

U.S. FRIGATE CONSTITUTION

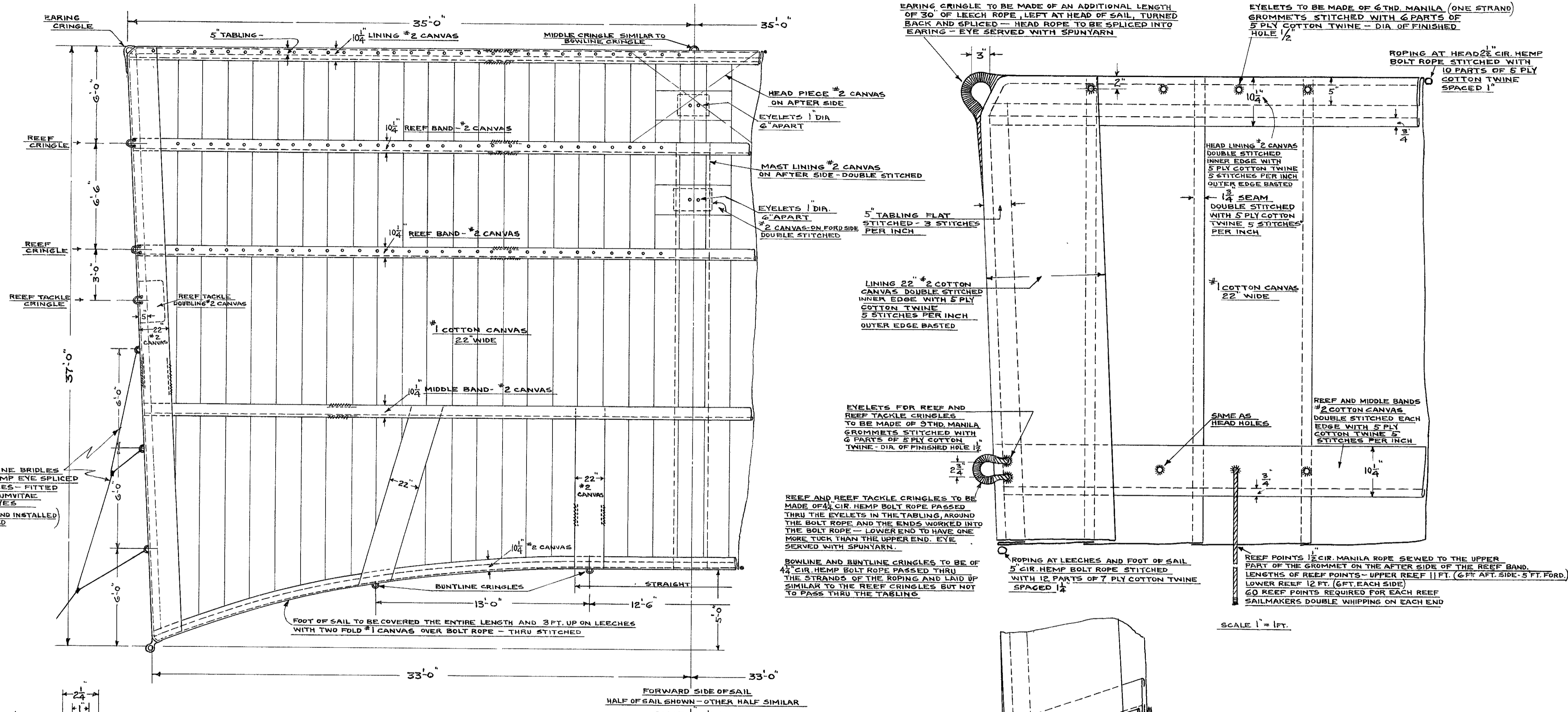
DETAILS OF SAILS

RESTORATION — 1927

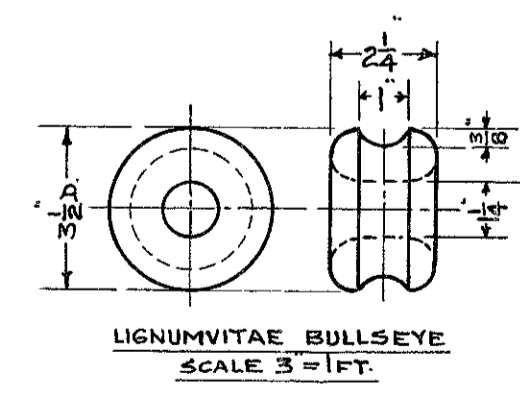
NAVY YARD BOSTON

FEBRUARY 1930

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BOWLINE BRIDLES 2 3/4" CIR. HEMP EYE SPLICED TO CRINGLES - FITTED WITH LIGNUMVITAE BULLSEYES
 (TO BE MFG. AND INSTALLED AT NAVY YARD)



- NOTES -**
- 1- DIMENSIONS GIVEN ARE FOR THE COMPLETED SAIL - ALLOWANCE HAS BEEN MADE FOR STRETCHING
 - 2- SAIL TO BE HAND STITCHED THROUGHOUT - NO METAL FITTINGS
 - 3- SEWING ON THE BOLT ROPE - 3 OR 4" OF SLACK CLOTH TO BE TAKEN UP IN EVERY YARD ON THE LEECHES AND 1" IN EVERY CLOTH ON THE FOOT - FOOT ROPE TO BE WELL STRETCHED BEFORE IT IS SEWED ON.
 - 4- ALL CLOTHS OF SAIL TO BE MADE IN ONE PIECE AND NOT LASHED OR BUTTED IN

CLEWS TO BE MADE OF 5" CIR. HEMP BOLT ROPE SPLICED INTO THE FOOT AND LEECH ROPES 4 EACH LEG, SPLICES TO BE DOUBLE STITCHED TO CANVAS. CLEWS TO BE WORKED, SERVED WITH SPUNYARN AND COVERED WITH #1 CANVAS. THROAT SEIZING 6THD. HEMP.
CLEWS TO BE AS SNUG TO SAIL AS POSSIBLE

THIS PLAN HAS BEEN DRAWN, AFTER CONSIDERABLE RESEARCH, FROM INFORMATION CONTAINED IN OLD BOOKS, RECORDS AND PRINTS.

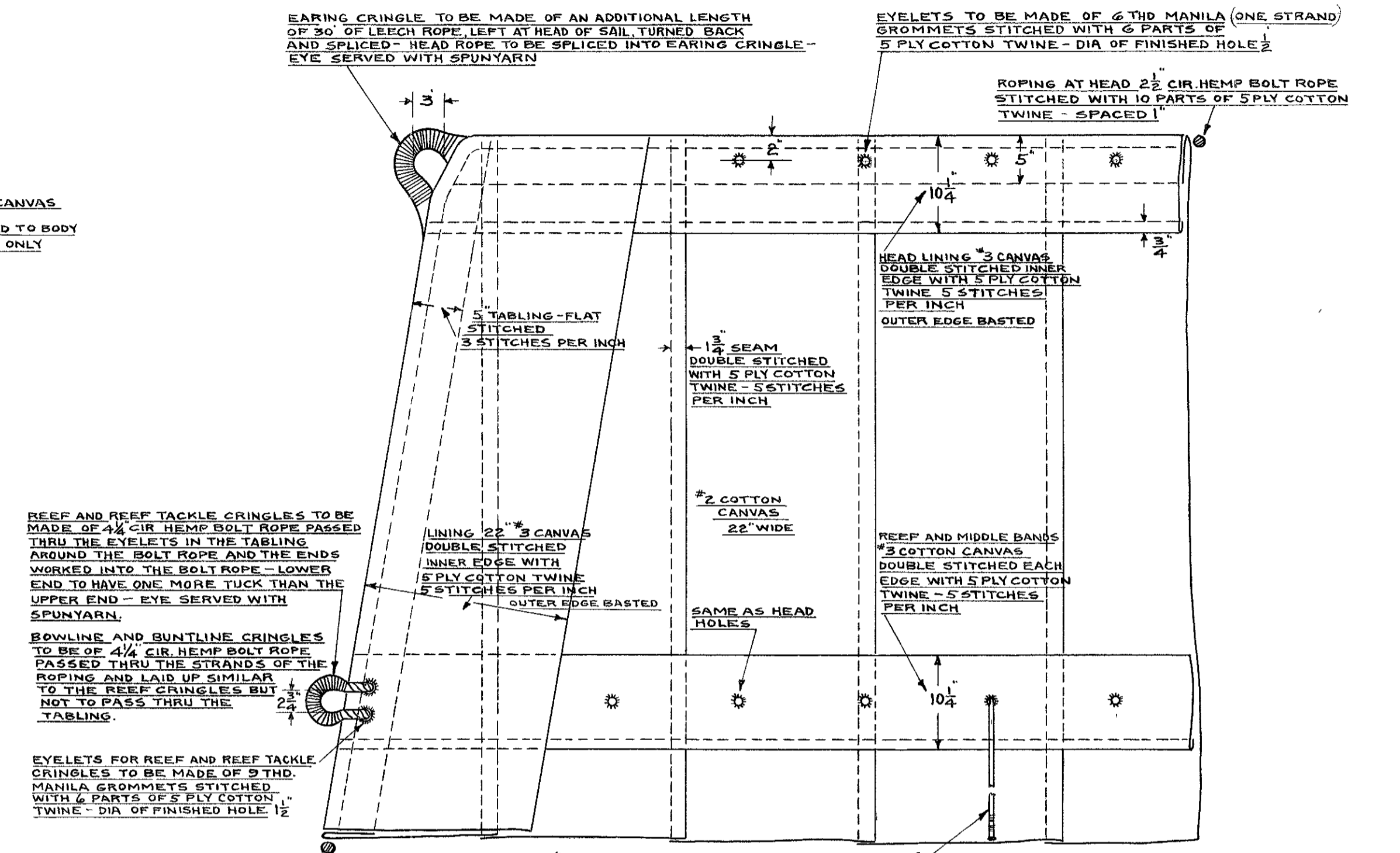
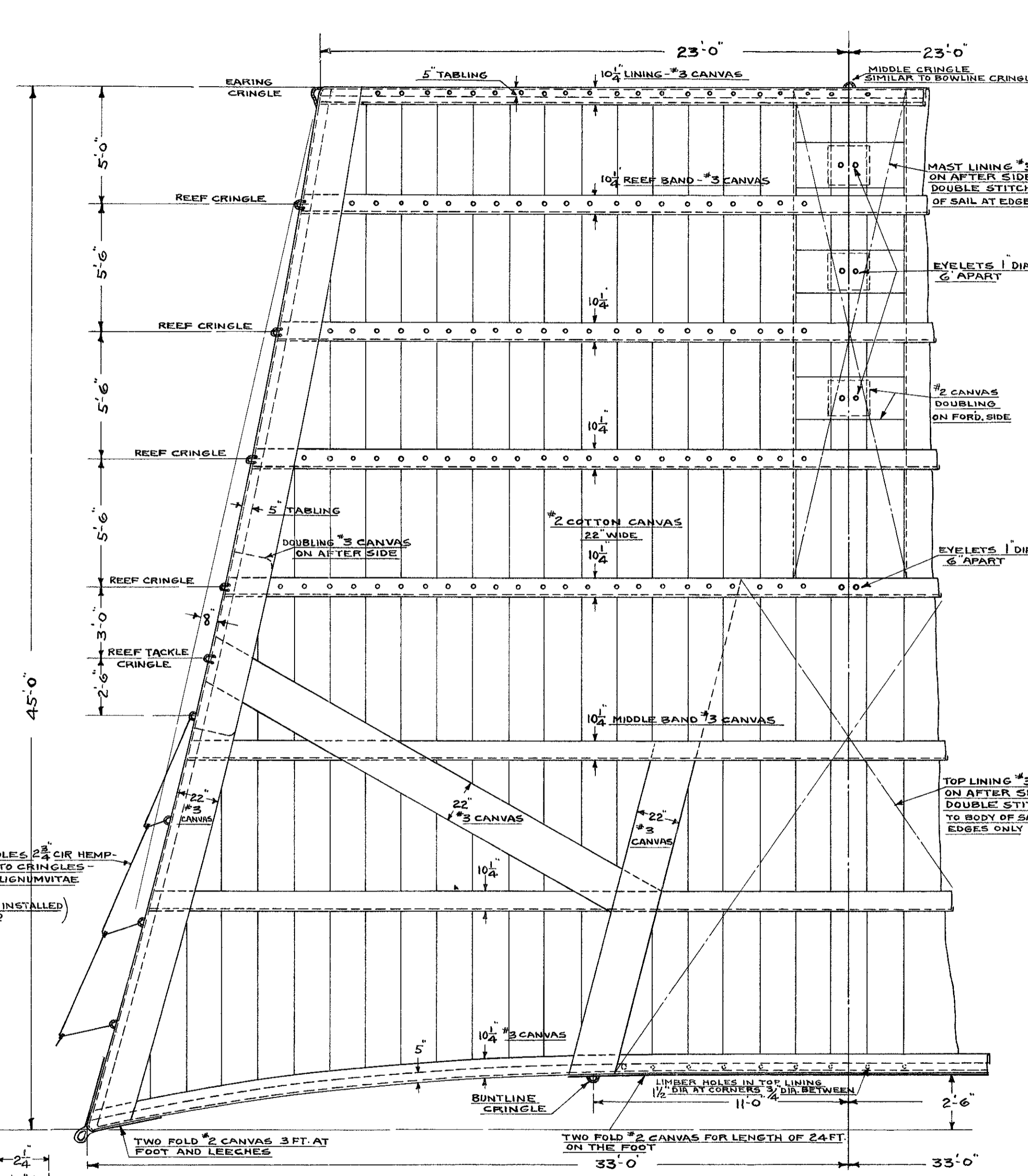
MATERIAL REQUIRED FOR ONE SAIL

CANVAS		HEMP BOLT ROPE		HEMP ROPE		MANILA ROPE			SPUN YARN	MARLINE	SAIL TWINE	SAIL TWINE	BULLSEYES	
NO.1 YDS.	NO.2 YDS.	5" CIR. FT.	4 1/2" CIR. FT.	2 1/2" CIR. FT.	2 3/4" CIR. FT.	1 1/2" CIR. FT.	3THD. FT.	6THD. FT.	LB.	LB.	7 PLY LB.	5 PLY LB.		
519	125	180	36	80	60	50	1450	15	90	3	3	8	16	4

DRAWN AND TRACED BY
 C. S. ADAMS - 10-17-29
 SUPERVISING DRAFTSMAN

U.S. FRIGATE CONSTITUTION
DETAILS OF SAILS
FORESAIL
 RESTORATION 1927
 NAVY YARD BOSTON OCTOBER 1929

APPROVED FOR MANAGER
John O. Lord
 LIEUT. (C.C.) U. S. N.
 SUPT. OF RESTORATION
PLAN NO 18402 - SHEET NO 1



REEF AND REEF TACKLE CRINGLES TO BE MADE OF 3/4 CIR HEMP BOLT ROPE PASSED THRU THE EYELETS IN THE TACKLING AROUND THE BOLT ROPE AND THE ENDS WORKED INTO THE BOLT ROPE - LOWER END TO HAVE ONE MORE TUCK THAN THE UPPER END - EYE SERVED WITH SPUNYARN.

BOWLINE AND BUNTLINE CRINGLES TO BE OF 1/4 CIR HEMP BOLT ROPE PASSED THRU THE STRANDS OF THE ROPING AND LAID UP SIMILAR TO THE REEF CRINGLES BUT NOT TO PASS THRU THE TACKLING.

EYELETS FOR REEF AND REEF TACKLE CRINGLES TO BE MADE OF 3 THD. MANILA GROMMETS STITCHED WITH 6 PARTS OF 5 PLY COTTON TWINE - DIA OF FINISHED HOLE 1 1/2

EYELETS TO BE MADE OF 6 THD MANILA (ONE STRAND) GROMMETS STITCHED WITH 6 PARTS OF 5 PLY COTTON TWINE - DIA OF FINISHED HOLE 2

ROPING AT HEAD 2 1/2 CIR HEMP BOLT ROPE STITCHED WITH 10 PARTS OF 5 PLY COTTON TWINE - SPACED 1"

HEAD LINING 3 CANVAS DOUBLE STITCHED INNER EDGE WITH 5 PLY COTTON TWINE 5 STITCHES PER INCH OUTER EDGE BASTED

REEF AND MIDDLE BANDS 3 COTTON CANVAS DOUBLE STITCHED EACH EDGE WITH 5 PLY COTTON TWINE - 5 STITCHES PER INCH

ROPING AT LEECHES 4/4 HEMP BOLT ROPE STITCHED WITH 12 PARTS OF 7 PLY COTTON TWINE - STITCHES SPACED 1 1/4 5/4 FOOT ROPE TO EXTEND UP ON LEECHES APT 10 FT.

REEF POINTS 1 1/2 CIR MANILA ROPE SEWED TO THE UPPER PART OF THE GROMMET ON THE AFTER SIDE OF THE REEF BAND.

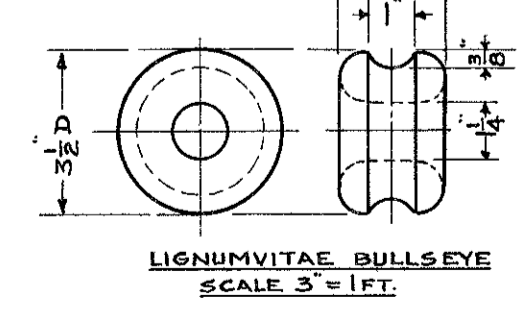
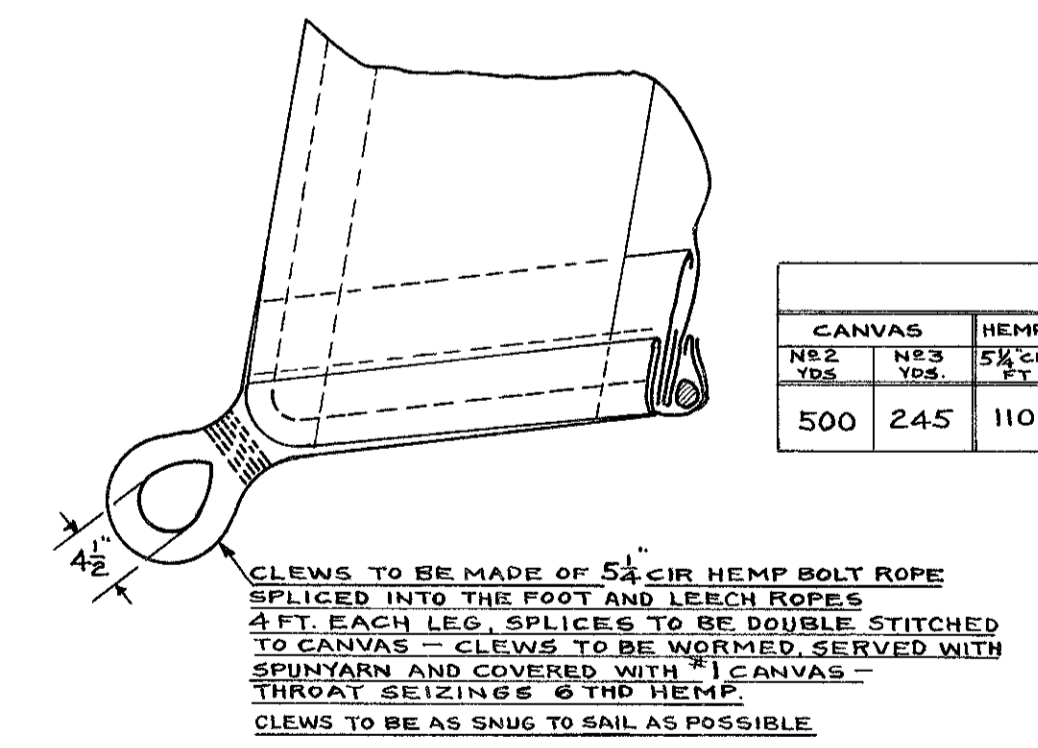
LENGTHS OF POINTS - 1ST REEF 9 FT. 5'-0" AFT 4'-0" FORD
 2ND " 10 " 5'-6" " 4'-6" "
 3R " 10 " 5'-6" " 4'-6" "
 CLOGE " 11 " 5'-6" " 5'-6" "

NUMBER REQUIRED - 172 FOR 4 REEFS
 SAILMAKERS DOUBLE WHIPPING ON EACH END

SCALE 1" = 1 FT.

MATERIAL REQUIRED FOR ONE SAIL

CANVAS	HEMP BOLT ROPE	HEMP ROPE	MANILA ROPE	SPUN YARN	MARINE	SAIL TWINE 7 PLY	SAIL TWINE 5 PLY	BULLS EYES
NBS YDS	NBS YDS	5/8 CIR FT	2 1/2 CIR FT	2 1/2 CIR FT	6 THD FT	5 THD FT	6 THD FT	
500	245	110	150	52	50	50	1800	25 120 8 6 8 24 6



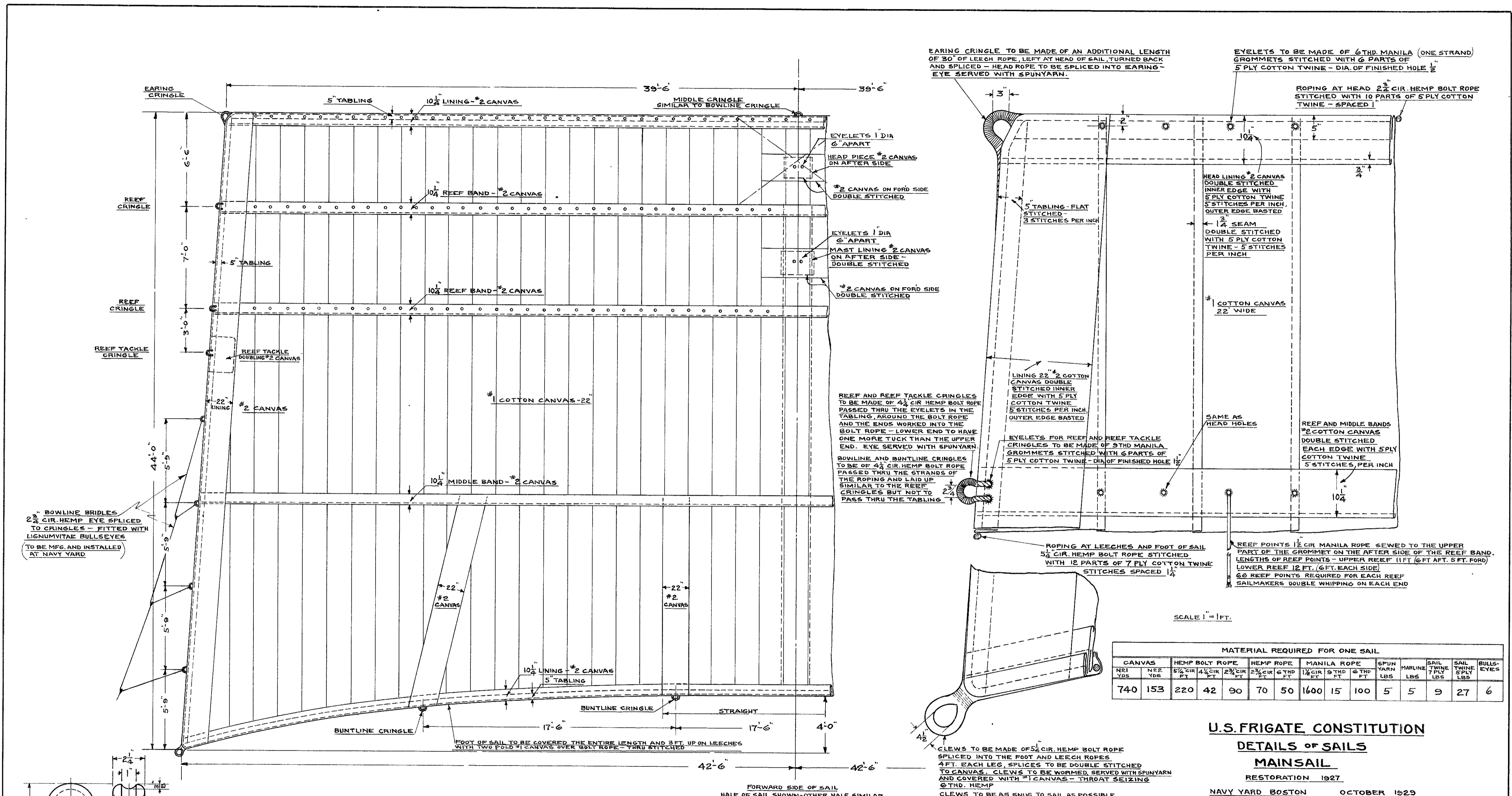
- NOTES-
- 1- DIMENSIONS GIVEN ARE FOR THE COMPLETED SAIL - ALLOWANCE HAS BEEN MADE FOR STRETCHING.
 - 2- SAIL TO BE HAND STITCHED THROUGHOUT - NO METAL FITTINGS.
 - 3- SEWING ON THE BOLT ROPE - 3" OR 4" OF SLACK CLOTH TO BE TAKEN UP IN EVERY YARD ON THE LEECHES AND 1" IN EVERY CLOTH ON THE FOOT - FOOT ROPE TO BE WELL STRETCHED BEFORE IT IS SEWED ON.
 - 4- ALL CLOTHS OF SAIL TO BE MADE IN ONE PIECE AND NOT LASHED OR BUTTED IN.

FORWARD SIDE OF SAIL
 HALF OF SAIL SHOWN - OTHER HALF SIMILAR
 SCALE 1/4" = 1 FT

THIS PLAN HAS BEEN DRAWN AFTER CONSIDERABLE RESEARCH FROM INFORMATION CONTAINED IN OLD BOOKS, RECORDS AND PRINTS.

U.S. FRIGATE CONSTITUTION
DETAILS OF SAILS
FORE TOPSAIL
 RESTORATION 1927
 NAVY YARD BOSTON NOVEMBER 1929

APPROVED FOR MANAGER
John A. Lord
 LIEUT. C.C. U.S.N.
 SUPT. OF RESTORATION



EYELETS TO BE MADE OF 6TH MANILA (ONE STRAND) GROMMETS STITCHED WITH 6 PARTS OF 5 PLY COTTON TWINE - DIA. OF FINISHED HOLE 1/2"

ROPING AT HEAD 2 3/4 CIR. HEMP BOLT ROPE STITCHED WITH 10 PARTS OF 5 PLY COTTON TWINE - SPACED 1"

EYELETS 1 DIA 6" APART
HEAD PIECE #2 CANVAS ON AFTER SIDE
#2 CANVAS ON FORD SIDE DOUBLE STITCHED

EYELETS 1 DIA 6" APART
MAST LINING #2 CANVAS ON AFTER SIDE - DOUBLE STITCHED
#2 CANVAS ON FORD SIDE DOUBLE STITCHED

REEF AND REEF TACKLE CRINGLES TO BE MADE OF 4 1/2 CIR. HEMP BOLT ROPE PASSED THRU THE EYELETS IN THE TACKLING, AROUND THE BOLT ROPE AND THE ENDS WORKED INTO THE BOLT ROPE - LOWER END TO HAVE ONE MORE TUCK THAN THE UPPER END. EYE SERVED WITH SPUNYARN.

BOWLINE AND BUNTLINE CRINGLES TO BE OF 4 1/2 CIR. HEMP BOLT ROPE PASSED THRU THE STRANDS OF THE ROPING AND LAID UP SIMILAR TO THE REEF CRINGLES BUT NOT TO PASS THRU THE TACKLING

REEF AND MIDDLE BANDS #2 COTTON CANVAS DOUBLE STITCHED EACH EDGE WITH 5 PLY COTTON TWINE - 5 STITCHES PER INCH

5" TACKLING - FLAT STITCHED - 3 STITCHES PER INCH

HEAD LINING #2 CANVAS DOUBLE STITCHED INNER EDGE WITH 5 PLY COTTON TWINE - 5 STITCHES PER INCH, OUTER EDGE BASTED

1 1/4" SEAM DOUBLE STITCHED WITH 5 PLY COTTON TWINE - 5 STITCHES PER INCH

#1 COTTON CANVAS 22" WIDE

SAME AS HEAD HOLES

REEF AND MIDDLE BANDS #2 COTTON CANVAS DOUBLE STITCHED EACH EDGE WITH 5 PLY COTTON TWINE - 5 STITCHES PER INCH

ROPING AT LEECHES AND FOOT OF SAIL 5 1/2 CIR. HEMP BOLT ROPE STITCHED WITH 12 PARTS OF 7 PLY COTTON TWINE STITCHES SPACED 1 1/4"

REEF POINTS 1 1/2 CIR. MANILA ROPE SEWED TO THE UPPER PART OF THE GROMMET ON THE AFTER SIDE OF THE REEF BAND. LENGTHS OF REEF POINTS - UPPER REEF 11 FT. (6 FT. AFT. 5 FT. FORD) LOWER REEF 12 FT. (6 FT. EACH SIDE) 60 REEF POINTS REQUIRED FOR EACH REEF SAILMAKERS DOUBLE WHIPPING ON EACH END

SCALE 1" = 1 FT.

MATERIAL REQUIRED FOR ONE SAIL														
CANVAS	HEMP BOLT ROPE	HEMP ROPE	MANILA ROPE	SPUN YARN	MARLINE	SAIL TWINE	SAIL TWINE	BULLSEYES						
N&I YDS	NEE YDS	5/8" CIR. FT	4 1/2" CIR. FT	2 1/2" CIR. FT	1 1/2" CIR. FT	5 THD FT	7 PLY LBS	7 PLY LBS						
740	153	220	42	90	70	50	1600	15	100	5	5	9	27	6

U.S. FRIGATE CONSTITUTION
DETAILS OF SAILS
MAINSAIL
 RESTORATION 1927
 NAVY YARD BOSTON OCTOBER 1929

APPROVED FOR MANAGER

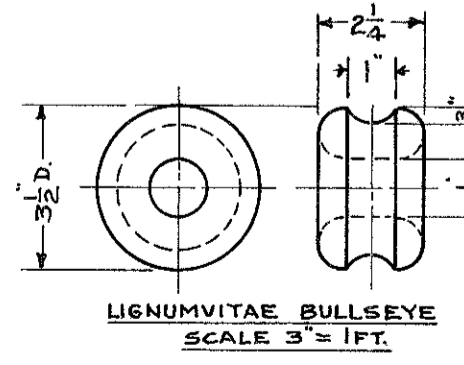
John A. Lord
 LIEUT. C. C. U. S. N.
 SUPT. OF RESTORATION

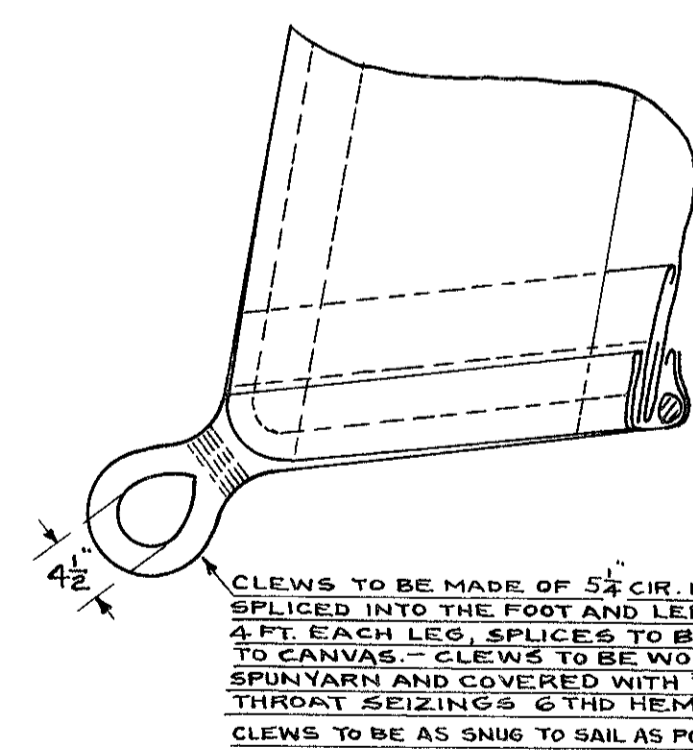
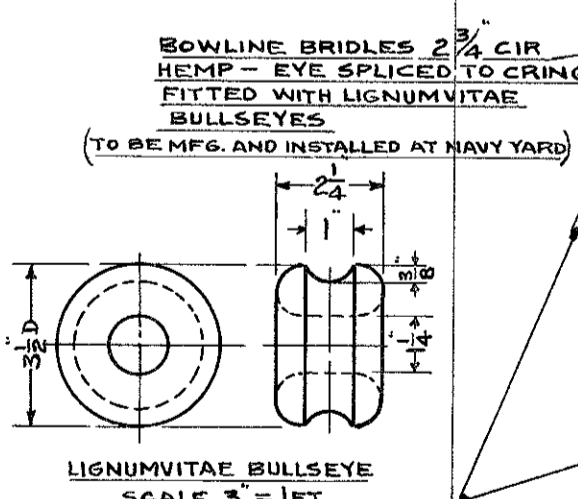
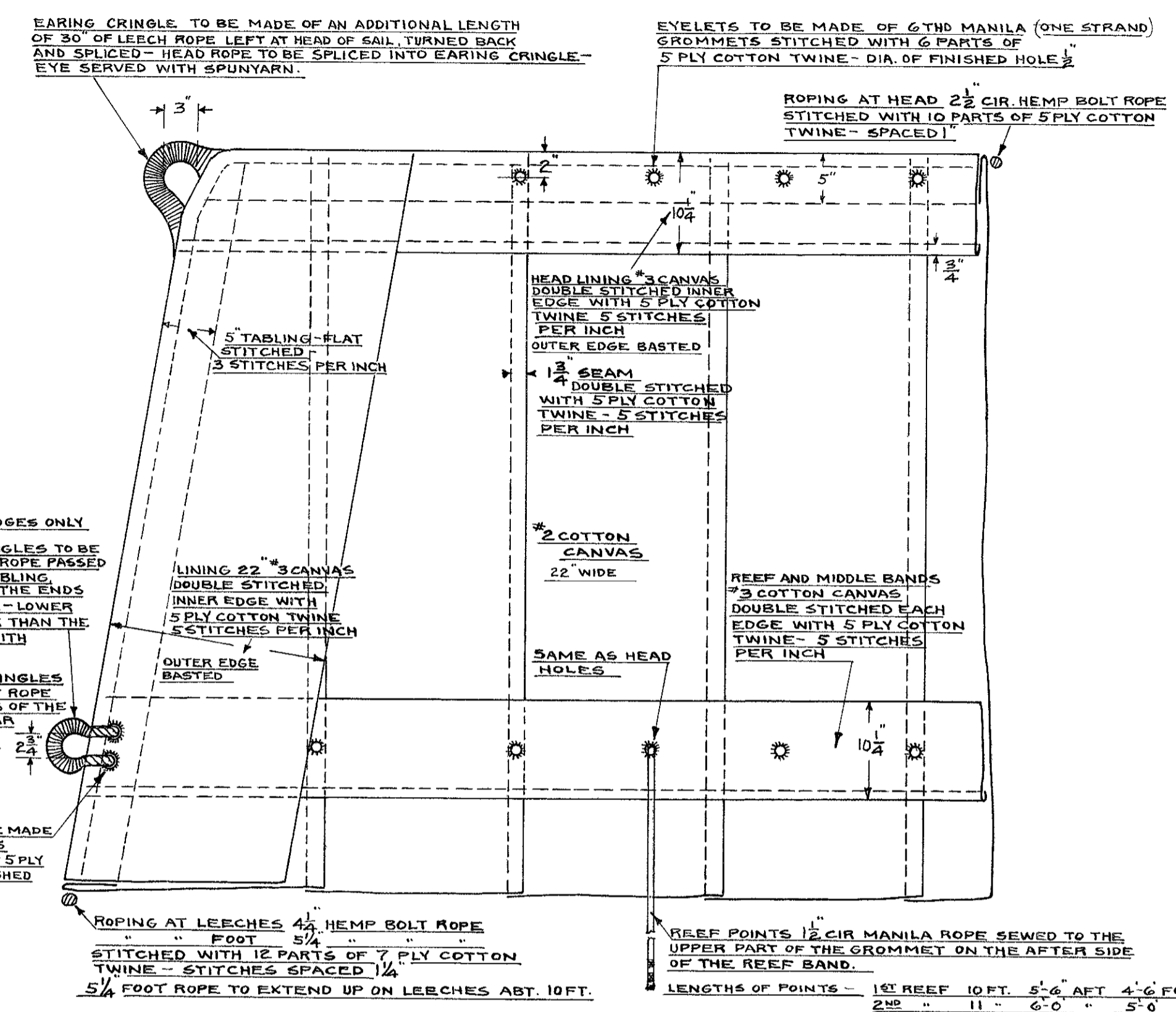
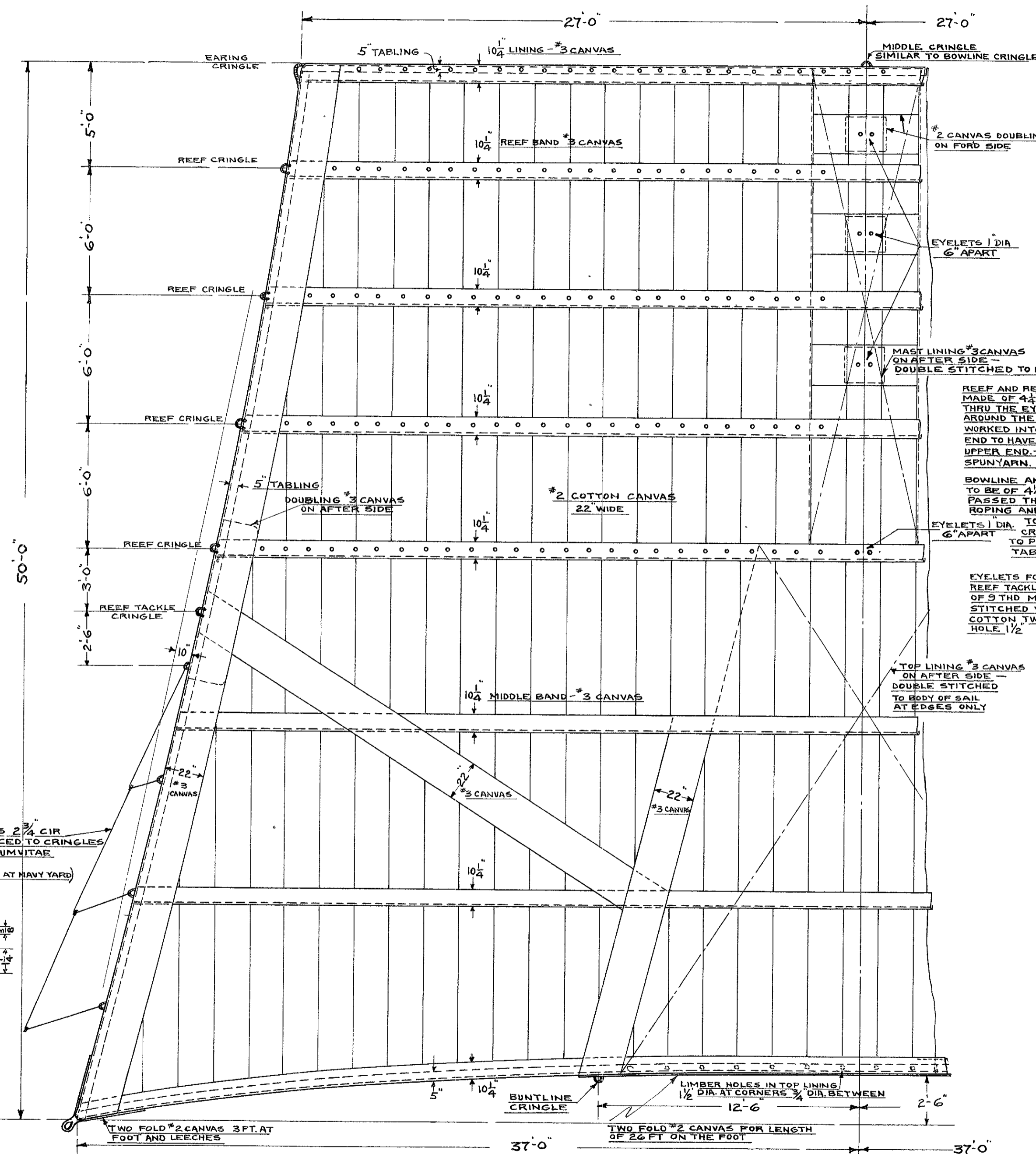
PLAN No 18402 - SHEET No 3

- NOTES-
- 1- DIMENSIONS GIVEN ARE FOR THE COMPLETED SAIL - ALLOWANCE HAS BEEN MADE FOR STRETCHING
 - 2- SAIL TO BE HAND STITCHED THROUGHOUT - NO METAL FITTINGS
 - 3- SEWING ON THE BOLT ROPE - 3 OR 4 OF SLACK CLOTH TO BE TAKEN UP IN EVERY YARD ON THE LEECHES AND 1 IN EVERY CLOTH ON THE FOOT - FOOT ROPE TO BE WELL STRETCHED BEFORE IT IS SEWED ON.
 - 4- ALL CLOTHS OF SAIL TO BE MADE IN ONE PIECE AND NOT LASHED OR BUTTED IN.

THIS PLAN HAS BEEN DRAWN, AFTER CONSIDERABLE RESEARCH, FROM INFORMATION CONTAINED IN OLD BOOKS, RECORDS AND PRINTS.

DRAWN AND TRACED BY
 C. S. ADAMS - 10-21-29
 SUPERVISING CRAFTSMAN





LENGTHS OF POINTS -

1 st REEF	10 FT.	5'-6" AFT	4'-6" FORD
2 nd "	11 "	6'-0" "	5'-0" "
3 rd "	11 "	6'-0" "	5'-0" "
CLOSE	12 "	6'-0" "	6'-0" "

MATERIAL REQUIRED FOR ONE SAIL

CANVAS	HEMP BOLT ROPE	HEMP ROPE	MANILA ROPE	SPUN YARN	MARLINE	SAIL TWINE	SAIL TWINE	BULLS-EYES
NRZ YDS	NE3 YDS	5/4 CIR FT	4 1/4 CIR FT	2 1/2 CIR FT	2 3/4 CIR FT	1 1/2 CIR FT	5 THD FT	6 THD FT
670	293	125	140	62	60	50	2200	25
							130	10
							12	12
							9	29
							6	6

NOTES -
 1-DIMENSIONS GIVEN ARE FOR THE COMPLETED SAIL- ALLOWANCE HAS BEEN MADE FOR STRETCHING.
 2-SAIL TO BE HAND STITCHED THROUGHOUT- NO METAL FITTINGS
 3-SEWING ON THE BOLT ROPE - 3 OR 4 OF SLACK CLOTH TO BE TAKEN UP IN EVERY YARD ON THE LEECHES AND 1 IN EVERY CLOTH ON THE FOOT - FOOT ROPE TO BE WELL STRETCHED BEFORE IT IS SEWED ON.
 4-ALL CLOTHS OF SAIL TO BE IN ONE PIECE AND NOT LASHED OR BUTTED IN

DRAWN AND TRACED BY
 C. S. ADAMS - 11-1-29
 SUPERVISING DRAFTSMAN

FORWARD SIDE OF SAIL
 HALF OF SAIL SHOWN- OTHER HALF SIMILAR
 SCALE 1/4" = 1 FT

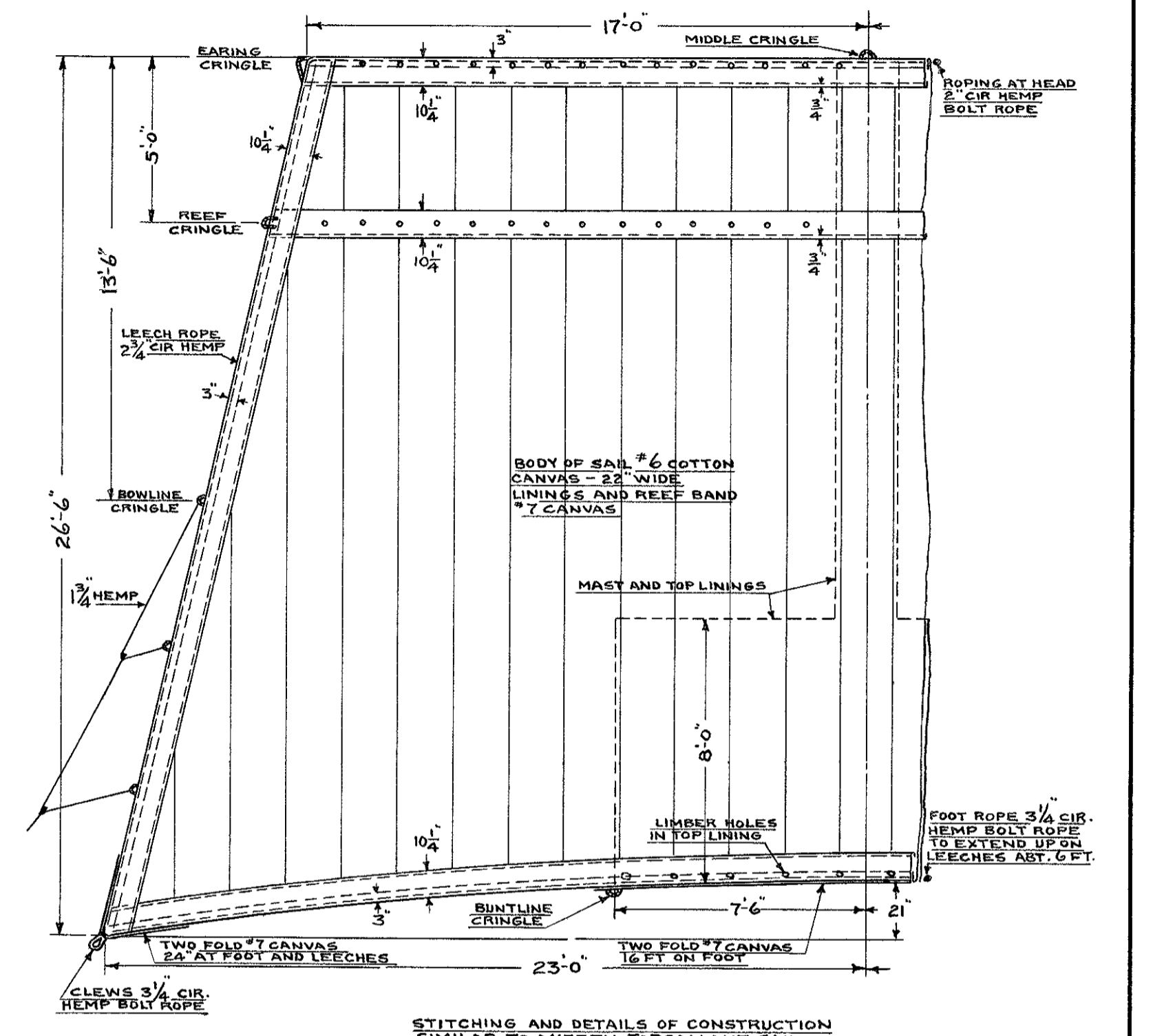
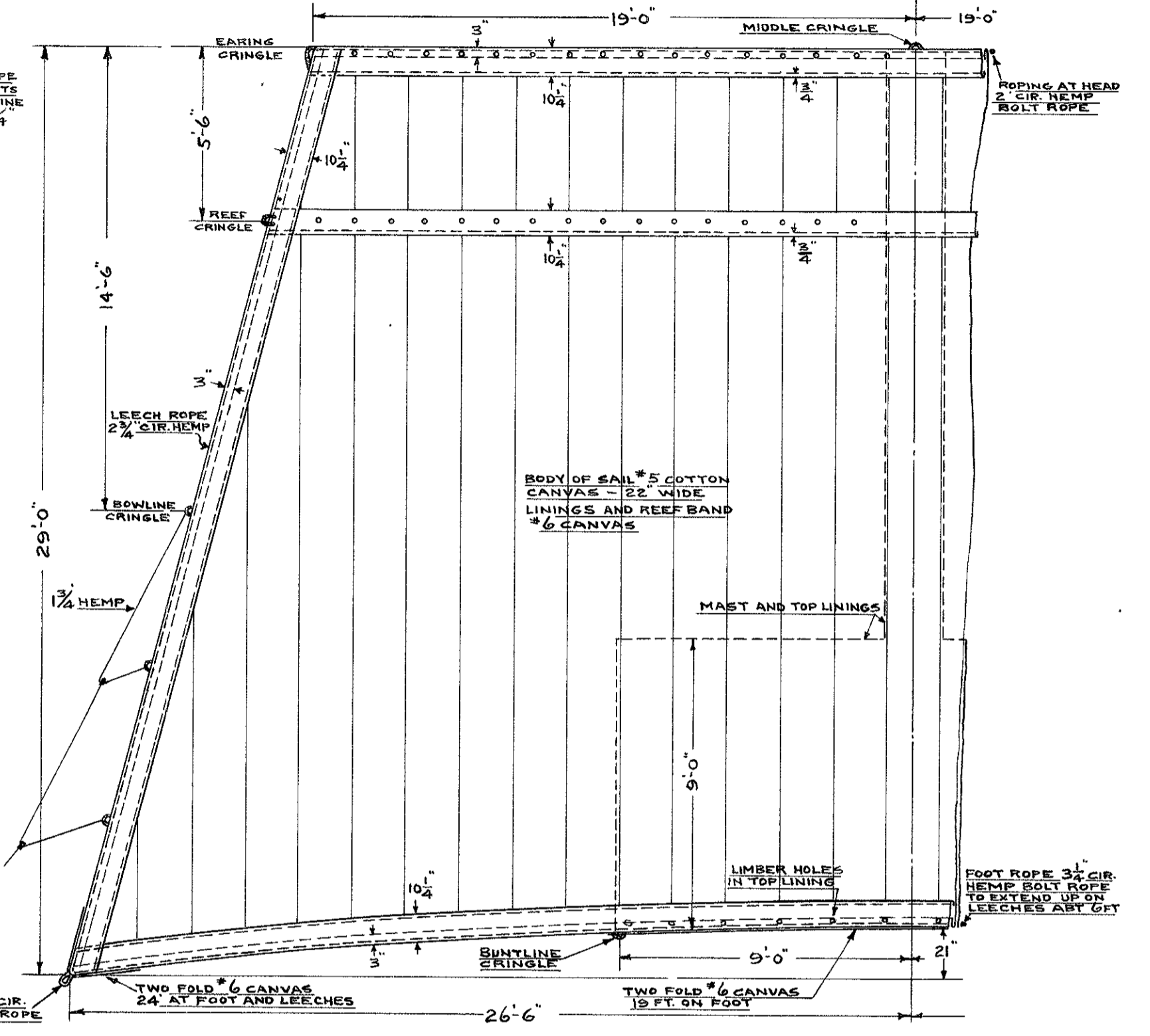
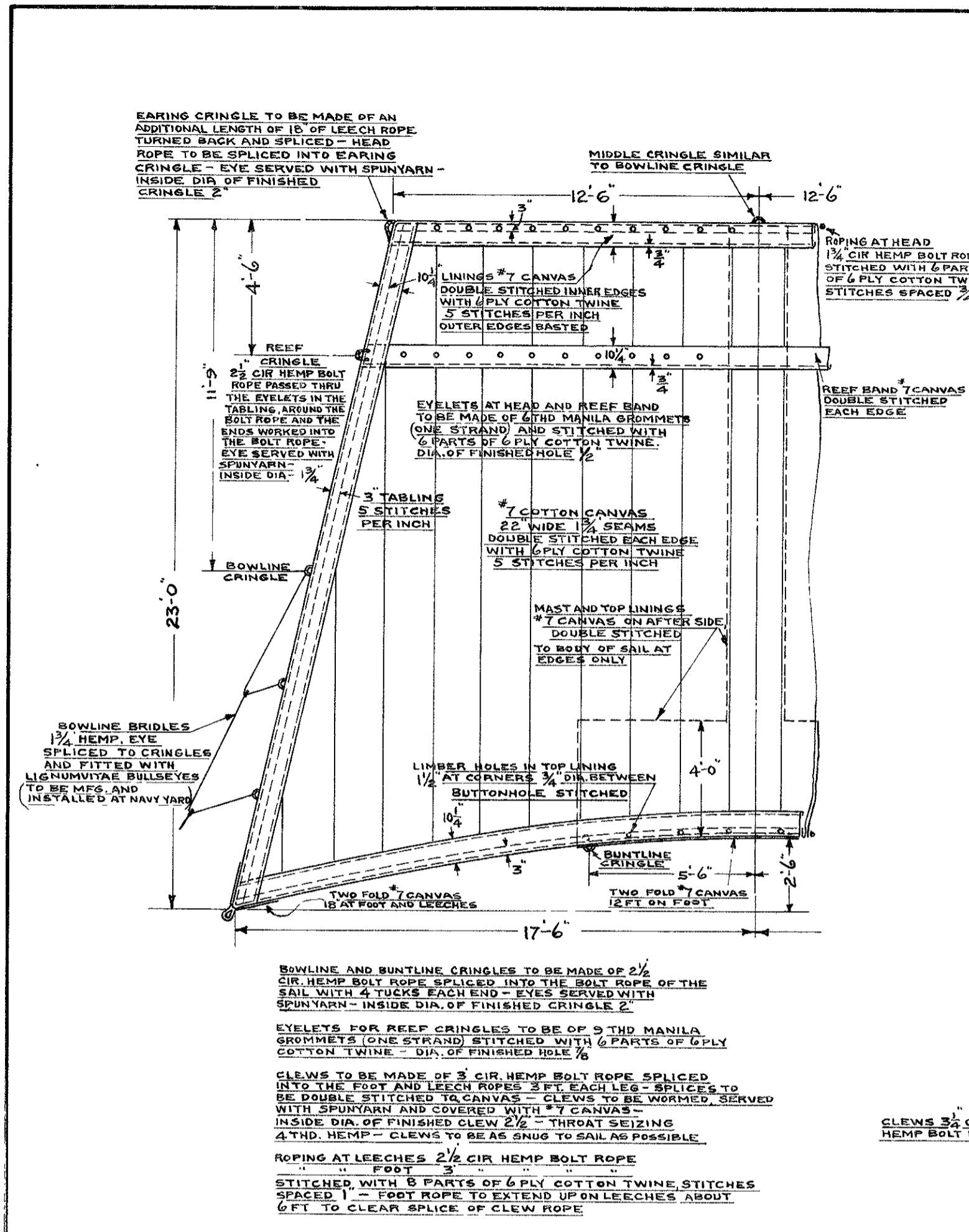
THIS PLAN HAS BEEN DRAWN AFTER CONSIDERABLE RESEARCH, FROM INFORMATION CONTAINED IN OLD BOOKS, RECORDS AND PRINTS.

U.S. FRIGATE CONSTITUTION
 DETAILS OF SAILS
 MAIN TOPSAIL
 RESTORATION 1927
 NAVY YARD BOSTON OCTOBER 1929

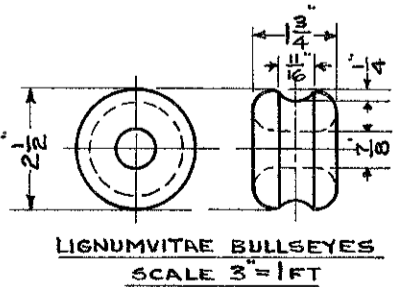
APPROVED FOR MANAGER

 LIEUT. C.C. U. S. N.
 SUPT. OF RESTORATION
 PLAN No 18402 - SHEET No 4

SCALE 1" = 1 FT



DRAWN AND TRACED
BY C.S. ADAMS - SUPERVISING DRAFTSMAN
12-7-29

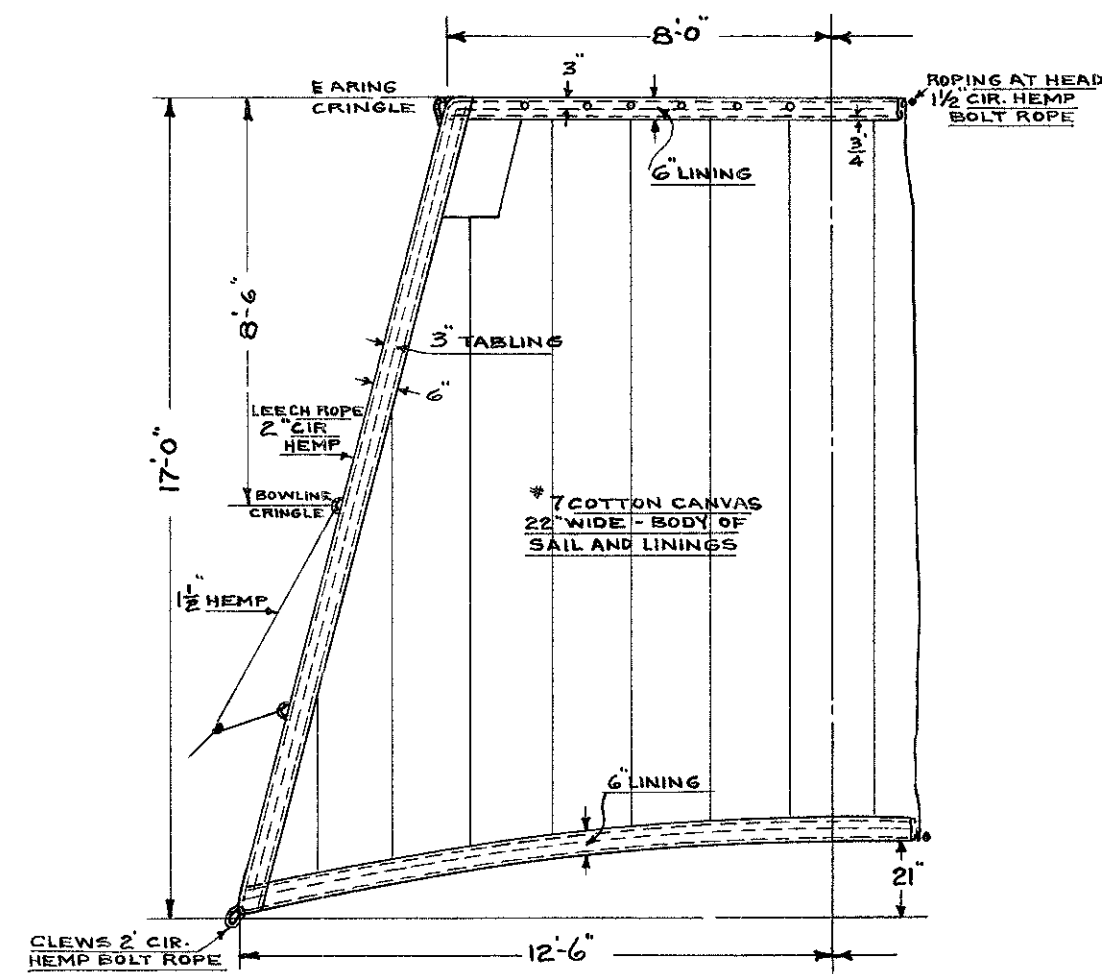


THIS PLAN HAS BEEN DRAWN, AFTER CONSIDERABLE RESEARCH, FROM INFORMATION CONTAINED IN OLD BOOKS, RECORDS AND PRINTS

U.S. FRIGATE CONSTITUTION
DETAILS OF SAILS
FORE - MAIN AND MIZZEN TOPGALLANT SAILS

RESTORATION 1927
NAVY YARD BOSTON DECEMBER 1929

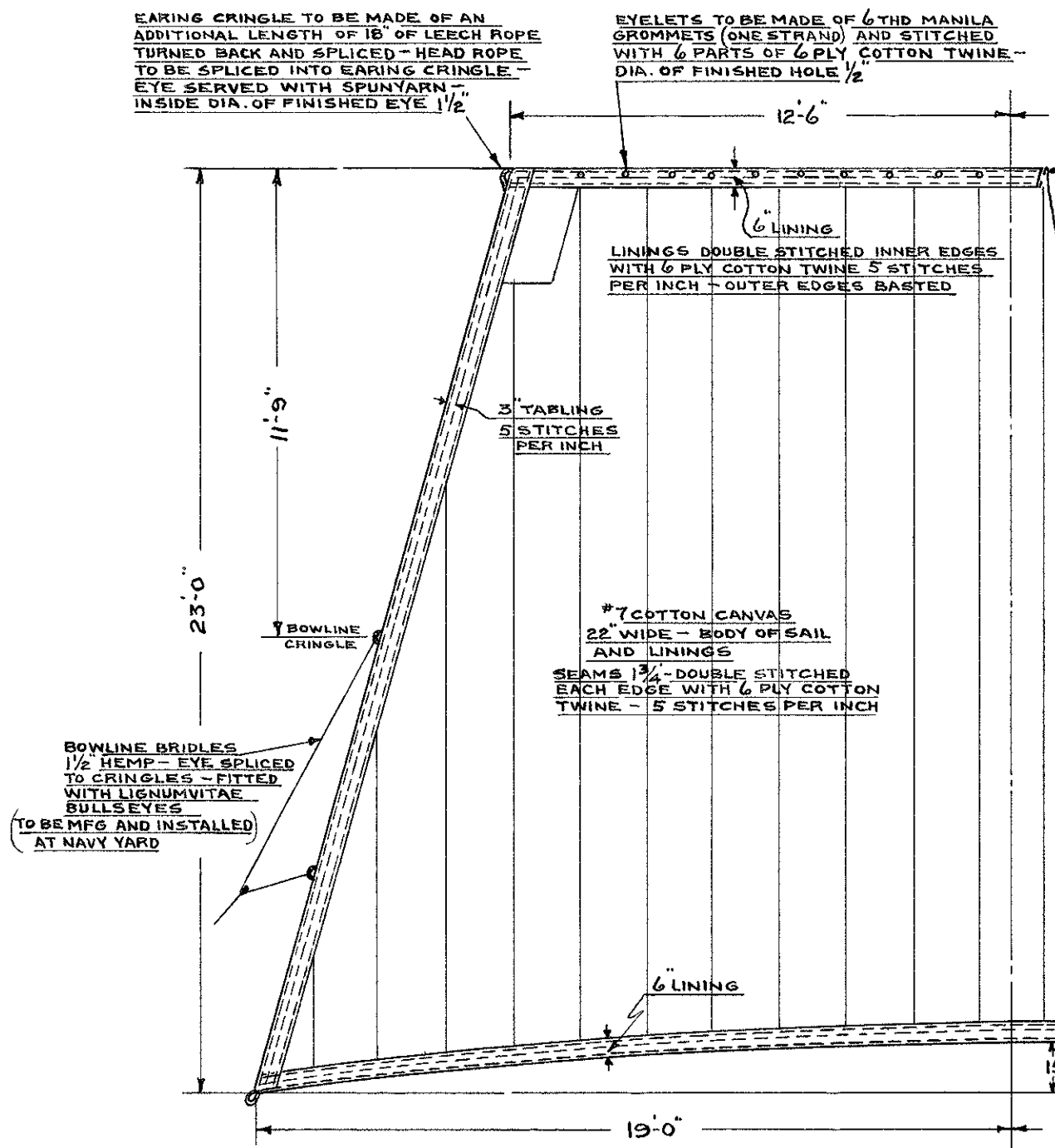
APPROVED FOR MANAGER
John A. Lord
LIEUT. (C.C.) U. S. N.
SUPT. OF RESTORATION
PLAN No 18402 - SHEET No 6



STITCHING AND DETAILS OF CONSTRUCTION
SIMILAR TO MAIN ROYAL SAIL

MIZZEN ROYAL SAIL
SCALE $\frac{1}{4}$ = 1 FT.

MATERIAL REQUIRED FOR ONE SAIL									
CANVAS	HEMP BOLT ROPE	HEMP ROPE	MANILA ROPE	SPUN YARN	TWINE	TWINE	BULLS EYES		
NS7 YDS	2" CIR FT	1 1/2" CIR FT	1 1/2" CIR 4 THD FT	6 THD FT	6 PLY L TWIST LBS	6 PLY R TWIST LBS			
90	90	20	20	20	8	1	3	1	2



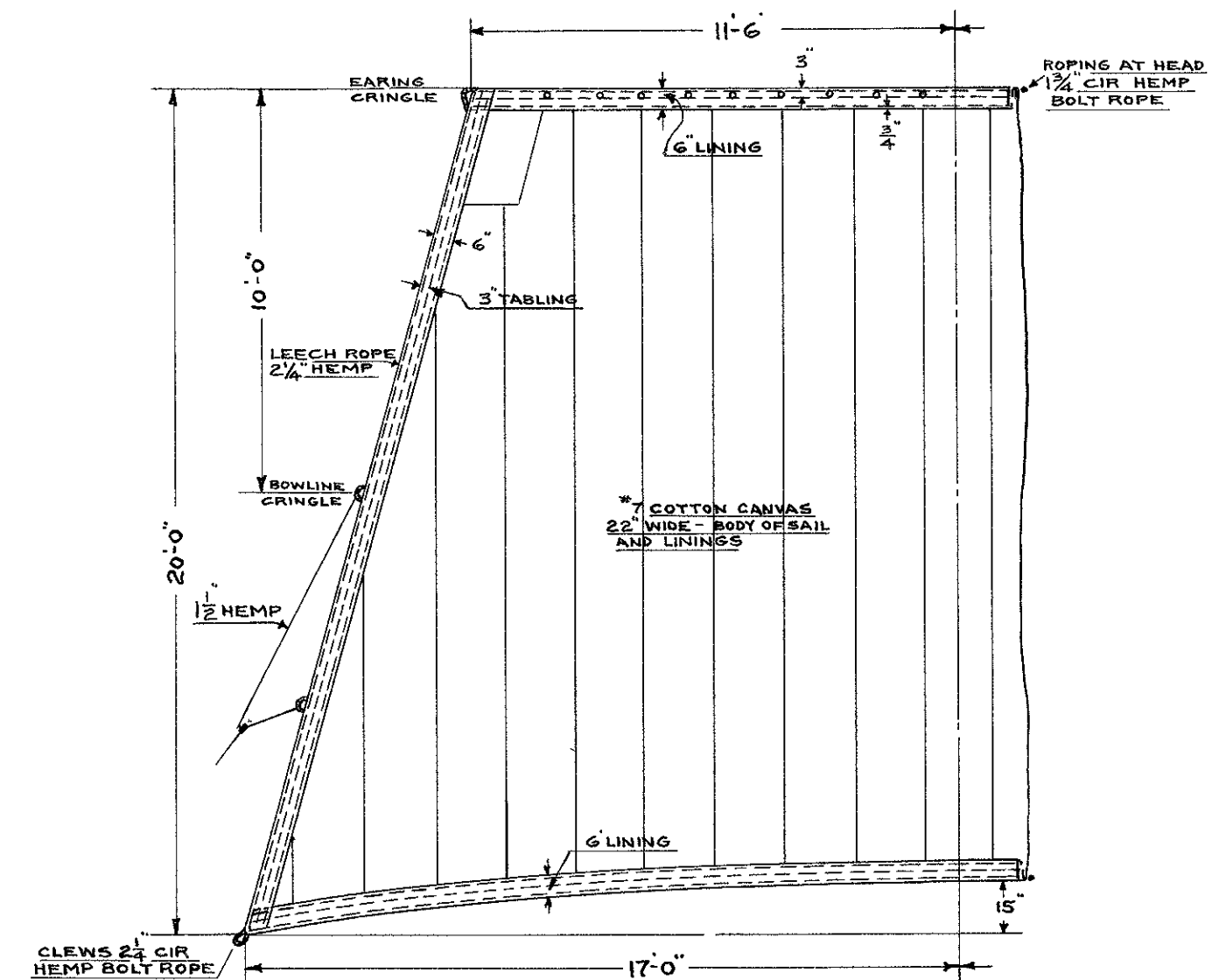
BUNTLINE CRINGLES TO BE MADE OF 2 1/4" CIR HEMP BOLT ROPE SPLICED INTO THE BOLT ROPE OF THE SAIL WITH 4 TUCKS. EACH END - EYES SERVED WITH SPUNYARN - INSIDE DIA. OF FINISHED CRINGLE 1 1/2"

CLEWS TO BE MADE OF 2 1/4" CIR HEMP BOLT ROPE SPLICED INTO THE FOOT AND LEECH ROPES 3 FT EACH LEG - SPLICES TO BE DOUBLE STITCHED TO CANVAS - CLEWS TO BE WORMED, SERVED WITH SPUNYARN AND COVERED WITH #7 CANVAS - INSIDE DIA. OF FINISHED CLEW 2" - THROAT SEIZING 4 THD. HEMP - CLEWS TO BE AS SNUG TO SAIL AS POSSIBLE.

ROPING AT LEECHES AND FOOT 2 1/4" CIR HEMP BOLT ROPE - STITCHED WITH 8 PARTS OF 6 PLY COTTON TWINE, STITCHES SPACED 3/4"

MAIN ROYAL SAIL
SCALE $\frac{1}{4}$ = 1 FT.

MATERIAL REQUIRED FOR ONE SAIL									
CANVAS	HEMP BOLT ROPE	HEMP ROPE	MANILA ROPE	SPUN YARN	TWINE	TWINE	BULLS EYES	MARLINE	
NS7 YDS	2 1/4" CIR FT	1 1/2" CIR FT	1 1/2" CIR 4 THD FT	6 THD FT	6 PLY L TWIST LBS	6 PLY R TWIST LBS			
175	120	30	25	40	15	1	5	3	2

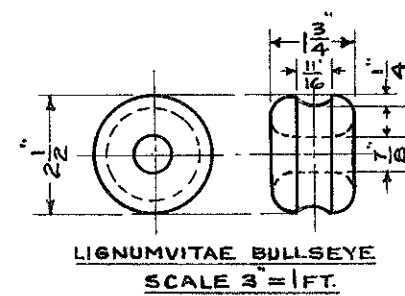


STITCHING AND DETAILS OF CONSTRUCTION
SIMILAR TO MAIN ROYAL SAIL

FORE ROYAL SAIL
SCALE $\frac{1}{4}$ = 1 FT.

MATERIAL REQUIRED FOR ONE SAIL									
CANVAS	HEMP BOLT ROPE	HEMP ROPE	MANILA ROPE	SPUN YARN	TWINE	TWINE	BULLS EYES		
NS7 YDS	2 1/4" CIR FT	1 1/2" CIR FT	1 1/2" CIR 4 THD FT	6 THD FT	6 PLY L TWIST LBS	6 PLY R TWIST LBS			
135	110	28	20	30	12	1	3	2	2

- NOTES-
- 1- DIMENSIONS GIVEN ARE FOR THE COMPLETED SAIL - NO ALLOWANCE TO BE MADE FOR STRETCHING
 - 2- SAILS TO BE EITHER HAND OR MACHINE STITCHED - NO METAL FITTINGS
 - 3- SEWING ON THE BOLT ROPE - SLACK CLOTH TO BE TAKEN UP ON THE LEECHES AND FOOT - FOOT ROPE TO BE WELL STRETCHED BEFORE IT IS SEWED ON
 - 4- ALL CLOTHS OF SAIL TO BE IN ONE PIECE AND NOT LASHED OR BUTTED IN
 - 5- FORWARD SIDE OF SAILS SHOWN

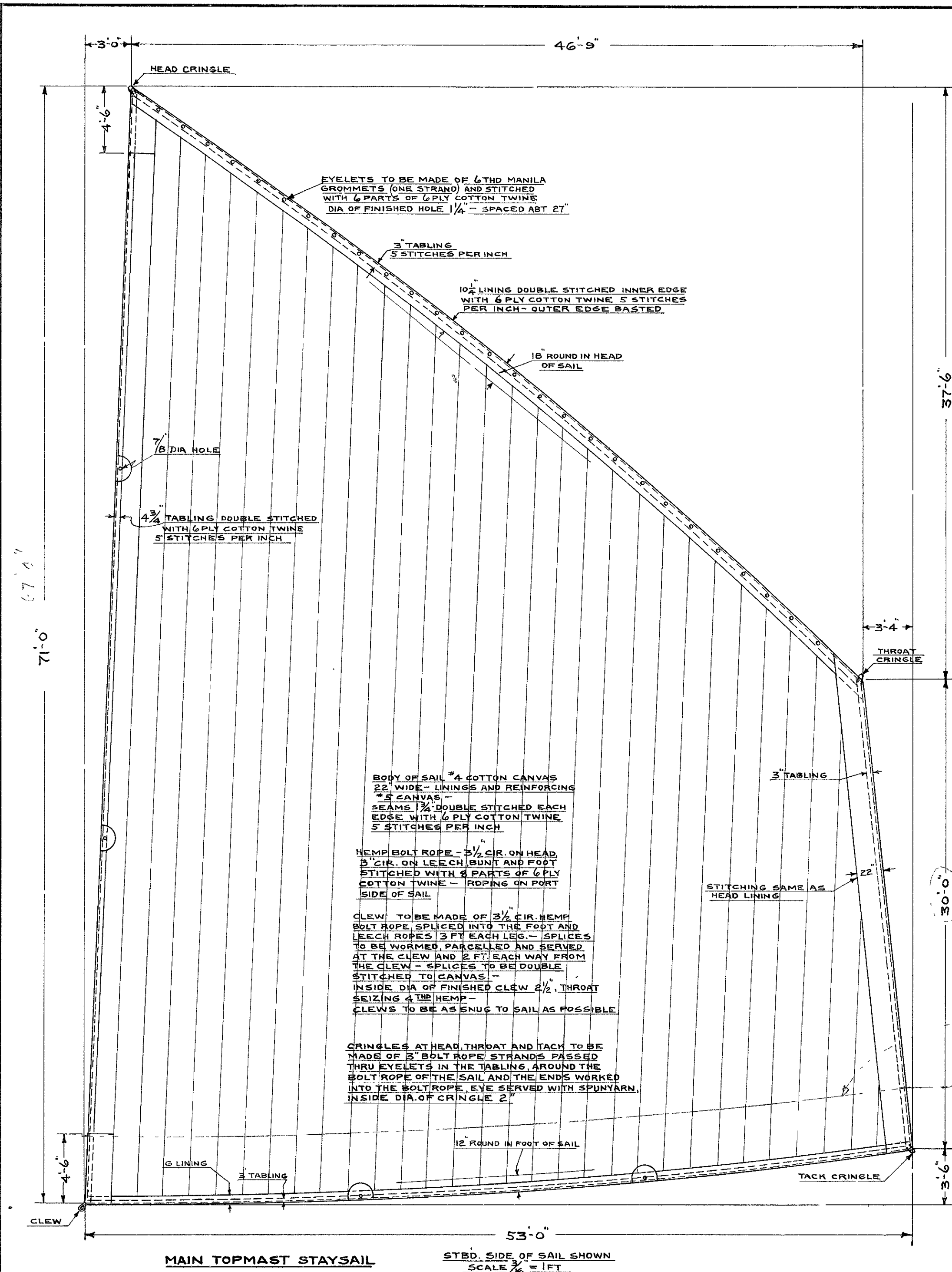


U.S. FRIGATE CONSTITUTION
DETAILS OF SAILS
FORE - MAIN AND MIZZEN ROYAL SAILS

RESTORATION 1927
NAVY YARD BOSTON DECEMBER 1929

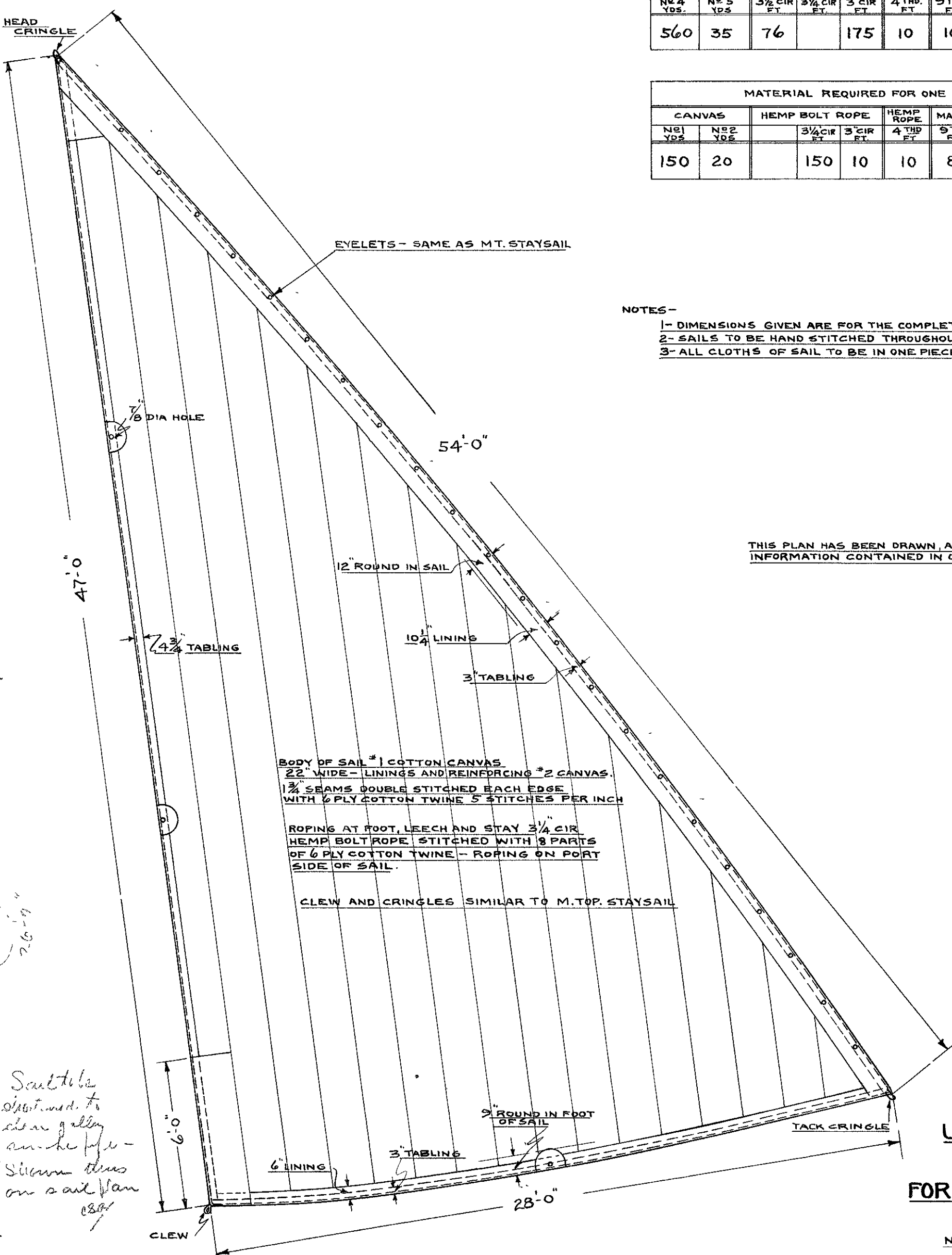
APPROVED FOR MANAGER

J. C. Long
LIEUT. (C.C.) U. S. N.
SUPT. OF RESTORATION
PLAN No 18402 - SHEET No 7



MAIN TOPMAST STAYSAIL
STBD. SIDE OF SAIL SHOWN
SCALE 1/16" = 1 FT.

DRAWN AND TRACED BY C.S. ADAMS
SUPERVISING DRAFTSMAN - 1-2-30



FORE TOPMAST STAYSAIL
SCALE 1/4" = 1 FT.

STITCHING AND DETAILS OF CONSTRUCTION
SIMILAR TO MAIN TOPMAST STAYSAIL
STBD. SIDE OF SAIL SHOWN

MATERIAL REQUIRED FOR ONE MAINTOPMAST STAYSAIL

CANVAS	HEMP BOLT ROPE	HEMP ROPE	MANILA ROPE	SPUN YARN	MARLINE	SAIL TWINE
NO. 4 YDS.	NO. 5 YDS.	3 1/2" CIR FT.	3" CIR FT.	4" THD FT.	5" THD FT.	6" THD FT.
560	35	76	175	10	10	25
				1	1	24

MATERIAL REQUIRED FOR ONE FORETOPMAST STAYSAIL

CANVAS	HEMP BOLT ROPE	HEMP ROPE	MANILA ROPE	SPUN YARN	MARLINE	SAIL TWINE
NO. 4 YDS.	NO. 5 YDS.	3 1/2" CIR FT.	3" CIR FT.	4" THD FT.	5" THD FT.	6" THD FT.
150	20	150	10	10	8	20
					1	1
						8

NOTES-
1- DIMENSIONS GIVEN ARE FOR THE COMPLETE SAIL - NO ALLOWANCE TO BE MADE FOR STRETCHING.
2- SAILS TO BE HAND STITCHED THROUGHOUT - NO METAL FITTINGS.
3- ALL CLOTHS OF SAIL TO BE IN ONE PIECE, AND NOT LASHED OR BUTTED IN.

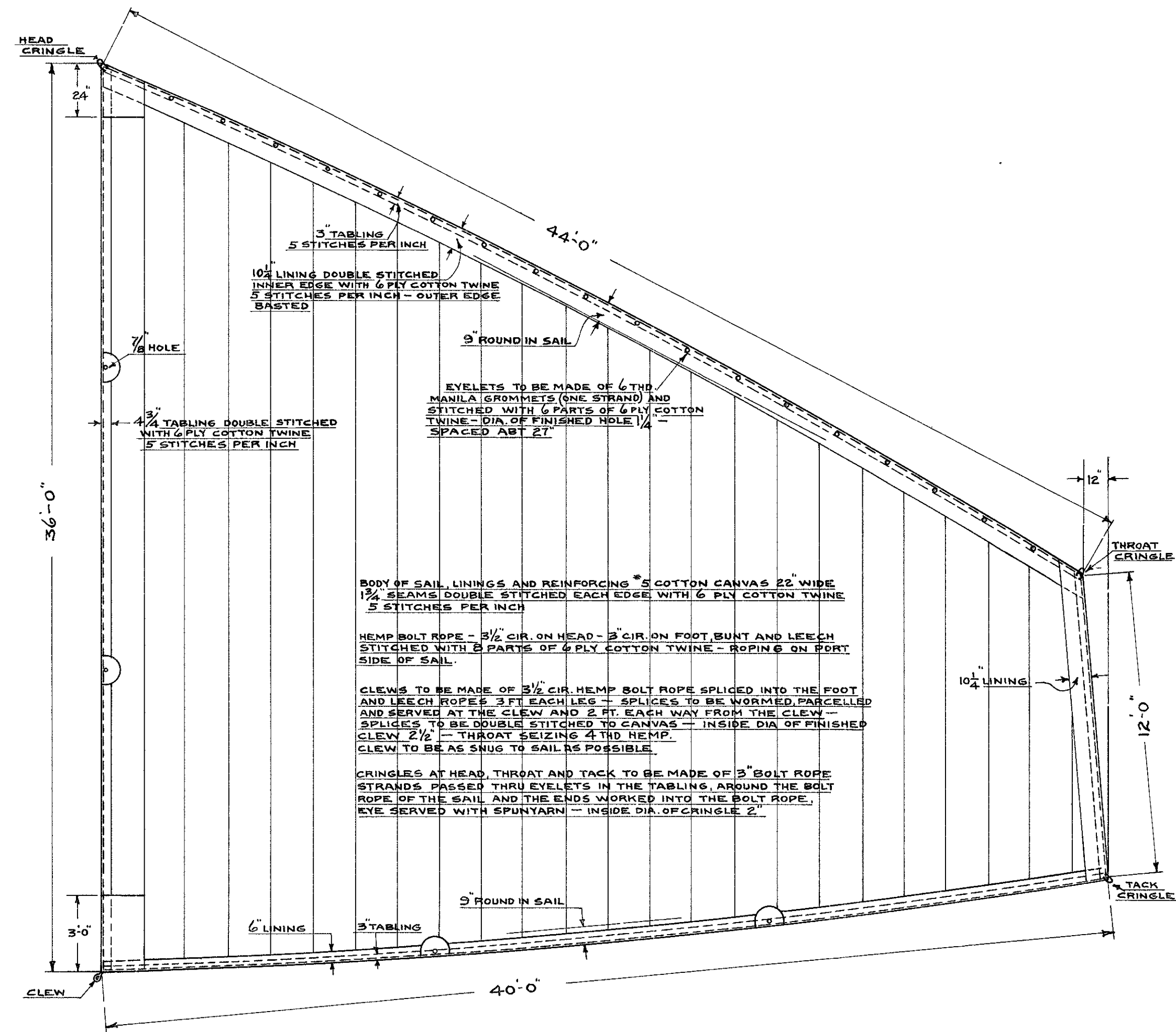
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U.S. FRIGATE CONSTITUTION
DETAILS OF SAILS
FORE AND MAIN TOPMAST STAYSAILS
RESTORATION 1927
NAVY YARD BOSTON JANUARY 1930

APPROVED FOR MANAGER
John M. Long
LIEUT. (C.C.) U. S. N.
SUPT. OF RESTORATION

PLAN NO 18402 - SHEET NO 8

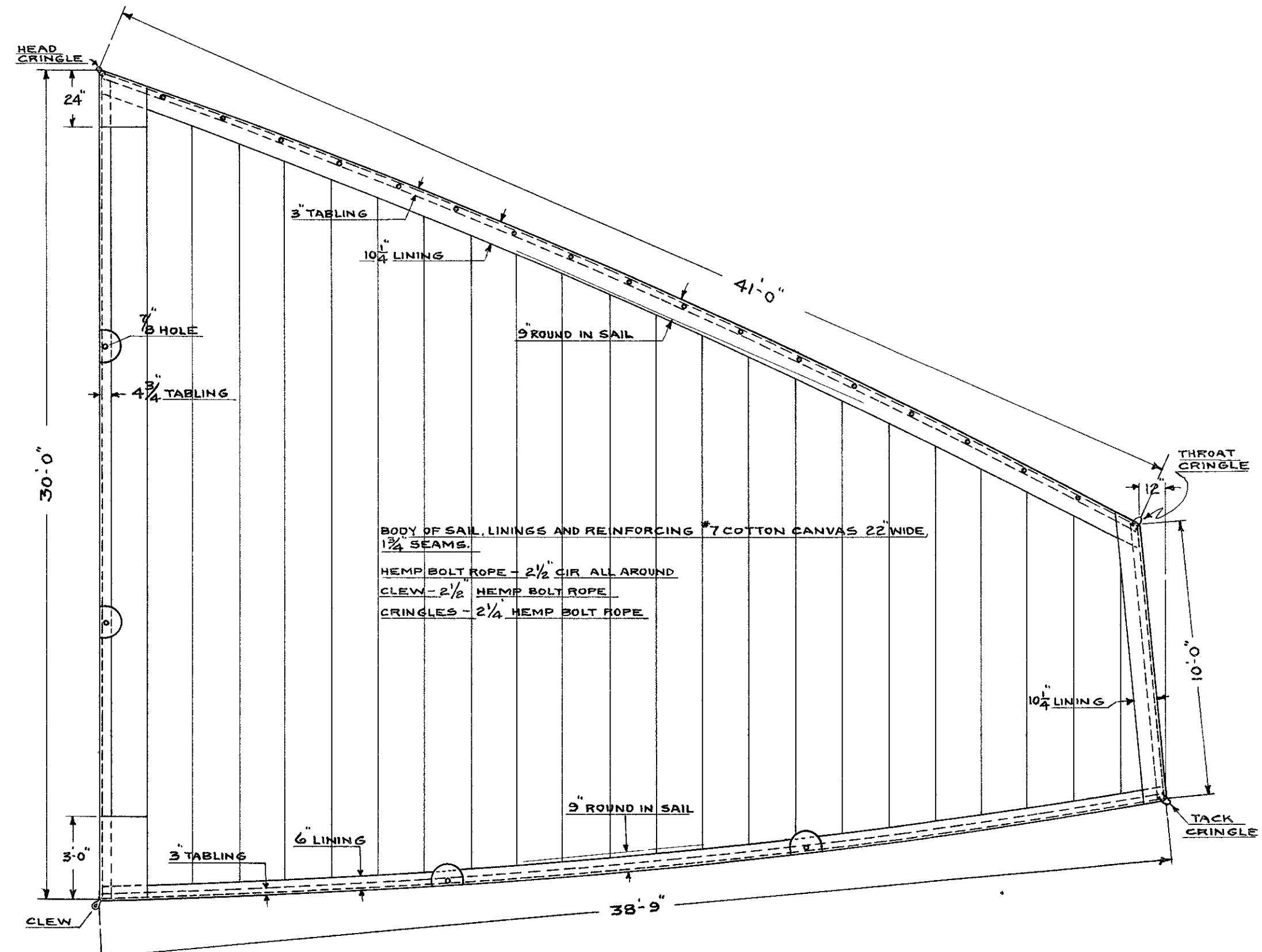
Scantling about mid. to clear gully in the fore - stream lines on sail plan 1830



MAIN TOPGALLANT STAYSAIL
SCALE 1/4" = 1 FT.
STBD. SIDE OF SAIL SHOWN

MATERIAL REQUIRED FOR ONE SAIL								
CANVAS	HEMP BOLT ROPE	HEMP ROPE	MANILA ROPE	SPUN YARN	MARLINE	TWINE	TWINE	
NO. & YDS.	3 1/2" CIR. FT.	3" CIR. FT.	5 THD. FT.	6 THD. FT.	1" & 1/2" FT.	6 PLY L. TWIST LBS.	6 PLY R. TWIST LBS.	
225	60	110	10	6	20	1	1	6 4

- NOTES-**
- 1- DIMENSIONS GIVEN ARE FOR THE COMPLETED SAIL - NO ALLOWANCE TO BE MADE FOR STRETCHING.
 - 2- SAILS TO BE EITHER HAND OR MACHINE STITCHED - NO METAL FITTINGS.
 - 3- ALL CLOTHS OF SAIL TO BE IN ONE PIECE AND NOT LASHED OR BUTTED IN.



MAIN ROYAL STAYSAIL
SCALE 1/4" = 1 FT.
STBD. SIDE OF SAIL SHOWN
STITCHING AND DETAILS OF CONSTRUCTION SIMILAR TO MAIN TOPGALLANT STAYSAIL

MATERIAL REQUIRED FOR ONE SAIL								
CANVAS	HEMP BOLT ROPE	HEMP ROPE	MANILA ROPE	SPUN YARN	MARLINE	TWINE	TWINE	
NET YDS.	2 1/2" CIR. FT.	2 1/4" CIR. FT.	4 THD. FT.	5 THD. FT.	6 THD. FT.	1" & 1/2" LBS.	1" & 1/2" R LBS.	
190	135	10	10	6	15	1	1	5 3

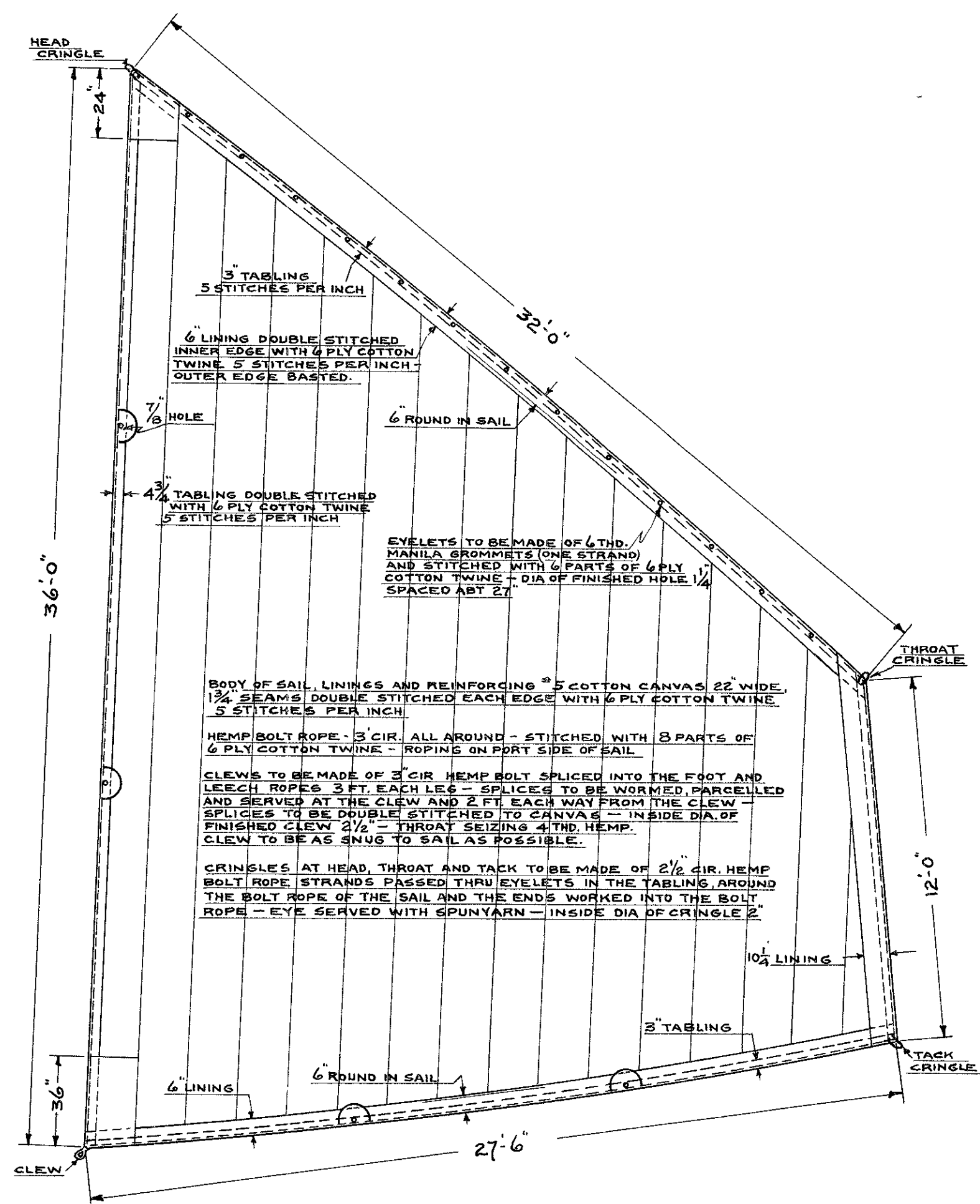
U.S. FRIGATE CONSTITUTION
DETAILS OF SAILS
MAIN TOPGALLANT AND ROYAL STAYSAILS

RESTORATION 1927
NAVY YARD BOSTON JANUARY 1930

APPROVED FOR MANAGER

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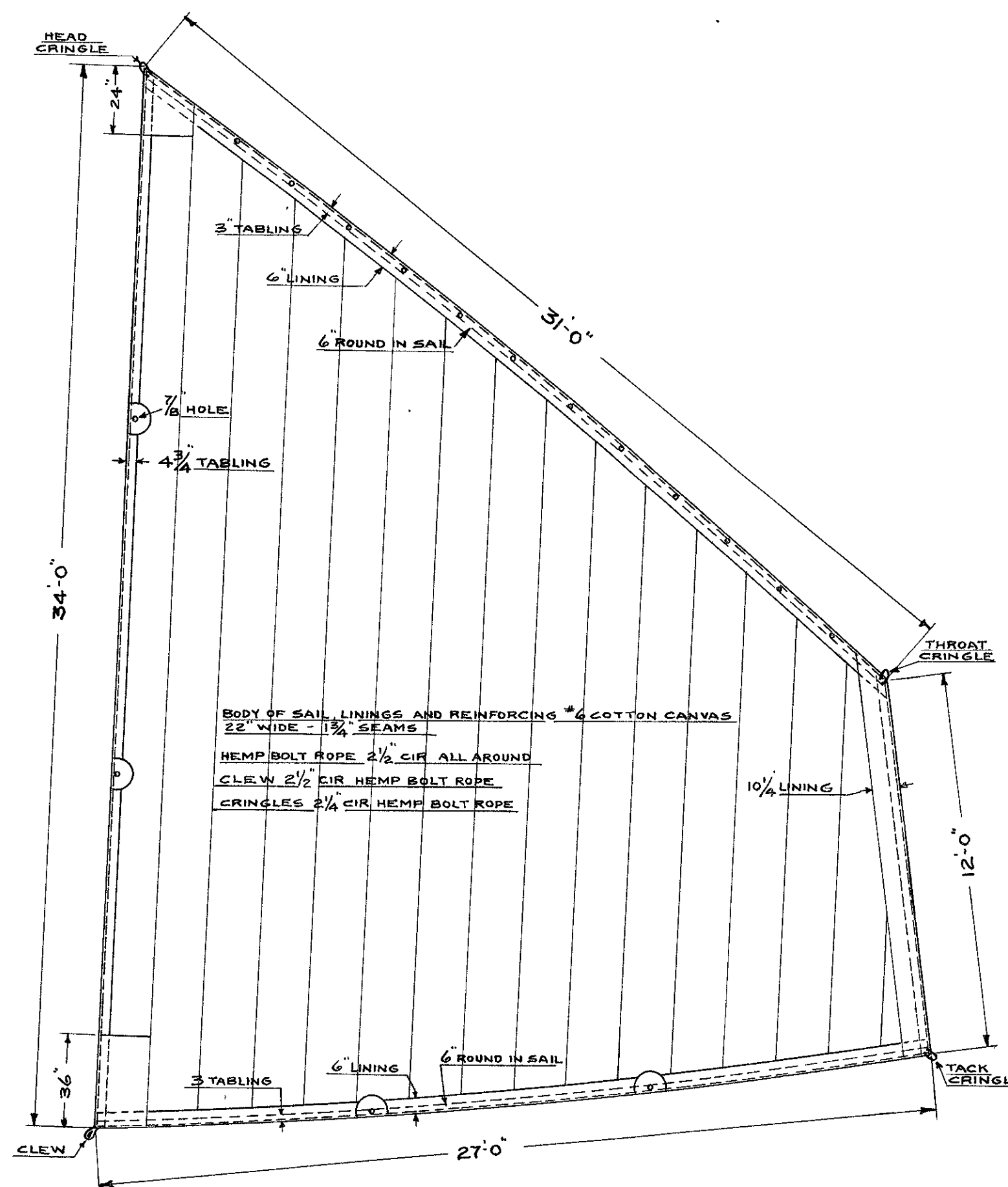


MIZZEN TOPMAST STAYSAIL
SCALE 1/4" = 1 FT.
STBD. SIDE OF SAIL SHOWN

MATERIAL REQUIRED FOR ONE SAIL									
CANVAS	HEMP BOLT ROPE	HEMP ROPE	MANILA ROPE	SPUN YARN	HARLINE	TWINE	TWINE	TWINE	TWINE
NE 6 YDS	2 1/2 CIR FT	2 1/2 CIR FT	4 THD FT	5 THD FT	6 THD FT	LBS	LBS	LBS	LBS
150	125	10	10	6	15	1	1	4	2

- NOTES -
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 - 3- ALL CLOTHS OF SAIL TO BE IN ONE PIECE AND NOT LASHED OR BUTTED IN.

THIS PLAN HAS BEEN DRAWN AFTER CONSIDERABLE RESEARCH FROM INFORMATION CONTAINED IN OLD BOOKS, RECORDS AND PRINTS



MIZZEN TOPGALLANT STAYSAIL
SCALE 1/4" = 1 FT.
STBD. SIDE OF SAIL SHOWN
STITCHING AND DETAILS OF CONSTRUCTION SIMILAR TO MIZZEN TOPMAST STAYSAIL

MATERIAL REQUIRED FOR ONE SAIL									
CANVAS	HEMP BOLT ROPE	HEMP ROPE	MANILA ROPE	SPUN YARN	HARLINE	TWINE	TWINE	TWINE	TWINE
NE 6 YDS	2 1/2 CIR FT	2 1/2 CIR FT	4 THD FT	5 THD FT	6 THD FT	LBS	LBS	LBS	LBS
143	120	10	10	6	15	1	1	4	2

U.S. FRIGATE CONSTITUTION
DETAILS OF SAILS
MIZZEN TOPMAST AND TOPGALLANT STAYSAILS

RESTORATION 1927
NAVY YARD BOSTON JANUARY 1930

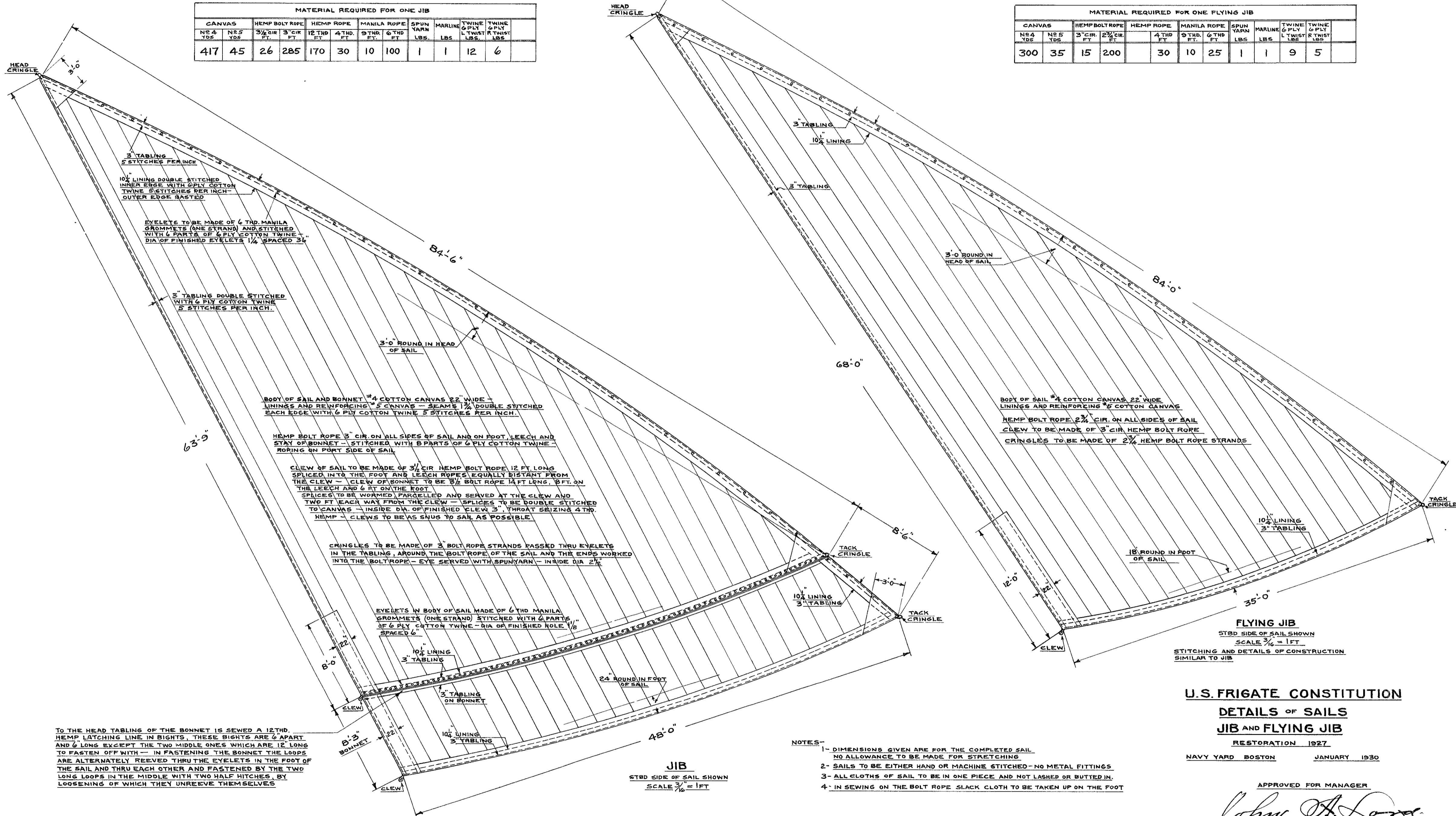
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PLAN No 18402 - SHEET No 10

MATERIAL REQUIRED FOR ONE JIB											
CANVAS		HEMP BOLT ROPE		HEMP ROPE		MANILA ROPE		SPUN YARN	MARLINE	TWINE 6 PLY L TWIST	TWINE 6 PLY R TWIST
NO 4 YDS	NO 5 YDS	3/4 CIR FT	3/4 CIR FT	12 THD FT	4 THD FT	5 THD FT	6 THD FT	LBS	LBS	LBS	LBS
417	45	26	285	170	30	10	100	1	1	12	6

MATERIAL REQUIRED FOR ONE FLYING JIB											
CANVAS		HEMP BOLT ROPE		HEMP ROPE		MANILA ROPE		SPUN YARN	MARLINE	TWINE 6 PLY L TWIST	TWINE 6 PLY R TWIST
NO 4 YDS	NO 5 YDS	3/4 CIR FT	2 3/4 CIR FT	4 THD FT	5 THD FT	6 THD FT	FT	LBS	LBS	LBS	LBS
300	35	15	200	30	10	25	1	1	9	5	



TO THE HEAD TABLING OF THE BONNET IS SEWED A 12 THD. HEMP LATCHING LINE IN BIGHTS, THESE BIGHTS ARE 6 APART AND 6 LONG EXCEPT THE TWO MIDDLE ONES WHICH ARE 12 LONG TO FASTEN OFF WITH - IN FASTENING THE BONNET THE LOOPS ARE ALTERNATELY REeved THRU THE EYELETS IN THE FOOT OF THE SAIL AND THRU EACH OTHER AND FASTENED BY THE TWO LONG LOOPS IN THE MIDDLE WITH TWO HALF HITCHES, BY LOOSENING OF WHICH THEY UNREEVE THEMSELVES

BODY OF SAIL AND BONNET #4 COTTON CANVAS 22" WIDE LININGS AND REINFORCING #5 CANVAS - SEAMS 1 1/2" DOUBLE STITCHED EACH EDGE WITH 6 PLY COTTON TWINE 5 STITCHES PER INCH.

HEMP BOLT ROPE 3/4 CIR ON ALL SIDES OF SAIL AND ON FOOT, LEECH AND STAY OR BONNET - STITCHED WITH 8 PARTS OF 6 PLY COTTON TWINE - TOPING ON PORT SIDE OF SAIL

CLEW OF SAIL TO BE MADE OF 3/4 CIR HEMP BOLT ROPE 12 FT LONG SPLICED INTO THE FOOT AND LEACH ROPES EQUALLY DISTANT FROM THE CLEW - CLEW OF BONNET TO BE 3/4 BOLT ROPE 14 FT LONG, 8 FT ON THE LEACH AND 6 FT ON THE FOOT SPICES TO BE WORKED, PARCELLED AND SERVED AT THE CLEW AND TWO FT EACH WAY FROM THE CLEW - SPLICES TO BE DOUBLE STITCHED TO CANVAS - INSIDE DIA. OF FINISHED CLEW 3", THROAT SEIZING 4 THD. HEMP - CLEWS TO BE AS SNUG TO SAIL AS POSSIBLE

CRINGLES TO BE MADE OF 3 BOLT ROPE STRANDS PASSED THRU EYELETS IN THE TABLING, AROUND THE BOLT ROPE OF THE SAIL AND THE ENDS WORKED INTO THE BOLT ROPE - EYE SERVED WITH SPUNYARN - INSIDE DIA 2 1/2"

EYELETS IN BODY OF SAIL MADE OF 6 THD MANILA GROMMETS (ONE STRAND) STITCHED WITH 6 PARTS OF 6 PLY COTTON TWINE - DIA OF FINISHED HOLE 1/8" SPACED 6"

- NOTES -
- 1- DIMENSIONS GIVEN ARE FOR THE COMPLETED SAIL NO ALLOWANCE TO BE MADE FOR STRETCHING
 - 2- SAILS TO BE EITHER HAND OR MACHINE STITCHED - NO METAL FITTINGS
 - 3- ALL CLOTHS OF SAIL TO BE IN ONE PIECE AND NOT LASHED OR BUTTED IN.
 - 4- IN SEWING ON THE BOLT ROPE SLACK CLOTH TO BE TAKEN UP ON THE FOOT

THIS PLAN HAS BEEN DRAWN AFTER CONSIDERABLE RESEARCH, FROM INFORMATION CONTAINED IN OLD BOOKS, RECORDS AND PRINTS

U.S. FRIGATE CONSTITUTION
DETAILS OF SAILS
JIB AND FLYING JIB
RESTORATION 1927

NAVY YARD BOSTON JANUARY 1930

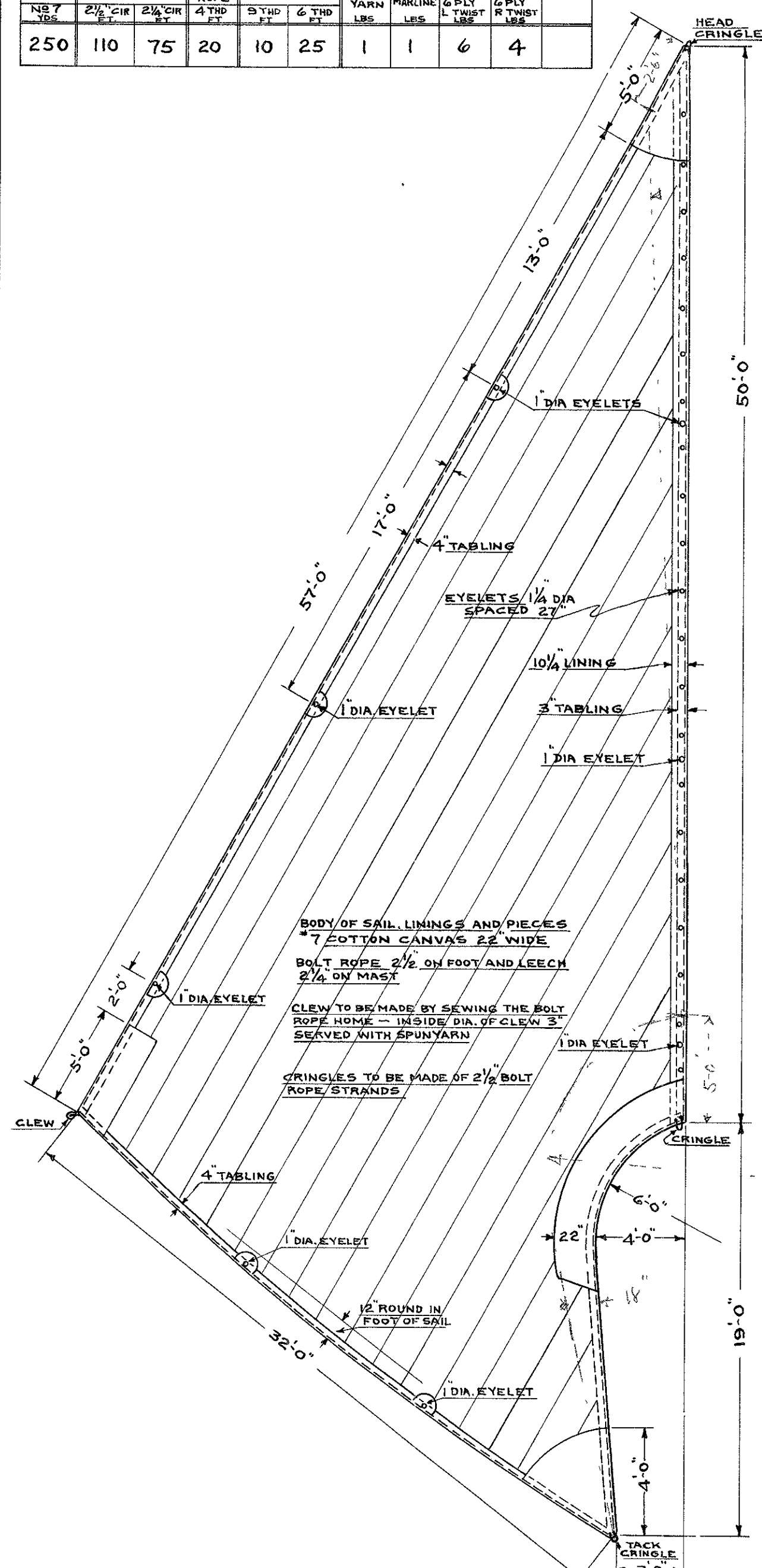
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PLAN NO 18402 - SHEET NO 11

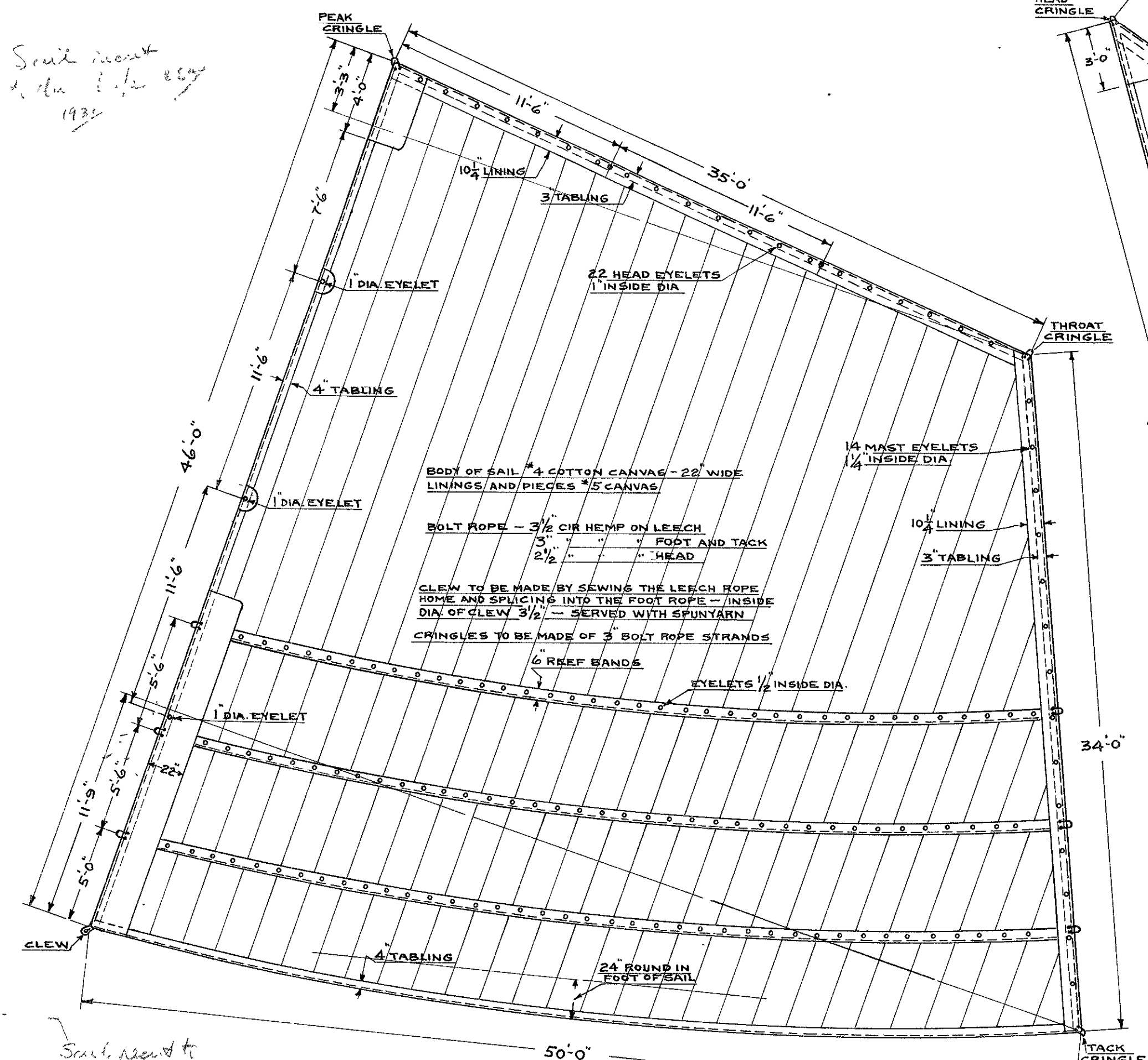
MATERIAL REQUIRED FOR ONE GAFF TOPSAIL									
CANVAS	HEMP BOLT ROPE	HEMP ROPE	MANILA ROPE	SPUN YARN	MARLINE	TWINE	TWINE	TWINE	TWINE
NB 7	2 1/2" CIR	2 1/2" CIR	5 THD	6 THD	6 THD	6 PLY	6 PLY	6 PLY	6 PLY
YDS.	FT.	FT.	FT.	FT.	FT.	LBS.	LBS.	LBS.	LBS.
250	110	75	20	10	25	1	1	6	4

MATERIAL REQUIRED FOR ONE SPANKER									
CANVAS	HEMP BOLT ROPE	HEMP ROPE	MANILA ROPE	SPUN YARN	MARLINE	TWINE	TWINE	TWINE	TWINE
NE 4	3 1/2" CIR	3" CIR	2 1/2" CIR	4 THD	5 THD	6 PLY	6 PLY	6 PLY	6 PLY
YDS.	FT.	FT.	FT.	FT.	FT.	LBS.	LBS.	LBS.	LBS.
368	36	60	108	36	20	12	85	1	10

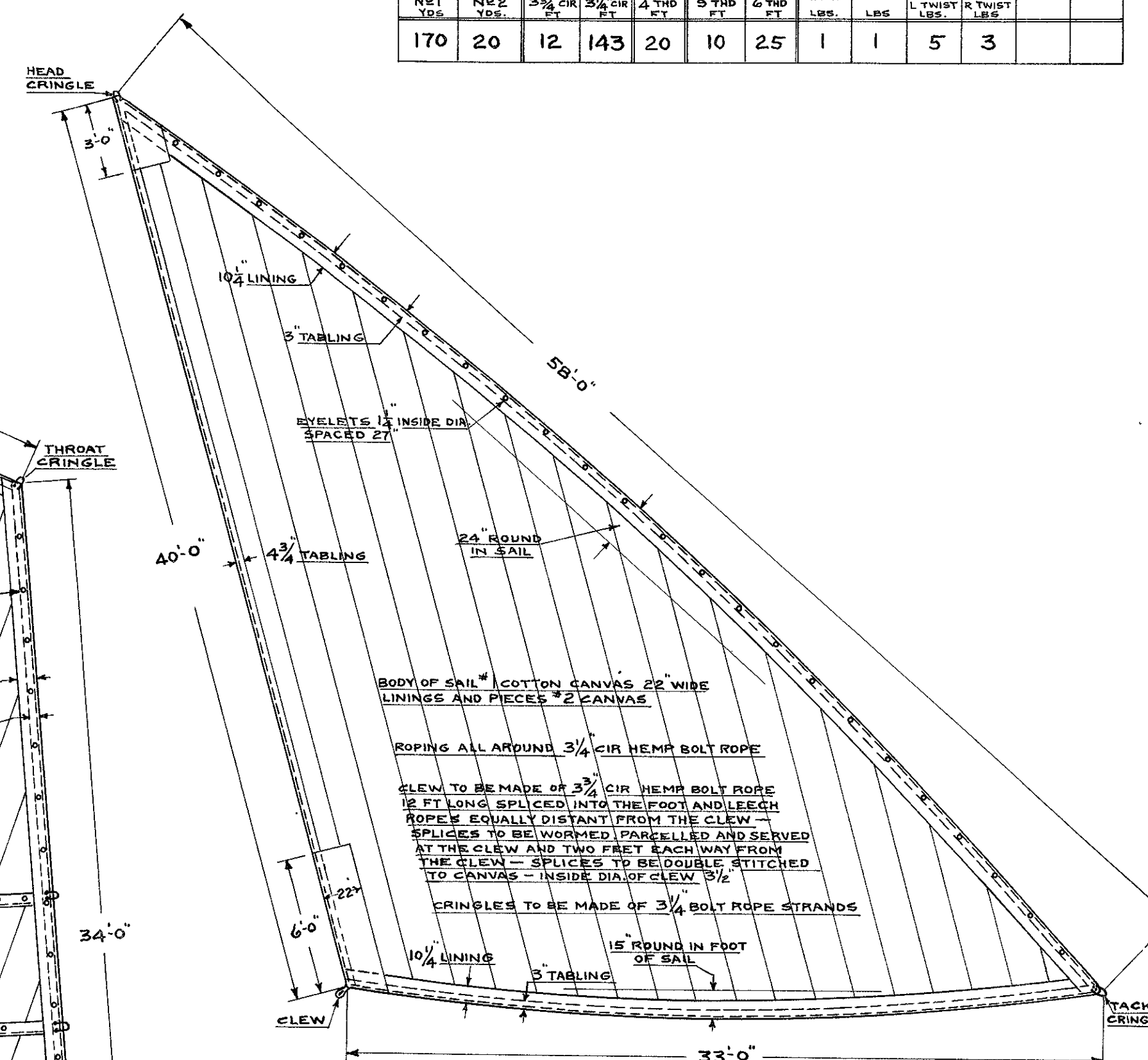
MATERIAL REQUIRED FOR ONE STAYSAIL									
CANVAS	HEMP BOLT ROPE	HEMP ROPE	MANILA ROPE	SPUN YARN	MARLINE	TWINE	TWINE	TWINE	TWINE
NE 1	3 1/2" CIR	3 1/2" CIR	4 THD	5 THD	6 THD	6 PLY	6 PLY	6 PLY	6 PLY
YDS.	FT.	FT.	FT.	FT.	FT.	LBS.	LBS.	LBS.	LBS.
170	20	12	143	20	10	25	1	1	5



MIZZEN GAFF TOPSAIL
STBD. SIDE OF SAIL SHOWN
SCALE 3/16" = 1 FT.



SPANKER
STBD. SIDE OF SAIL SHOWN
SCALE 3/16" = 1 FT.



FORE TOPGALLANT STAYSAIL
STBD. SIDE OF SAIL SHOWN
SCALE 3/16" = 1 FT.

NOTES FOR ALL SAILS
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 2- SAILS TO BE EITHER HAND OR MACHINE STITCHED - NO METAL FITTINGS.
 3- ALL CLOTHS OF SAILS TO BE IN ONE PIECE AND NOT LASHED OR BUTTED IN.
 4- IN SEWING ON THE BOLT ROPE SLACK CLOTH TO BE TAKEN UP ON THE FOOT, SPLICES TO BE CLEAR OF CRINGLES.

DRAWN AND TRACED BY C. S. ADAMS
SUPERVISING DRAFTSMAN - 1-23-30

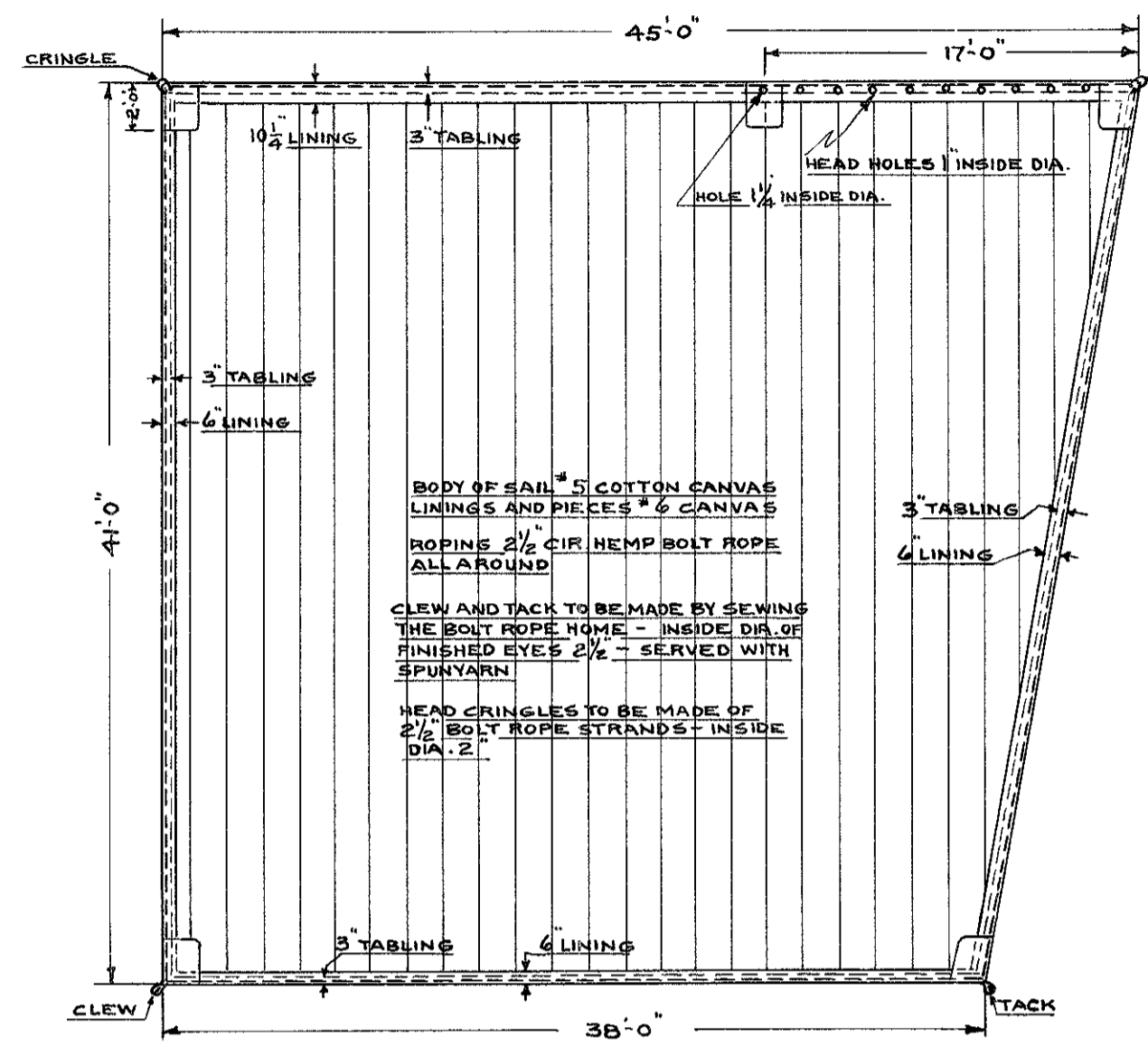
THIS PLAN HAS BEEN DRAWN, AFTER CONSIDERABLE RESEARCH, FROM INFORMATION CONTAINED IN OLD BOOKS, RECORDS AND PRINTS

U.S. FRIGATE CONSTITUTION
DETAILS OF SAILS
MIZZEN GAFF TOPSAIL - SPANKER
FORE TOPGALLANT STAYSAIL
 RESTORATION 1927
 NAVY YARD BOSTON JANUARY 1930

APPROVED FOR MANAGER

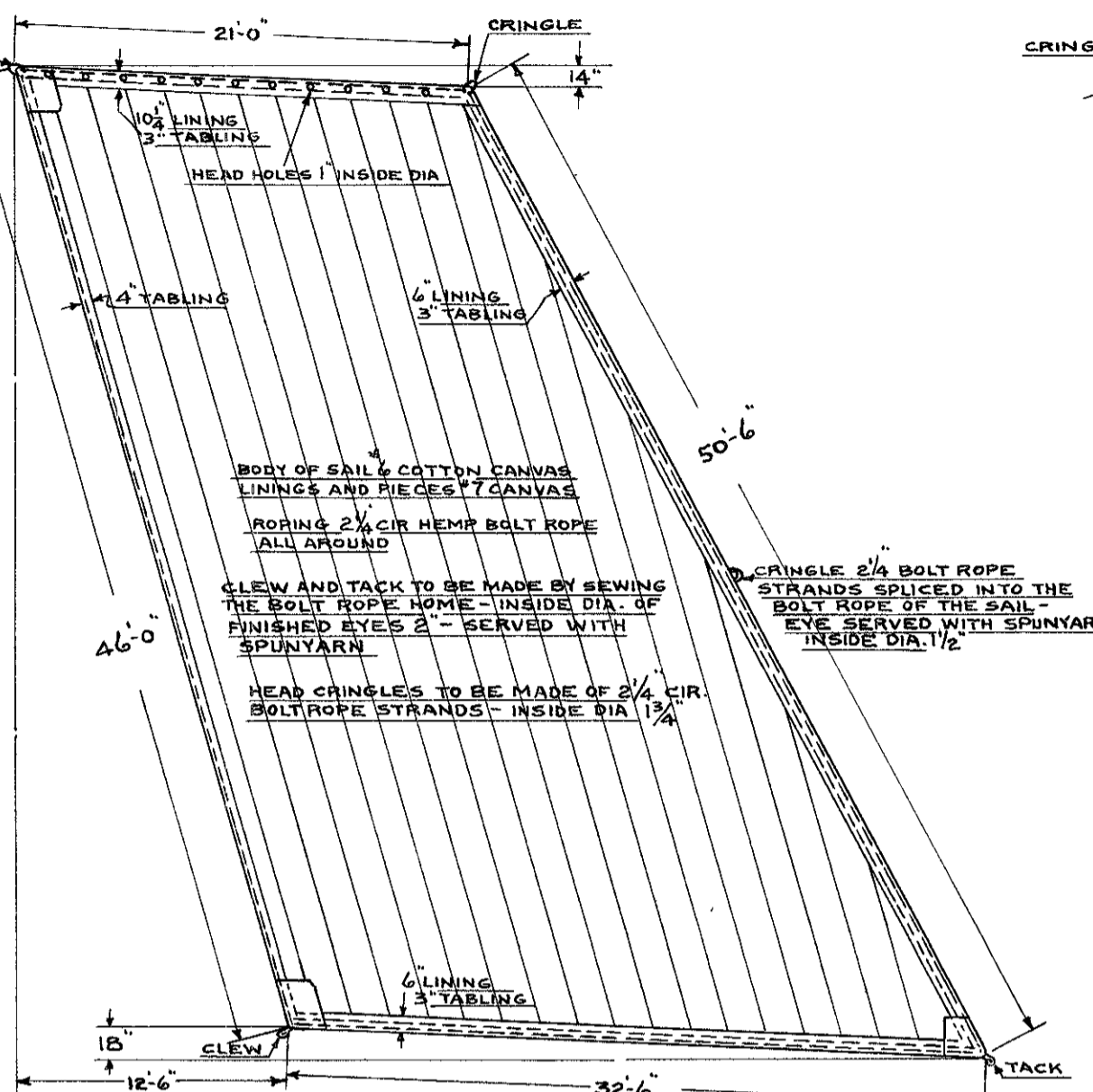
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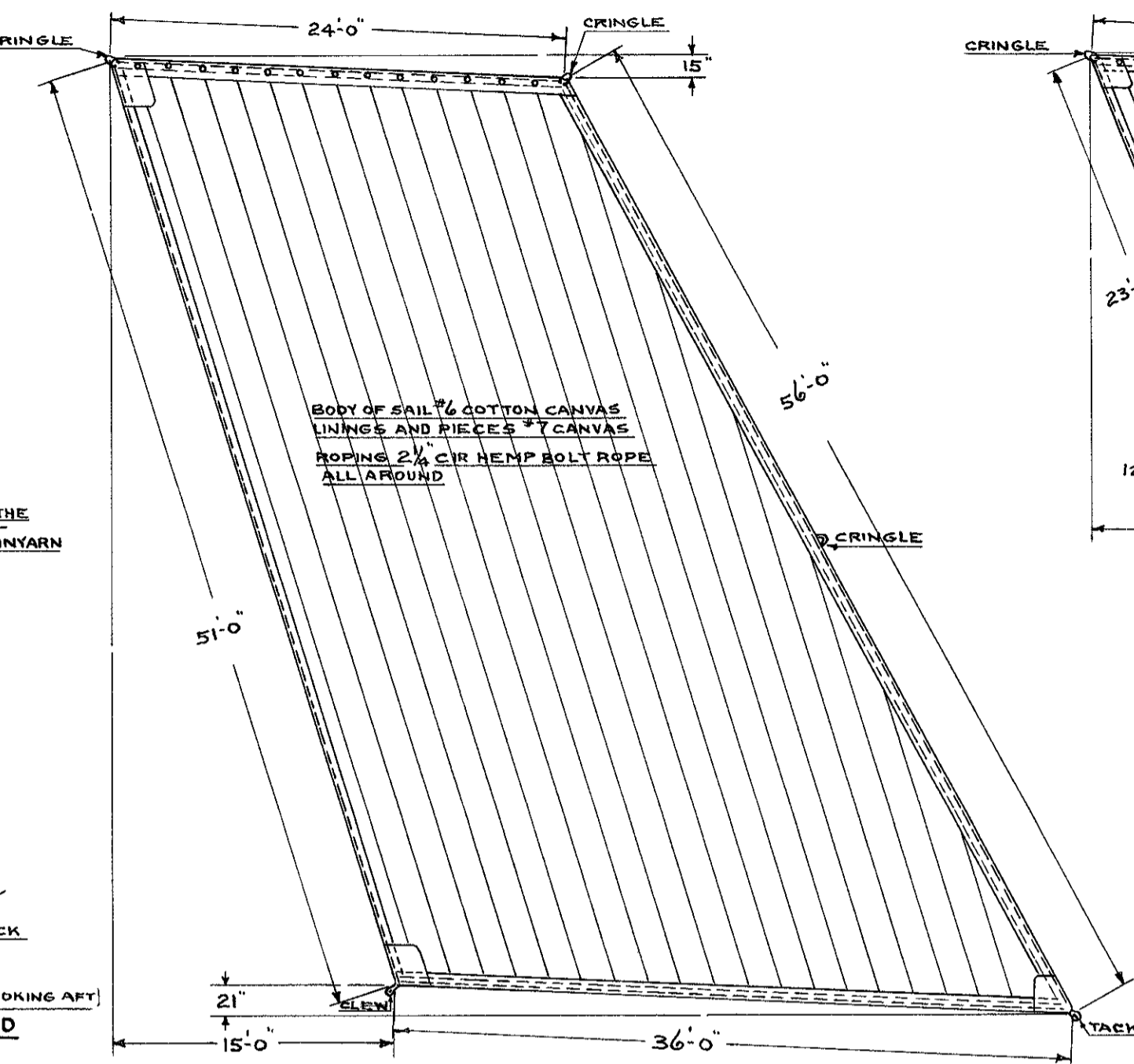
PORT LOWER STUDDING SAIL SHOWN (LOOKING AFT)
STBD. " " " " TO OTHER HAND
SCALE $\frac{1}{8}$ = 1 FT.

MATERIAL REQUIRED FOR TWO LOWER STUDDING SAILS									
CANVAS	HEMP BOLT ROPE	HEMP ROPE	MANILA ROPE	SPUN YARN	MARLINE	TWINE	TWINE	TWINE	TWINE
NS 8 YDS	NS 6 YDS	4 THD FT	5 THD FT	6 THD FT	LBS	6 PLY L TWIST LBS	6 PLY R TWIST LBS	6 PLY L TWIST LBS	6 PLY R TWIST LBS
726	68	370	10	25	25	1	1	20	12



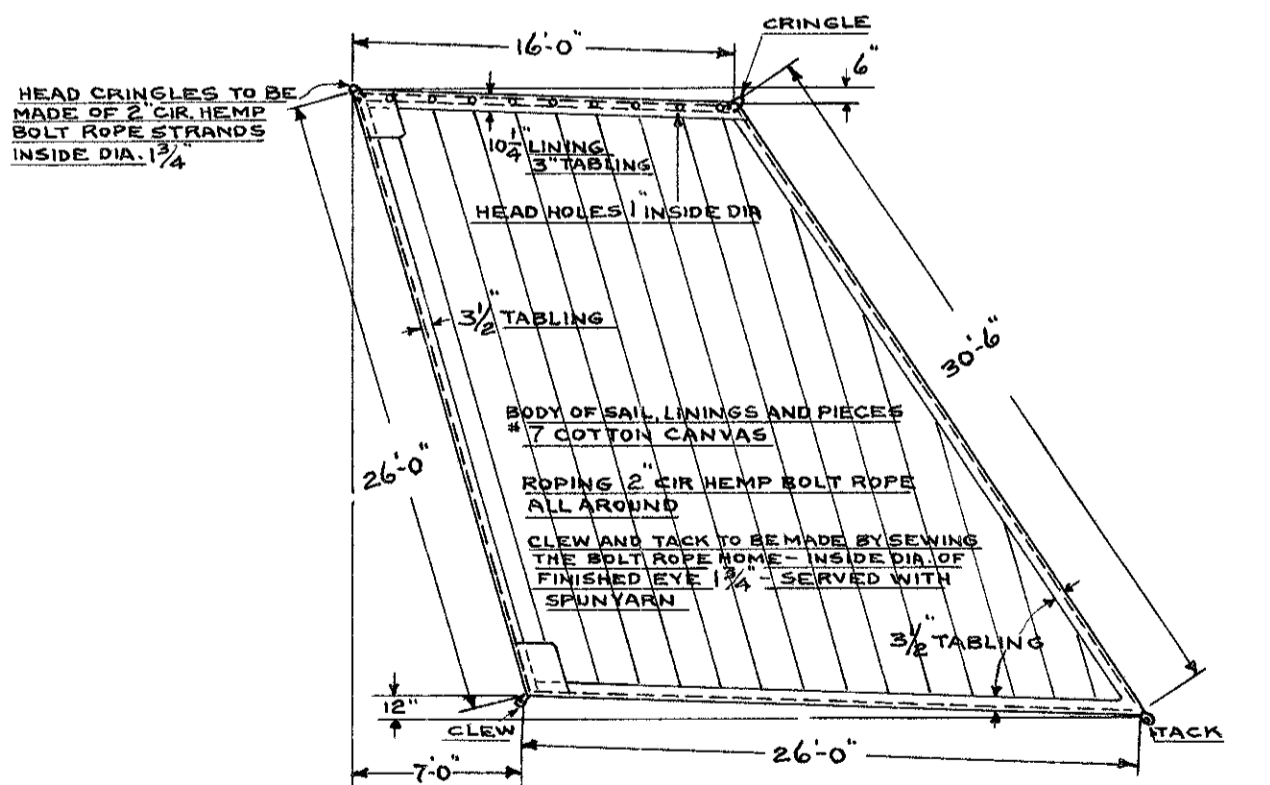
PORT FORE TOPMAST STUDDING SAIL SHOWN (LOOKING AFT)
STBD. " " " " TO OTHER HAND
SCALE $\frac{1}{8}$ = 1 FT.

MATERIAL REQUIRED FOR TWO FORE TOPMAST STUDDING SAILS									
CANVAS	HEMP BOLT ROPE	HEMP ROPE	MANILA ROPE	SPUN YARN	MARLINE	TWINE	TWINE	TWINE	TWINE
NS 6 YDS	NS 7 YDS	4 THD FT	5 THD FT	6 THD FT	LBS	6 PLY L TWIST LBS	6 PLY R TWIST LBS	6 PLY L TWIST LBS	6 PLY R TWIST LBS
520	35	350	10	25	25	1	1	14	8



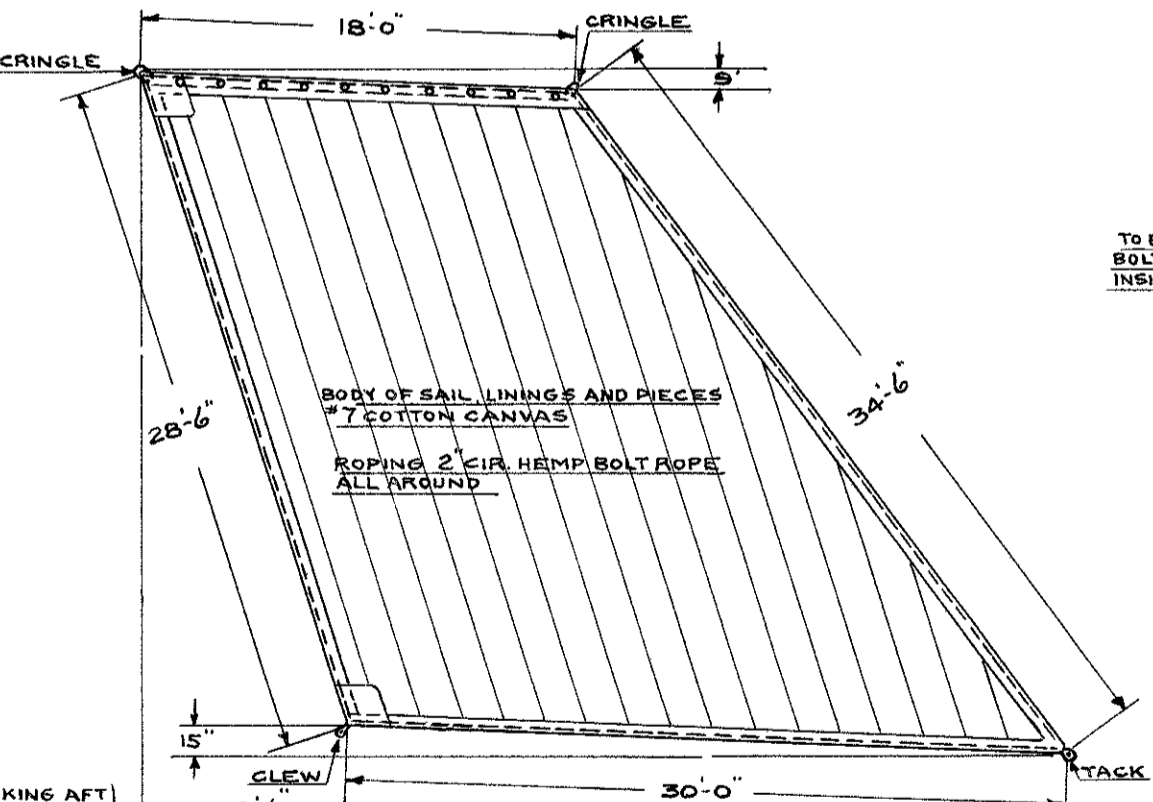
PORT MAIN TOPMAST STUDDING SAIL SHOWN (LOOKING AFT)
STBD. " " " " TO OTHER HAND
CONSTRUCTION SAME AS FORE TOPMAST STUDDING SAIL
SCALE $\frac{1}{8}$ = 1 FT.

MATERIAL REQUIRED FOR TWO MAIN TOPMAST STUDDING SAILS									
CANVAS	HEMP BOLT ROPE	HEMP ROPE	MANILA ROPE	SPUN YARN	MARLINE	TWINE	TWINE	TWINE	TWINE
NS 6 YDS	NS 7 YDS	4 THD FT	5 THD FT	6 THD FT	LBS	6 PLY L TWIST LBS	6 PLY R TWIST LBS	6 PLY L TWIST LBS	6 PLY R TWIST LBS
630	34	385	10	25	25	1	1	18	10



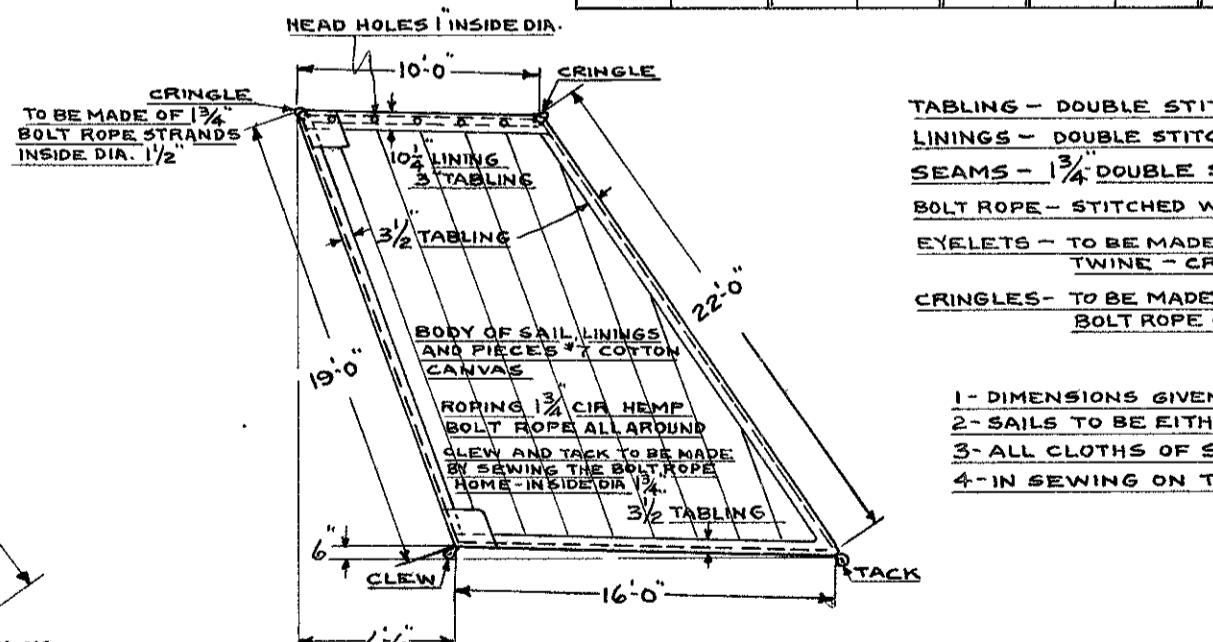
PORT FORE TOPGALLANT STUDDING SAIL SHOWN (LOOKING AFT)
STBD. " " " " TO OTHER HAND
SCALE $\frac{1}{8}$ = 1 FT.

MATERIAL REQUIRED FOR TWO FORE TOPGALLANT STUDDING SAILS									
CANVAS	HEMP BOLT ROPE	HEMP ROPE	MANILA ROPE	SPUN YARN	MARLINE	TWINE	TWINE	TWINE	TWINE
NS 7 YDS	2 CIR FT	4 THD FT	5 THD FT	6 THD FT	LBS	6 PLY L TWIST LBS	6 PLY R TWIST LBS	6 PLY L TWIST LBS	6 PLY R TWIST LBS
246	230	10	15	20	1	6	4		



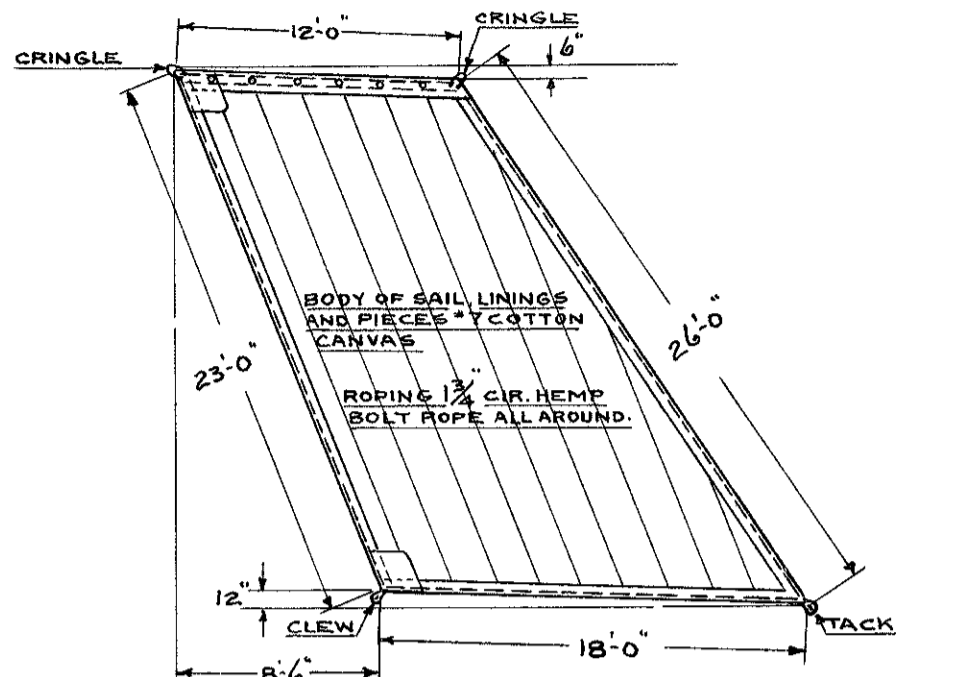
PORT MAIN TOPGALLANT STUDDING SAIL SHOWN (LOOKING AFT)
STBD. " " " " TO OTHER HAND
CONSTRUCTION SAME AS FORE TOPGALLANT STUDDING SAIL
SCALE $\frac{1}{8}$ = 1 FT.

MATERIAL REQUIRED FOR TWO MAIN TOPGALLANT STUDDING SAILS									
CANVAS	HEMP BOLT ROPE	HEMP ROPE	MANILA ROPE	SPUN YARN	MARLINE	TWINE	TWINE	TWINE	TWINE
NS 7 YDS	2 CIR FT	4 THD FT	5 THD FT	6 THD FT	LBS	6 PLY L TWIST LBS	6 PLY R TWIST LBS	6 PLY L TWIST LBS	6 PLY R TWIST LBS
300	252	10	15	20	1	7	5		



PORT FORE ROYAL STUDDING SAIL SHOWN (LOOKING AFT)
STBD. " " " " TO OTHER HAND
SCALE $\frac{1}{8}$ = 1 FT.

MATERIAL REQUIRED FOR TWO FORE ROYAL STUDDING SAILS									
CANVAS	HEMP BOLT ROPE	HEMP ROPE	MANILA ROPE	SPUN YARN	MARLINE	TWINE	TWINE	TWINE	TWINE
NS 7 YDS	1 1/2 CIR FT	4 THD FT	5 THD FT	6 THD FT	LBS	6 PLY L TWIST LBS	6 PLY R TWIST LBS	6 PLY L TWIST LBS	6 PLY R TWIST LBS
118	160	35	1	3	2				



PORT MAIN ROYAL STUDDING SAIL SHOWN (LOOKING AFT)
STBD. " " " " TO OTHER HAND
CONSTRUCTION SAME AS FORE ROYAL STUDDING SAIL
SCALE $\frac{1}{8}$ = 1 FT.

MATERIAL REQUIRED FOR TWO MAIN ROYAL STUDDING SAILS					
CANVAS	HEMP BOLT ROPE	HEMP ROPE	MANILA ROPE	SPUN YARN	TWINE
NS 7 YDS	1 1/2 CIR FT	4 THD FT	5 THD FT	6 THD FT	6 PLY L TWIST LBS
156	180	20	1	4	2

NOTES FOR ALL SAILS
 1- DIMENSIONS GIVEN ARE FOR THE COMPLETED SAILS - NO ALLOWANCE TO BE MADE FOR STRETCHING
 2- SAILS TO BE EITHER HAND OR MACHINE STITCHED - NO METAL FITTINGS
 3- ALL CLOTHS OF SAILS TO BE IN ONE PIECE, AND NOT LASHED OR BUTTED IN
 4- IN SEWING ON THE BOLT ROPE SLACK CANVAS SHOULD BE TAKEN UP ROUND THE SAIL
 TABLING - DOUBLE STITCHED WITH 6 PLY COTTON TWINE - 5 STITCHES PER INCH
 LININGS - DOUBLE STITCHED INNER EDGE WITH 6 PLY COTTON TWINE - 5 STITCHES PER INCH - OUTER EDGE BASTED
 SEAMS - 1 1/2" DOUBLE STITCHED EACH EDGE WITH 6 PLY COTTON TWINE - 5 STITCHES PER INCH
 BOLT ROPE - STITCHED WITH 6 PARTS OF 6 PLY COTTON TWINE - ROPING ON AFTER SIDE OF SAILS
 EYELETS - TO BE MADE OF 6 THD MANILA GROMMETS (ONE STRAND) STITCHED WITH 6 PARTS OF 6 PLY COTTON TWINE - CRINGLE EYELETS TO BE MADE OF 9 THD MANILA GROMMETS (ONE STRAND)
 CRINGLES - TO BE MADE OF BOLT ROPE STRANDS PASSED THRU THE EYELETS IN THE TABLING, AROUND THE BOLT ROPE OF THE SAIL AND THE ENDS WORKED INTO THE BOLT ROPE - EYE SERVED WITH SPUNYARN

U.S. FRIGATE CONSTITUTION
DETAILS OF SAILS
STUDDING SAILS
 RESTORATION 1927
 NAVY YARD BOSTON JANUARY 1930

APPROVED FOR MANAGER
John A. Lord
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PLAN NO 18402 - SHEET NO 13

DRAWN AND TRACED BY C. S. ADAMS
 SUPERVISING DRAFTSMAN - 1-31-30

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