



THE FIREFLY RESERVE RAM AIR PARACHUTE CANOPY

P/N SST 202

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THE FIREFLY RESERVE HAS BEEN TESTED IN ACCORDANCE WITH NAS804 AND IS APPROVED FOR THE LOW SPEED CATEGORY UNDER TSO C235 FOR LITE FLITE INC. IT IS DESIGNED FOR USE AS A SPORT PARACHUTIST'S RESERVE, LIMITED TO USE IN AIRCRAFT UNDER 150 MPH. THE FIREFLY RESERVE IS RECOMMENDED FOR SPORT JUMPERS WEIGHING UP TO 175 LBS. IT SHOULD BE WORN ONLY BY THOSE JUMPERS WHO HAVE HAD EXPERIENCE WITH RAM AIR PARACHUTES.

PARTS LIST FOR FIREFLY RESERVE CANOPY:

CANOPY WITH SUSPENSION LINES AND CONTROL LINES ATTACHED
FOUR (4) CONNECTOR LINKS (#6 FRENCH "RAPIDE")
SLIDER 18" x 22½"
FOUR (4) VINYL SLIDER BUMPERS (OPTIONAL)
TWO (2) STEERING TOGGLES

NOTE: THE HARNESS-CONTAINER SYSTEM INTO WHICH THE FIREFLY RESERVE IS INSTALLED MUST INCLUDE FOUR (4) RESERVE RISERS. THE TWO REAR RISERS MUST HAVE A TOGGLE-KEEPER AND BRAKE-SET SYSTEM INSTALLED ACCORDING TO FIGURES 1 THRU 3 IN THESE INSTRUCTIONS.

THE FIREFLY RESERVE MANUAL

TABLE OF CONTENTS

PARTS LIST	1
SPECIFICATIONS AND PERFORMANCE DATA	2
ASSEMBLY INSTRUCTIONS	3
INSPECTION INSTRUCTIONS	4
PACKING INSTRUCTIONS	5
REPAIR INSTRUCTIONS AND LIMITATIONS	7
DISCLAIMER	8

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THE FIREFLY RESERVE

SPECIFICATIONS AND PERFORMANCE DATA

WING SPAN:	19 FT. APPROX.
WING CHORD:	9 FT. APPROX.
WING AREA:	172 SQ. FT. APPROX. (TOP SKIN)
WEIGHT:	6.2 LBS.
FABRIC:	1 oz. RIPSTOP, 0-3 CFM
LINES:	400 LB. BRAIDED DACRON
PACK VOLUME:	400 CU. IN. APPROX.
FORWARD SPEED:	25-30 MPH (FULL DRIVE)
RATE OF DESCENT:	
FULL DRIVE:	10.4 FT./SEC.
HALF BRAKES:	7.7 FT./SEC.
3/4 BRAKES:	10.5 FT./SEC.
BRAKES STOWED:	11.8 FT./SEC.
GLIDE RATIO:	3.7 to 1
360-DEGREE TURN	
FROM FULL DRIVE	2.5 SEC.
AFTER ONE REVOLUTION:	1.5 SEC.
AVERAGE OPENING TIME:	1.4 SEC.

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INSPECTION

ALL SEAMS AND PANELS SHOULD BE VISUALLY INSPECTED FOR FLAWS OR DAMAGE TO THE FABRIC, OR ANY STRAIN IN THE SEAMS (PULLED STITCHES, BROKEN THREADS, ETC.) ANY DAMAGE WHICH WOULD RENDER THE CANOPY NON-AIRWORTHY MUST BE REPAIRED.

ALL LINES SHOULD BE INSPECTED FOR ABRASIONS OR YARN PULLS. DAMAGE WHICH IS NOT IMMEDIATELY VISIBLE CAN BE EASILY DETECTED BY RUNNING THE LINES THROUGH YOUR FINGERS. DAMAGED LINES MUST BE REPAIRED OR REPLACED.

ALL LINES WITHIN A GROUP SHOULD BE OF EQUAL LENGTH. MAXIMUM DEVIATION ALLOWED: 1 INCH.

WHEN CHECKING THE FOLLOWING SPECIFICATIONS, BE SURE THAT THE CONNECTOR LINKS ARE ALL ANCHORED AT THE SAME PLACE, AND ALL SLACK IS PULLED OUT OF THE LINES.

WHEN THE "B" AND "C" LINES AND CONTROL LINES ARE ALL PLACED ON TOP OF THE "A" LINES, THE "B" LINE ATTACHMENT POINTS ON THE CANOPY SHOULD BE SEVEN INCHES ABOVE THE "A" LINE ATTACHMENT POINTS. THE "C" LINE ATTACHMENT POINTS SHOULD BE TWENTY INCHES ABOVE THE "A" LINE ATTACHMENT POINTS. WHEN THE BRAKES ARE SET, THE ATTACHMENT POINTS ON THE TAIL OF THE CANOPY SHOULD BE SIX INCHES ABOVE THE "A" LINE ATTACHMENT POINTS. MAXIMUM DEVIATION ALLOWED: 1 INCH.

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- 8) STARTING WITH THE OUTERMOST CORNER ON EACH SIDE OF THE TAIL RESPECTIVELY, FLAKE OR PLEAT THE TAIL AS SHOWN IN FIG. 12. LAY THE FLAKED TAIL ALONG EITHER SIDE OF THE CENTER OF THE PILE, POSITIONING IT SO THAT ALL THE SLACK IS PULLED OUT OF THE CONTROL LINES.
- 9) THE CELL ON EITHER SIDE OF THE CENTER OF THE TAIL CAN NOW BE WRAPPED AROUND THE WHOLE STACK OF FOLDED CANOPY, AS SHOWN IN FIGURES 13 & 14.
- 10) ROLL THE SIDES UNDER TO THE APPROXIMATE WIDTH OF THE DEPLOYMENT BAG. (FIG. 14)
- 11) GRASP THE SLIDER IN THE CENTER OF ITS UPPER SURFACE, AND SLIDE IT UP BETWEEN THE RIGHT AND LEFT LINE GROUPS TOWARD THE CANOPY AS FAR AS IT WILL GO. (FIG. 15) (DO NOT STOW THE SLIDER IN A RUBBER BAND; THAT'S O.K. FOR A MAIN CANOPY, BUT NOT FOR A RESERVE.)
- 12) AT THIS POINT THE RIGGER MUST REFER TO THE INSTRUCTIONS BY THE MANUFACTURER OF THE HARNESS-CONTAINER SYSTEM FOR DIRECTIONS PERTAINING TO THE FOLDING OF THE CANOPY INTO THE DEPLOYMENT BAG AND THE CLOSING OF THE CONTAINER.

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REPAIR INSTRUCTIONS AND LIMITATIONS

REPAIRS MAY BE MADE TO THE FIREFLY PROVIDED LIKE MATERIALS ARE USED, AND THE WORKMANSHIP IS COMPARABLE TO THAT WHICH IS DISPLAYED IN THE ORIGINAL CONSTRUCTION OF THE CANOPY.

ANY DAMAGE TO THE FABRIC SKINS OR RIBS MUST BE REPAIRED BY A "PROPER" OR "RIGGER" PATCH. (FOR DETAILED INSTRUCTION ON MOST TYPES OF PATCHES, REFER TO POYNTER'S PARACHUTE MANUAL.) RIPSTOP TAPE OR ANY MATERIAL USING GUM OR OTHER ADHESIVES IS NOT ACCEPTABLE. FOR ANY PATCHES MORE THAN EIGHT INCHES SQUARE, CONSULT THE MANUFACTURER.

DAMAGE TO LINES MAY BE REPAIRED IF THE LINE IS NOT COMPLETELY BROKEN, BY AN "INTERNAL SPLICE". THIS IS ACCOMPLISHED BY FINGER-TRAPPING A LENGTH OF THE SAME TYPE OF LINE INSIDE THE DAMAGED LINE SO THAT THE NEW LINE EXTENDS BEYOND THE DAMAGED PART $1\frac{1}{2}$ INCHES IN EACH DIRECTION. A BAR TACK OR SINGLE-THROW ZIG-ZAG STITCH WITH "E" THREAD OR EQUIVALENT IS THEN USED FOR THE LENGTH OF THE SPLICE. THE ENDS OF THE LINE INSIDE THE REPAIRED LINE MUST BE CUT WITH SCISSORS, NOT WITH A HOT KNIFE. THIS IS AN ACCEPTABLE REPAIR ONLY IF THE LENGTH OF THE LINE IS PRESERVED TO WITHIN ONE INCH OF ITS ORIGINAL DIMENSION.

IF THE SLIDER IS DAMAGED IN THE AREA OF ONE OF THE GROMMETS, IT IS ADVISABLE TO REPLACE IT, RATHER THAN ATTEMPT TO REPAIR IT.

IF THE SLIDER-BUMPERS ARE NOT USED, THE GROMMETS OF THE SLIDER MAY SUSTAIN SOME DAMAGE WHEN THEY STRIKE THE CONNECTOR LINKS DURING DEPLOYMENT. BE SURE THAT ALL NICKS OR BURRS ARE REMOVED FROM THESE GROMMETS BEFORE REPACKING AFTER A DEPLOYMENT.

FOR ANY OTHER MAJOR REPAIRS, CONSULT THE MANUFACTURER, OR RETURN THE CANOPY TO THE MANUFACTURER.

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DISCLAIMER

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REAR RESERVE RISER

600 LB. (MINIMUM)
BRAIDED DACRON

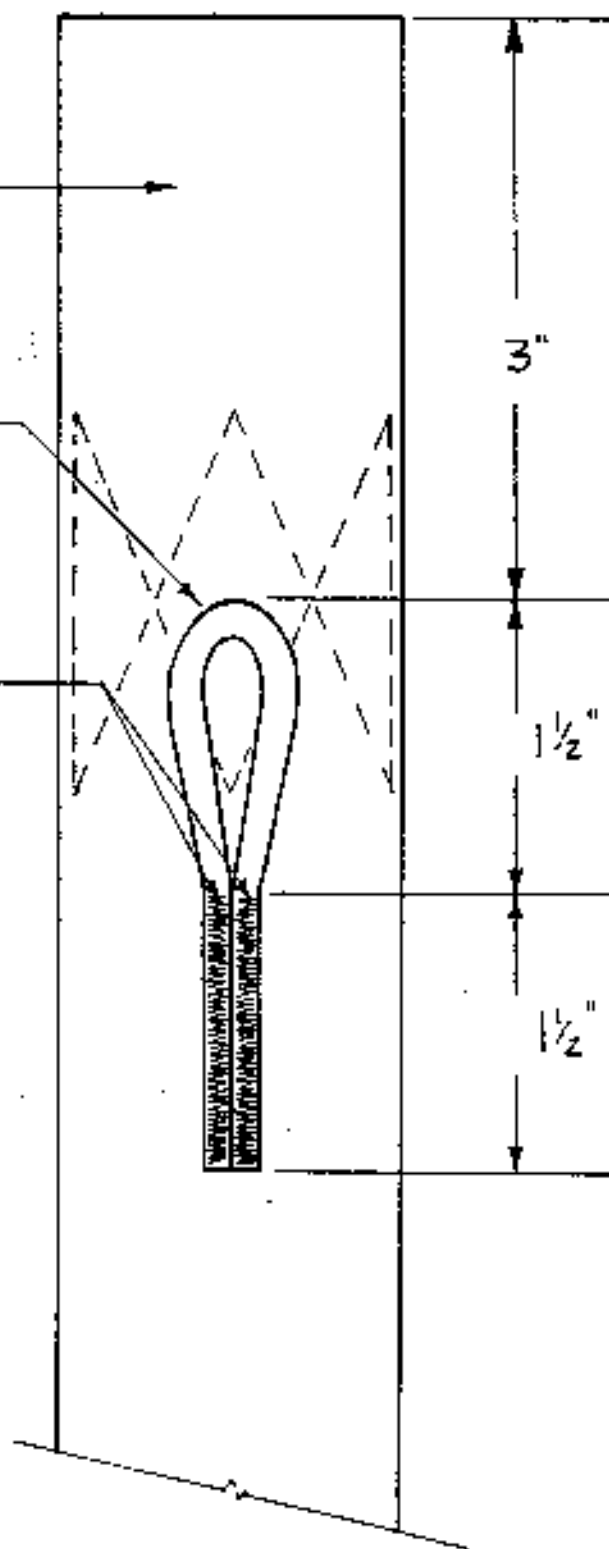
BAR TACK OR
SINGLE-THROW ZIG-ZAG
STITCH WITH "E"
THREAD OR EQUIVALENT

3"

1 1/2"

1 1/2"

FIG. 1



STEEL "O" RING
I.D. $\frac{7}{8}$ " , O.D. $1\frac{1}{4}$ "

1" TAPE, TYPE IX,
MIL-T-5038

USE "E" THREAD OR
EQUIVALENT FOR BAR TACKS

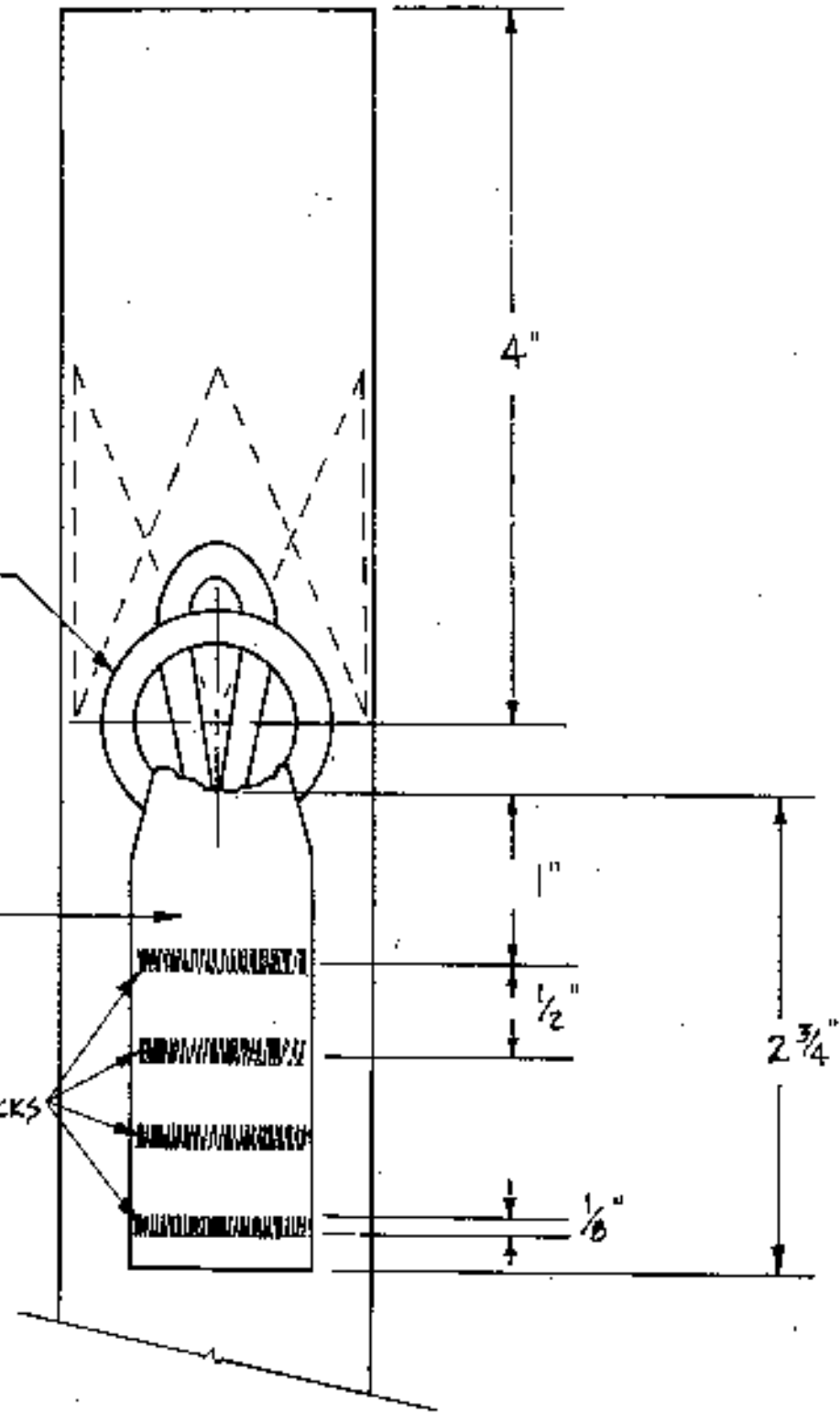


FIG. 2

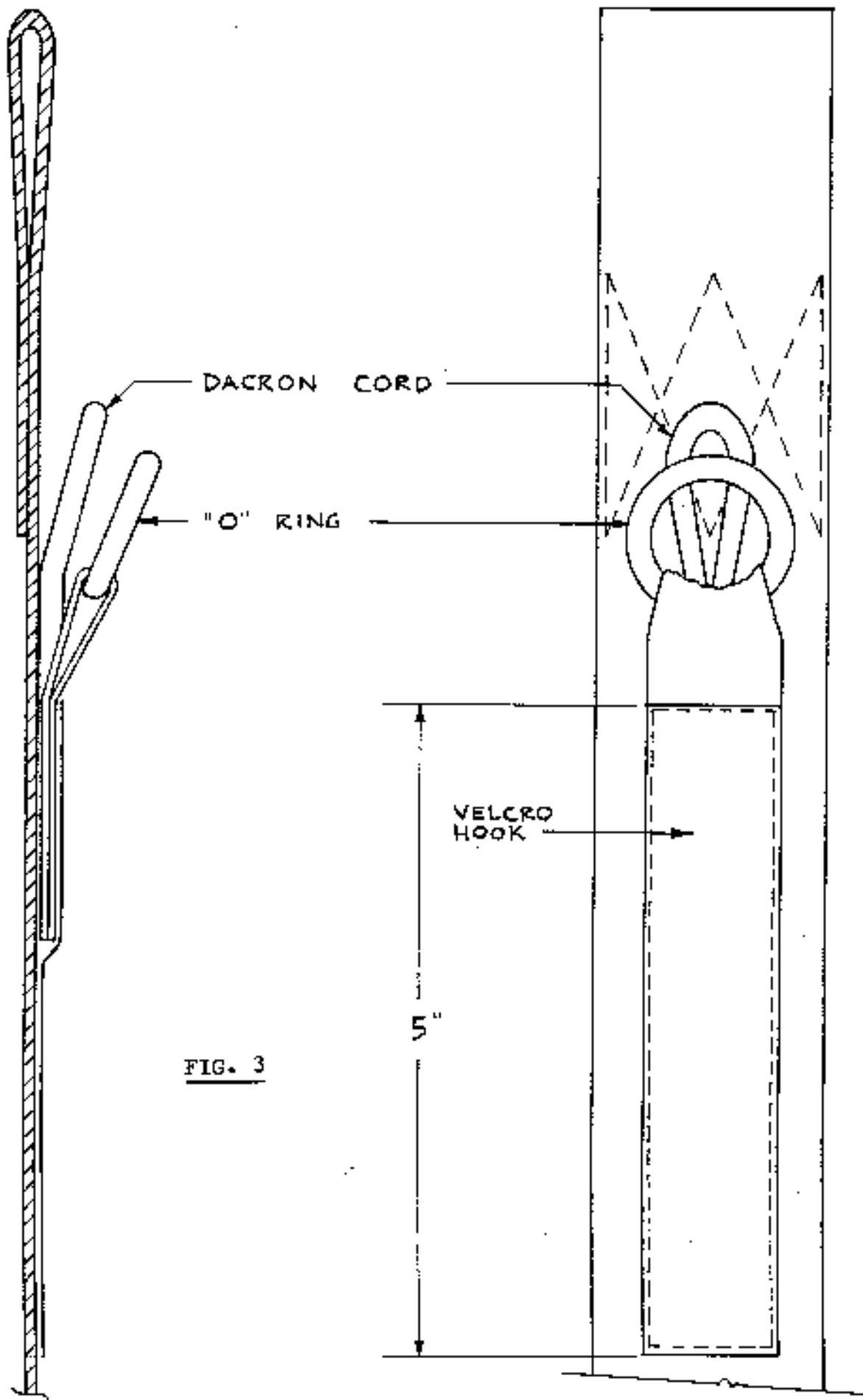


FIG. 3

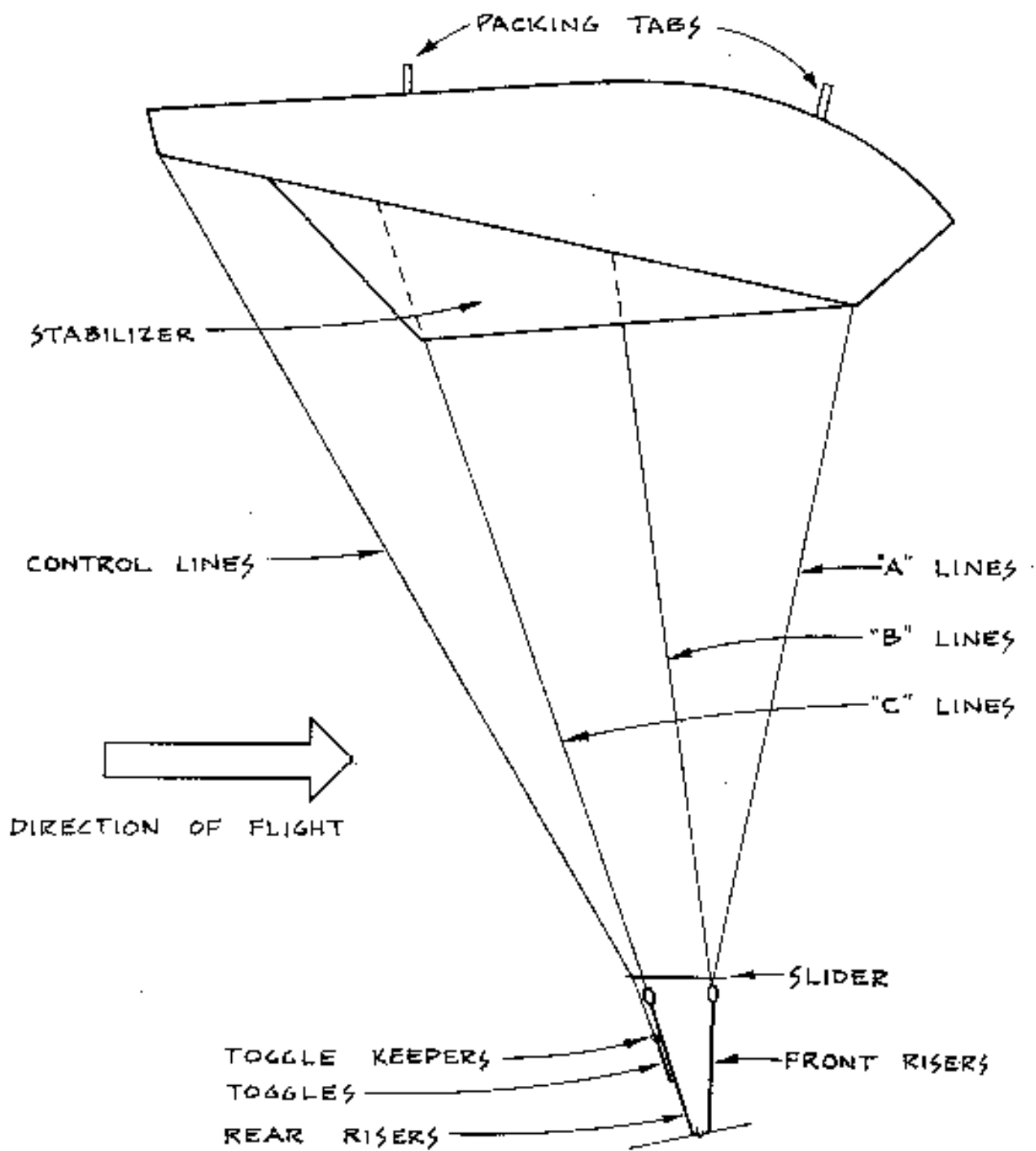
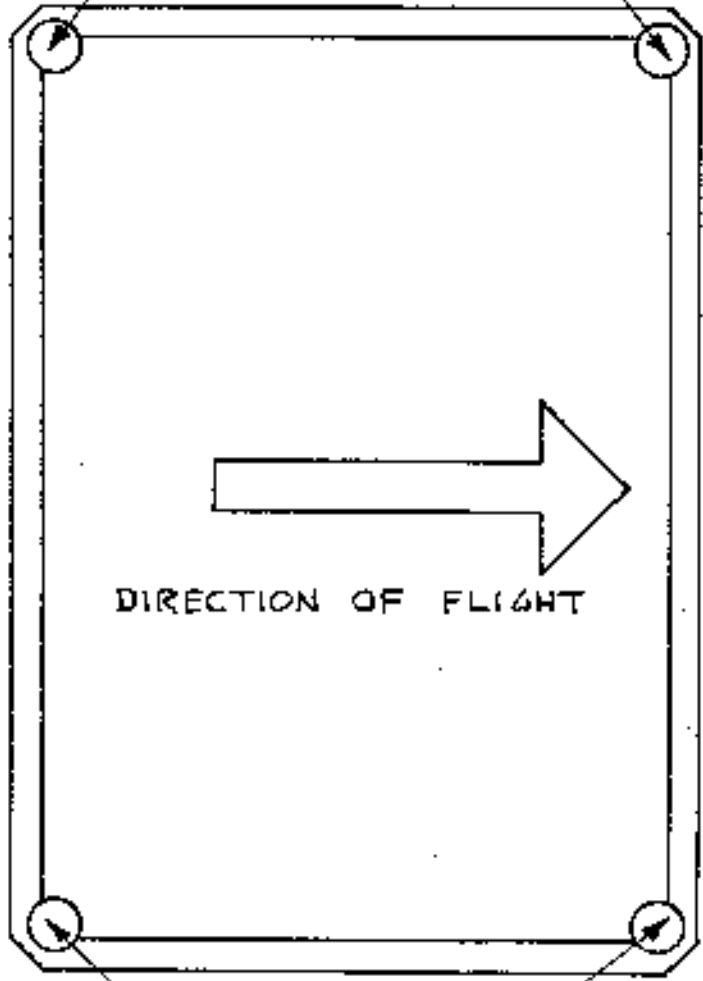


FIG. 4

LEFT "C" LINES
& LEFT CONTROL LINES

LEFT "A" & "B" LINES



DIRECTION OF FLIGHT

RIGHT "C" LINES
& RIGHT CONTROL LINES

RIGHT "A" & "B" LINES

TOP VIEW
OF SLIDER

FIG. 5

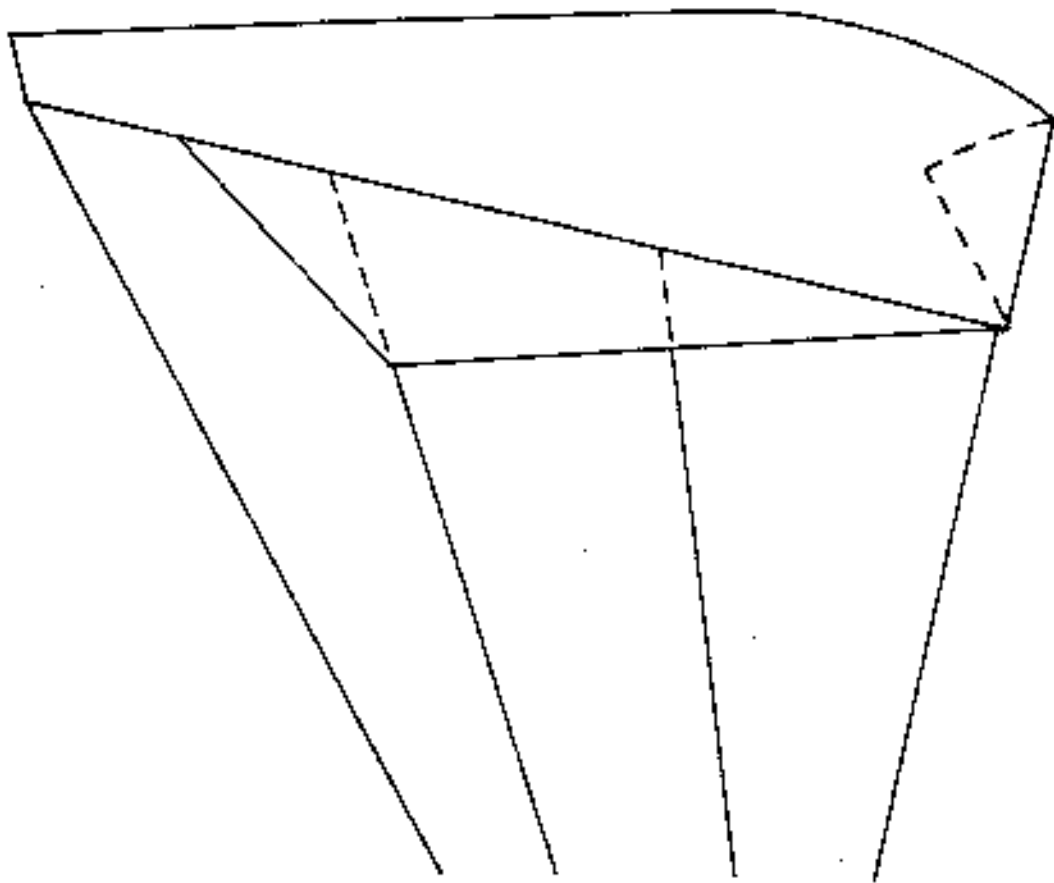


FIG. 6

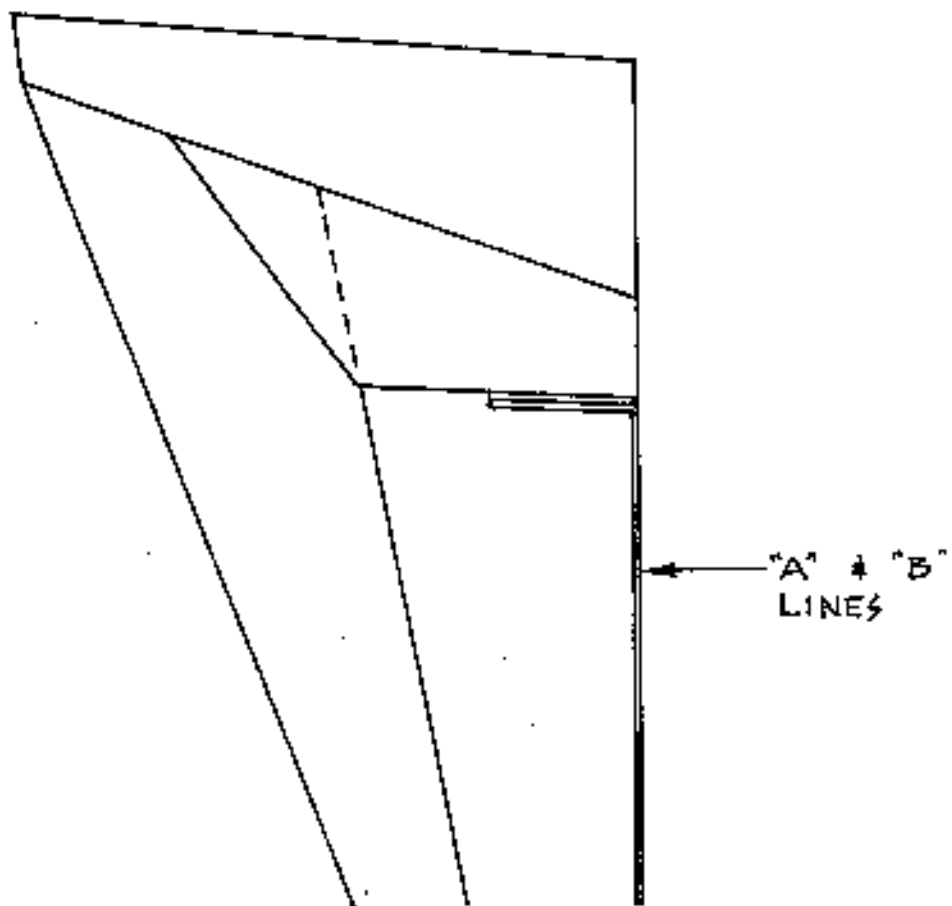


FIG. 7

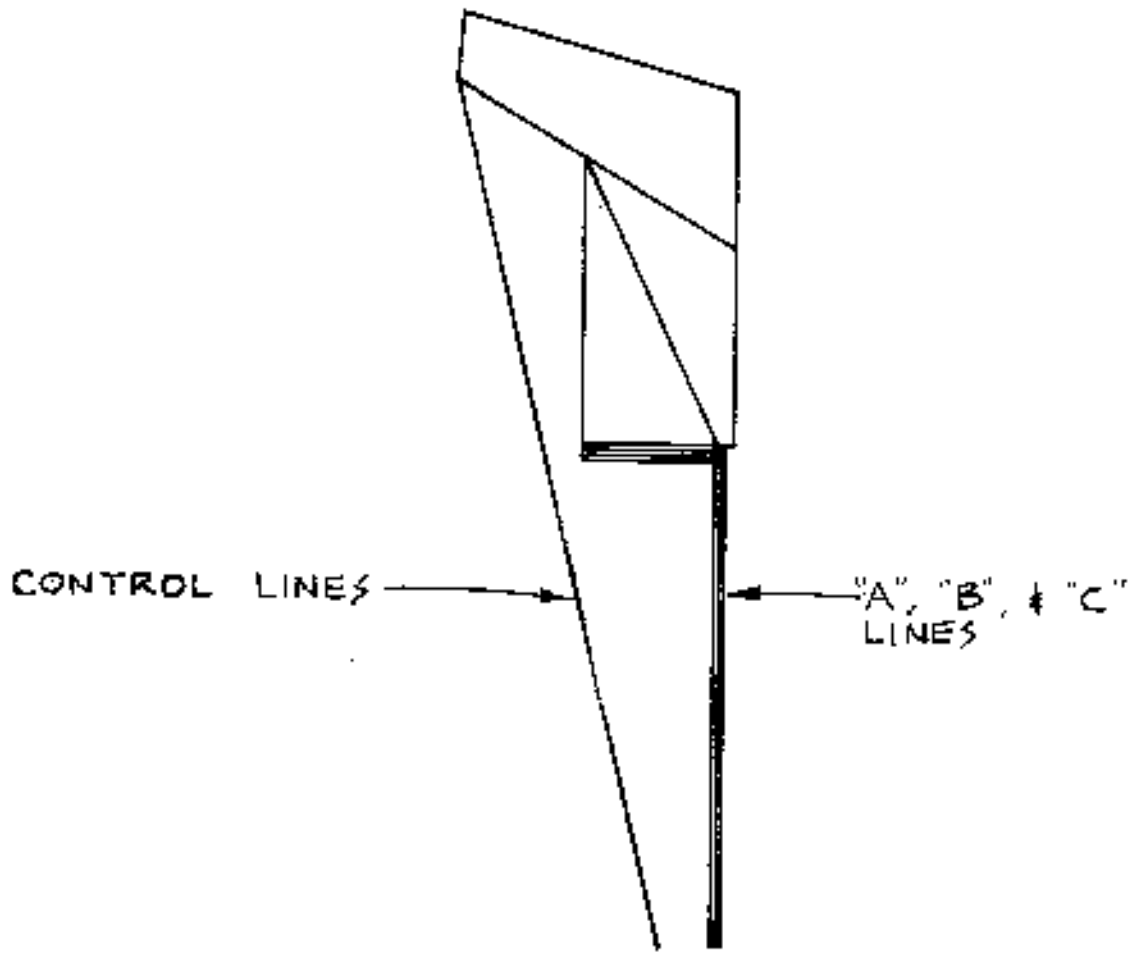


FIG. 8

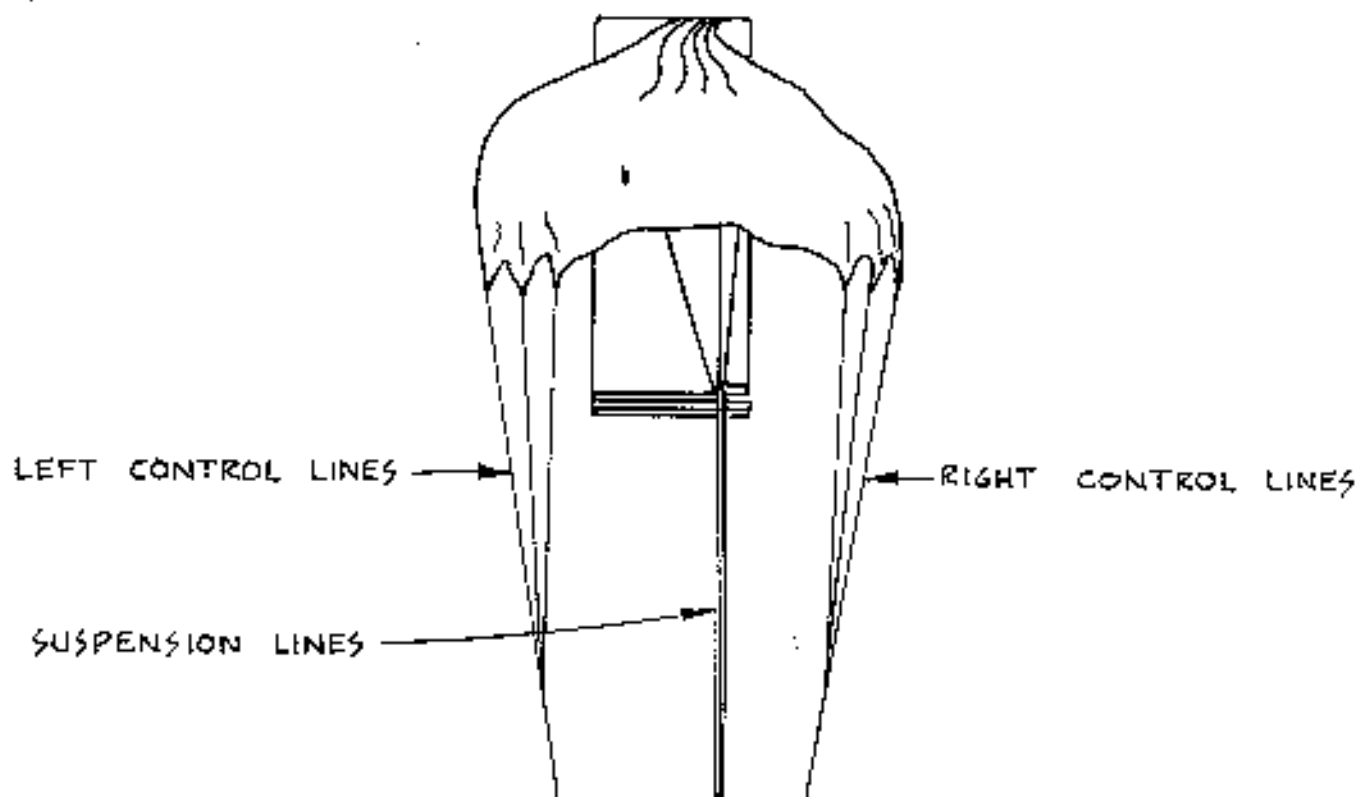


FIG. 9

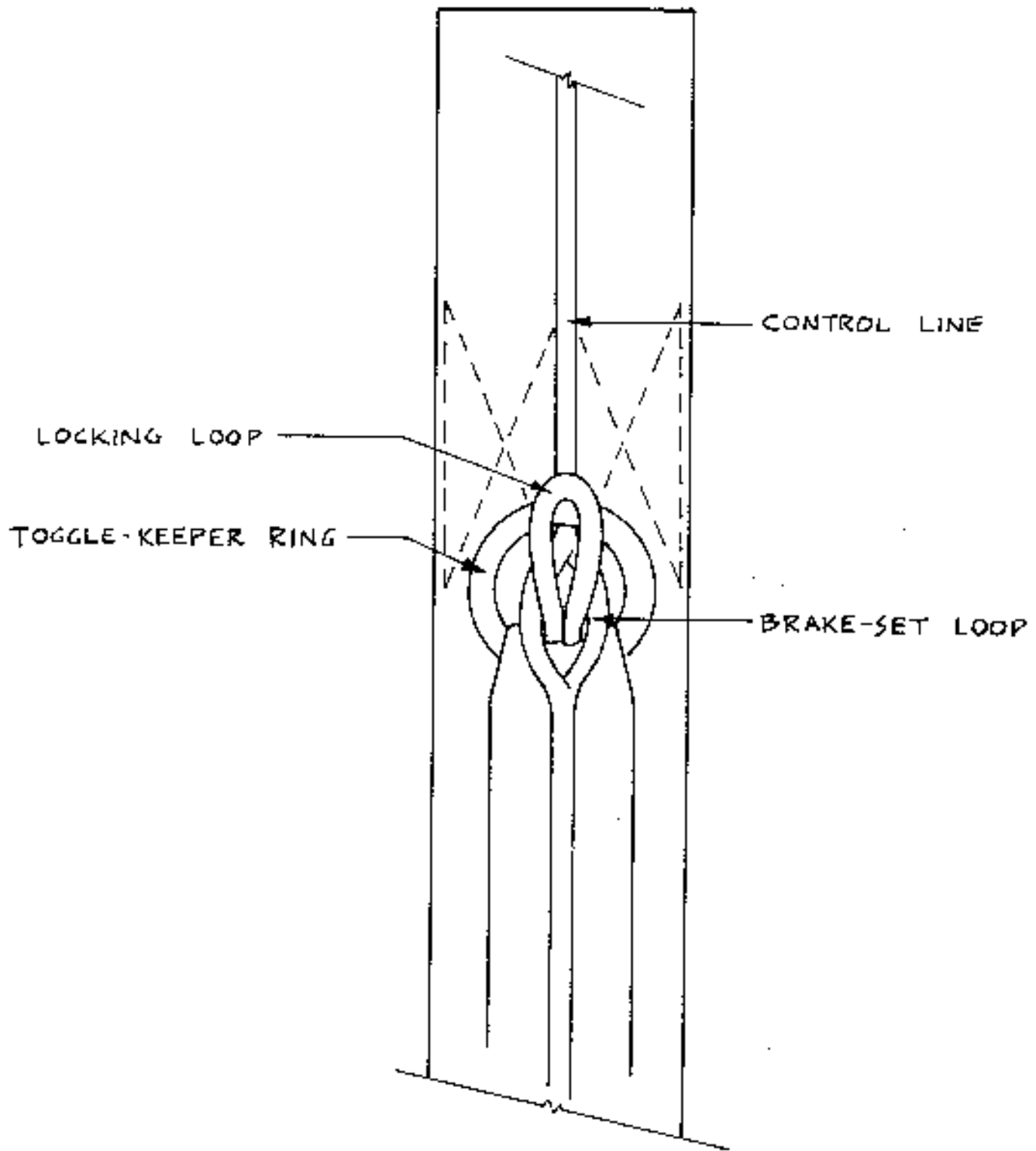


FIG. 10

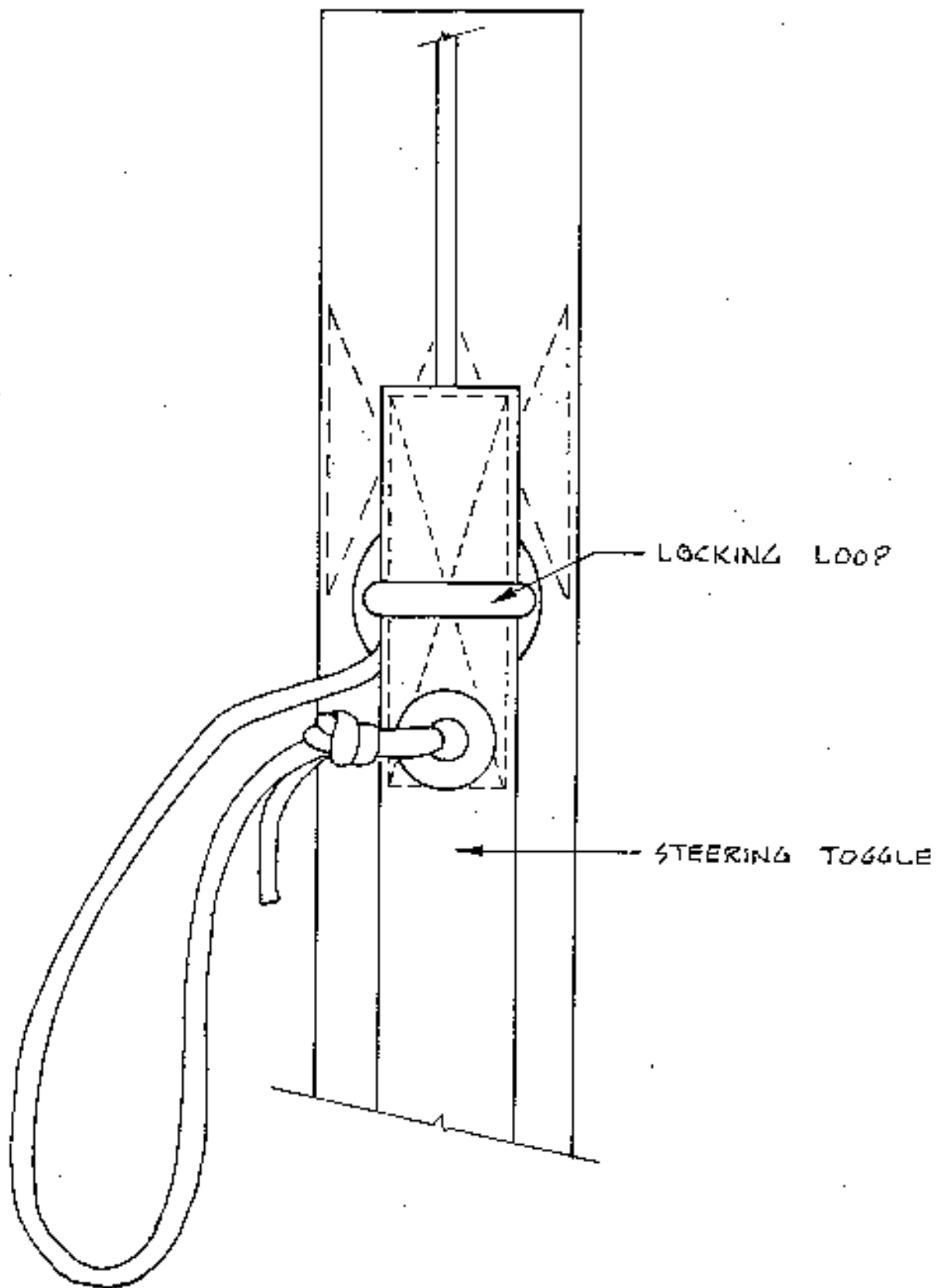


FIG. 11

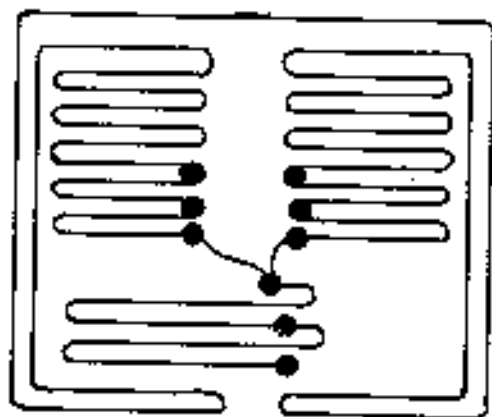


FIG. 13