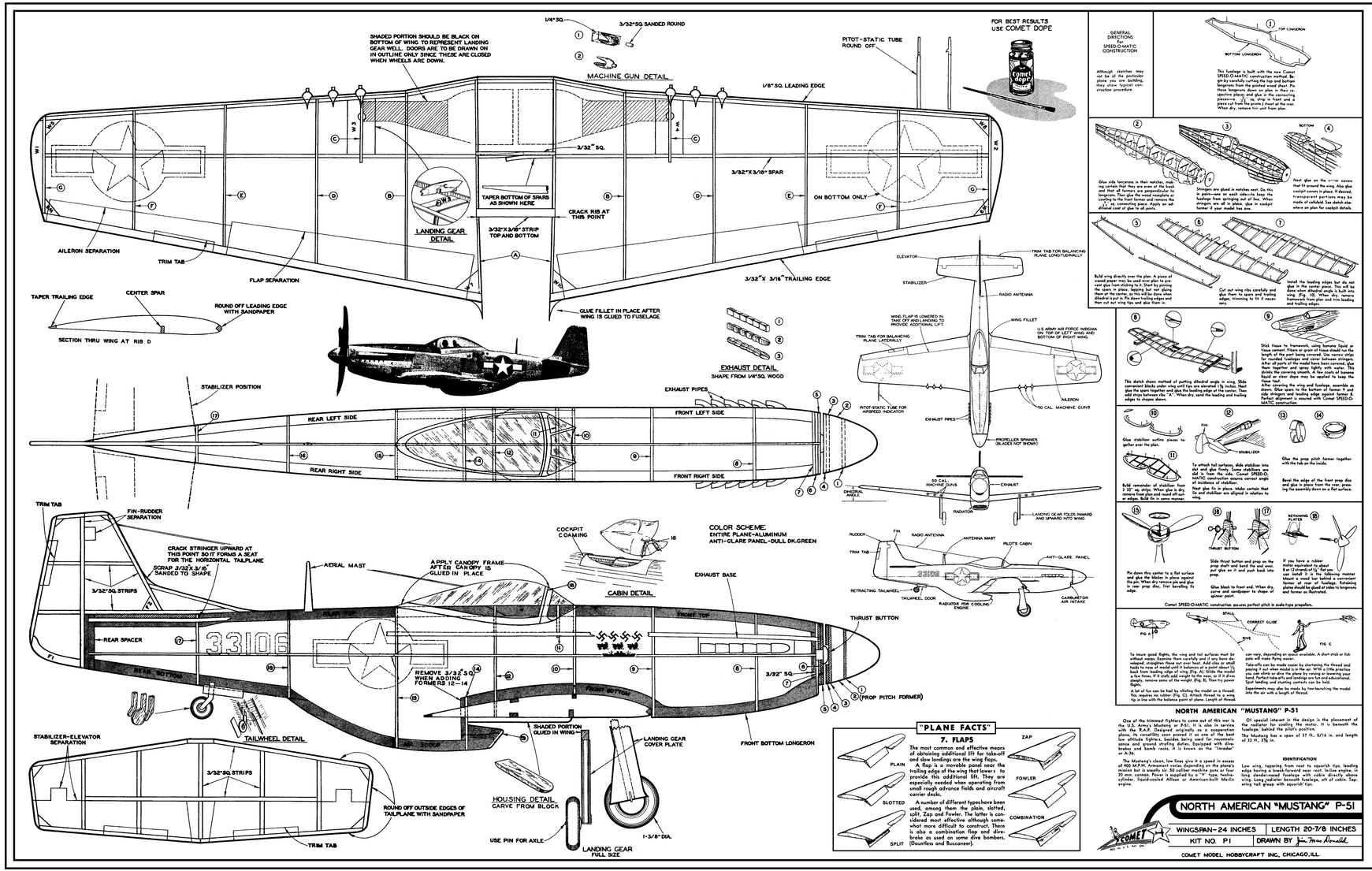
SHADED PORTION SHOULD BE BLACK ON BOTTOM OF WING TO REPRESENT LANDING GEAR WELL. DOORS ARE TO BE DRAWN ON IN OUTLINE ONLY SINCE THESE ARE CLOSED WHEN WHEELS ARE DOWN.
1/4"SQ.
3/32"SQ. SANDED ROUND
MACHINE GUN DETAIL
PITOT-STATIC TUBE ROUND OFF
FOR BEST RESULTS USE COMET DOPE
1/8"SQ. LEADING EDGE
3/32"SQ.
3/32"X3/16" SPAR
ON BOTTOM ONLY
TAPER BOTTOM OF SPARS AS SHOWN HERE
CRACK RIB AT THIS POINT
3/32"X3/8" STRIP TOP AND BOTTOM
LANDING GEAR DETAIL
AILERON SEPARATION
TRIM TAB
FLAP SEPARATION
3/32"X 3/16" TRAILING EDGE
GLUE FILLET IN PLACE AFTER WING IS GLUED TO FUSELAGE
TAPER TRAILING EDGE
CENTER SPAR
ROUND OFF LEADING EDGE WITH SANDPAPER
SECTION THRU WING AT RIB D
EXHAUST DETAIL
SHAPE FROM 1/4"SQ. WOOD
STABILIZER POSITION
EXHAUST PIPES
REAR LEFT SIDE
FRONT LEFT SIDE
REAR RIGHT SIDE
FRONT RIGHT SIDE
ELEVATOR
STABILIZER
TRIM TAB FOR BALANCING PLANE LONGITUDINALLY
RADIO ANTENNA
WING FILLET
WING FLAP IS LOWERED IN TAKE OFF AND LANDING TO PROVIDE ADDITIONAL LIFT
TRIM TAB FOR BALANCING PLANE LATERALLY
U.S. ARMY AIR FORCE INSIGNA ON TOP OF LEFT WING AND BOTTOM OF RIGHT WING.
AILERON
.50 CAL. MACHINE GUNS
PITOT-STATIC TUBE FOR AIRSPEED INDICATOR
EXHAUST PIPES
PROPELLER SPINNER (BLADES NOT SHOWN)
.50 CAL. MACHINE GUNS
EXHAUST
OIL COOLER
RADIATOR
LANDING GEAR FOLDS INWARD AND UPWARD INTO WING
TRIM TAB
FIN-RUDDER SEPARATION
CRACK STRINGER UPWARD AT THIS POINT SO IT FORMS A SEAT FOR THE HORIZONTAL TAILPLANE
SCRAP 3/32"X3/8" SANDED TO SHAPE
3/32"SQ. STRIPS
AERIAL MAST
APPLY CANOPY FRAME AFTER CANOPY IS GLUED IN PLACE
COCKPIT COAMING
CABIN DETAIL
COLOR SCHEME:
ENTIRE PLANE-ALUMINUM
ANTI-GLARE PANEL-DULL DK.GREEN
EXHAUST BASE
RUDDER
FIN
RADIO ANTENNA
ANTENNA MAST
PILOT'S CABIN
TRIM TAB
ANTI-GLARE PANEL
RETRACTING TAILWHEEL
TAILWHEEL DOOR
RADIATOR FOR COOLING ENGINE
CARBURETOR AIR INTAKE
THRUST BUTTON
REAR SPACER
33106
REAR BOTTOM
FRONT TOP
REMOVE 3/32"SQ. WHEN ADDING FORMERS 12-14
3/32" SQ.
(PROP PITCH FORMER)
FRONT BOTTOM
AIR SCOOP
TAILWHEEL DETAIL
STABILIZER-ELEVATOR SEPARATION
3/32"SQ. STRIPS
ROUND OFF OUTSIDE EDGES OF TAILPLANE WITH SANDPAPER
TRIM TAB
HOUSING DETAIL
CARVE FROM BLOCK
USE PIN FOR AXLE
LANDING GEAR COVER PLATE
1-3/8" DIA.
LANDING GEAR FULL SIZE
FRONT BOTTOM LONGERON
GENERAL DIRECTIONS for SPEED-O-MATIC CONSTRUCTION
Although sketches may not be of the particular plane you are building, they show typical construction procedure.
TOP LONGERON
BOTTOM LONGERON
This fuselage is built with the new Comet SPEED-O-MATIC construction method. Begin by carefully cutting the top and bottom longerons from the printed wood sheet. Fit these longerons down on plan in their respective places and glue in the connecting formers. Fit the former marked "Top" in place and bend the points down at the rear. When dry, remove this unit from plan.
Glue side longerons in their notches, making certain that they are even at the back and that all formers are perpendicular to longerons. Then glue the wood nosepiece or cowling to the front former, and remove the fuselage from plan. Apply an all-around coat of glue to all joints.
Stringers are glued in notches next. Do this in pairs—one on each sidewalls keep the bottoms even and straight out of line. When dry, remove the fuselage from plan in cockpit former if your model has one.
BOTTOM
Next glue on the former covers that fit around the wing. Also glue cockpit covers in place if desired. transparent portions may be made of celluloid. See sketch also where on plan for cockpit details.
Build wing directly over the plan. A piece of waxed paper may be used over plan to prevent glue from sticking to it. Start by pinning the spars in place, tapping but not gluing them at the center, as this will be done when attached to the fuselage. Glue ribs in place and then cut out wing tips and glue them in.
Cut out wing ribs carefully and glue them to spars and trailing edges, trimming to fit if necessary.
Install the leading edges but do not glue in the center section. Bend down and glue when dihedral angle is built into wing. (Fig. 10). When dry, remove framework from plan and trim leading and trailing edges.
This sketch shows method of putting dihedral angle in wing. Slide center block under wing and pin down firmly in place. Now glue the spars together and glue the leading edge of the center. Then add strips between ribs "A". When dry, sand the leading and trailing edges to shape down.
Stick tissue to framework, using banana liquid or tissue cement. Fibers or grain of tissue should run the length of the part being covered. Use narrow strips on curved fuselages and curve between stringers. After tissue has dried, shrink it with water. Then wipe it down and spray lightly with water. This shrinks the covering smooth. A few coats of banana liquid or clear dope may be applied to keep the covering taut.
After covering the wing and fuselage, assemble as shown. Glue spars to the bottom of former 9 and side stringers and leading edge against former 8. Perfect alignment is ensured with Comet SPEED-O-MATIC construction.
Glue stabilizer outline pieces together over the plan.
PIN
STABILIZER
To attach tail surfaces, slide stabilizer into slot in former 9. Since stabilizer is built on plan, the new Comet SPEED-O-MATIC construction ensures correct angle of incidence of stabilizer.
Build remainder of stabilizer from 3/32" sq. strips. When glue is dry remove from plan and round off outer edges. Build fin in same manner.
Next glue fin in place. Make certain that fin and stabilizer are aligned in relation to wing.
Glue the prop pitch former together with the tab on the inside.
Bend the edge of the front prop disc and glue in place from the rear, pressing the assembly down on a flat surface.
Pin down this center to a flat surface and glue the blades in place against the pin. When dry remove pin and glue in rear prop disc, first bevelling its edge.
THRUST BUTTON
Slide thrust button and prop on the prop shaft and bend the end over. Put glue on it and push back into prop.
Glue block to front end. When dry, carve and sandpaper to shape of spinner point.
RETAINING PLATES
If you have a rubber motor, cut a piece equivalent to about 8 or 12 strands of 1/4" flat gum.
Install motor in the following manner. Mount a wood bar behind a convenient former at rear of fuselage. Retaining plates should be glued at sides to longerons and former as illustrated.
Comet SPEED-O-MATIC construction assures perfect pitch in scale-type propellers.
FIG. A
STALL
CORRECT GLIDE
DIVE
FIG. C
To insure good flights, the wing and tail surfaces must be without warps. Examine them carefully and if any have developed, straighten them out by bending in the opposite way to one of model until it balances at a point about 1/3 back from leading edge of wing (Fig. A). Glide the model a few times. If it stalls add weight to the nose, or if it dives steeply, remove some of the weight (Fig. B). Then try power flight.
A lot of fun can be had by stickling the model on a thread. Attach a hook to the tail post. Fly the model in a circle and tip in line with the balance point of plane. Length of thread will vary, depending on space available. A short stick or fish pole will make flying easier.
Take-offs can be made easier by shortening the thread and paying it out when model is in the air. With a little practice and patience, the model can be made to perform almost anything. Perfect take-offs and landings are fun and educational. Spot landing and stunting contests can be held.
Experiments may also be made by tow-launching the model into the air with a length of thread.
NORTH AMERICAN "MUSTANG" P-51
One of the slimmest fighters to come out of this war is the U.S. Army's Mustang or P-51. It is also in service with the R.A.F. Designed originally as a cooperation plane, its versatility soon proved it as one of the best all-purpose fighters. It has been used as a long-range escort and ground strafing dofter. Equipped with dive-brakes and bomb racks, it is known as the "Invader" or Ack.
The Mustang's clean, low lines give it a speed in excess of 400 M.P.H. Armament varies depending on the plane's mission but is usually six .50 caliber machine guns or four 20 mm. cannon. Power is supplied by a "V" type twelve-cylinder, liquid-cooled Allison or American-built Merlin engine.
Of special interest in the design is the placement of the radiator for cooling the motor. It is beneath the fuselage, behind the pilot's position.
The Mustang has a span of 37 ft. 5/16 in. and length of 32 ft. 2¾ in.
IDENTIFICATION
Low wing, tapering from root to squarish tips, leading edge having a break-forward near root. In-line engine, in long slender-nosed fuselage with cable directly above wing. Long radiator beneath fuselage, aft of cable. Tapering tail group with squarish tips.
"PLANE FACTS"
7. FLAPS
The most common and effective means of obtaining additional lift for take-off and slow landings are the wing flaps.
A flap is a movable panel near the trailing edge of the wing that lowers it to provide this additional lift. They are especially needed when operating from small rough advance fields and aircraft carrier decks.
A number of different types have been used, among them the plain, slotted, split, Zap and Fowler. The latter is considered most effective although somewhat more difficult to construct. There is also a combination flap and dive-brake as used on some dive bombers. (Dauntless and Buccaneer).
PLAIN
SLOTTED
SPLIT
ZAP
FOWLER
COMBINATION
NORTH AMERICAN "MUSTANG" P-51
WINGSPAN-24 INCHES
LENGTH 20-7/8 INCHES
KIT NO. P1
DRAWN BY
COMET MODEL HOBBYCRAFT INC., CHICAGO, ILL.
MUSTANG KIT P1 SHEET 4
CANOPY PATTERN
INSTRUMENT PANEL
GLUE RADIATOR TO FORMER 13
GLUE AIR SCOOP TO FORMER 14
FUSELAGE WING SLOT COVERS
WINDSCREEN BRACES
COCKPIT COAMING
PROP PITCH FORMER
MUSTANG KIT NO. P1
MUSTANG KIT P1 SHEET 2
PITOT TUBE
AIR SCOOP
MUSTANG KIT P1 SHEET 1 1/16"
FRONT LEFT SIDE
REAR RIGHT SIDE
FRONT BOTTOM
REAR LEFT SIDE
REAR BOTTOM
AERIAL MAST
RUDDER GUSSETS
FRONT RIGHT SIDE
REAR TOP
REAR
MUSTANG KIT P1 1/16" SHEET
STEEL RETAINING PLATE
THRUST BUTTON
TAILWHEEL DOOR
ELEVATOR GUSSETS
FRONT TOP