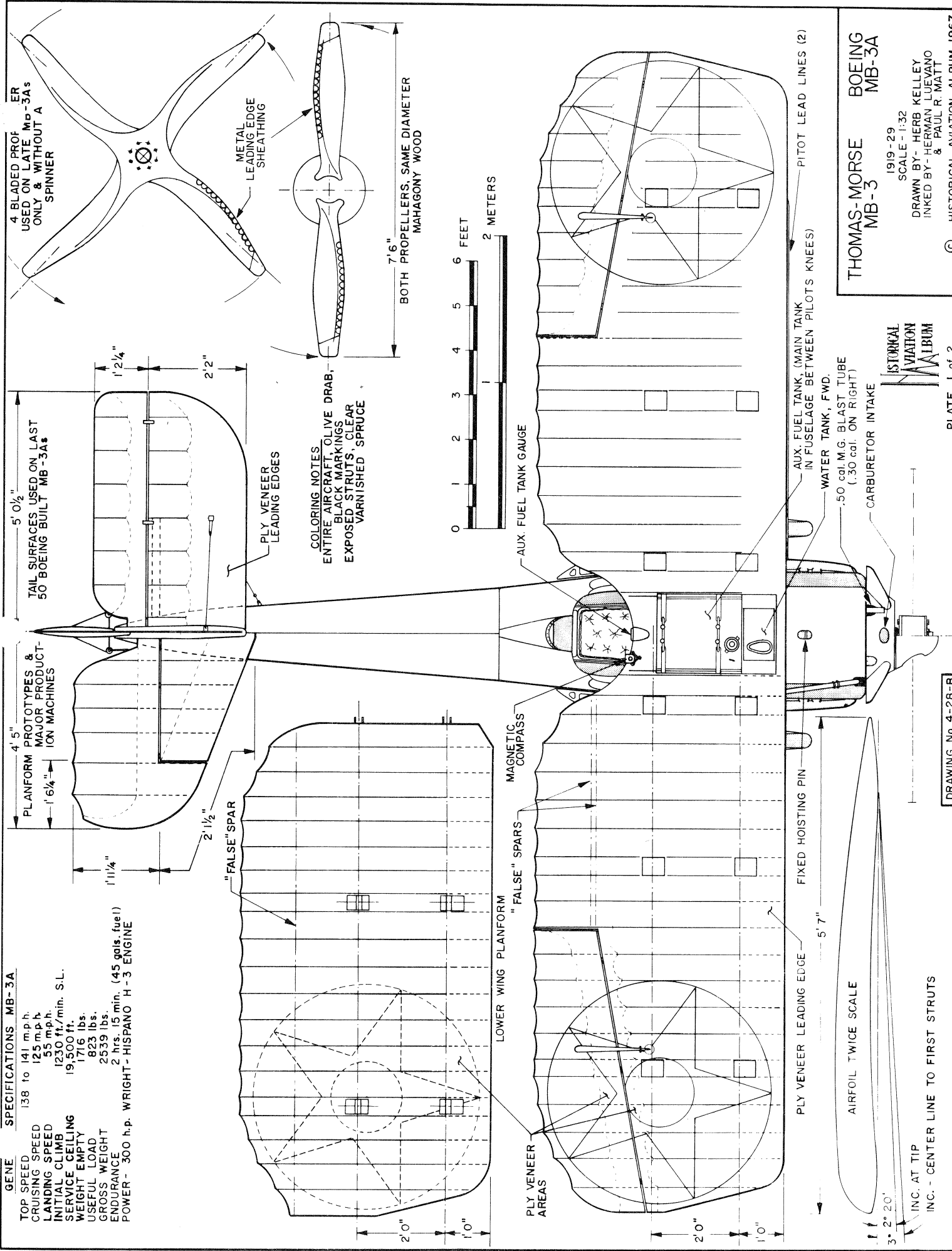


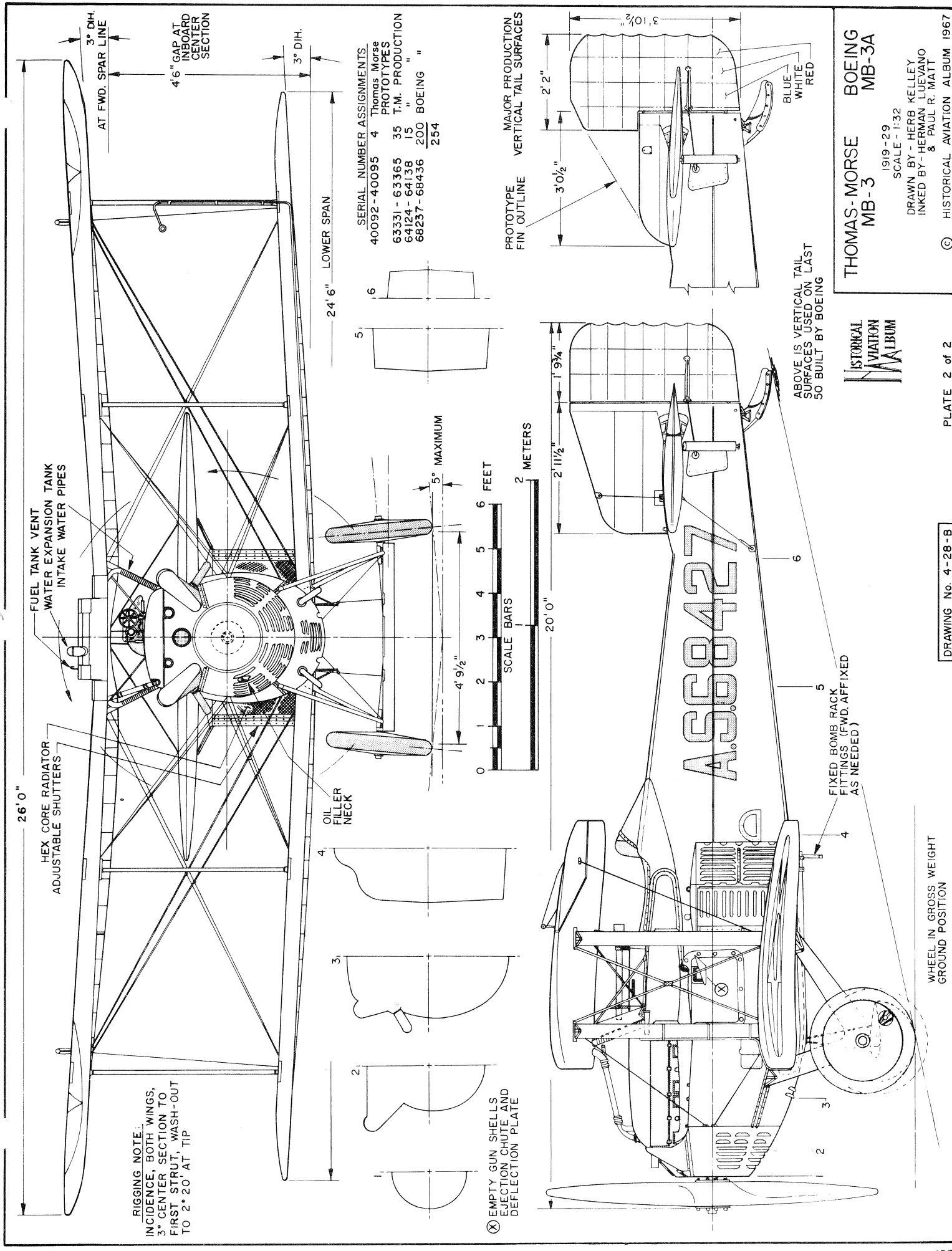
**GENE SPECIFICATIONS MB-3A**

TOP SPEED 138 to 141 m.p.h.  
 CRUISING SPEED 125 m.p.h.  
 LANDING SPEED 55 m.p.h.  
 INITIAL CLIMB 1230 ft./min. S.L.  
 SERVICE CEILING 19,500 ft.  
 WEIGHT EMPTY 1716 lbs.  
 USEFUL LOAD 823 lbs.  
 GROSS WEIGHT 2539 lbs.  
 ENDURANCE 2 hrs. 15 min. (45 gals. fuel)  
 POWER - 300 h.p. WRIGHT-HISPANO H-3 ENGINE



**THOMAS-MORSE BOEING MB-3**

1919-29  
 SCALE - 1:32  
 DRAWN BY - HERB KELLEY  
 INKED BY - HERMAN LUJEVANO & PAUL R. WATT



**RIGGING NOTE:**  
 INCIDENCE, BOTH WINGS,  
 3° CENTER SECTION TO  
 FIRST STRUT, WASH-OUT  
 TO 2° 20' AT TIP

SERIAL NUMBER	ASSIGNMENTS
40092 - 40095	4 Thomas Morse PROTOTYPES
63331 - 63365	35 T.M. PRODUCTION "
64124 - 64138	15 " "
68237 - 68436	200 BOEING " "
	254

⊗ EMPTY GUN SHELLS  
 EJECTION CHUTE AND  
 DEFLECTION PLATE

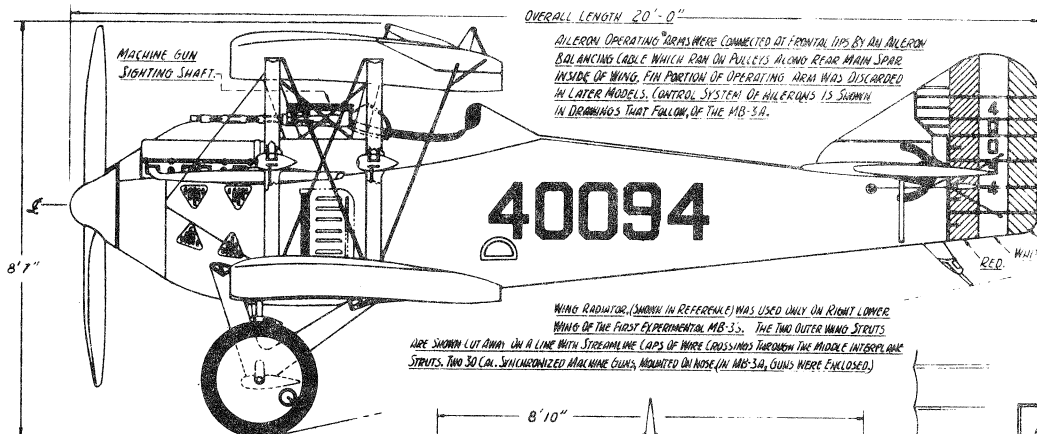
ABOVE IS VERTICAL TAIL  
 SURFACES USED ON LAST  
 50 BUILT BY BOEING



**THOMAS-MORSE MB-3**  
**BOEING MB-3A**

1919-29  
 SCALE - 1:32

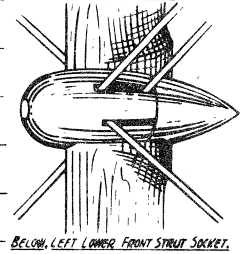
DRAWN BY - HERB KELLEY  
 INKED BY - HERMAN LUEVANO  
 & PAUL R. MATT



AIR AGE INC 5511TH AVE NEW YORK 17 N.Y.  
 SCALE: 1/4" = 1'-0" GENERAL ARRANGEMENTS  
 FULL SIZE: 3/4" = 1'-0" THOMAS MORSE EXPERIMENTAL  
 DRAWN BY: Joseph Nieto  
 TYPE MB-3

WING RADIATOR (SHOWN IN REFERENCE) WAS USED ONLY ON RIGHT LOWER WING OF THE FIRST EXPERIMENTAL MB-3'S. THE TWO OUTER WING STRUTS ARE SHOWN CUT AWAY ON A LINE WITH STREAMLINE CAPS OF WING CROSSINGS THROUGH THE MIDDLE INTERPLANE STRUTS. TWO 30 CAL. SYNCHRONIZED MACHINE GUNS, MOUNTED ON NOSE (IN MB-3A, GUNS WERE ENCLOSED)

DETAIL C Streamlining Cap at Wire Crossing Through Middle Interplane Struts.



DETAIL D Below, Left Lower Front Strut Socket.

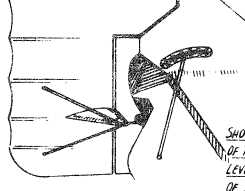
COMMITTEE FOR PASSAGE OF AILERON CONTROLS & CONTROL CABLE. PLAN REFERENCE OF STREAMLINE WIRES, CABLES, LEADINGS, WIRES, CABLES, STREAMLINE CAPS (SEE DETAIL C) DISCARDED IN SUCCESSIVE THOMAS MORSE MB-3'S. AILERON IN THE PROTOTYPE TO STREAMLINE WIRE, WIRE, CABLES, & STRUT INTERFERENCES. PLAN REFERENCE OF AILERON, MB-3'S USED WIRE STREAMLINED TYPE ON TOP SIDE OF BOLT. BOLT PLACES ON SPINES AT ALL INTERPLANE STRUT POINTS OF ATTACHMENT.

LEAD WOLDS FOR PILOT MOUNTING SHIP UNUSUAL LEATHER SEAT CUSHION. UNUSUAL LEATHER BACK REST. UNUSUAL LEATHER HEADREST. SECTION COVERED WITH PLYWOOD & FABRIC. MANUALLY BALANCED CONTROL. STABILIZER & ELEVATOR WIRE FRAME (CONTD.) REAR HALF OF FUSELAGE WIRE FRAME (CONTD.)

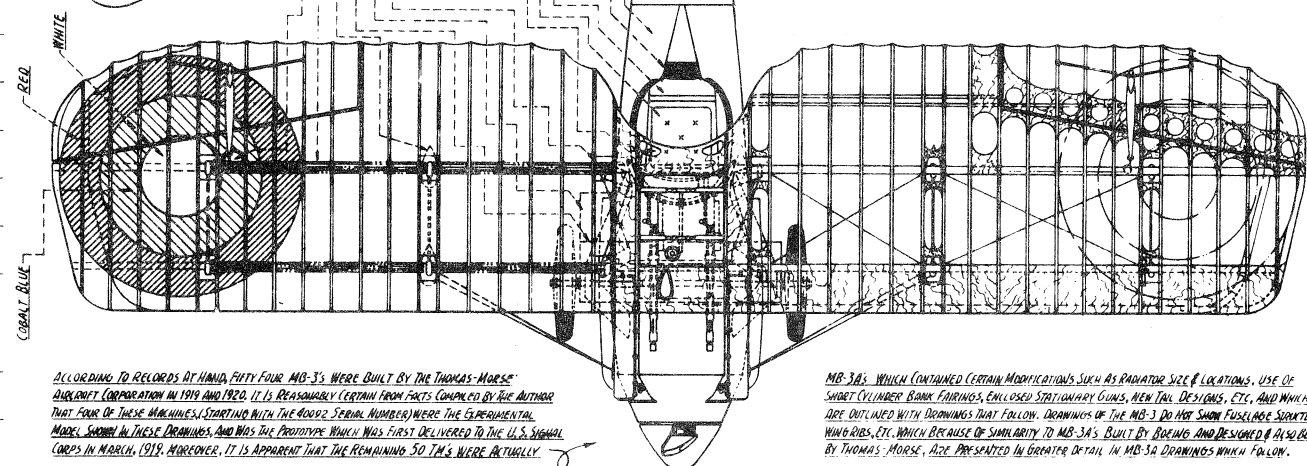
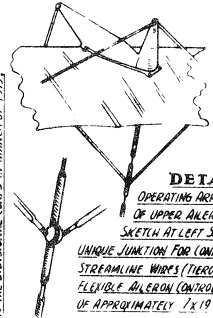
OPERATIONS OF THE THOMAS MORSE PROTOTYPE MB-3  
 UPPER WING SPAN 26'-0" (SAME AS TYPE MB-3A)  
 LOWER " 24'-6"  
 OVERALL LENGTH 20'-0"  
 HEIGHT 8'-7"  
 INCUBATOR APPROX. 3 TO 4 HOURS (2 COOL TIPS)  
 LOWER WING SPAN (SAME AS TYPE MB-3A)  
 OVERALL (BOTH WINGS SAME AS IN MB-3A) 3'

POWERED BY THE 8 CYL V TYPE HISPANO-SUIZA #1 500-300 HP. MAXIMUM SPEED 152 TO 103 MPH. LANDING 35 MPH. RATE OF CLIMB 1000 FT. IN 4 MIN. 52 SEC. GROSS WEIGHT OF SHIP ONE TON. TO 2085 LBS. THE FIRST FOUR THOMAS MORSE MB-3'S WERE DELIVERED TO THE U.S. SIGNAL CORPS IN MARCH OF 1919.

DETAIL A SHOWING THE UNUSUAL ARRANGEMENT OF THE PROTOTYPE MB-3 ELEVATOR LEVER WHICH WAS RUN ON THE INSIDE OF THE VERTICAL FIN.

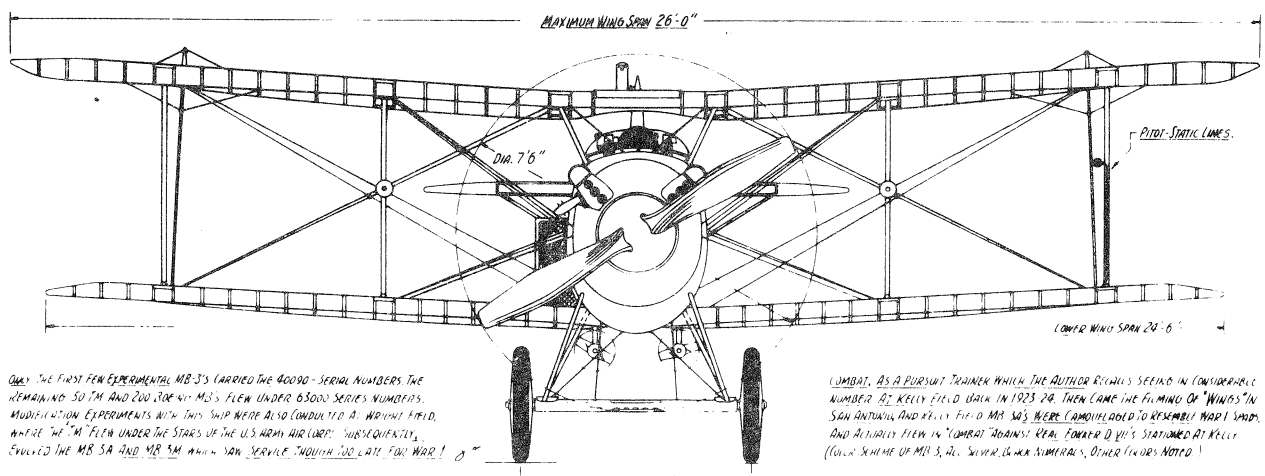


DETAIL B OPERATING ARM ON TOP OF UPPER AILERON. SKETCH AT LEFT SHOWS THE UNIQUE JUNCTION FOR CONNECTING STREAMLINE WIRES (TIED) TO FLEXIBLE AILERON CONTROL CABLES OF APPROXIMATELY 1 X 19 STRANDS.



ACCORDING TO RECORDS AT LEAST FIFTY FOUR MB-3'S WERE BUILT BY THE THOMAS MORSE AIRCRAFT CORPORATION IN 1918 AND 1919. IT IS REASONABLY CERTAIN FROM FACTS COMPILED BY THE AUTHOR THAT FOUR OF THESE MACHINES (STARTING WITH THE 40092 SERIAL NUMBER) WERE THE EXPERIMENTAL MODEL SHOWN IN THESE DRAWINGS AND WAS THE PROTOTYPE WHICH WAS FIRST DELIVERED TO THE U.S. SIGNAL CORPS IN MARCH, 1919. HOWEVER, IT IS APPARENT THAT THE REMAINING 50 74'S WERE ACTUALLY

MB-3A'S WHICH CONTAINED CERTAIN MODIFICATIONS SUCH AS RADIATOR SIZE & LOCATIONS, USE OF SHORT CYLINDER BANK FAIRINGS, ENCLOSED STATIONARY GUNS, NEW TAIL DESIGNS, ETC. AND WHICH ARE OUTLINED WITH DRAWINGS THAT FOLLOW. DRAWINGS OF THE MB-3 DO NOT SHOW FUSELAGE SPURTS, WING RIBS, ETC. WHICH BECAUSE OF SIMILARITY TO MB-3A'S BUILT BY BREGMONT AND DESIGNED & ASSEMBLED BY THOMAS MORSE, ARE PRESENTED IN GREATER DETAIL IN MB-3A DRAWINGS WHICH FOLLOW.



ONLY THE FIRST FEW EXPERIMENTAL MB-3'S CARRIED THE 40090 SERIAL NUMBERS. THE REMAINING 50 74'S AND 200 74'S MB-3'S FLEW UNDER 65000 SERIES NUMBERS. MODIFICATION EXPERIMENTS WITH THIS SHIP WERE ALSO CONDUCTED AT WRIGHT FIELD, WHERE THE "M" FLEW UNDER THE STARS OF THE U.S. ARMY AIR CORPS. SUBSEQUENTLY, IT JOINED THE MB-3A AND MR-3M WHICH WERE IN SERVICE THROUGHOUT THE WAR!

COMBAT, AS A PURSUIT TRAINER WHICH THE AUTHOR RECALLS SEEING IN COMBAT. NUMBER 121 KEELY FIELD OAK IN 1923. THEN CAME THE FILMING OF "WINGS" IN SAN ANTONIO AND AT WRIGHT FIELD. MR. SA'S WERE CAPTURED TO RESEMBLE MAD I. SA'S, AND ACTUALLY FLEW IN "COMBAT" AGAIN. REAR ENGINE D-11'S STATIONED AT KEELY (COLOR SCHEME OF MB-3, ALL SILVER, IS A NUMERALS, OTHER COLORS NOTED)

TRACK 4 9: WHEELS ARE SHOWN IN RETRACTED POSITION.

