

Oct. 29, 1929.

W. A. ELLIOT

1,733,532

WOODWORKING MACHINE

Filed June 14, 1927

2 Sheets-Sheet 1

FIG. 1.

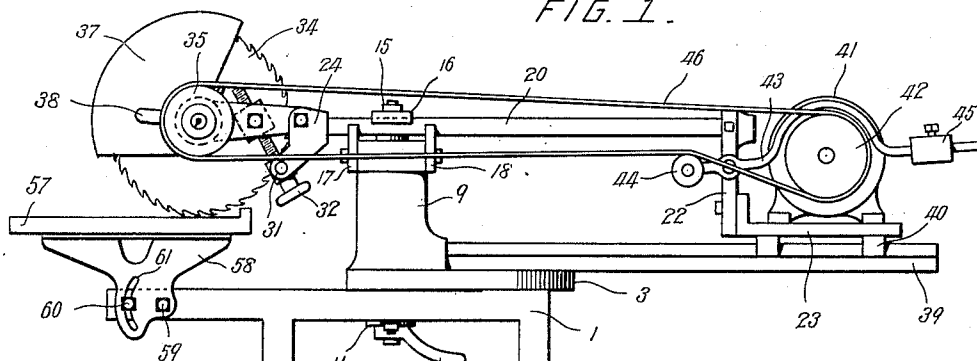


FIG. 2.

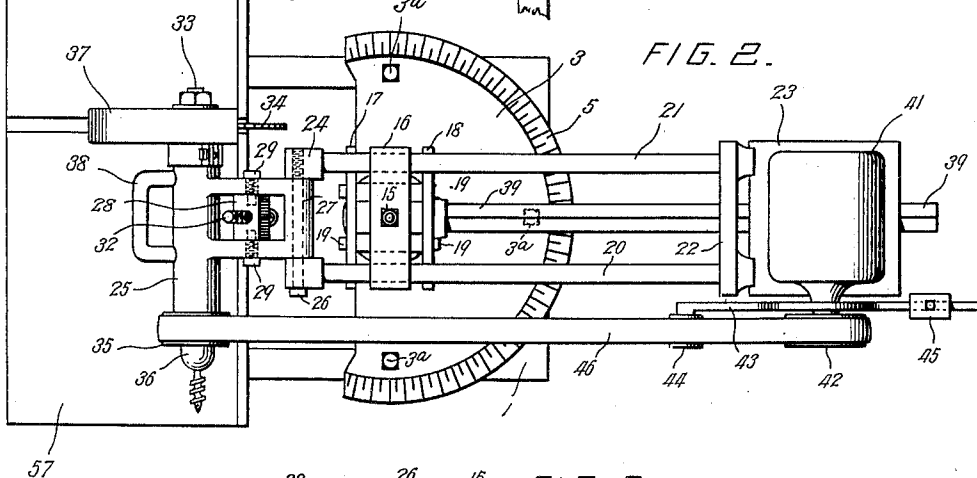
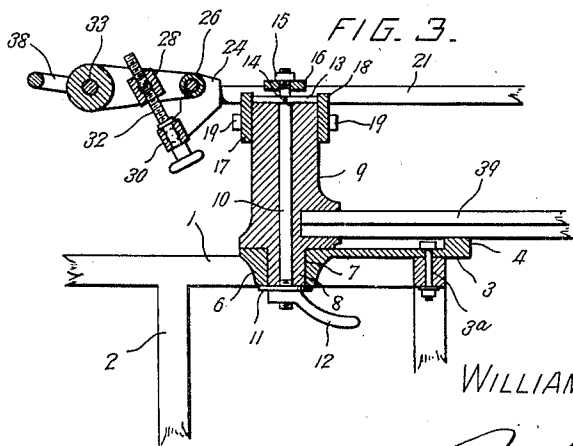


FIG. 3.



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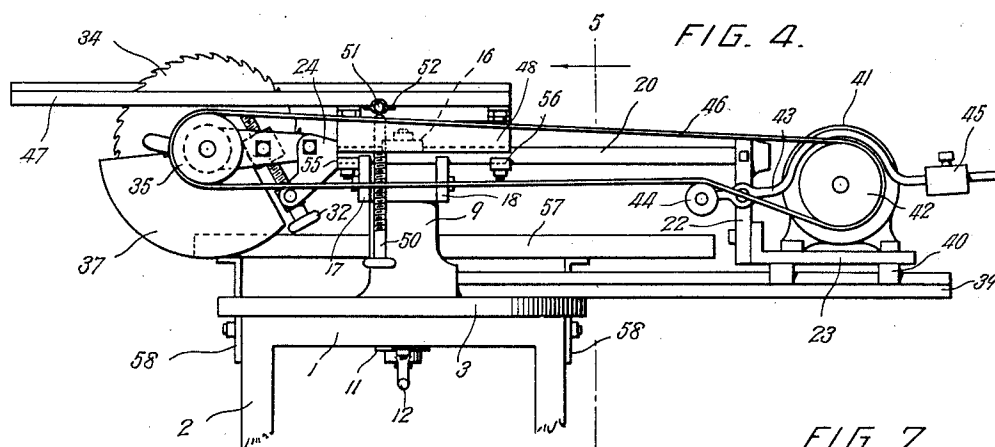
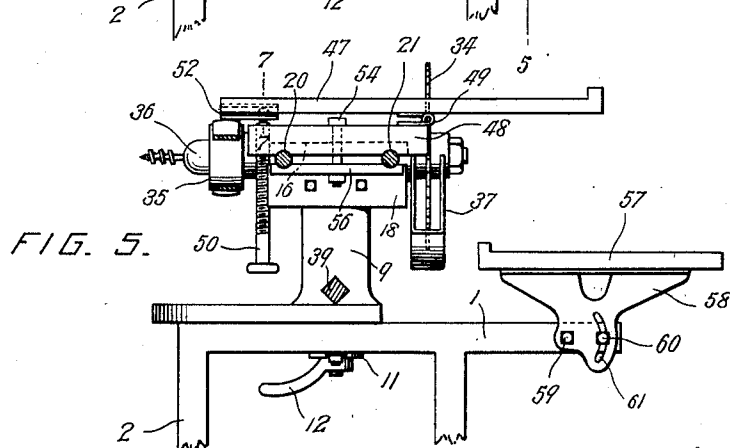
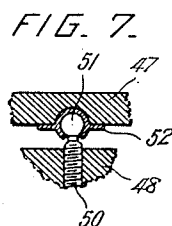
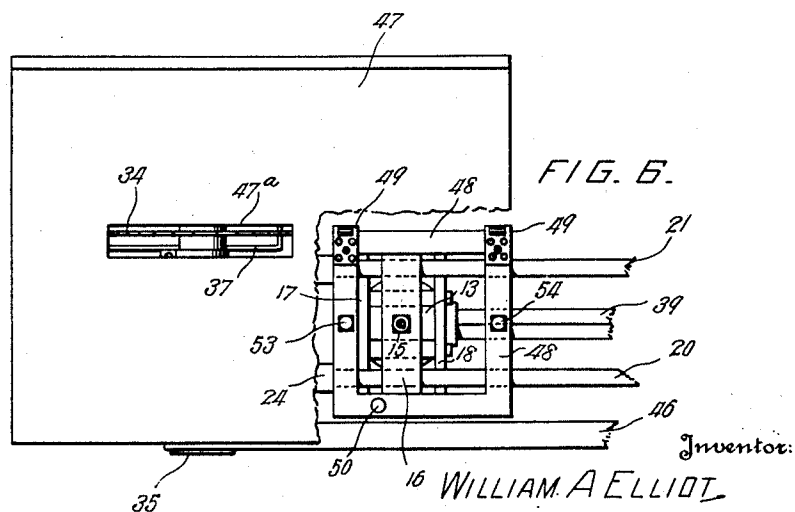
**W. A. ELLIOT**

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2 Sheets-Sheet 2



# UNITED STATES PATENT OFFICE

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## WOODWORKING MACHINE

Application filed June 14, 1927. Serial No. 198,713.

This invention relates to improvements in woodworking machines, and has special reference to a machine more particularly adapted to cross-cutting and ripping.

5 An object of this invention is the combination with a main frame an adjustable table for cross-cut work, an adjustable table for ripping, an adjustable tool shaft mounted upon a slidable and rotatable carriage, together  
10 with a motor mounted upon said carriage, the periphery of said motor being below the horizontal plane of said adjustable ripping table, a transmission means adapted to connect the driving pulley of said motor with the driving  
15 pulley of said tool shaft and means for applying tension to said transmission means.

A novel feature of my device is the ripping table which is removable from the sliding carriage. This table is adapted when in position  
20 upon the sliding carriage, to be raised at one side thus inclining the table top at any desired angle to the cutting tool, the table being hinged in the cutting plane of the tool.

Another novel feature is the saw guard  
25 which is adapted to cover the upper periphery of the saw when the lower periphery is to be used and the lower periphery when the upper periphery is to be used.

Referring to the drawings: Fig. 1 is a side  
30 view of my invention in which the saw is shown in cross-cut position. Fig. 2 is a plan view of Fig. 1. Fig. 3 is a cross section of the main post and cross head showing adjustment of each. Fig. 4 is a side view of my device in  
35 which the ripping table is shown in place. Fig. 5 is a sectional elevation on the line 5—5 of Fig. 4. Fig. 6 is a sectional plan view of Fig. 4 partially broken away to show the hinging means for the ripping table. Fig.  
40 7 is a detail view of the elevating screw and sliding ball socket used for inclining the ripping table on line 7—7, Fig. 5.

Referring more particularly to the drawings my invention consists of a main frame 1,  
45 having legs 2, a quadrant bed plate 3 having a raised periphery 4 having angular degrees 5 scribed thereon, a central downwardly projecting boss 6 adapted to center in said main frame 1 and having a hole 7 therein for the reception of a hub 8 of the main post 9. The

bed plate 3 is secured to main frame 1 by bolts  
3<sup>a</sup>. The main post 9 is provided with a vertical bore through which passes a clamping bolt 10 provided at its bottom with a washer 11 and a clamping nut 12. At the top of bolt 10  
55 is a plate 13 pinned thereto by pin 14. The top of bolt 10 is threaded and provided with a nut 15 adapted to hold a plate 16 which together with plates 17 and 18 which are bolted  
60 to the post 9 with bolts 19, act as guides for the sliding carriage which consists of sliding rods 20 and 21 secured at one end to a vertical plate 22 to which is secured a horizontal plate 23 and at the far end of rods 20 and 21 is mounted  
65 a bracket 24.

The bracket 24 is adapted to adjustably hold the cross-head 25 in the following manner, a bolt 26 acting as a pintle passes through bracket 24, and the hinge extension 27 of the cross-head 25. The guard 37 is adapted to  
70 be positioned above the saw when cross-cutting and below when ripping, in each of which positions the guard has a wide range of adjustability. Mounted in the cross head 25 is a swivel block 28 by means of set screws 29, a  
75 like block 30 is mounted in the bracket 24 by means of set screws 31. An adjustment screw 32 passes through these blocks 28 and 30 for the purpose of adjusting the cross-head 25 up  
80 or down.

In the cross-head 25 is mounted a tool shaft  
33 adapted to carry at one end a saw 34 and at the other a pulley 35. At the pulley end the shaft 33 is adapted to carry a drill socket 36.

A saw guard 37 is adapted to be clamped to  
85 the cross-head and adjustable to guard the operator from the saw in predetermined adjustments.

The cross-head 25 is also provided with a handle 38 for conventional handling thereof.  
90 A square guide track 39 is mounted in the post 9 and extends horizontally therefrom its lower edge resting upon the raised portion 4 of the bed plate 3.

Sliding engagement is provided between  
95 the horizontal plate 23 and the square guide track 39 by conventional bearings 40 which may be grooved blocks or small wheels.

Upon horizontal plate 23 is mounted a motor 41 having a power pulley 42. A rocking  
100

arm 43 provided with a small pulley 44 at one end and an adjusting weight 45 at the other end is mounted upon the plate 22 for the purpose of maintaining tension upon a belt 46 which transmits power from the power pulley 42 to the tool pulley 35.

A rip-saw table 47 provided with a saw slot 47<sup>a</sup> is secured to a frame 48 by means of hinges 49. Through the frame 48 passes an elevating screw 50 surmounted by a ball 51 integral therewith. In the table 47 is mounted a pipe shaped track 52. This arrangement allows the table 47 to be fixedly secured in any desired inclined position. The frame 48 is adapted to rest upon the sliding rods 20 and 21. Bolts 53 and 54 are adapted to pass through frame 48 and clamp plates 55 and 56 thus securely clamping the frame 48 to the rods 20 and 21.

A cross-cut saw table 57 having a bracket 58 is swingingly secured to the main frame 1 by bolt 59. Another bolt 60 in said frame 1 is adapted to pass through a slot 61 in said bracket 58 for the adjustment of said table 57 in any desired position.

It will be seen from the construction of my invention that an ordinary wooden shipping box may be substituted for the main frame shown in the drawings.

Claims:

1. In a woodworking machine the combination of a frame; a rotatable post mounted thereon; a carriage mounted for slidable movement in a horizontal plane upon said post; a guide rod mounted on said post and extending in a horizontal plane beneath said carriage; a motor positioned between the horizontal planes of said carriage and said guide rod; a base for said motor adapted to slide with said carriage while resting upon said guide rod; a tool shaft on said carriage; a pulley for said tool shaft; a pulley for said motor and driving means connecting said pulleys.

2. In a woodworking machine the combination of a base; a carriage slidably mounted on said base; a tool shaft mounted on said carriage; a track mounted on said base below said carriage; a second carriage mounted on said track; a motor on said second mentioned carriage positioned intermediate the two carriages; a connection between the two carriages; and driving means connecting the motor and the tool shaft.

In testimony that I claim the foregoing as my own, I affix my signature.

WILLIAM ALBERT ELLIOT.