain Brodie pointed out that the equipment has been proof tested and is acceptable to the Air Corps. He further stated that the equipment now in use for training purposes had made well over 500 arrests and was actually service tested in the field.

2. At the conclusion of the above conference, wherein the noted points were tabled and the Office of Strategic Services promised to immediately initiate processing of the formal contract, Captain Brodie made a statement that, in his opinion, the costs in the estimate submitted on July 7th were out of line. As a result of this statement, the representative from the General Counsel's office, OSS, stated that no progress could be made in preparing a formal contract until an accounting was made to determine the costs. The All American Aviation, Inc. representative presented Ensign Kelley with an invoice listing costs up to October 31, in the amount of $98, 881.24, which invoice was certified by the Resident Army Air Forces' auditor and which included no profit and only those items of cost allowed for partial payment under AAF contracts. All American Aviation's representative further pointed out that the above costs were to October 31st, 1944, and that since that time considerable costs have been incurred and, furthermore, considerable costs will be incurred on receipt of shipping instructions for boxing the equipment remaining for export.

3. The action of the representative of the General Counsel's Office, OSS, in the opinion of the writer is contrary to the agreement made during Mr. T. M. Mayo's visit to the plant of the contractor last summer wherein Captain Brodie made the same statement, and at which time it was decided that the contract should proceed because the contractor at that time agreed to a price determination clause in the contract.

4. As a result of the General Counsel's statement in regard to the preparation of the contract, All American Aviation's representative pointed that, since a fixed price contract was involved and if such a pre-contract accounting were desired by the Office of Strategic Services, it would then only be fair for OSS to reimburse the contractor for all costs, plus reasonable profit, rather than have the contractor lose money as the case now stands if the contract is processed on the basis of the contractor's letters of July 7 and Oct. 6, since under such an accounting prior to the issuance of a contract, the job takes on the nature of a cost-plus arrangement. Contractor's representative further pointed out that through no fault of the contractor the contract was not issued, and that the contractor's formal proposal letter for reducing the letter of intent to a formal fixed-price contract still stood and action was expected in the usual manner on such proposal as related to fixed-price contracts, in accordance with existing Government procurement

regulations.

5. The entire matter, in the opinion of the contractor, as expressed at the meeting was that it was one of paper work since there was no question as to the amount of cost involved, or the suitability or acceptability of the equipment in view of Captain Brodie's statement of the continued and satisfactory use of the equipment in the field. The contractor pointed out that well over 50% of the total equipment desired as described in the contractor's letters of July 7 and October 6 had been delivered and was in use.

6. The contractor cannot help but feel discouraged at the interminable delay which has occurred in the issuance of the contract to cover the equipment in question, particularly in view of the fact that the contractor performed in accordance with instructions received from OSS representatives on the basis that the contract would be issued in a short time after July 7th and that the equipment was urgently needed for the war effort. The contractor has extended every effort to expedite delivery of the equipment by going to extra expense by way of overtime and double time on Sundays to expedite manufacturing, by incurring high costs because of personal follow-up in the field to obtain short materials, and by performing considerable machine work on substitutions in order to rush the job at OSS request, none of which have been included in the contract price because of the difficulty of segregating such costs.

7. The contractor has been and still is very anxious to obtain reimbursement for the work done and to ship the remaining Brodie parts on hand, in order that working capital tied up since July may be free for further war use, and also to allow utilization of the space now occupied by this equipment for war use.

8. The above letter is transmitted in order to verify the results of the conference and requests that action be expedited to clarify the matters in question to the satisfactory of all parties concerned at the earliest possible moment.

Very truly yours,

ALL AMERICAN AVIATION INC.

By /s/ E. E. Minor
E. E. Minor, Vice President
Manufacturing & Development
Division

EEM:MAM

Copies to:
Ensign Joseph Kelley - OSS
Mr. McClland - OSS

Major Frank D. Johnston, Jr.
Air Technical Service Command
Assistant Chief
Miscl. Equipment Branch
Wright Field, Ohio

19

Capt. Jon H. Ober
ocs/TSTEI (5-6147)

ARMY AIR FORCES
HEADQUARTERS
AIR TECHNICAL SERVICE COMMAND

T E C H N I C A L I N S T R U C T I O N S

Wright Field, Dayton, Ohio
3 January 1945

SERIAL NO: TI-2137.

SUBJECT: Suspended Cable Launching and Landing Equipment — Brodie.

TO: Procurement Division
Engineering Division.

MX-561

1. Problem Presented:

a. To outline program required for procurement and future development of subject Brodie system.

2. Factual Data:

a. This TI supercedes and cancels CTI-1791 and Addendums 1 and 2.

3. Authority:

a. CG, AAF. By message WAR 80137 dated 21 September 1944, received from Engineering Branch, Materiel Division, AC/AS, M&S.

4. Action Desired:

a. Procurement Division will:

(1) Procure twenty-two (22) complete suspended cable and landing equipments with six (6) months maintenance parts. It is understood that four (4) of the sets referred to can be made available through the Office of Strategic Services. These are to be utilized as a part of the quantity of twenty-two (22).

(2) In addition, six (6) months maintenance parts for sixteen (16) sets of the subject equipment, now on contract by OSS, will be procured.

(3) Six (6) L-4 conversion kits and six (6) L-5 conversion kits are to be procured for each of the twenty-two (22) Brodie systems.

b. This project carries a 1-A priority. Procurement referred to above is to be so scheduled that delivery will start by 1 March 1945, and will be completed six (6) weeks thereafter.

Central Files

- 1 -

For W.A.D.C.
per Asst Branch Chief
Comd.

SERIAL NO: TI-2137 (continued).

SUBJECT: Suspended Cable Launching and Landing Equipment - Brodie.

TO: Procurement Division
Engineering Division.

c. The Engineering Division will continue research for the improvement for the design of the subject apparatus.

By command of Lt. General KNUDSEN:

T. A. SIMS,
Colonel, Air Corps,
Chief of Administration.

cc: Supply Division
Maintenance Division.

SAFETY FILM KODAK

THIS PAGE IS UNCLASSIFIED

RESTRICTED

ORIGINAL

27 Mar 1945

CONTROL UNIT

LE BRANCH

Nº 411647

Authority for Purchase

C. Middlesworth
CM:dm Ext. 25132

7741

Restricted

VENDOR

CONTRACT No. TSBPR4K1
W33-038 ac 7741
PURCHASE ORDER No. (13611)

DELIVERY | VIA | TERMS | METHOD | PROPOSAL

THE ABOVE SPACE TO BE USED BY THE PURCHASE BRANCH ONLY

Item	Quantity	Unit	Estimated Unit Price	DESCRIPTION OF MATERIAL OR SERVICES TO BE PURCHASED.	Unit Price	Total Price
1	18	ea	$9,000.00	Brodie Systems in accordance with A.C. Assembly Drawings shown on Exhibit "A" attached hereto and made a part hereof.		
2	204	ea	700.00	L-4 Conversion Kits in accordance with A.C. Assembly Drawings shown on Exhibit "A".		
3	204	ea	700.00	L-5 Conversion Kits in accordance with A.C. Assembly Drawings shown on Exhibit "A".		
4	34	sets	3,000.00	Spare Parts for Item 1 (See Exhibit "A")		

License Rights Article
PARO Form No. 1, 2/17/44
Patents Article DA PARO Form #108, 7/15/44
No Patents ... RLP

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Negotiations Completed 3-24-45

None

Total Estimated Cost $721,506.60 / 45

CLASSIFICATION 19-A C-2-AA-1

Total Actual Cost $690,737.36

B—FUNDS			A—FUNDS		C—FUNDS			Increase of Funds to Actual Cost Approved
EXPEND. ORDER No. MISCL. CHARGE No.	Project No.	Item No.	Project No.	Item No.	Project No.	Class No.	Item No.	
			XXXXXX					Chief-Division-Organization

MATERIAL TO BE OBLIGATED XXXXXXXXXXXXXXXX

WANTED NOT LATER THAN See Exhibit "A".

Expenditure Control—B. F. O.

DELIVER TO To be furnished later

Procurement Data Number of Sets

DATE FURNISHED

Budget & Fiscal Officer

Remarks on the following matter marked with "X" appear in the space below:

1. Recommended Sources of Supply X
2. Government furnished material X
3. Tools, patterns, etc. loaned by Government
4. Should Serial Number be assigned
5. Point of Inspection X
6. Increase Existing Orders
7. General Remarks: X

ASC MAINT DIV
UNIT-WEIGHT FILED
PROCESSED BY:

1. Maryland Engineering Co., Pikesville, Md.

5. Contractor's Plant.

CLEARED 1-6-45 Spec. Br.

7. It is requested that Maryland Engineering Co. be made sole source for this procurement, as they are now in production on this System for O.S.S., and delivery requirements will not permit time to establish new sources. This procurement in accordance with CTI 2137, dated 3 Jan. 1945, and War Teletype 80137, dated 21 December 1944.

2. ALL AN FITTINGS REQUIRED FOR ASSEMBLIES AS CALLED OUT ON AC DRAWINGS

The supplies and services to be obtained by this instrument are authorized by, are for the purpose set forth in and are chargeable to allotment number(s):

21x/50705 502-5150 P 423-07 A 33-038 (Items 1, 2 + 3)
21x/50705 502-5150 P 423-08 A 33-038 (Item 4)

Upon due inquiry made it was found that the articles enumerated hereon could not be procured from any other branch of the Government without transfer of funds, or the immediate need of these supplies or the remoteness of this station from point of supply precludes their purchase from any other branch of the Government.

Date 5 JAN 1945

Initiated by C. Middlesworth

Signed R. R. CLARKSON, Maj., AC, Chief, Misc. Br.

Signed Acting Chief, Proc. Sec. SHEPARD, Col., AC

Approved—

AC Form No. 48
(16 Sep 43)

COORDINATION
DIRECTOR OR DEP.
AIR INSPECTOR
MGT. CONTROL
CHIEF OF ADMN.
SPECIAL STAFF
CHIEF, ENG. & PROC.
CHIEF, SUPPLY & MAINT.
PERS. & BASE SERV. DIV.
MAINT. DIV.
SUPPLY DIV.
Capt J.H. Brodie
ENGINEERING DIV.
PROCUREMENT DIV.
READJUST DIV.
OTHER

"Ship Type Brodie Device"

TSEFL-3H2
Captain James H. Brodie, Jr.
Extension No. [illegible]

1st Ind.

Headquarters, Air Technical Service Command, Wright Field, Dayton, Ohio, 6 January 1945.

To: Commanding General, Army Air Forces, Washington 25, D. C.
Attention: Assistant C/S, Materiel and Services

1. Directives stated in basic letter are being complied with.

2. This Command has been informed by Colonel McElhaney, Requirements Branch, Headquarters, Army Ground Forces, that no directive has yet been issued by the Navy Department to equip landing ship tanks in conformance with recommendations. Results of further service tests are being awaited.

3. This Command is prepared to take immediate action on procurement of items as discussed and reported in Confidential Navy Department Report from Chief, BuDocks, Chief, BuShips, and Chief, Bureau to Chief, Naval Operations, dated 13 December 1944, BuShips File No. [illegible] (633-519), BuDocks File No. [illegible], and Bureau File No. [illegible].

4. Standard Air Force drawings of all equipment involved in A.A.F. procurement proposal for this program are not in the process of being prepared. It is anticipated that complete drawings will be available without delay when required.

For the Director:

O. W. HOLLOMAN
Colonel, Air Corps
Chief, Equipment Laboratory
Propulsion and Accessories Section
Engineering Division

1 Incl. - No change

-2-

Y-115484

WF Area B-10-14-44-600M

CENTRAL FILE COPY

64

ATSC 360.2

COORDINATION

DIRECTOR OR DEP.

AIR INSPECTOR

MGT. CONTROL

CHIEF OF ADMN.

SPECIAL STAFF

CHIEF, ENG. & PROC.

CHIEF, SUPPLY & MAINT.

PERS. & BASE SERV. DIV.

MAINT. DIV.

SUPPLY DIV.

ENGINEERING DIV.

PROCUREMENT DIV.

READJUST DIV.

OTHERS

JHD/ebo
Extension No. [illegible]-52[illegible]

22 June [illegible] 1945

O.S.S. Procurement of Brodie Systems

[illegible]ructor,
Office of Strategic Services
Room 106, North Building
25th Street N. .
Washington 25, D. C.
Attention: Mr. W. I. Welbish

1. Reference is made to your letter, dated 27 September 19[illegible], regarding conclusions reached on coordination of financial and technical problems involved with O. .S. procurement of Brodie systems.

2. The agreements reached as a result of the meeting described in your letter are satisfactory to this Command. Progress on this portion of the project taken over by this Command is as follows as of this date:

a. All equipment involved but the Model 20 brake unit has been thoroughly tested in experimental stages by personnel of this Command and in operational stages by the Field Artillery School, Fort Sill, Oklahoma and the Amphibious Training Command, Coronado, California.

b. Minor changes in the Model 20 brake unit have been recommended by this Command. These have been incorporated by the contractor, and final acceptance tests are to be made in the next several days.

c. All equipment as furnished [illegible] Maryland Manufacturing Company, Pikesville, Maryland and All American Aviation, Inc., Wilmington, Delaware has been proven satisfactory and according to approved drawings and specifications except for minor details which can be remedied in the field upon receipt of equipment.

65

d. Action has been started on working out the parachute drop problem. Engineering and design problems have been assigned to Miscellaneous Branch, Engineering Division, T[illegible]-3[illegible]. Tentative design has been established as a result of study of similar projects successfully performed. A contract for actual fabrication and testing is to be let in the near future with a large engineering and development concern. This problem is to be worked out first for use with a C-[illegible] airplane. Use of this type aircraft was advised by Lt. Colonel W. . . Quinn, Air Officer, Office of Strategic Services.

RESTRICTED

W.F. Area B-10-14-44-600M

CENTRAL FILE COPY

e. A complete set of AAF drawings and specifications for all subject equipment is being made and prints will be available to any service desiring them about 1 February 1945.

f. All equipment furnished by the Maryland Engineering Company, Pikesville, Maryland on O.S.S. contracts has been inspected and accepted. It has been shipped to the Miscellaneous Equipment Depot, Columbus, Ohio for storage. The nine sets to be retained by O.S.S. are included in this storage.

g. Certain amounts of equipment furnished by All American Aviation, Inc., Wilmington, Delaware on O.S.S. contracts have been shipped direct to field organizations for testing and operational use. Some complete sets have been canibalized to furnish spare parts. The equipment already shipped amounts to about six complete sets. The remainder of this equipment is now in storage at the contractor's plant awaiting AAF shipping instructions.

h. Nine complete sets as described in O.S.S. contracts are available for disposition by Office of Strategic Services at any time.

i. In the opinion of personnel of this Command, these sets should be supplied with spare parts for six months' operation in the field. Action has been taken to procure equipment to furnish these requirements for all eighteen sets procured on O.S.S. contracts, nine of which are being retained for O.S.S. disposition. The procurement of these spare parts has been arranged on AAF contract with the Maryland Engineering Company, Pikesville, Maryland.

j. All the L-5 airplane conversion kits furnished under O.S.S. contract with All American Aviation, Inc. have been shipped out to field organizations. At present there are six complete L-5 and twelve L-5 conversion kits which were made in AAF shops, available for shipment from supply at this Command.

3. Action has been taken to obtain complete sets of documents showing evidence of shipment on O.S.S. and A.A.F. shipping instructions of all equipment already shipped from both contractors. These complete sets have not yet been obtained. However, it is expected they will be on hand within the near future.

54

Ltr., ATSC (360.2), 22 Jan. 45, to O.S.S., Washington, D. C., Sub: "O.S.S. Procurement of Brodie Systems" (Continued)

4. From a standpoint of technical inspection and acceptance of the equipment manufactured on O.S.S. letter contracts with Maryland Engineering Company and All American Aviation, Inc., there is nothing involved which should, in the opinion of this Command, delay the processing of final O.S.S. contracts. It is to be stated however that costs incurred by All American Aviation, Inc. for manufacture of this equipment appear excessive from a general viewpoint. It is believed that a detailed post payment audit should be made on these costs.

For the Director:

C. V. HOLLOMAN
Colonel, Air Corps
Chief, Equipment Laboratory
Propulsion and Accessories Section
Engineering Division

-3-

ATSC Form No. 43
(16 Sep 44)

ATSC 360.2

IN REPLY ADDRESS BOTH
COORDINATION AND EN-
DIRECTOR OF DISP. DORSE TO ATTENTION OF
FOLLOWING OFFICE SYMBOL:
AIR INSPECTOR EPL-3H2

MGT. CONTROL

CHIEF OF ADMN.

SPECIAL STAFF

CHIEF, ENG. & PROC.

CHIEF, SUPPLY & MAINT.

PERS. & BASE SERV. DIV.

MAINT. DIV.

SUPPLY DIV.

ENGINEERING DIV.

PROCUREMENT DIV

READJUST DIV.

OTHER

JHB/bjb
Extension No. 2-5244

20 January 1945

MX-561

All American Aviation, Inc.
210 Greenhill Avenue
Wilmington, Delaware

Gentlemen:

It is requested this Command be furnished photostatic copies of all bills of lading, shipping tickets, or other documents evidencing shipment of equipment on U.S.S. Contract No. 592. This information is needed to determine the amount of material delivered to date which your Company should be paid for.

Very truly yours,

FRANK B. JOHNSTON, JR.
Major, Air Corps
Equipment Branch

1-17

G. V. HOLLOMAN
Colonel, Air Corps
Chief, Equipment Laboratory
Propulsion and Accessories Section
Engineering Division

EPA-3H2

WF, Area B-10-14-44-600M

CENTRAL FILE COPY

ATSC Form No. 48
(16 Sep 44)

ATSC 360.2
IN REPLY ADDRESS BOTH COORDINATION AND ENVELOPE TO ATTENTION OF FOLLOWING OFFICE SYMBOL:
EPL-3M2

JHB/ojb
Extension No. 2-5244

20 January 1945

DIRECTOR OF MAT.
AIR INSPECTOR
MGT. CONTROL
CHIEF OF ADMN.
SPECIAL STAFF
CHIEF, ENG. & PROC.
CHIEF, SUPPLY & MAINT.
PERS. & BASE SERV. DIV.
MAINT. DIV.
SUPPLY DIV.
ENGINEERING DIV.
PROCUREMENT DIV.
READJUST DIV.
OTHER

Maryland Engineering Company
1326 Reisterstown Road
Pikesville 8, Maryland

MX-561

Gentlemen:

It is requested this Command be furnished photostatic copies of all bills of lading, shipping tickets, or other documents showing shipment of all equipment on both O.S.S. contracts on the Brodie System. This information is needed to determine the amount of ~~material delivered~~ to date which your Company should be paid for.

Very truly yours,

G. V. HOLLOMAN
Colonel, Air Corps
Chief, Equipment Laboratory
Propulsion and Accessories Section
Engineering Division

FILE COPIES TO: INITIALS
EPL-3M2

WF, Area B-10-14-44-600M

CENTRAL FILE COPY

P 11 1:57

WB145

URD V MARA NR74 TD

FROM ARNOLD WASHINGTON DC 102203Z

TO DIR ATTN TSEPR AAF ATSC WRIGHTFLD OHIO

[10 Feb. 1945]

CRNC

AFDMA-2C 3020 PD

REURTEL TSEPR-40/3/2-4 SUBJ ERDDIE SYSTEMS. EVERY EFFORT SHLD BE MADE TO HAVE FIRM SCHED FOR DLV OF COMPLETE SYSTEMS AVAIL NO LATER THAN 15 FEB. YOUR SCHED WILL BE GIVEN TO ARMY GROUND FORCES AS BASIS FOR ISSUING MOVEMENT ORDERS COVERING EQUIPMENT AND TRAINED PERSONNEL NOW AWAITING ORDERS IN SUBMITTING SCHED STATE WHEN AND WHERE COMPLETE EQUIPMENT WILL BE AVAILABLE FOR EMBARKATION. ANY BASIS INFO REQD WHERE IT IS ASSUMED THAT EMERGENCY STEPS ARE BEING TAKEN TO AVOID SHARP DEVIATION FOR PREVIOUS SCHED SUBMITTED IN TSEPL-3-12-85 AND CONFIRMED IN TSEPL-3-12-170

2212Z

Cf. Brodie-4

22

ARMY AIR FORCES
HEADQUARTERS
AIR TECHNICAL SERVICE COMMAND

Captain Jon H. Ober
ees/TSTEX (5-6147)

TECHNICAL INSTRUCTION

MX-561

Wright Field, Dayton, Ohio
14 February 1945

ORIGINAL COPIES TO RECORDS DIV. ASC | INITIALS
EXTRA COPY RETAINED
VALUE OF PAPER-CHECK ONE
PERMANENT TRANSITORY

SERIAL NO: TI-2137, Addendum No. 1.

SUBJECT: Method of Dropping Brodie Gear.

TO: Engineering Division.

1. Problem Presented:

a. To develop a method of dropping the Brodie gear from a C-46 or C-54 aircraft by parachute.

2. Authority:

a. CG, AAF. By teletype dated 9 February 1945 with regards to the above subject, received from Chief, Engineering Branch, Materiel Division, AC/AS, M-S.

3. Action Desired:

a. That which is stated under paragraph 1, Problem Presented.

b. Two (2) complete equipments necessary to accomplish the Problem Presented are to be fabricated and shipped to the Field Artillery Board, Fort Bragg, North Carolina for service test. Fabrication should not interfere with production of present Brodie models.

c. This project has a 2-A priority.

By command of Lt. General KNUDSEN:

T. A. SIMS,
Colonel, Air Corps,
Chief of Administration.

cc: Procurement Division
Supply Division
Maintenance Division

X

AGD-LR

21

Z-167.

9 FEB 0 17

V

WA250

UFD V WARE NR80 WD [9 Feb. 1945]

FROM ARNOLD WASHINGTON DC 092200Z

TO DIR AAF AIR TECH SERV COMD WRIGHTFIELD DAYTON OHIO ATTN CHIEF OF ADM

TSTEX

GRNC

AFDMA-2C 2631 PD

REFERENCE YOUR TSTEX-1-28 REGARDING AIR DROP OF BRODIE GEAR ARMY GROUND FORCES HAS INDICATED REQUIREMENT FOR BRODIE GEAR MODIFIED FOR DELIVERY BY PARACHUTE FROM C-46 OR C-54 AIRCRAFT

THEREFORE DIRECTED THAT TWO SUCH DEVICES BE FABRICATED AND SHIPPED TO FIELD ARTILLERY BOARD FT BRAGG NORTH CAROLINA FOR SERVICE TEST

FABRICATION SHOULD NOT INTERFERE WITH PRODUCTION OF PRESENT BRODIE MODELS

FACILITY TWO A ASSIGNED

2231Z

AFDMA-2C 2631 TSTEX-1-28 C-46 C-54

ATSC Form No. 10-1 (17 Oct. 44)

ROUTING AND RECORD SHEET AIR TECHNICAL SERVICE COMMAND

Use this form for inter-office correspondence within headquarters.

Use authorized office symbols to designate addressor and addressee.

Use entire width of sheet, both sides.

Please initials at dictator and typist, telephone number and location to right of signature.

Separate comments by horizontal lines across page.

ORIGINATING OFFICE TO: INITIALS

RETAINED

CHECK ONE

PERMANENT ☒ TRANSITORY ☐

SUBJECT: Method for Dropping Brodie Gear

DATE: 20 Jan 45

TO: ISTEX

FROM: TSEPL-3H2

Attention: Captain Ober

1. The Office of Strategic Services has requested that the Air Technical Service Command work out a method for dropping the Brodie gear from an airplane by parachute.

2. At a meeting between representatives of Office of Strategic Services and Air Technical Service Command, on 6 September 1944, it was agreed that the project would be undertaken by this Command. As this portion of the project is not covered in CTI-2137, it is requested that it be included by an addendum.

3. It has been decided between Office of Strategic Services and Air Technical Service Command representatives that a C-54 airplane is most adaptable to the problem from both engineering and tactical consideration. The TI addendum should therefore state that a C-54 airplane should be used.

FRANK B. JOHNSTON, JR.
MAJOR, AIR CORPS,
ASST. CHIEF
MISCL. EQUIPMENT BRANCH

Frank B. Johnston Jr.

G. V. HOLLOMAN
Colonel, Air Corps
Chief, Equipment Laboratory
Propulsion and Accessories Section
Engineering Division

J.V.03.

JHB/bjb
Ext. 2-5244
Bldg. 45

Ord 688-mx-561

AF, Adm 8-10-20-44-1 Mil. FROM (CONTINUE ON OTHER SIDE) DATE COMMENT NO.

Brodie Device

AC/S, OPD NDD 15 Feb 45 1
Maj Hammond/73596

REFERENCES: 1. CM-IN 27759 dtd 28 Nov 44 from CG, USAFMTO
2. CM-IN 3236 dtd 3 Feb 45 from CG, USAFMTO

SUMMARY

1. On 28 Nov 44, by message from CG, USAFMTO (reference 1 above), that theater requested two (2) Brodie Devices and one team of personnel which was to be absorbed by that theater upon completion of the instruction program. At the time of their request, no Brodie Devices were available due to a high priority diversion of production of these devices by OSS.

2. By CM-IN 3236 (reference 2 above) that theater reiterated its request for two (2) devices. M & S, AAF have indicated this date that the first two devices from production will be available 1 March 45. Due to the peculiarity of the terrain in that theater, it has been agreed by Col. Cox (AGF), Maj. Sparks (OPD) and NDD that the first two devices should go to MTO.

3. The attached cable informs that theater of the availability of the first two devices and referring to their original cable states that the instruction team is to be absorbed within the theater allotment. Shipping instructions for the equipment and the team were also requested.

COORDINATION

4. Informal approval by Maj. Sparks (OPD-Log, Ext 6024), Col. Sluder (OPD-MTO, Ext 74675), and Col. Wade (OPD-MTO, Ext 72969).

Informal concurrence by Col. Cox (AGF, Code 618-695), Maj. Oakley (M&S, AAF, Ext 3831) and Maj. Bernstein (OC&R, AAF, Ext 5652).

1 Incl
Draft of Radio

Wm. A. BORDEN
Brigadier General, GSC
Director, New Developments
Division

Information Cpy for Maj Oakley

ATSC Form No. 10-508 (3 Jan 45)
(Old ATSC Form No. 43)

PRIORITY

15 February 1945

COORDINATION

DIRECTOR, ATSC

AIR [illegible] General, Army Air Forces
Washington 25, D.C.
Attn: AC/AS, M&S
Engineering Branch

H.A. SHEPARD,
Colonel, Air Corps

Attn: Major Oakley

CHIEF OF ADMN.

CMiddlesworth:hp 2-5132

TCW 240(8)-2-42

SPECIAL STAFF

REURTEL AFDIA-20 3020 PD, TWO COMPLETE SYSTEMS WITH SPARES AND EXPORT PACKED WILL BE AVAILABLE AT COLUMBUS DEPOT ONE MARCH. NO SHIPPING INSTRUCTIONS AS YET RECEIVED AT ATSC. FURTHER COMPLETE SHIPMENTS WILL BE DETERMINED BY ABILITY OF ATSC AND WPB TO FILL RAW MATERIAL REQUIREMENTS OF CONTRACTOR'S ASG-16 FORMS NOW ON FILE AT ATSC. ALL PURCHASE ORDERS HAVE BEEN PLACED BY CONTRACTOR AND SUB-CONTRACTORS BUT ARE CANCELLABLE. CANNOT AT THIS TIME GIVE A FIRM DELIVERY DATA AS NO PROMISE OF THE DELIVERY OF CABLE, [illegible], SHEAVES, TURNBUCKLES, CABLE EYES AND OTHER CRITICAL ITEMS HAS BEEN RECEIVED BY CONTRACTOR. IF THESE ITEMS COULD BE PLACED IN CONTRACTOR'S HANDS BY ONE MARCH COMPLETE EQUIPMENT WITH SPARES COULD AGAIN START FLOWING AT RATE OF TWO SETS PER WEEK BY FIFTEEN MARCH OR EARLIER AT THE LATEST. EVERY EFFORT IS BEING PUT FORTH AT ATSC TO EXPEDITE THIS DELIVERY. SIGNED: PROCUREMENT DIVISION.

CHIEF, ENG. & PROC.

CHIEF, SUPPLY

PERS. & BASE SERV. DIV.

MAINT. DIV.

SUPPLY DIV.

ENGINEERING DIV.

PROCUREMENT DIV.

Smith
Hoff
Cheney

READJUST DIV.

OTHER

70

SIGNAL CENTER
BASE SIGNAL OFFICE, HQ. ASC
PATTERSON FIELD, OHIO

ACTION / FOR INFOR

BUY

1945 FEB 21 17 17 1945 FEB 21 PM 18

GREENWICH TIME

BPR

MX-561
Confid

WA163

UFD V LABE NR35 WD

FROM ARNOLD WASHINGTON DC 2116527

TO DIR AAF AIR TECH SERV COMD WRIGHTFLD DAYTON OHIO ATTN CHIEF PROC DIV

CBMC

AFDMA-2C 5756FN REURTEL TSBPR 10/B/-2-42 DATED 16 FEBRUARY 1945 SUBJECT BRODIE SYSTEMS ARMY GROUND FORCES HAS BEEN REQUESTED TO PROCESS SHIPPING INSTRUCTIONS COVERING TWO SYSTEMS AVAILABLE 1 MARCH STILL REQUIRE ESTIMATE OF WHEN REMAINING UNITS WILL BE AVAILABLE DIFFICULTIES FULLY APPRECIATED HERE BUT BELIEVED TO BE NO DIFFERENT FROM THOSE AFFECTING EVERY RUSH ITEM CAN YOU SAY NOW THAT SHORTAGES MENTIONED REFERENCE TELETYPE WILL BE COVERED BY APPROXIMATELY 1 MARCH SO COMPLETE EQUIPMENT WILL BEGIN TO FLOW ABOUT 15 MARCH IF NOT WHEN DO YOU EXPECT TO BE ABLE TO MAKE FIRM STATEMENT REASONABLY FIRM SCHEDULE WELL IN ADVANCE OF DELIVERY OF FIRST ARTICLE IS NECESSARY TO ALLOW FOR PERSONNEL AND EQUIPMENT MOVEMENT ORDER PREPARATION AND TO AVOID LOST TIME IN STORAGE

17017

ATSC Form No. 10-508 (3 Jan 45)
(Old ATSC Form No. 43)

PRIORITY

7 March 1945

COORDINATION
~~URGENT~~: ATSC
DIRECTOR OR DEP.

Commanding General
AIR INSPECTOR
Army Air Forces
Office AC/AS, M & S
MGT. CONTROL
Washington 25, D.C.

Engineering Branch, Attn: Major Oakley

7 Mar 45

H. A. SHEPARD,
Colonel, Air Corps

CHiddlesworth Ext. 2-5132

CHIEF OF ADMN.
TSEPI40(8)-3-40

REURTEL AFDMA-2C-5756PD, SAMPLE STEEL

SPECIAL STAFF

CASTING FOR SHEAVES READY FOR INSPECTION 10 MARCH. FIRST PRODUCTION SHEAVE CASTING 26 MARCH. THIS ITEM DETERMINING FACTOR OF DELIVERY ON COMPLETE BRODIE SYSTEMS. ATTEMPTING TO BETTER DELIVERY TIME BETWEEN SAMPLE AND FIRST PRODUCTION SHEAVE CASTING.

CHIEF, ENG. & PROC.

ONE COMPLETE SYSTEM WILL BE READY 31 MARCH AND FLOW OF TWO SYSTEMS PER WEEK WILL BE

CHIEF, SUPPLY & MAINT.

[illegible] 16 APRIL UNLESS SHEAVE CASTING DELIVERY CAN BE IMPROVED. SIGNED: PROCUREMENT DIVISION.

PERS. & BASE SERV. DIV

MAINT. DIV.

cc: Eastern District.

SUPPLY DIV.

ENGINEERING DIV

PROCUREMENT DIV.
Middlesworth

READJUST DIV.

OTHER

W.F. Area B-1-1-45-600M

CENTRAL FILE COPY

O. Brodie
ARF.C.F. 373.1 June
10(2/44)

ADDRESS REPLY TO
COMMANDING GENERAL, ARMY AIR FORCES
WASHINGTON, D. C.

27

RESTRICTED

Classification changed To SECRET by authority of CG, Army Ground Forces
J Bleum 1st Lt 7 May 47
(Name) (Grade) (Date)

WAR DEPARTMENT
HEADQUARTERS OF THE ARMY AIR FORCES
WASHINGTON, D. C.

AFDMA-2C
14 March 1945

SUBJECT: Cable Launching and Landing Apparatus (Brodie Design)

TO: Commanding General
Army Ground Forces
Army War College
Washington, D. C.

Attention: Field Artillery Branch,
Requirements Section.

1. Information received from the Air Technical Service Command indicates that one (1) complete Brodie system will be available at the Maryland Engineering Company, Pikesville, Maryland, packed for export, approximately 1 April 1945.

2. It is now expected that two complete systems will become available, packed for export at the Maryland Engineering Company, during the week beginning 16 April 1945, and each week thereafter until contract is completed.

3. It is requested that shipping instructions covering the above be made available to the Army Air Forces at the earliest practicable date.

4. Unless shipping instructions are available prior to the dates mentioned in paragraphs 1 and 2 above, the equipment will be moved to the 843rd Army Air Forces Specialized Depot, Columbus Fair Grounds, Columbus, Ohio, where it will be available for re-shipment approximately two weeks later.

FOR THE COMMANDING GENERAL, ARMY AIR FORCES:

J. F. PHILLIPS
Brigadier General, U.S.A.
Chief, Materiel Division
Office, Assistant Chief of Air Staff
Materiel and Services

11529

O-Brodie
AAF-CF-373.1-Tow
10(1/2)

26

664

452.11(S)(14 Mar.45)GNRQT-10/19437 1st Ind.

HEADQUARTERS, ARMY GROUND FORCES, Army War College, Washington, D. C.

TO: Commanding General, Army Air Forces, Washington 25, D. C., Attention: Asst. Chief of Air Staff, Operations, Commitments and Requirements, Airborne and Liaison Branch, War Department

1. Informal arrangements have been made with your office through New Developments Division, W.D.S.S. to hold the Brodie device completed 1 April 1945 at the Maryland Engineering Company until 15 April 1945.

2. Shipping instructions received 6 April 1945 from ETO request immediate shipment of four (4) Brodie systems to that theater.

3. Action has been initiated to ship the completed system mentioned in paragraph 1, basic letter, with the least practicable delay and to ship the two (2) systems to be completed during week beginning 16 April 1945 and one (1) of the systems to be completed during week beginning 23 April 1945 to the same theater as soon as completed.

4. Further shipping instructions will be furnished your headquarters when available.

FOR THE COMMANDING GENERAL:

R.A. Meredith
R. A. MEREDITH
[illegible] A.G.D.
[illegible] Ground Adj. Gen.

373.1 Tow

CF

CF C-6

SAVE

RESTRICTED

HEADQUARTERS, ARMY AIR FORCES
WASHINGTON

IN REPLY REFER TO: AFDMA-2C
27 March 1945

FOR VICTORY BUY UNITED STATES WAR BONDS AND STAMPS

SUBJECT: Cable Launching and Landing Apparatus (Brodie Device)

TO: Director
AAF Air Technical Service Command
Wright Field, Dayton, Ohio

Attention: Chief, Procurement Division - TSPPR-40-S

1. Reference is made to letter from this Headquarters, dated 14 March 1945, subject as above, and to telephone conversation with Captain [redacted], T. Wolf this date.

2. It has been determined that the one (1) apparatus scheduled for completion approximately 1 April 1945 will be shipped overseas from an east coast port. This apparatus should therefore be held at the Hamilton Engineering Company for shipping instructions which will be available shortly after 1 April 1945.

BY COMMAND OF GENERAL ARNOLD:

L. I. Bradbury, Lt. Col. AC.

[redacted] D. C. DOUBLEDAY
Colonel, Air Corps
Chief, Engineering Sec., Materiel Div.
Office, Assistant Chief of Air Staff,
Materiel and Services

RESTRICTED

ADDRESS REPLY TO COMMANDING GENERAL, ARMY AIR FORCES, WASHINGTON 25, D. C.

ATSC Form No. 19-304 (19 OCT 44)

SAVE

IN REPLY ADDRESS BOTH COMMUNICATION AND ENVELOPE TO ATTENTION OF FOLLOWING OFFICE SYMBOL
TSEPL-3H2

ARMY AIR FORCES
HEADQUARTERS
AIR TECHNICAL SERVICE COMMAND

JHB/bjb
Extension 2-5244
WRIGHT FIELD, DAYTON, OHIO
10 April 1945

SUBJECT: Status of Brodie System Equipment Being Manufactured

TO: Commanding General
Army Air Forces
Washington, D. C.
Attention: Major Oakley, Office,
Assistant C/AS, Materiel and Services

1. A representative of this Command recently visited the Maryland Engineering Company, Pikesville, Maryland, prime contractor for the construction of new equipment for Brodie System, and All American Aviation, Inc., Wilmington, Delaware, sub-contractor and manufacturer of L-4 and L-5 conversion kits and Model 20 arresting brake units for the system.

2. Equipment being manufactured by both companies appeared to be acceptable from a construction standpoint. It was found however that both companies are short on aluminum alloy sheet necessary to make certain parts of the equipment. Some of the sheet is being furnished GFE, AAF Depot, Topeka, Kansas and some is being furnished commercially from different sources in the United States. The reason given by contractors that they had not commenced the fabrication of items involving aluminum sheet was that the GFE material had not been delivered in time and that some of the aluminum had been traced to a railroad car which has been delayed in the Ohio River flood several weeks ago.

3. Delivery of complete sets of equipment is not expected until about 1 May 1945. Although, one or two sets of spare parts suitable for completing sets now in AAF Stock will probably be ready about 15 April 1945.

For the Director:

Frank B. Johnston

S. R. STEWART
Colonel, Air Corps
Chief, Equipment Laboratory
Propulsion and Accessories Subdivision
Engineering Division

RESTRICTED

Subject: Status of Brodie System Equipment Being Manufactured

1st Ind. AFDMA-2C
Headquarters, Army Air Forces, Washington 25, D. C., 12 April 1945

To: Director, AAF Air Technical Service Command, Wright Field, Dayton, Ohio. Attention: Engineering Division - TSEPL-3H2

1. Based on conversation with personnel of Procurement Division (TSBPR-40-8) and Engineering Division (TSEPL-3H2), it is understood that in spite of difficulties cited above there will be one (1) complete device ready for overseas shipment at the Maryland Engineering Company approximately 25 April 1945, and three (3) complete devices ready approximately 1 May 1945.

2. It is further understood that the three devices ready 1 May 1945, will be production articles and that the previously mentioned production rate of two devices per week will be maintained after 1 May.

3. This Headquarters should be notified by telephone (Major Oakley Extension 3831) if there is any change in the prospects for having the first four devices available on the dates mentioned in paragraph 1 above.

4. These first four articles should be held at the Maryland Engineering Company, Pikesville, Maryland, packed for export until shipping instructions, now being prepared, are received.

BY COMMAND OF GENERAL ARNOLD:

D. C. DOUBLEDAY
Colonel, Air Corps
Chief, Engr. Branch, Materiel Division
Office, Assistant Chief of Air Staff
Materiel and Services

75

RESTRICTED

RESTRICTED

Major F C Oakley/fw-3831
AFDMA-2C
12 April 1945

Cable Launching and Landing Apparatus (Brodie Design)

Commanding General
Army Ground Forces
Washington, D. C.

Attn: Field Artillery Branch, Requirements Section

1. The attached copy of 1st Indorsement to Air Technical Service Command dated 12 April 1945, subject: Status of Brodie System Equipment being Manufactured, is forwarded to supplement the information contained in letter from this Headquarters dated 14 March 1945, subject as above.

2. It is understood that the slight change in availability dates has already been reflected in movement orders in process.

3. Your attention is invited to instruction in paragraph 4 of attached indorsement. This deviation from standard procedure, as outlined in paragraph 4 of letter referenced in paragraph 1 above, was made at request of Lt. Colonel T. I. Ramsey, New Developments Division, War Department General Staff.

FOR THE COMMANDING GENERAL, ARMY AIR FORCES:

D. C. BANDELDAY
Colonel, Air Corps
Chief, Engineering Branch, Materiel Div.
Office, Asst. Chief of Air Staff
Materiel and Services

1 Incl.
Cy 1st Ind to
ATSC dtd 12 Apr 45.

cc: New Developments Division
War Dept. General Staff
Attn: Lt Col T I Ramsey
Room 4B 887

AFDMA-2

RESTRICTED

SECRET

16 April 1945

Dear Colonel Wolf:

Enclosed is an article which I wrote of our experiences on the Brodie IST. I enclose it for your approval or disapproval. It is immaterial to me whether my article gets in the F. A. Journal or any other publication just as long as someone gets the desired information.

Since it still pays to advertise, I try to get as much publicity for my air sections as possible for several reasons. First, there is no bigger morale builder, that is understood. Second, something as radical as the Brodie, it is best that others should not have as bad an impression of it as we did. Third, and the biggest reason, was proven yesterday. I received a letter from my supply friend Pat Williams at HAD. He stated that due to the growing importance of these planes he has gotten a wide berth toward the issuing of supplies.

As a suggestion for any new changes in the T/O, I would like to add that the pilots be placed on the staff of their respective battalions rather than Hq Btry. Though we have experienced little trouble along this line it did have to be ironed out. It is SOP that after the fire of battle has died down, our pilots go to their respective battalions to live, eat, play, and work with the battalion officers.

It was a bitter pill for the pilots at first to have to leave their isolated airstrips away from the "brass". The practice has proven itself ten fold. In most cases, they have struck up a close feeling of friendship. Now when the S-3 calls for observation that pilot not only goes because of the order, but a friend is calling him and he gives all he's got.

I wrote this letter on an envelope on the shore of Henna Shima where we are building an airstrip. We never dreamed at Sill that we could use anything as bad as this. As I sit here in the cool breeze and hot sun I can look out across the water and watch the progress of the landings on Ie Shima 8000 yards away. Only a couple hours ago, I saw one of the hardest shellings of a small island I have yet seen.

Within the past twenty minutes I have seen two Jap planes shot down about six miles out at sea. Yesterday we installed our artillery on Henna Shima. It is a Ft. Sill solution. It is a V-shaped island about 1000 yards long and 200 yards wide. It is fringed completely with a forty foot sand dune. The cultivated fields in the center are like a sunken garden. Consequently we have complete defilade and coverage by trees.

X-188888

SECRET

The Cubs and L-5 based on Yontan airfield on Okinawa, twenty miles away, adjusted the battalions on registrations points yesterday. Having had such a naval concentration this morning, it looks like the landing forces are having no resistance for we have not had to fire anything yet.

22 April 1945.

Just a closing note. The island proved pretty tough. Sorry I don't have time to really complete this letter properly, but I want to get it mailed promptly. Lost two old planes yesterday in a wind storm. The first since Guam. Had two L-5's but lost one on the carrier. We are having our old planes corroding due to salt water.

Best regards to all. Certainly appreciated your letter. It explained everything we wanted to know.

/s/ JOHN C. Kriegsman
JOHN C. KRIEGSMAN
Major, Hq 77th Div Arty
Air Officer

1

cc/O. Brodie
Equip. Ltr. 3/5 pp.

3

SECRET

7

THE BRODIE IST

Probably the only IST with a name is the "Brodie" IST 776. It is the answer to an island hopping liaison-pilot's dream. It is a Cub Carrier. It makes possible Air Ch's long before the strips can be made on the beaches. This ship, the only one of its kind, was ordered to us with the reputation of being about as safe as going over Niagara Falls in a barrel. The Marine Corps pilot who was sent in advance of the ship to instruct us in landing and taking off could bear nothing but sad tidings. He said the Marines enjoyed about a 50 percent operational loss. The Naval Commander in charge of the ship with raised eyebrows, and hunched shoulders said it would work. The Artillery Captain who checked out on the land rig on Saipan described the hook as something from Buck Rogers, and the rig what the name implies a "Brodie."

Each Division and Group was ordered by Corps to put one L-5 airplane aboard. Its primary mission was merely to fly off the rig (which was the easiest part), and go directly to Kadena Airfield on Okinawa after it was secured. For my part I assigned my oldest plane with Lt. Earl Montgomery, one of my best pilots whose battalion was in reserve, and not expected to be committed. He was to get out with as few scratches as possible--to hell with the airplane. Fortunately it was known that no one had ever been killed.

The ship limped in from Iwo Jima, and anchored by a repair ship. Maj. Ernest, and myself took a boat out to the ship planning to stay for the night for all the ice cold water, and good chow we could get. We were greeted with open arms by the officers and crew. It was an experimental ship with a bad reputation they knew, but they had faith in the value of their ship, and they wanted someone to prove it.

We saw with our own eyes Capt James Brodie's cunning design, and beautifully constructed landing and launching device. We saw actual photographs of the rig in operation, and we heard the enthusiastic support given by the ship's officers. Not one Lt. Sill pilot ever had an accident on it. By the time we departed from the ship next morning, the panoramic picture of its intended use began to unfold in our minds and we saw what a valuable piece of equipment was ours. Another plane from the 77th Div Arty Air section was added.

The Brodie IST simply enables a Cub or L-5 not only to takeoff, but also to return and land. It has a large boom forward and one aft extending about thirty feet from the port side of the ship. These booms are connected with a two inch cable which acts as the trolley wire. Advantages of the wind are gotten by turning the ship into the wind.

To take off, a plane is lifted from a platform on the forward deck of the IST to a trolley which conveys it to the take-off trolley. The plane is then pulled to the rear boom. The flight officer gives the signal to rev up the engine to full throttle. When full R.P.M. is reached

T

CC/8 - Brodie
Copying Inc. 4/6/7-

SECRET

the pilot, by a wave of his hand, signals his release. The plane gathers speed on the three hundred feet of trolley, and the pilot can pull the release at any time sufficient speed is attained. Should the pilot fail to release in time an automatic release will come into play at the end of the cable.

To land back on the ship, a loop or rather a rectangle of nylon rope 6' x 8', is hung on the trolley about four feet below the boom aft. To describe a method of hooking the loop is very difficult. For my part whenever I thought I would make a clean-cut hook I missed. When I thought I would grind the loop up with my prop I hooked. If the prop hits the loop it tosses it aside and no damage is done.

When the plane has hit the loop the pilot should simultaneously cut his throttle and dump his stick forward. This avoids having the nose of the plane shoot upward thus chewing off the propeller on the trolley cable. A brake with a pressure of 75-100 lbs is set for the initial shock of striking the loop, and is increased as the plane moves on down the trolley. Generally a pland is stopped about midway, but allowed to coast on to the end of the cable to be transferred to the deck. Time required for each operation is approximately ten to fifteen minutes.

Tactically the Brodie LST has proved its worth. The mission of the 77th Inf Div was to secure the Kerama Retto islands for an anchorage. The islands are located about 15 miles southwest of Okinawa. The action was to begin on L minues 6. Photos revealed no airstrip sites. Artillery was to be placed on one island and adjust on otherislands. Air observation was needed. On L minus 6 at 0730 the pilots and planes were ready to take-off. The mission: to report to the flagship the results and resistance encountered in the landings. This could have been made known before the landing forces had a chance to set up their radios.

The LST was 20,000 yards from the target area, ever farther out than the flagship. Attempts to get off the ship were futile. Pleadings to get nearer the target went unanswered. At 1230 the S-3 frantically wanted to know why we weren't in the air. The answer: "No orders from the Navy."

At 1430 the Navy finally gave us permission to take off. Six batteries were registered on a point on Tokashiki island so that preparation fires could be made for the landings the following day. Aerial photos were taken of all the islands, and along with reports on the landings were dropped to the flagship.

On L-5 at 0745 with Lt E. B. Montgomery took off, and sat for two hours at 1500 feet above the two beachheads on Tokashiki giving a "blow by blow" account of the landings to the flagship. At one time

X-1886

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Copy furn 5th Ftr

SECRET

three dive bombers apparently mis-timing their attack dropped their eggs narrowly missing the first landing wave. Prompt report to the flagship stopped a repeat performance. Before Lt. Montgomery returned to the ship, Lt Reynolds had taken off to continue the surveillance of the beachheads. Thus any and all calls for observation were promptly carried out. Airstrips on these picturesque islands of rock were impossible not only to lack of flat space, but high steep hills provided extremely turbulent wind currents.

On L minus 1 the Corps long-toms set up on a spit of land which the Japs named Keise Shima. That evening Lt Davis and Lt Dillo of Corps took off from the ship and adjusted two battalions on registration points on the main island of Okinawa. It took four bulldozers two days to build an airstrip on Keise Shima. In spite of this delay in building a strip air observation continued from the Cub Carrier. The same story is true of the 7th Inf Div which was able to adjust their guns immediately without any delay caused by lack of a suitable strip.

Since this was the first tactical use of the Brodie LST, several important points must not be overlooked for the smooth cooperation from both branches of service. First there should be no more than one division represented on the LST. This operation had four different organizations represented, each wanting to go to a different place at the same time. By placing the whole Div Arty Air Section on the ship damages to planes can be eliminated from putting them on overcrowded ships. Second, there should be close liaison between the Army and Navy commands as to the disposition of the LST. The senior Air Officer should have the authority to launch the airplanes. Third, a supply of hooks must be maintained on the LST at all times. One of the limiting factors of this operation was there were only three available hooks. Those which were ordered for this operation did not arrive in time, and when finally located on another island they were for P-5 planes. The supply must be kept with the ship. Fourth, a pilot should be with the ship to check out new pilots unfamiliar with the rig.

Of the fifteen or twenty take-offs and landings, two propellers were broken. This represents the total damage done to the planes. A record which could hardly be duplicated on a beachhead strip.

/s/ JOHN C KNIGHTMAN
Major Hq 77th Div Arty
Air Officer.

Fr. Town File

OFFICE OF STRATEGIC SERVICES
Washington, D. C.

26 APRIL 1945

Director, Headquarters
AAF Air Technical Service Command
Wright Field
Dayton, Ohio

Attention: Department TSMPL-3H2
Captain J. H. Brodie

Dear Sir:

Subject: 19 Brodie Arresting Systems
OSS-592, P. O. 21538
All American Aviation, Inc.

Enclosed herewith is a copy of the subject contract, amendment thereto, and purchase order for your files and future reference.

Also the receiving file copy of subject purchase order is enclosed. It is requested that you sign same showing receipt of the 19 Brodie Arresting Systems and component parts. Upon receipt of the signed receiving file copy, by this office, our Finance Officer will be able to make payment to All American Aviation, Inc. which, as you know, has been outstanding for some time.

Your early attention in this matter will be appreciated.

Very truly yours,

M. I. MCHUGH
Chief, Procurement and Supply Branch

Encls.

Co. Final Fil. - 2b(3)(p).

T 38.

Contract No. W 33-038 ac-7741

Maryland Engineering Company
Pikesville, Maryland

7741

APPROVED: 27 April 1945
By Direction of the Secretary of War under the Provisions of the First War Powers Act, 1941, and Executive Order 9001, dated 27 December 1941.

D. C. SWATLAND
Brig. Gen. U. S. A.
Deputy Chief, Procurement Division

RESTRICTED

38.

Materiel Command Contract Form No. 32

RESTRICTED

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Contract No. W 33-038 ac-7741 (13611)

CONTRACT

(SUPPLIES)

ANMB Preference ~~C-2~~, AA-1

WAR DEPARTMENT

JMA:eb

MARYLAND ENGINEERING COMPANY
(Contractor)

Contract for Brodie Systems - Conversion Kits - Spare Parts *Amount,* $ 690,737.36

Place, Army Air Forces, Air Technical Service Command, Wright Field, Dayton, Ohio

The Finance Officer, U. S. Army, 222 East Redwood Street, Baltimore, Maryland, is designated as the officer to make payments in accordance with this contract. The supplies and services to be obtained by this instrument are authorized by, are for the purposes set forth in, and are chargeable to allotments below enumerated, the available balances of which are sufficient to cover the cost thereof.

212/50705 502-5150 P 423-09 S 33-038-Brodie Systems and Conversion Kits $517,371.36
212/50705 502-5150 P 423-06 S 33-038-Spare Parts - - - - - - - - -$173,366.00

AFP: 411647

Class 19A

By authority of the War Production Board the preference ratings indicated are assigned to the deliveries on this contract.

This formal contract supersedes Letter Contract dated 10 January 1945, as amended.

(1-c)

RESTRICTED

Contract File
2(3)(4)

13

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CONTRACT FOR SUPPLIES

THIS CONTRACT, entered into this 19th day of APRIL, 19 45 by THE UNITED STATES OF AMERICA, hereinafter called the Government, represented by the Contracting Officer executing this contract, and MARYLAND ENGINEERING COMPANY

[redacted]
a partnership consisting of W. F. McBride, R. D. S. McBride, W. G. McConnel and J. P. McConnel,

[redacted]
of the city of Pikesville, in the State of Maryland hereinafter called the Contractor, witnesseth that the parties hereto do mutually agree as follows:

ARTICLE 1. **Definitions and Miscellaneous Provisions**—(a) The term "Secretary of War" as used herein shall include the Under Secretary of War, and the term "his duly authorized representative" shall mean any person or board authorized to act for him other than the Contracting Officer.

(b) Except for the original signing of this contract, and except as otherwise stated herein, the term "Contracting Officer" as used herein shall include (i) his duly appointed successor or his authorized representative and (ii) any and all Contracting Officers, acting within the scope of the orders respectively appointing them Contracting Officers.

(c) Unless otherwise expressly provided herein, all the supplies to be furnished hereunder shall be manufactured and supplied in strict accordance with the specifications, schedules and drawings respectively applicable thereto, as stated herein. Unless otherwise provided herein, all specifications, schedules and drawings referred to herein or in any exhibit or appendix attached hereto are hereby made a part hereof.

(d) This contract was negotiated under the authority of the First War Powers Act, 1941, and Executive Order No. 9001, December 27, 1941.

ARTICLE 2. **Changes.**—Where the supplies to be furnished are to be specially manufactured in accordance with drawings and specifications, the Contracting Officer may at any time, by a written order, and without notice to the sureties, make changes in the drawings or specifications. Changes as to shipment and packing of all supplies may also be made as above provided. If such changes cause an increase or decrease in the amount due under this contract, or in the time required for its performance, an equitable adjustment shall be made and the contract shall be modified in writing accordingly. Any claim for adjustment under this Article must be asserted within 90 days from the date the change is ordered, provided, however, that the Contracting Officer, if he determines that the facts justify such action, may receive, consider and adjust any such claim asserted at any time prior to the date of final settlement of the contract. If the parties fail to agree upon the adjustment to be made the dispute shall be determined as provided in Article 12 hereof. But nothing provided in this Article shall excuse the Contractor from proceeding with the contract as changed.

ARTICLE 3. **Extras.**—Except as otherwise herein provided, no charge for extras will be allowed unless the same have been ordered in writing by the Contracting Officer and the price stated in such order.

ARTICLE 4. **Inspection.**—(a) All material and workmanship shall be subject to inspection and test at all times and places and, when practicable, during manufacture. In case any articles are found to be defective in material or workmanship, or otherwise not in conformity with the specification requirements, the Government shall have the right to reject such articles, or require their correction. Rejected articles, and/or articles requiring correction shall be removed by and at the expense of the Contractor promptly after notice so to do. If the Contractor fails to remove promptly such articles and to proceed promptly with the replacement and/or correction thereof, the Government may, by contract or otherwise, replace and/or correct such articles and charge to the Contractor the excess cost occasioned the Government thereby, or the Government may terminate the right of the Contractor to proceed as and subject to the conditions provided in Article 5 of this contract, the Contractor and surety being liable for any damage to the same extent as provided in said Article 5 for terminations thereunder.

Article 15 - ...ticles and Supplies to be Furnished - (a) The Contractor shall furnish and deliver to the Government all of the following articles in the quantities and at the unit and total prices set forth below:

Item 1 - Eighteen (18) Brodie Systems in accordance with AAF Assembly Drawings set forth below:

DRAWING NO.	NOMENCLATURE
45H17520	Rig Assembly; Ground Equipment.
45K17521	Mast Assembly.
45K17522	Boom Assembly.
45G17523	Anchorage Assembly, #1.
45G17524	Anchorage Assembly, #3.
45K17525	Derrick Assembly; Lifting.
45G17526	Chair Assembly; Boatswain.
45G17527	Line Assembly; Man Lift.
45G17528	Line Assembly; Plane Lift.
45G17529	Cableway Assembly; Runway.
45G17530	Cable Assembly; Main Bridle.
45G17531	Buffer Assembly.
45G17532	Trolley Assembly; Landing
45J17533	Sling Assembly; Landing (L-5)
45J17534	Trolley Assembly; Take-Off.
45G17535	Sling Assembly; Take-Off.
45J17536	Brake Assembly; Arrester.
45G17537	Release Assembly; Hold Back
45G17538	Pulley; Brake Line.
45J17539	Sling Assembly; Landing (L-4).

(a) The price of each said Brodie System shall be $13,606.28; total price . . . . . $244,913.04.

Item 2 - (a) Two Hundred Four (204) L-4 Conversion Kits in accordance with AAF Assembly Drawings set forth below:

DRAWING NO.	NOMENCLATURE
45J17340	Gear Assembly; Suspending (L-4)
45K17341	Arm Assembly; (L-4)
45D17361	Lanyard Assembly; Release (L-4)
45B17367	Cable Assembly; Main Support (L-4)
45B17368	Cable Assembly; Safety Support (L-4)
45D17370	Bracket Assembly; Safety Support (L-4)
45G17375	Bracket Assembly; Main Support (L-4)
45G17383	Cord Assembly; Elastic Support (L-4)
45A17385	Sheave Assembly; Elastic Cord (L-4)
45D17388	Cable Assembly; Elastic Support (L-4)
45D17391	Box; Universal
45D17392	Mount ssembly; (L-4)

(b) One (1) Spare Cord Assembly; Elastic Support (L-4), AAF Drawing No. 45G17383, shall be supplied with each of the Two Hundred Four (204) Conversion Kits.

(c) The unit price for each L-4 Conversion Kit shall be $667.79; total price . . . . . $136,229.16.

Contract Item 3(a) pp 16

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Item 3 - (a) Two Hundred Four (204) L-5 Conversion Kits in accordance with AAF Assembly Drawings set forth below:

DRAWING NO.	NOMENCLATURE
45J17395	Gear Assembly; Suspending (L-5)
45K17396	Arm Assembly; (L-5)
45D17410	Lanyard Assembly; Release (L-5)
45G17414	Cable Assembly; Main Support (L-5)
45G17419	Cord Assembly; Elastic Support (L-5)
45D17421	Cable Assembly; Elastic Support (L-5)
45A17385	Sheave Assembly; Elastic Cord (L-5)
45D17391	Box; Universal
45D17424	Mount Assembly; (L-5)

(b) One (1) Spare Cord Assembly; Elastic Support (L-5), AAF Drawing No. 45G17419, shall be supplied with each of the Two Hundred Four (204) L-5 Conversion Kits.

(c) The unit price for each L-5 Conversion Kit shall be $667.79; total price . . . . . $136,229.16.

Item 4 - Thirty-Four (34) sets of Spare Parts for the Brodie Systems called for in Item 1, in accordance with Exhibit "A", which exhibit is attached hereto and hereby made a part hereof, at a unit price of $5,099.00; total price . . . . . $173,366.00.

(b) The Government shall furnish to the Contractor all Army-Navy fittings which are required for the Assemblies as called out on the AAF Drawings.

(c) The title to the tooling used and to be used by the Contractor in the manufacture of the articles called for under Items 1 to 4, inclusive, shall vest in the Government upon completion of this contract and shall thereafter be considered as Government-furnished equipment under the applicable provisions of this contract.

(d) Contractor shall not be required to furnish any data for the articles called for in paragraph (a) of this Article 15, except that one copy of Instructions Manual "Engineering Report SM-112", entitled "Operation and General Maintenance of Model 20 Arresting Unit for Brodie Airplane Landing System" shall be furnished with each Model Arresting Gear. Said data shall be accepted as satisfactory by the Government even though it has not been prepared in accordance with AAF manual specifications.

(g) All of the articles called for under Item 1 of paragraph (a) of Article 15 hereof shall be delivered to the Government starting 15 April 1945 in accordance with the following schedule:

Item	Rate of Delivery
1	Two (2) Brodie Systems per week.
2	Twenty (20) L-4 Conversion Kits per week.
3	Twenty (20) L-5 Conversion Kits per week.
4	Four (4) sets of Spare Parts per week.

(h) All of the articles called for under Item 2 of paragraph (a) of Article 15 hereof shall be packed for export shipment in accordance with Article 19 hereof except as the requirements of said Article 19 are modified by the following provisions:

1. Material called for under Article 15 is to be packaged in containers of approximately five hundred (500) pounds gross in those instances where the material is of such a nature as to permit such packaging.

2. All heavy cables called for under Article 15 hereof will be furnished by the Contractor on reels which the Contractor receives from the manufacturer of said cables.

3. 1 1/4" x 500' 6x19 Galvanized Plow Steel Cable, and 1"x350' 6x19 Galvanized Plow Steel Cable shall be furnished on separate reels which reels shall be used for export shipment of these items.

4. Packing for one (1) complete Brodie System, as called for under Item 1 of Article 15 hereof, shall be in accordance with the following dimensions:

Crates 1 to 14, incl.	- 1'1/2" high, 2'4-1/2" wide, 9'5-1/2" lg.
" 15 to 18, incl.	- 1' 7" high, 2'9-1/4" wide, 2'9-1/4" lg.
" 19 to 22, incl.	- 1' 3" high, 2'4" wide, 3'2-1/2" lg.
" 23 and 24,	- 9" high, 1'2" wide, 9'5-1/2" lg.
Crate 25	- 1'3" high, 2'4" wide, 3'9-3/4" lg.
Reel 26	- 39-1/2" dia. x 29-1/2" wide.
Reels 27 and 28	- 28" dia. x 17-1/2" wide.
" 29 and 30	- 38" dia. x 15-1/2" wide.
Crate 31	- 18" high x 24" wide x 24" long.
Crate 32	- 6" high x 6" wide x 13'3" long.
Crates 33 and 34	- 18" high x 36" wide x 84" long.
Crates 35 and 36	- 23-3/4" high x 27-1/2" wide x 36" lg.

5. Packaging for each of the Two Hundred Four (204) L-4 Conversion Kits called for under Item 2 of paragraph (a) of Article 15 hereof shall be Crate 1 of the following dimensions:

8" high, 18" wide, 9'3-1/4" long.

6. Packaging for each of the Two Hundred Four (204) L-5 Conversion Kits called for under Item 3 of paragraph (a) of Article 15 hereof shall be Crate 1 of the following dimensions:

8" high, 18" wide, 9'3-1/4" long.

7. Packaging for each of the Thirty-Four (34) sets of Spare Parts called for under Item 4 of Article 15 hereof shall be in accordance with the following dimensions:

Crates land 2	- 24" wide, 24" high, 96" lg.
Crate 3	- 24" wide, 15" high, 48" lg.
Crates 4 to 6, inc.	- 10" wide, 10" high, 9'3-1/2" lg.
Crates 7 and 8	- 27" wide, 27" high, 8'4-1/4"lg.
Crate 9	- 24" wide, 12" high, 24" lg.
Crate 10 and 11	- 9" wide, 10" high, 7'3-1/4" lg.
Crate 12	- 12" wide, 24" high, 42" lg.
Crates 13 and 14	- 12" wide, 24" high, 24" lg.
Crate 15	- 9" wide, 10" high, 7'3-1/4" lg.
Crate 16	- 12" wide, 24" high, 42" lg.
Crate 17	- 10" wide, 10" high, 10'3-1/4" lg.
Crate 18	- 12" wide, 24" high, 42" lg.

(i) No shipment of articles called for under Article 15 hereof shall be made until the Contractor receives shipping instructions. Contractor shall make a written request to Director, Air Technical Service Command, Wright Field, Dayton, Ohio, Attention: Unit TSEPM-408, for shipping instructions not later than fifteen (15) days prior to the date on which any of the articles called for under Article 15 hereof are ready for shipment.

(j) The articles called for under Article 15 hereof shall be delivered to the Government at the Contractor's plant located at Pikesville, Maryland.

Contract File - 5

ARTICLE 43 .—**Approval**—This contract shall be subject to the written approval of the Secretary of War or such individual as said Secretary may designate and shall not be binding until so approved. The date of such approval shall be deemed to be the true date for the purpose of determining all times of performance.

In witness whereof, the parties hereto have executed this contract as of the day and year first above written.

THE UNITED STATES OF AMERICA

By H. C. Smith
N. C. SMITH, Major, Air Corps
Contracting Officer
(Official title)

Type or print under their respective signatures the names of the witnesses and Contractor's representative.

Two witnesses:

H. S. REGESTER

G. W. RATHMAN

MARYLAND ENGINEERING COMPANY, a partnership consisting of: W. F. McBride, R.D.S. McBride, N. O. McConnel, and J. P. McConnel.
Contractor.

By W. F. McConnel

(Partner)
Title

Reisterstown Road, Pikesville, Maryland.
(Business address)

I, , certify that I am the

Secretary of the corporation named as contractor herein; that

who signed this contract on behalf of the contractor, was then
of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

[CORPORATE SEAL]

I hereby certify that, to the best of my knowledge and belief, based upon observation and inquiry,

, who signed this contract for MARYLAND ENGINEERING COMPANY, had authority to execute the same, and is the individual who signs similar contracts on behalf of this corporation with the public generally.

Contracting Officer.

A 3 4

Basic Ltr., OSS, Washington, D. C. to ATSC, 4-26-45, Subject: 19 Brodie Arresting Systems OSS-592, P.O. 21538, All American Aviation, Inc.

ATSC (4-26-45) 1st Ind. TSMPL3M2/JMB/bjb

HQ AAF ATSC, Wright Field, Dayton, Ohio, 11 May 1945.

To: Office of Strategic Services
Room 106, North Building
25th Street N.W.
Washington, D. C.

1. Reference is made to basic communication.

2. Request was made to this Command to certify that the equipment had been delivered the Government by the contractor. As only a portion of the equipment was actually received by personnel of this Command, it is not considered proper to have the purchase order copy signed having received all of it. It can be said however that this Command has knowledge that all the equipment has been delivered to either Army, Navy, or O.S.S. organizations. These deliveries were made over a long period of time and on several different vouchers.

3. It is suggested that delivery receipts from accountable officers to whom equipment was shipped to be referred to for property accountability.

For the Acting Director:

S. R. STEWART
Colonel, Air Corps
Chief, Equipment Laboratory
Propulsion and Accessories Subdivision
Engineering Division

Incls. - No change

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RESTRICTED

THE ARMY AIR FORCES BOARD
Orlando, Florida

29 May 1945

ARMY AIR FORCES BOARD PROJECT NO. 4100A373.1

STAFF STUDY OF THE BRODIE SYSTEM FOR LAUNCHING AND LANDING LIGHT AIRCRAFT.

I. OBJECT:

To determine the military requirement for the Brodie System for launching and landing light aircraft.

II. FACTUAL DATA:

a. General: This project was activated at the request of Headquarters, Army Air Forces, Washington, D.C., by letter, 23 October 1944, subject: "Brodie System Launching and Landing Device". The following factors have been considered in this study:

(1) The AAF Board project officer visited the Field Artillery Air School, Ft. Sill, Oklahoma, and participated in flights on the Brodie land rig, using an L-4 aircraft.

(2) The opinions of various personnel experienced in the operation of the Brodie Land and Sea Rig.

(3) Field Artillery service test report on the Brodie Land Rig (Inclosure No. 2).

(4) Result of Army Ground Forces' experience with the Brodie Land Rig (Inclosure No. 3).

(5) Result of the Navy's experience with the Brodie Sea Rig (Inclosure No. 4).

(6) Third Air Force comments for the use of the Brodie System (Inclosure 5).

(7) Report on Air operations from an L.S.T. (Combined Operations Headquarters Monthly Information Summary No. 12).

(8) Review of the Instruction Manual for the Brodie System. (Office of Strategic Services Presentation).

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b. Description:

(1) The Brodie System is a method for launching and landing of liaison airplanes from a taut overhead cableway. This system has been adapted for use on land or on the sea. The land rig is basically a 500 ft. overhead cableway, supported by V bridle cables from four 60 ft. upright masts. This rig is portable. The sea rig utilizes only a 300 ft. cableway supported by two upright masts with horizontal booms. This rig is for use on LST's or larger ships. The horizontally taut cableway is the runway for launching and landing. It is equipped with a take-off, and a landing trolley.

(2) Each aircraft utilizing the Brodie System is equipped with an overhead hook at the end of a swivel arm. This hook is the Brodie landing gear. The aircraft is suspended from a free wheeling take-off trolley and launched by its own power. The aircraft is released from the trolley by the pilot after flying speed is obtained. The aircraft is landed by hooking the aircraft overhead hook on a nylon loop suspended from the landing trolley. As the aircraft rolls down the cableway on the landing trolley, the aircraft is brought to a gradual stop by a brake line attached to the trolley. The Brodie rig is identical at both ends, thereby permitting operation from either end. For a more detailed description see the instruction manual for the Brodie System.

III. CONCLUSIONS: It is concluded that:

a. No requirement exists in the Army Air Forces for the Brodie landing device; however, there may be a requirement in the Army Ground Forces for the Brodie landing rig. (Inclosure No. 3).

b. The Brodie System will permit liaison plane operations under abnormal conditions where landing strip preparation is not feasible.

c. Training pilots for the use of the Brodie System will not be difficult.

d. The Brodie System is a complicated method for launching and landing liaison airplanes.

e. More time will be required to erect the Brodie Rig, under most combat conditions, than to prepare a liaison plane landing strip.

f. The Brodie Sea Rig is a means for providing launching and landing facilities for liaison aircraft during amphibious operations.

g. The use of the Brodie System at night would be extremely hazardous.

IV. RECOMMENDATIONS: It is recommended that:

a. The Brodie System not be adopted for use by the Army Air Forces.

b. Army Air Forces procure only a sufficient number of Brodie land rigs to fulfill Army Ground Forces training and tactical requirements.

c. In the event that the Brodie equipment is procured for Army Ground Forces, the serviceability of the rig be improved, and the weight of the rig be reduced in order to facilitate portability and erection.

V. DISCUSSION:

a. No requirement exists in the Army Air Forces for the use of the Brodie System. Liaison aircraft operations that require the use of the Brodie System, can be conducted more easily, quickly, and satisfactorily by helicopters. The Brodie System is a complicated method for launching and landing light aircraft and a poor substitute for an airstrip. It is a mechanical apparatus and is subject to failure. (Inclosure No. 2). The land rig can be erected in approximately 30 hours with a nine man crew. Erection of the rig in the field, under conditions that warrant its use, will require considerably more time. The rig, when erected, covers approximately 600 ft. of terrain. The terrain must be free of obstructions and fairly level, since the aircraft fly under the overhead cableway which is supported by 60 foot masts. Night operations on the Brodie rig would be extremely hazardous or impossible, since the aircraft must fly under the cable and between the supporting masts, and hook the landing sling.

b. Close liaison aircraft support, such as artillery observation, front line reconnaissance and liaison flights, are usually conducted by liaison airplanes of the Army Ground Forces. These aircraft must operate near the front lines to accomplish their mission. A few occasions will undoubtedly arise when an air strip cannot be economically provided and the Brodie System would then prove very useful to Army Ground Forces. Therefore, a limited number of Brodie Land Rigs should be procured to fulfill Army Ground Force requirements (Inclosure No. 3), for liaison aircraft operating under any conditions.

c. Liaison aircraft support can be obtained on amphibious operations by the use of the Brodie Sea Rig. Every LST or larger ship can be utilized as a liaison aircraft carrier. Close liaison can be achieved by operating from the ship in which the ground unit is transported. Liaison aircraft have operated from aircraft carriers on past amphibious operations, but this places an added burden on an aircraft carrier, and the aircraft carrier will usually anchor too far out for close liaison with the front unit. Liaison aircraft have also operated from LST's with a specially prepared platform. This requires a major modification of the ship. These platforms have been large enough to permit the aircraft to take off, but not to land, whereas the Brodie Sea Rig will provide two-way

liaison aircraft operations, and permit close liaison aircraft support on amphibious operations.

d. Training pilots for the use of the Brodie System will not be difficult. An average liaison pilot, after six take-offs and landings should be able to use this system. The take-off is very simple. The aircraft is hoisted up and connected to the take-off trolley. A static line is fastened to the tail of the aircraft and the aircraft motor started. The static line is released when the motor has been reved up to the full throttle, allowing the aircraft to roll down the cableway under its own power. The aircraft gains flying speed when about half way down the cableway and is released from the trolley by the pilot. The aircraft drops slightly when it is released, but otherwise the take-off is normal. The landing is a little more difficult. After the take-off, the landing trolley is placed in position and a nylon sling, approximately 4 ft. square is suspended from the trolley. The aircraft on landing makes a slow, nose high, power-on approach, regulating the descent with the throttle rather than with the elevator. The aircraft is flown so that the Brodie hook makes contact with the landing sling. Upon contact, the throttle is closed and the aircraft nosed down slightly. The aircraft is brought to a gradual stop by a ground crew operated brake line attached to the landing sling. The take-off utilizes about two-thirds of the cable length and the landing utilizes approximately one-half of the cable length. After landing, the aircraft is taxied back to the end of the cable and transferred to the take-off trolley or lowered to the ground. Take-off or landing can be accomplished from either end of the Brodie rig and cross wind operations present no difficulty.

VI. INCLOSURES:

1. Directive dtd 23 Oct. 1944, from Hqs. AAF, Washington, D.C.
2. Field Artillery Service Test Report dtd 27 Jan. 1945.
3. Result of AGF experience with the Brodie Sea Rig.
4. Result of Navy's experience with Brodie Sea Rig.
5. Third AF comments for the use of the Brodie System.
6. Weight of component parts of the Brodie Land Rig.
7. Photographs.

FOR THE ARMY AIR FORCES BOARD:

A. C. STRICKLAND
Brigadier General, U. S. Army
President

OFFICIAL:

Gustav A. Neuberg

GUSTAV A. NEUBERG
Lt. Colonel, AGD
Recorder

AAF Bd. Proj. No. 4100A373.1

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In Reply Refer to:

AFRBC-1

HEADQUARTERS, ARMY AIR FORCES
WASHINGTON

30 June 1945

SUBJECT: Staff Study of the Brodie System for Launching and Landing Light Aircraft, AAF Board Project 4100

TO: Commanding General, Army Air Forces Center, Orlando, Florida
ATTENTION: Army Air Forces Board

Subject report of AAF Board has been approved by this Headquarters and action is being taken to implement recommendations.

BY COMMAND OF GENERAL ARNOLD:

/s/ H. S. Ecklund, Col., AC
for HOYT S. VANDENBERG
Lt. General, USA
Ass't Chief of Air Staff
Operations, Commitments and
Requirements

A TRUE COPY

J. A. KENT
1st Lt., Air Corps

ATSC Form No. 10-5
(1[illegible] Sr. 453)

ROUTING AND RECORD SHEET — AIR TECHNICAL SERVICE COMMAND

Use this form for inter-office correspondence within headquarters.

Use entire width of sheet, both sides.

Use authorized office symbols to designate addressor and addressee.

Number all comments consecutively.

Place initials of dictator and typist, telephone number and location to right of signature.

Separate comments by horizontal lines across page.

SUBJECT: Brodie Systems
Contract W33-038-ac-7741, Maryland Engineering Co., Pikesville, Md.

TO: TSEPL-3H7
(Colonel Bishop)

FROM: TSBPR408

DATE: 8 June '45 COMMENT NO. 1

1. In order to comply with Directives from Headquarters, AAF to supply 7 Brodie Systems together with Spare Parts and Conversion Kits to the Navy it is understood from Captain Brodie that modifications of various components now used in the standard Brodie Systems now on procurement for the Army Air Forces will have to be made.

2. Captain Brodie further states that there are no drawings available for the modifications required and that he is the only person possessing sufficient knowledge to enable Contractor, Maryland Engineering Company, Pikesville, Maryland, to accomplish the necessary changes.

3. In order to enable the Contractor to produce the required units, it is therefore, requested that Captain Brodie be authorized to visit Contractor's plant and take necessary steps to explain to the Contractor what system consists of and design of the components.

4. It is further requested that TSBPR408 be furnished a written resume of action taken by Captain Brodie.

for W. A. SHEPARD,
Colonel, Air Corps,
Acting Chief, Prod. Sec.,
Procurement Division.

WRWOLF, Captain, A.C.:jc
2-6103

To: TSBPR408 From: TSEPL3H7 Date: 16 June 45

1. Captain J. H. Brodie departed this station 9 June 1945.

2. He will proceed to Maryland Engineering Company, Pikesville, Maryland for the purpose of modifying present equipment to meet Naval requirements. From Pikesville, Maryland he will proceed to New Orleans to modify the Model 20 Arresting Unit for ship use.

3. Captain Brodie is expected to return this station approximately 20 June 1945. A copy of his trip report will be furnished your office.

for C. E. HOLLIDAY,
Colonel, Air Corps,
Chief, Equipment Laboratory,
Propulsion and Accessories Subdivision,
Engineering Division.

HAROLD W. SHAW,
CAPTAIN, AIR CORPS,
ASST. CHIEF,
MISCELLANEOUS BRANCH.

AAG/ver
Ext. 2117

FROM : TSEPA403 DATE 25 July 1945 COMMENT NO. 3

A Sullivan

SULLIVAN:mt 2-6103

1. Reference is made to Comment #2. To date this office has not received a detailed trip report of duties taken by Captain Brodie at the Maryland Engineering Company, Inc. Baltimore, Maryland on the modification of AAF Brodie Systems to Navy requirements.

2. It is requested that this report be forwarded to TSEPA403 immediately.

P. C. Funkhouser
for T. A. SULLIVAN, Maj, A.C.
Colonel, Air Corps,
Chief, Production Section,
Procurement Division.

To: TSEPA403 From: TSEPL3H7 Date: 31 July 45 Comment No. 4.

1. Reference is made to Comment No. 3 above.

2. Attached herewith is one copy of a detailed trip report as requested by your Office.

for T. S. HOLLIDAY,
Colonel, Air Corps,
Chief, Equipment Laboratory,
Propulsion & Accessories Subdivision,
Engineering Division.

JHB/vmf
Ext: 2-5244
Bldg. 45

1 Incl.
Memorandum Report No. TSEPL-3H-662-16-I.

(DO NOT WRITE BELOW THIS LINE)

Mr. Meisinger
2(1 [illegible])

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/Memorandum Report/

Ref: HMeisinger/bp
Ext. 3-1223

16 June 1945

Conversion of AAF Brodie Systems to Navy use.

W33-038 AC-7741

Service & Maint. Equipment Br.

TSSPL3-H.M

PURPOSE:

1. Pursuant to letter orders 96-11-10 dated 11 June 1945, Ray H. Meisinger, Production Supervisor, proceeded to Pikesville, Maryland, arriving 12 June 1945 for the purpose of contacting Maryland Engineering Company in collaboration with Captain James E. Brodie to determine nature and extent of modifications specified by Captain James E. Brodie to the contractor in order that contractor could convert seven AAF Brodie Systems, with spares, for Navy use and the subject contract accordingly amended.

FACTUAL DATA:

1. Personnel contacted:

Captain James E. Brodie, Hdq., ATSC, TSSPL3
Mr. C. H. Culver, Baltimore Sub-Reg. Office, E.D., ATSC
Mr. H. E. Oliver, Philadelphia Reg. Office, E.D., ATSC
Mr. W. R. Davidson, AAF Inspector-in-charge
Mr. W. G. McConnel, Maryland Engineering Company
Mr. Albert Senon, Maryland Engineering Company

2. The Brodie System as designed for the AAF use constitutes a portable launching and/or take off facility for small aircraft for use over rough terrain or under conditions where a normal runway or land strip is impracticable or uneconomical. A long taut cable supported by masts is the primary operating unit of the system. Adapted to Navy use, the cable is shortened, the masts omitted, and the cable supported by ship born "over the side" horizontal booms, with some modifications and additions to other operating subassemblies in the system. The conversion kit (separate from the system) constitutes an independent mechanism which is attached to the airplane in order that landing contact and flight release can be effected with and/or from the cableway in the system.

3. Fourteen of the above referred to AAF Brodie systems have been completed by the contractor and accepted by the AAF. Of the fourteen sets, two have not been shipped. Four systems are currently being completed by the

RESTRICTED

Memo Report. TSEPR4-M-43 (Cont'd)

contractor. It is contemplated to convert the two not shipped plus the four in course of completion and supply the seventh Navy system from existent une shipped spares.

4. Modifications and/or additions determined by Captain Brodie and conveyed to the contractor orally and in sketch form were noted and supplied to TSEPRMO in order that request for Contract Change Notification could be activated. Inasmuch as standardized drawings for the AAF system are not available, Navy modifications for the purpose of expediency in delivery were necessary as such.

5. Four of the Navy systems are for immediate installation on waiting ships and must be progressively shipped as component modifications are completed to allow completion of installations at port of embarkation prior to already specified sailing dates.

CONCLUSIONS:

1. That subject contract be amended to cover conversion of seven AAF Brodie Systems and conversion kits with spares to Navy requirements.

RECOMMENDATIONS:

1. It is recommended that TSEPRMO
   (a) Activate request for Contract Change Notification containing special detailed information furnished by the writer.
   (b) Arrange for expedited shipment of four of the seven sets on a progressive component basis to facilitate shipboard installation by the Navy.
   (c) Determine and activate procedure necessary relative disposition of cannibalized AAF systems and spares.

/Sgd. Roy N. Meisinger/

Roy N. Meisinger, Prod. Supvr.

Sgd.
/C.P. Culbert/
CHARLES P. CULBERT, Lt.Col., A.C.
Service & Maint. Br.

/Sgd. R.E. Miller, Lt.Col., AC. for/
ORVILLE M. MOELLER, Lt.Col., A.C.
Chief, Aero.Equip.Sub-Section.

/Sgd. Myron B. Wolf/
MYRON B. WOLF, Capt., A.C.

Capt. James H. Brodie, TSEPLJ
Mr. C. H. Culver, Baltimore Sub-Reg.Office
Mr. H.E. Oliver, Philadelphia Reg. Office

CONFIDENTIAL"

7-H-285

OFFICE OF STRATEGIC SERVICES
WASHINGTON 25, D. C.

4 July 1945

Commanding General
Materiel Command
Attention: Department 545
Wright Field,
Dayton, Ohio

Attention: Major Shrine

Gentlemen:

Reference: Contract OSS-592

1. Reference is made to various exchanges of correspondence between your Command and the Office of Strategic Services regarding subject contract.

2. It is the purpose of this letter to bring to your attention certain matters which remain uncompleted and to respectfully urge that said matter be handled in the immediate future.

3. In order to supply necessary background for this request, the following factors are considered particularly pertinent.

(a) On 6 September 1944 a conference occurred at Wright Field, attended by Major Shrine, Major Johnston and Captain Webb, Air Corps representatives and Lt. Col. Quinn and Mr. M. I. McHugh of the Office of Strategic Service, the effect of which was to place in the hand of the Air Corps complete responsibility for the technical supervision, production, testing, engineering and redesigning of any part of the device contemplated by Contract No. OSS-592.

(b) At said conference, the proposal for OSS to cancel its commitment with All American Aviation and for Air Corps to initiate a new contract for the same work with the same company was avoided because of the great amount of time which would be required for processing same.

(c) The results of this conference were formally communicated to you under our letter of 27 September 1944 signed by Mr. M. I. McHugh, Acting Chief, Procurement & Supply Branch.

(d) In the latter part of September Wright Field contacted the OSS by wire, urgently requesting that OSS instruct All American Aviation and Maryland Engineering Company to honor Government Bills of Lading for shipment of the Brodie Devices as were issued by Material Command from time to time. Under letter dated 5 October 1944 Material Command

W-7329

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Paragraph 3 (d) (Continued)

was advised that its request had been complied with and copies of communications transmitted to the Contractors were forwarded for its information and files. Prior thereto, one complete Brodie Device had been picked up by OSS in the beginning of September and delivered to Fort Belvoir for test purposes. That was the first shipment. With that shipment we are not concerned. We are here concerned with all shipments made after the first shipment, all of which were forwarded under the authorization and direction of Captain James H. Brodie.

(e) Subsequent thereto, after request by OSS, this Branch was advised by letter dated 22 January 1945 signed by Chief, Equipment Laboratory, that action had been initiated to obtain complete sets of documents showing evidence of shipment on OSS and Army Air Force shipping instructions of all equipment already shipped from both contractors. It was stated further that evidence thereof had not been obtained but that we should anticipate receipt thereof in the immediate future.

(f) In the month of January 1945 further discussions transpired between Wright Field and the OSS. As a result of the increased requirements of the Air Corps, the curtailment of certain OSS operations calling for the equipment, and the urgent need for the equipment by Materiel Command, it was decided that the entire procurement would be turned over to it. Question then arose as to the desireability of (1) assigning the contract to the Air Corps or (2) having the equipment requisitioned by the Air Corps. The OSS was advised by Wright Field on 1 February 1945 that requisitioning was preferable to assignment. After request by OSS, this Branch was advised on 9 March 1945 that a detailed list of articles shipped on contracts with Maryland Engineering and All American Aviation was being prepared and that a requisition would be forwarded in the immediate future.

(g) After several requests by the OSS this office was properly advised on 22 January 1945 by the Army Service Technical Command that all of the equipment under its contracts, OSS-584, OSS-585 & OSS-654, with Maryland Engineering Company had been delivered. On the basis of this information, pending payment vouchers were cleared and the matter brought to a conclusion.

(h) This office has not been able to clear payment vouchers of All American Aviation due to its lack of receiving information. After several additional telephonic requests, this office was advised by letter of 11 May 1945, the letter having been prepared by Captain James H. Brodie, for S. R. Stewart, Col. Air Corps and signed by Harold W. Shaw, Captain, Air Corps,

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Paragraph 3 (h) (Continued)

that delivery receipts be obtained from the accountable officers to whom equipment was shipped. Inasmuch as the control of shipments was surrendered to the Air Corps in September 1944 after only one shipment had been authorized by the OSS (refer paragraph (d) above) this office is in no position and should not be obligated to contact said accountable officers. It may be noted here that this matter was referred to the Army Air Force inspector at All American Aviation, Wilmington, Delaware, who advised that Captain James H. Brodie was the only one in a position to know where and to whom shipments had been made. All shipping instructions were given by Captain James H. Brodie. Because of certain changes in the nomenclature of the devices of the Brodie System, initiated by Captain Brodie during the course of production, this office was advised that Supply Officers would be in a very difficult position to pass on the receipt of equipment without the assistance of Captain Brodie.

(i) The hesitancy of Captain Brodie to pass on the receipt of the equipment procured under OSS-592 is not understood when it is considered that the same principles are here involved that were involved in the clearance of OSS-584, OSS-585 and OSS-645 with Maryland Engineering Company, on which no delay in receipt of information was experienced.

4. The inability of OSS to make payment to All American Aviation, Inc. is a source of considerable embarrassment inasmuch as the Contractor has completed performance as of six months past and Captain Brodie has affirmed to the Contractor and OSS that all the equipment has been delivered, though a written statement without qualification is not forthcoming.

5. In summation, it is respectfully requested that immediate action be taken to (1) obtain complete sets of documents showing evidence of shipment as stated in your letter of 22 January 1945 so that payment may be made and (2) requisition against OSS for all equipment referred to in wire signed by General Knudsen under date of 8 March 1945.

Very truly yours,

W. I. McHugh
Chief, Proc. & Supply Branch

CONFIDENTIAL W-7328

ATSC Form No. 10-508 (3 Jan 45)
(Old ATSC Form No. 43)

CONFIDENTIAL

COORDINATION
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AIR INSPECTOR
MGT. CONTROL
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CHIEF OF ADMN.
SPECIAL STAFF
CHIEF, ENG. & PROC.
CHIEF, SUPPLY & MAINT.
PERS. & BASE SERV. DIV.
MAINT. DIV.
SUPPLY DIV.
ENGINEERING DIV.
Capt J W Brodie
PROCUREMENT DIV.
READJUST DIV.
OTHER

TSEPL3H/JHB/vmf

18 July 1945

OSS Contract No. 592

Office of Strategic Services,
Room 106, North Building,
25th & East Street N. W.,
Washington 25, D. C.

1. Reference is made to your letter dated 4 July 1945 regarding OSS Contract No. 592.

2. Action is being taken by the Traffic Section, Air Technical Service Command to obtain a complete set of shipping documents.

3. This Command is advised that these documents were mailed from the Eastern District, Air Technical Service Command about 14 July 1945, to Wright Field.

4. The requisitioning of Brodie System equipment from Office of Strategic Services by the Army Air Forces is being handled by the Production Section of Procurement Division, Air Technical Service Command.

5. Your letter is being referred to Procurement Division for action and forwarding required information to Office of Strategic Services.

FOR THE COMMANDING GENERAL:

HAROLD W. SHAW,
CAPTAIN, AIR CORPS,
ASST. CHIEF,
MISC. EQUIPMENT BRANCH

T. S. HOLLIDAY,
Colonel, Air Corps,
Chief, Equipment Laboratory,
Propulsion and Accessories Subdivision,
Engineering Division.

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W-7323-A

WF. Area B-1-1-45-600M

CENTRAL FILE COPY

AAF Form No. 10-3

ROUTING AND RECORD SHEET AIR TECHNICAL SERVICE COMMAND

Use this form for inter-office correspondence within headquarters.

Use authorized office symbols to designate addressor and addressee.

Place initials of dictator and typist, telephone number and location to right of signature.

Use entire width of sheet, both sides.

Number all comments consecutively.

Separate comments by horizontal lines across page.

SUBJECT: Contract CSS-592
All American Aviation Corp., Wilmington, Delaware

TO: TSEPL-3H7 FROM: TSEPR403 DATE 26 July '45 COMMENT NO. 1

RSullivan
RSULLIVAN: mt 2-6103

1. Confirming conference held in Dept. TSEPR403 with Captain Brodie of your office and Mr. West of the Office of Strategic Services, Washington, D. C., 24 July 1945, relative to subject Contract, an examination of records has been made which indicates the following:

a. An offer was made on or about 6 September 1944 by the Office of Strategic Services, Washington, D. C. to the Engineering Division to turn over the Production of the Brodie Systems procured on subject Contract to the Army Air Forces.

b. A conference was held 6 September 1944 at Wright Field at which the following individuals were present: Major Shrein, Major Johnston and Captain Webb of the Engineering Division and Lt. Col. Quinn and Mr. McHugh, Office of Strategic Services. The Engineering Division accepted the offer tendered in paragraph (a) above.

c. In a letter dated 12 December 1944 by the Office of Strategic Service the arrangement was confirmed with a definite statement to the effect that after 6 September 1944 the administration of subject Contract was transferred to the Army Air Forces personnel in attendance at the above conference.

d. The records also indicate that shipping instructions were issued by the Engineering Division from time to time thus dissipating in whole or in part, all the material furnished under subject Contract.

2. In view of the above, it is recommended that Engineering Division initiate by R & R to Dept. TSESP a requisition to provide for the acceptance of the material which was taken over by Engineering Division from subject Contract.

3. Although it is not considered that TSEPR403 is involved in this transaction notification as to the action taken by your office is requested in order that files can be closed.

for H. A. SHEPARD,
Colonel, Air Corps,
Chief, Production Section,
Procurement Division.

To: TSEPR 403 From: TSEPL3H7 Date: 8/9/45 Comment No. 2 (on other side) 85

TO TSBPRL03 FROM TSEPL-3H7 DATE 10 August 45 COMMENT NO. 2.

1. Reference is made to Comment No. 1 above. The Engineering Division has received and accepted five of the nineteen OSS Brodie Systems referred to. These were used for experimentation and tests. Other than these, the Engineering Division has no requirement for additional sets. Therefore, it is not considered appropriate for this office to initiate action to requisition the remaining sets obtained from Office of Strategic Services.

2. A Memorandum Report on the history of the procurement of nineteen OSS Brodie System sets is being prepared, and a copy will be available about 15 August 1945.

T. B. HOLLIDAY,
Colonel, Air Corps,
Chief, Equipment Laboratory,
Propulsion & Accessories Subdivision,
Engineering Division.

JHB/vmf
Ext: 2-5214
Bldg. 45

(DO NOT WRITE BELOW THIS LINE)

ATSC Form No. 10-5
(19 Mar. 43)

ROUTING AND RECORD SHEET AIR TECHNICAL SERVICE COMMAND

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Number all comments consecutively.
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Separate comments by horizontal lines across page.

SUBJECT: Disposition of Sets of Brodie System Equipment Procured by Office of Strategic Services.

TO: TSEPL-3H FROM: TSEPL-3B7 DATE: 13 Aug. '45 COMMENT NO. 1.

A. PURPOSE:

1. To outline the history of procurement and the disposition of eighteen Brodie System Sets procured by Office of Strategic Services, a number of which were disposed of or stored by action of the AAF. This is for information and record only.

2. In January 1944, the Office of Strategic Services established a project to develop the Brodie System for portable ground use. One experimental set was procured for testing and training Office of Strategic Services ground crews and pilots. Upon the successful results of tests, eighteen more sets were procured for early Office of Strategic Services employment in the C. B. I. Theatre. Office of Strategic Services procured the structural protions of these sets of equipment from the Maryland Engineering Company, Pikesville, Maryland and the mechanical portions from the All American Aviation Company, Incorporated.

3. In June 1944, the Headquarters, Army Ground Forces established a requirement for twenty-two sets of Brodie System equipment for operation in all combat theatres. The project to procure and issue twenty-two new sets to the Army Ground Forces and to further develop and improve the equipment, was undertaken by the AAF per authority of C.T.I. 1791 dated 27 July 1944, and superceeded by T.I. 2137 dated 3 January 1945. By September 1944, the fabrication of eighteen sets for Office of Strategic Services by two contractors was nearly complete. Delivery of equipment to Office of Strategic Services was much later than was planned and due to favorable tactical changes in the C. B. I. Theatre, the Office of Strategic Services requirement for the number sets was reduced. At this time personnel of Office of Strategic Services contacted personnel of Headquarters, ATSC and requested that the AAF take over the responsibility of supervision of production, testing, engineering, and technical supervision of their contracts for procurement of eighteen sets. Arrangements were made for the AAF to do this and for Office of Strategic Services to give the AAF nine of their sets without cost. Confirmation of this is in Office of Strategic Services letter to Headquarters, ATSC dated 27 September 1944.

4. Two of the Office of Strategic Services sets had been delivered to that organization at Ft. Belvoir, Virginia from the contractors. The other seventeen Office of Strategic Services sets were held at the contractor's plants for disposition. Letters dated 5 October 1944, from Office of Strategic Services to Maryland Engineering Company and All American Aviation, Incorporated gave the AAF authority to issue shipping instructions on all Office of Strategic Services Brodie System Equipment.

5. The following lists the destination and present use of sets shipped under Office of Strategic Services contracts:

Ltr Sig Feb 3(3/44)

ATSC Form No. 10-3 (17 Oct 41)

ROUTING AND RECORD SHEET — AIR TECHNICAL SERVICE COMMAND

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SUBJECT: Disposition of Sets of Brodie System Equipment Procured by Office of Strategic Services.

TO: TSEPL-3H FROM: TSEPL-3H7 DATE: 13 Aug. '45 COMMENT NO. 1. (Continued)

No. of Sets	Destination	Shipping Date	Use
1.	Office of Strategic Services Ft. Belvoir - reshipped to Wright Field	Feb. 1944 Nov. 1944	First Original Test Set
1.	Office of Strategic Services Ft. Belvoir - reshipped to Wright Field	12 June 1944 Nov. 1944	Test
1.	Amphibious Training Base, San Diego, California	21 Sept. 1944	Training
2.	Wright Field	5 Oct. 1944	Overseas Shipment
1.	Ft. Sill, Oklahoma	18 Oct. 1944	Training
1.	Ft. Sill, Oklahoma	20 Oct. 1944	Training
2.	Wright Field	20 Oct. 1944	Test
3.	843rd AAF Specialized Depot, Columbus, Ohio	16 Nov. 1944	Storage for Office of Strategic Services
3.	843rd AAF Depot, Columbus, Ohio	21 Nov. 1944	Storage for Office of Strategic Services
2.	843rd AAF Depot, Columbus, Ohio	22 Nov. 1944	Storage for Office of Strategic Services
2.	843rd AAF Depot, Columbus, Ohio	27 Nov. 1944	Storage for Office of Strategic Services
19	Total		

6. Four sets were shipped from the nine sets given the AAF by Office of Strategic Services to fulfill a part of the A.G.F. requirement for twenty-two sets; two were shipped to Ft. Sill, one was shipped to Los Angeles Port of Embarkation for the C.B.I. Theatre; one was shipped to the Amphibious Training Base, San Diego, California. The other five sets were shipped to Wright Field for use in experimental and testing work; ten sets were shipped to the 843rd AAF Specialized Depot, Columbus, Ohio for storage awaiting Office of Strategic Services disposition.

-2-

AT Form No. 10-3
(19 Mar. 45)

ROUTING AND RECORD SHEET AIR TECHNICAL SERVICE COMMAND

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SUBJECT: Disposition of Sets of Brodie System Equipment Procured by Office of Strategic Services

TO: TSEPL-3H FROM: TSEPL-3H7 DATE: 13 Aug. '45 COMMENT NO. 1.
(Continued)

7. This accounts for all Office of Strategic Services Brodie System sets shipped under AAF Shipping requests up to 1 March 1945.

C. CONCLUSIONS:

8. None

D. RECOMMENDATIONS:

9. None

C. H. Webb

C. H. WEBB,
Captain, Air Corps,
Chief, Aerial Pick-Up Unit,
Miscellaneous Branch.

for JHB/fms
2-5244
Bldg. 45

CC 2-31

TSEPL-307

TSEPL-307/JHD/fms

29 August 1945

Delivery of Equipment Involved in
Office of Strategic Services Contract
No. 592.

Office of Strategic Services,
Room 106, North Building,
25th Street, N.W.,
Washington 25, D.C.
Att: Chief, Procurement & Supply Branch

1. Reference is made to letter from your Office to this Command dated 26 April 1945 and 1st Indorsement to basic letter dated 11 May 1945.

2. This Command has now obtained copies of all packing lists, express tickets, and bills of lading which give evidence of the shipment of nineteen (19) sets of Brodie System equipment as described in Office of Strategic Services Contract No. 592. One complete set of these instruments are inclosed herewith for Office of Strategic Services records.

3. This evidence has been examined and is found correct. Certification is made that all equipment involved in Office of Strategic Services Contract No. 592 has been delivered to agencies of the Government.

FOR THE COMMANDING GENERAL:

/Harold W. Shaw,
Captain, Air Corps,
Asst. Chief,
Misc.Equipment Branch/

/Sgd. HWS for/
T. P. McKinley,
Colonel, Air Corps,
Chief, Equipment Laboratory,
Propulsion & Accessories Subdivision,
Engineering Division.

1 Incl.
One set of Instrum.

ALL AMERICAN AVIATION, INC.
AIR PICK-UP
GENERAL OFFICES
210 GREENHILL AVENUE
WILMINGTON, DELAWARE

Dept. 4, 1945.

Office of Strategic Services
25th and "E" Streets
Washington, D. C.

Attention: Warrant Officer West

Subject: OSS-592 - Brodie Equipment,
Request for Payment of Balance Due

Dear Sir:-

This facility in accordance with request received from the Contracting Officer's section at OSS forwarded photostatic copies of all shipping sheets and bills of lading to Wright Field, together with a breakdown thereof showing that 19 sets of equipment had been delivered. In other words, the contractor has performed all requirements in the subject contract and has made all deliveries called for thereunder.

The contractor urgently requests that the remaining 10% due under this contract be paid in accordance with invoices previously submitted. Our last delivery on this contract was made more than six months ago, and it is felt that ample time has elapsed to allow payment of the full amount.

Please let us know at an early date when we may expect to receive the 10% unpaid balance.

Very truly yours,

ALL AMERICAN AVIATION INC.

BY E. E. Minor

E. E. Minor, Vice President
Manufacturing & Development
Division.

EEM:MAM

Copies to:

Capt. J. H. Brodie
Equipment Laboratory
Engineering Division
Wright Field, Dayton, O.

Mr. M. I. McHugh, Chief of War Department, OSS

COPY

AT[illegible] (3 Jan 43)
(Old ATSC Form No. 43)

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CHIEF, SUPPLY & MAINT.
PERS. & BASE SERV. DIV.
MAINT. DIV.
SUPPLY DIV.
ENGINEERING DIV.
Capt J.H. Brodie
PROCUREMENT DIV.
READJUST DIV.
OTHER

WF, Area B-1-1-15-600M

TSEPL5H/JHB/vmf

10 September 1945

OSS Contract No. 592

Office of Strategic Services,
Room 106, North Building,
25th & East Streets, N. W.,
Washington 25, D. C.
Attn: Warrant Officer West

1. Reference is made to letter from this Command to Office of Strategic Services dated 29 August 1945, Subject: Delivery of Equipment Involved in OSS Contract No. 592, and to letter from All American Aviation Incorporated to Office of Strategic Services dated 4 September 1945, Subject: OSS 592 Brodie Equipment, Request for Payment of Balance Due.

2. It is requested that this Command be informed of action taken by Office of Strategic Services regarding final payment on OSS Contract 592.

FOR THE COMMANDING GENERAL:

for T. B. HOLLIDAY,
Colonel, Air Corps,
Chief, Equipment Laboratory,
Propulsion & Accessories Subdivision,
Engineering Division.

HAROLD W. SHAW,
CAPTAIN, AIR CORPS,
ASST. CHIEF,
MISC. EQUIPMENT BRANCH

4-10

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C.G. AISC

CMT

31 OCTOBER 1945

W-61664-3