

REFERENCE ATT. 7

PART NO. STYLES USED ON

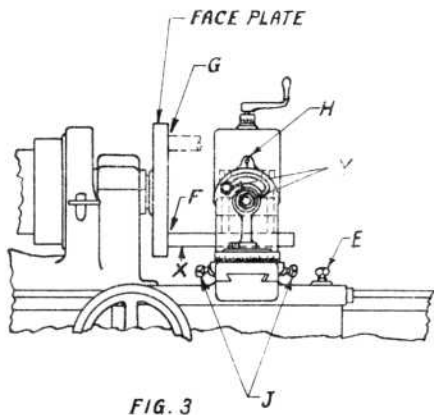
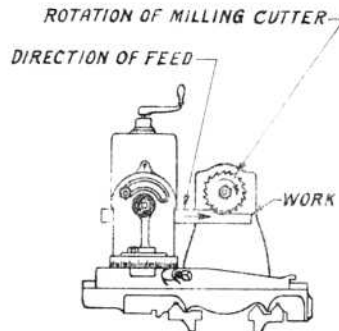


FIG. 3



MILLING IN THE LATHE

- 1- BE SURE THAT ALL DOVETAIL GIB SCREWS ARE TIGHT AND THAT CARRIAGE IS SECURELY LOCKED TO LATHE BED BEFORE STARTING TO TAKE A CUT.
- 2- ALWAYS MAKE SURE THAT THE ROTATION OF THE MILLING CUTTER IS SUCH THAT THE WORK WILL BE FED AGAINST THE CUT AS SHOWN IN ILLUSTRATION.

INSTRUCTIONS FOR MILLING ATTACHMENT SHIPPED WITHOUT LATHE

HOW TO MOUNT AND SQUARE UP A MILLING ATTACHMENT WITH CENTER LINE ON SOUTH BEND LATHE.

- 1ST. REMOVE THE COMPOUND REST TOP WITH SWIVEL FROM THE COMPOUND REST BASE AS SHOWN IN FIG. 1.
- 2ND. DRILL AND TAP 2 HOLES IN THE COMPOUND REST BASE FOR CAP SCREW "X". LOCATE TO SUIT FROM MILLING ATTACHMENT SLOT WHEN SET AS SHOWN IN FIG. 3.
- 3RD. MOUNT THE COMPLETE ATTACHMENT ON THE COMPOUND REST BASE AS SHOWN IN FIG. 2. MOUNT THE LARGE FACE PLATE ON SPINDLE NOSE AS SHOWN AT "A" IN FIG. 2.
- 4TH. PLACE A PARALLEL ON LOWER JAW OF THE MILLING ATTACHMENT VISE AS SHOWN AT "B". THIS PARALLEL IS TO BE A TRIFLE WIDER THAN THE JAW. THE LENGTH OF THE PARALLEL OUGHT TO BE ABOUT THE DIAMETER OF THE FACE PLATE.
- 5TH. RUN CARRIAGE WITH MILLING ATTACHMENT TOWARD THE FACE PLATE, PARALLEL "B" SHOULD LINE UP WITH FACE OF FACE PLATE AND THE INSIDE FACE OF THE MILLING ATTACHMENT VISE AS SHOWN AT "C".
- 6TH. WHEN BOTH THE FACE OF THE FACE PLATE AND THE INSIDE FACE OF THE MILLING ATTACHMENT VISE ARE PERFECTLY PARALLEL WITH THE PARALLEL BAR THEN THE MILLING ATTACHMENT IS SQUARED UP EXACTLY AT 90° WITH THE CENTER LINE OF THE LATHE. SCRIBE A WITNESS OR ZERO LINE ON COMPOUND REST BASE TO COINCIDE WITH THE 90° LINE ON MILLING ATTACHMENT AS SHOWN AT "D". MILLING ATTACHMENT SET TO THIS ZERO LINE TO ANY ANGLE OF DEGREE, AS SHOWN ON MILLING ATT. BASE, WILL BE CORRECT ANGLE WITH CENTER LINE OF LATHE.

LINING UP VERTICAL SLIDE FOR WITNESS MARK.

- 7TH. MOUNT THE MILLING ATTACHMENT AS SHOWN IN FIG. 3. SET AT ZERO LINE ON THE BASE. CLAMP A STEEL BAR "X" IN THE JAWS OF VISE. LOWER THE MILLING ATTACHMENT SLIDE WITH BAR "X" TO POSITION "F" AND RUN LATHE CARRIAGE TOWARD THE FACE PLATE.
- 8TH. ALLOW THE BAR "X" TO BUTT UP AGAINST FACE PLATE WITH A PAPER FEELER BETWEEN END OF BAR AND FACE PLATE. LOCK CARRIAGE AT "E" AND RUN VERTICAL MILLING ATTACHMENT SLIDE UP TO POSITION "G".
- 9TH. WHEN PROPERLY LINED UP THE CLEARANCE BETWEEN FACE PLATE AND THE END OF BAR "X" SHOULD BE THE SAME IN BOTH POSITIONS "F" AND "G", USING PAPER FEELER BETWEEN FACE PLATE AND END OF BAR "X" FOR GAGE.
- 10TH. IT MAY BE NECESSARY TO LOOSEN AND TIGHTEN A FEW TIMES THE CARRIAGE LOCK "E". ALSO SWIVEL BOLTS "Y" ON MILLING ATTACHMENT SO IT CAN BE TAPPED AROUND AND SQUARED UP WITH THE FACE PLATE BEFORE FINAL RESULTS ARE OBTAINED.
- 11TH. WHEN THE ABOVE TESTS SHOW A PERFECTLY PARALLEL LINE UP, SCRIBE A WITNESS OR ZERO LINE ON MILLING ATTACHMENT SADDLE TO COINCIDE WITH ZERO LINE ON MILLING ATTACHMENT ANGLE IRON AS SHOWN AT "H" FIG. 3.
- 12TH. CAUTION! IN MAKING THIS SET UP THE GIBS ON THE COMPOUND REST BASE & ON THE MILLING ATTACHMENT SHOULD BE TAKEN UP. MILLING ATTACHMENT MUST BE FASTENED FIRMLY TO THE COMPOUND REST BASE, WHEN PROPERLY LINED UP, TO SECURE AN ACCURATE ZERO LINE.

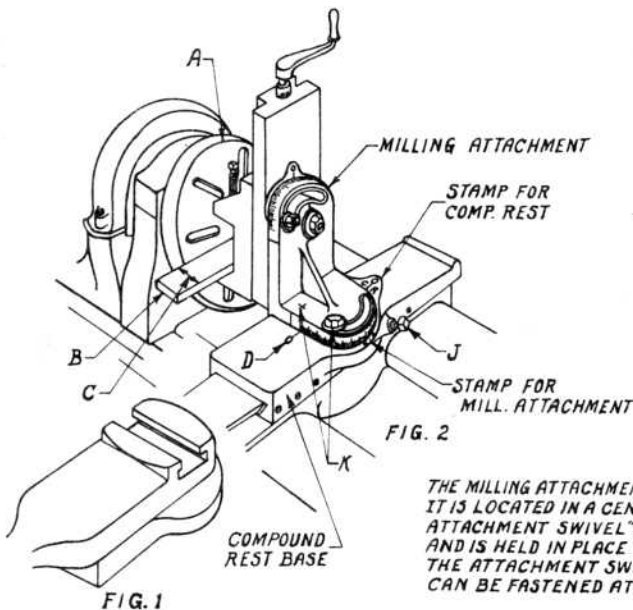
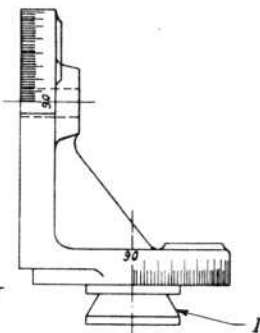


FIG. 2

THE MILLING ATTACHMENT FITS ON TOP OF THE COMPOUND REST BASE. IT IS LOCATED IN A CENTRAL POSITION ON THE BASE BY MILLING ATTACHMENT SWIVEL "I" WHICH FITS INTO THE HOLE IN THE BASE AND IS HELD IN PLACE BY TWO BOLTS "J" AND CAP SCREW "K". THE ATTACHMENT SWIVELS ON THE COMPOUND REST BASE AND CAN BE FASTENED AT ANY ANGLE ON THE HORIZONTAL PLANE.



ALL-LATHE		DWG. NO. ATT. 7	
UNIT FITTING A MILLING ATTACHMENT TO SOUTH BEND LATHE		STYLE	
SCALE NONE			
SOUTH BEND LATHE INC. SOUTH BEND, IND., U.S.A.			
DRAWN BY	CRU. BY	TRACED BY	APPR. BY
C.Z.	R.D.	L.Q.R.	J.H.
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