

L. J. HALVERSTADT.
 GUARD FOR WOODWORKING MACHINES.
 APPLICATION FILED NOV. 10, 1909.

969,618.

Patented Sept. 6, 1910.

2 SHEETS—SHEET 1.

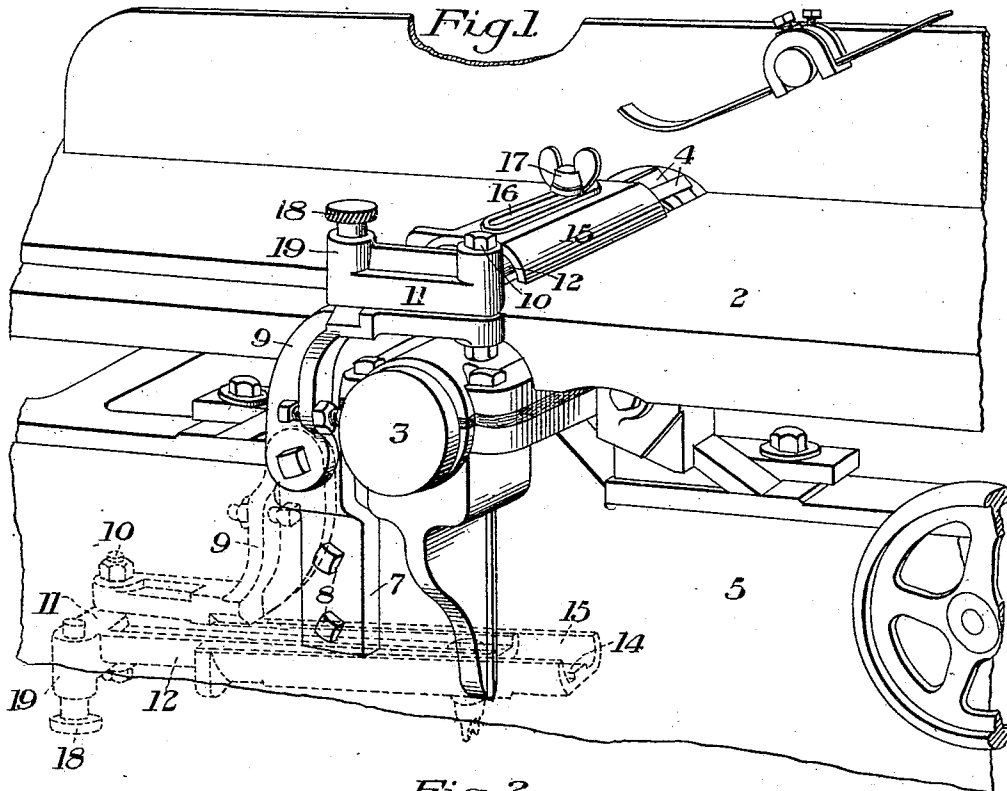
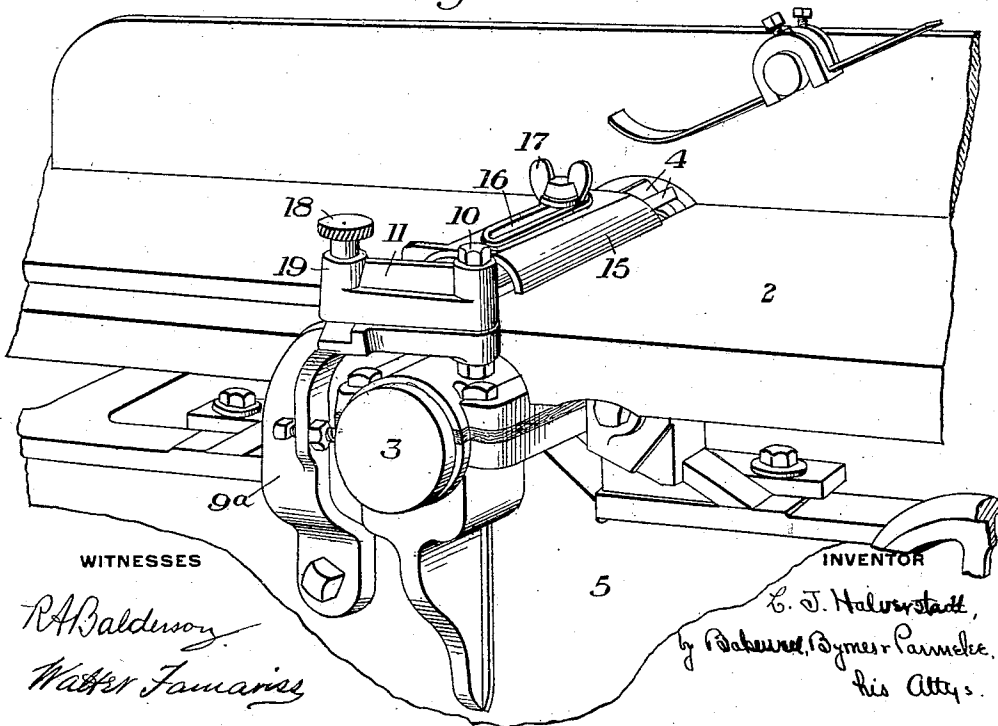


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

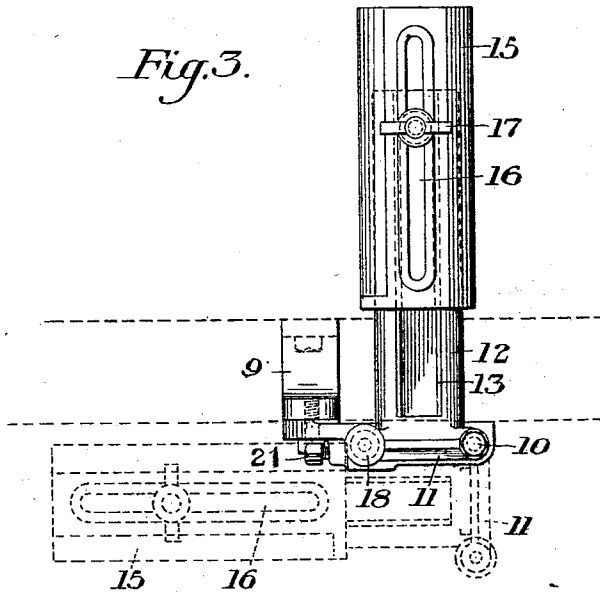


Fig. 4.

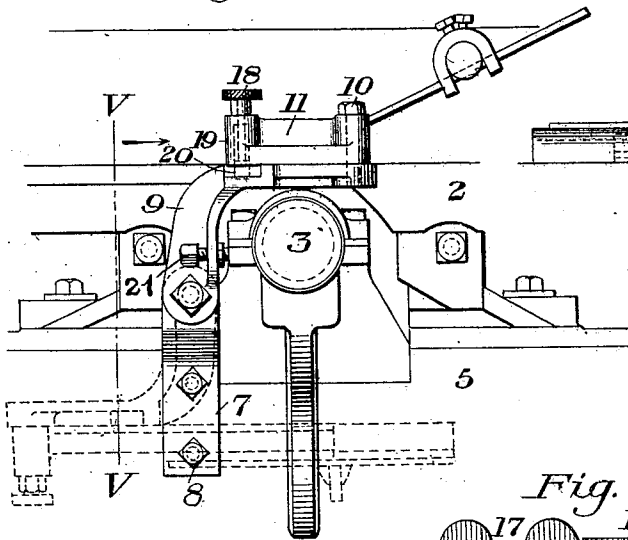


Fig. 5.

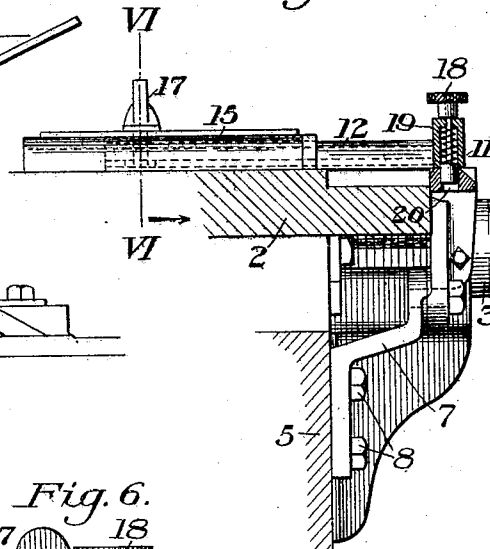
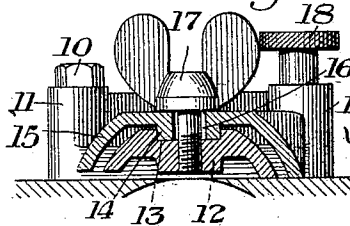


Fig. 6.



WITNESSES

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UNITED STATES PATENT OFFICE.

LEROY J. HALVERSTADT, OF LEETONIA, OHIO, ASSIGNOR TO THE CRESCENT MACHINE COMPANY, OF LEETONIA, OHIO, A CORPORATION OF OHIO.

GUARD FOR WOODWORKING-MACHINES.

969,618.

Specification of Letters Patent.

Patented Sept. 6, 1910.

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To all whom it may concern:

Be it known that I, LEROY J. HALVERSTADT, of Leetonia, county of Columbiana, and State of Ohio, have invented a new and useful Improvement in Guards for Woodworking-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective view of a portion of a jointer, with one form of my improved guard attached; Fig. 2 is a similar view of modified form of guard; Fig. 3 is a plan view of the guard, and a portion of the jointer table shown in dotted lines; Fig. 4 is an end view of the guard, and a portion of the jointer; Fig. 5 is a section on the line V—V of Fig. 4; Fig. 6 is a sectional view on the line VI—VI of Fig. 5.

My invention relates to an improvement in guards for woodworking machines, and is especially designed to provide a cheap and efficient guard arranged to cover a portion of the cutter tool or knife which is not in use, and thereby preventing accidental contact with that portion of the knife.

A further object of my invention is, to provide a guard of the character described, which can be readily adjusted to cover a predetermined portion of the knife. Also to provide a guard which can readily be released and swung out of its guarding position without detaching it from the frame of the machine, and which can be inserted into guarding position and removed without the aid of tools.

The precise nature of my invention will be best understood by reference to the accompanying drawings, which will now be described, it being premised, however, that various changes may be made in the details of construction and general arrangement of the parts without departing from the spirit and scope of my invention, as defined in the appended claims.

In the drawings, the numeral 2 designates the table of a jointer. 3 is the shaft for the cutter of said jointer, and 4 are blades or knives secured to said shaft.

5 is the main frame of the jointer.

The guard illustrated in Figs. 1, 3, 4, 5 and

6, is provided with a bracket 7, which is attached to the frame 5 of the jointer by means of the bolts or screws 8. Pivottally mounted on the upper end of this bracket is an arm 9, the upper end of which is in line with the upper edge of the table 2. Pivottally connected to this arm 9 by means of the screw or rod 10 is a frame 11 having an extension 12, which extends over a portion of the knife 4. One side of this extension 12 rests on the upper face of the table, while the other side thereof is slightly shorter so as to clear the cutter 4 when the guard is swung out of guarding position. The upper portion of this extension 12 is provided with a groove 13, which forms a guide for the flange 14 on the bottom of an adjustable guard 15.

16 is a longitudinal slot extending through the guard and flange 14 thereof, and 17 is a thumb screw passing through the slot 16 and entering a screw threaded orifice in the extension 12, to retain the guard in its adjusted position with relation to the extension of the frame 11.

18 is a vertically movable latch, which is mounted in a socket 19 in the frame 11. When the guard is in use, the latch is adapted to enter an orifice 20 in the arm 9 to retain the frame 11 and arm 9 in proper relation with each other.

By means of the guide and flange connection between the extension 12 and the guard 15, the guard can be adjusted along the extension 12 to cover or uncover a portion of the knife 4, and is retained in its adjusted position by means of the thumb screw 17.

When it is desired to remove the guard from the jointer so as to use all cutting surface or the major portion of the knives 4, the latch 18 is raised so as to remove it from the recess 20. The frame 11 and the guard attached thereto are then swung on the pin 10 to a point approximately at right angles to the guarding position or so as to clear the edge of the bed. The arm 9, together with frame 11 are then swung on the pivotal connection between the arm 9 and the bracket 7 until the parts assume the position shown in dotted lines in Figs. 1, 3 and 4. The guard is placed in guarding position by first swinging the arm on its pivot

until the set screw 21, which has been properly adjusted, engages a portion of the frame of the jointer. The frame 11 together with the guard 15 are then swung around at right angles over the knife until the latch 18 is above the recess 20, which will drop into the recess 20 and lock the guard in fixed relation with the jointer.

In Fig. 2, I have shown a modification in which the arm 9^a is pivoted to the frame 5 of the machine, instead of to a bracket secured to the frame of the machine.

The advantages of my invention result from the provision of a guard for wood working machines, which is adjustably mounted on a hinged frame, and which can readily be moved into and out of guarding relation to the knife, and which can readily be locked in its guarding position. Still another advantage results from the provision of means for folding the guard and its frame at the side of the frame of the jointer when not in use, so that it lies below the level of the top of the machine and out of the way of the operator, without the use of tools or without disconnecting it from the frame of the machine. By the use of a guard of this character, the guard is always in its proper place, and none of the parts are liable to become broken or lost, which is likely to occur with a guard which is detached from the machine when not in use. By this arrangement considerable time is also saved, in comparison to a guard which is detached when not in use. My guard can also readily be swung into and out of guarding position without the use of tools and without any appreciable loss of time, thereby overcoming any excuse of the operator for not placing the guard in position when using the machine for a short time on work in connection with which the guards should be used, thereby assisting in avoiding accidents caused by fully exposed cutters.

I claim:

1. In knife guards for wood working machines, comprising a guard for the cutter, an arm having vertically and horizontally extending portions, a pivotal connection between the frame of the machine and the end of the vertically extending portion of the arm, and a pivotal connection between the arm and guard, the horizontally extending portion of the arm being arranged to support the guard; substantially as described.

2. In knife guards for wood working machines comprising a guard for the cutter, an arm having vertically and horizontally extending portions, both portions of the arm being in approximately the same vertical plane, a pivotal connection between the frame of the machine and the end of the vertically extending portion of the arm, and

a pivotal connection between the arm and the guard, the horizontally extending portion of the arm being arranged to support the guard; substantially as described.

3. In knife guards for wood working machines comprising a guard for the cutter, an arm having vertically and horizontally extending portions, both of said portions of the arm being in approximately the same vertical plane, a pivotal connection between the frame of the machine and the end of the vertically extending portion of the arm, a pivotal connection between the arm and the guard, the horizontally extending portion of the arm being arranged to support the guard, and a latch arranged to secure the guard in this working position on the arm; substantially as described.

4. In knife guards for wood working machines comprising a guard for the cutter, an arm having vertically and horizontally extending portions, both of said portions of the arm being in approximately the same vertical plane, a pivotal connection between the frame of the machine and the end of the vertically extending portion of the arm, a pivotal connection between the arm and the guard, the horizontally extending portion of the arm being arranged to support the guard, a vertically extending spring pressed bolt in the guard, and a recess in the arm arranged to receive the bolt to secure the guard in this working position; substantially as described.

5. In knife guards for wood working machines having a cutter, a table, an arm having vertically and horizontally extending portions, the horizontally extending portion being parallel with the machined table, a pivotal connection between the frame of the machine and the end of the vertically extending portion of the arm, and a pivotal connection between the arm and the guard, the horizontally extending portion of the arm being arranged to support the guard; substantially as described.

6. In knife guards for wood working machines, comprising a guard for the cutter, an arm having vertically and horizontally extending portions, a pivotal connection between the frames of the machine and the end of the vertically extending portion of the arm, a pivotal connection between the arm and the guard, the horizontally extending portion of the arm being arranged to support the guard, a second guard slidably mounted on the main guard, and means to secure the second guard to the main guard; substantially as described.

7. In knife guards for wood working machines, comprising a guard for the cutter, an arm pivoted to the frame of the machines and extending longitudinally along the side thereof, a pivotal connection between the

guard and the frame, the pivotal connection being arranged to permit the guard to be swung at an angle of approximately 90° over the arm and to permit the arm to be swung at an angle of approximately 180° to place the arm and guard below the top of the machine; substantially as described.

In testimony whereof, I have hereunto set my hand.

LEROY J. HALVERSTADT.

Witnesses:

JOHN B. MORGAN,
MAYME J. SCULLY.