J. H. BUTTERFIELD.

GUARD AND WORK HOLDER FOR SHAPING MACHINES.

APPLICATION FILED FEB. 20, 1908

907,734. Patented Dec. 29, 1908.

FIG. 1.

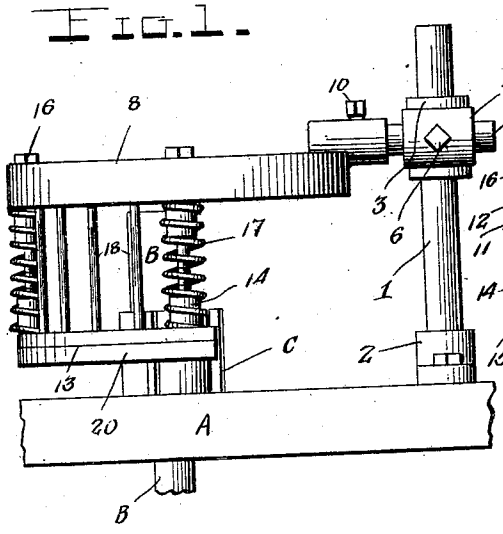


FIG. 3.

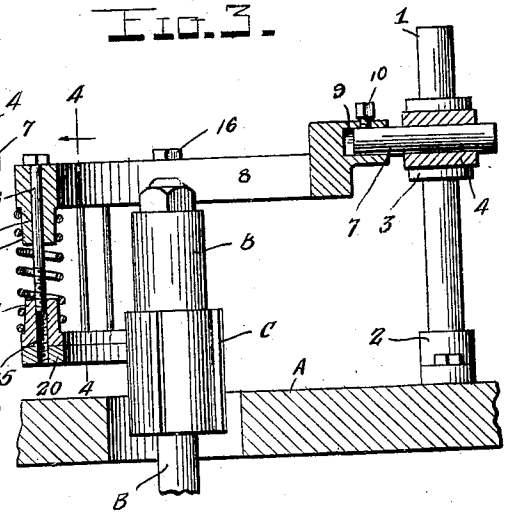


FIG. 2.

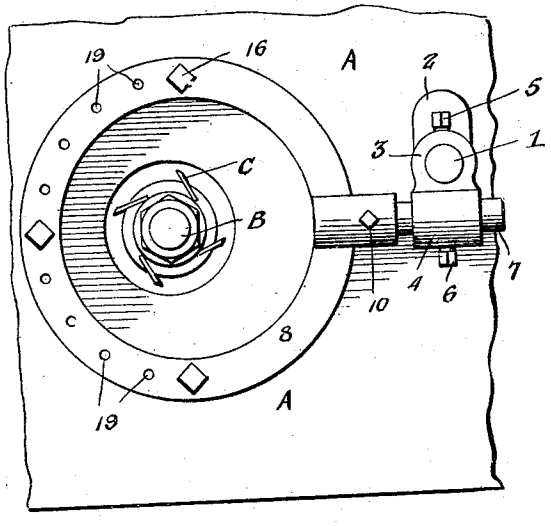
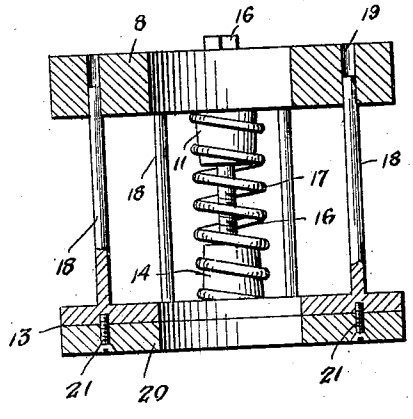


FIG. 4.



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GUARD AND WORK-HOLDER FOR SHAPING-MACHINES.

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Application filed February 20, 1908. Serial No. 416,942.

To all whom it may concern:

Be it known that I, JAMES H. BUTTERFIELD, a citizen of the United States, residing at Logan, in the county of Hocking and State of Ohio, have invented certain new and useful Improvements in Guards and Work-Holders for Shaping-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to attachments for shaping machines and has for its object to provide a combination work holder and guard to protect the fingers and hands of the operator against accidental contact with the blades of the shaping machine.

Another object is to provide in a device of this kind resilient means whereby the work holding surface is held in firm but yielding engagement with the work.

Another object is to provide a device of this kind which may be easily adjustable for different thicknesses of work and different styles of blades.

For this and other objects which will presently appear, my invention consists of certain novel combinations and arrangements of parts of which the herein described guard is one of many possible embodiments.

While herein I describe minute details of my invention, I do not limit myself to these as the details of construction and arrangement may be greatly varied without departing from the spirit and scope of the invention.

In the annexed drawing forming a part of this specification, Figure 1 is a side elevation; Fig. 2 is a top plan view; Fig. 3 is a longitudinal sectional view, and, Fig. 4 is a sectional view taken on the line 4—4 of Fig. 3.

Referring more particularly to the drawings which are for illustrative purposes only and therefore not drawn to any particular scale, my invention is shown as applied to a shaping machine having a table A, a vertical rotating shaft B, and cutting knives C.

The guard is attached to the table by means of a vertically extending shaft support 1 secured in a bracket 2 screwed or bolted to the table. Vertically and slidably adjustable on said shaft 1 is a vertical sleeve 3 formed with a tubular horizontal extension 4. The sleeve 3 is held in adjusted position on the shaft 1 by means of a set screw or the like 5 whereby said sleeve may be vertically and transversely rotatably adjusted.

A set screw 6 is provided for the sleeve 4. Slidably received within the sleeve 4 and adjustably held therein by means of the set screw 6 is a horizontal coupling rod 7 to one end of which is removably attached the upper supporting member 8. Said member is provided with an outwardly extending longitudinally socketed portion 9 adapted to receive the end of the shaft 7 and is held on said shaft by means of a set screw or similar device 10.

The frame member 8 is annular in shape as shown and it is provided at convenient distances with any number of downwardly extending bosses 11 and perforations 12 extending downwardly through said member and centrally through said bosses. A lower or pressing member 13 is provided, the same being substantially crescent or semi-annular in shape, and provided with upwardly extending bosses 14 having central perforations 15 adapted to register with the perforations 12 of the upper member. The perforations 15 are internally threaded and have screw threaded engagement with the threaded bolts 16 extending through said perforations 12 into the perforations 15. The bolt 16 is loosely received by the perforation 12 whereby the lower member is freely movable vertically, the lower limit of movement of the lower member being determined by the head of the bolt 16 and the upward movement being limited by the contact of the boss 14 with the boss 11. Around said bosses 11 and 14 is mounted the coil spring 17 adapted to yieldably hold said lower member at its lowest limit of movement. The lower member 13 is provided with upwardly extending fingers 18 adapted at their upper ends to be received and have movement in the recesses 19 of the upper member 8. The lower member 13 is provided with a bearing strip 20 of wood or any desired material which may be fastened to said lower member by means of counter sunk screws 21 or any suitable fastening.

It will be noticed that the tension of the lower member may be adjusted by the rotation of the bolts 16, the height of said member relative to the table being adjusted by means of the set screw 5 and the sleeve 3. In operation the guard is adjusted relative to the table according to the thickness of the

material to be used and the position or style of cutting blades on the rotating shaft B.

The lower face of the bearing strip 20 is placed at such a height that it will bear firmly upon the work to permit the work to be easily moved thereunder. The fingers 18 in connection with the parts 11, 15 and 17 form an efficient guard to prevent the hands of the operator from coming in contact with the cutting blades.

It is thought that the operation and advantages of my device will be understood without further explanation.

Having thus described my invention, what I claim as new and desire to secure by U. S. Letters Patent is:—

In combination with the table of a wood working machine, a round vertical support, a sleeve formed with a horizontal tubular extension adjustably mounted upon said support, a set-screw for holding said sleeve in vertical or rotated adjustments, a supporting frame formed with an integral outwardly extending longitudinally socketed portion, a round coupling rod mounted in the tubular extension of said sleeve and extended into the socketed portion of the upper frame member, set-screws for adjustably connecting the ends of the coupling rod with said socketed portion and tubular extension, and a vertically movable presser member carried by the supporting frame.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JAMES H. BUTTERFIELD.

Witnesses:
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C. V. WRIGHT.