

E. ANDRE.
CUTTER GUARD.
APPLICATION FILED NOV. 19, 1909.

961,198.

Patented June 14, 1910.

2 SHEETS—SHEET 1.

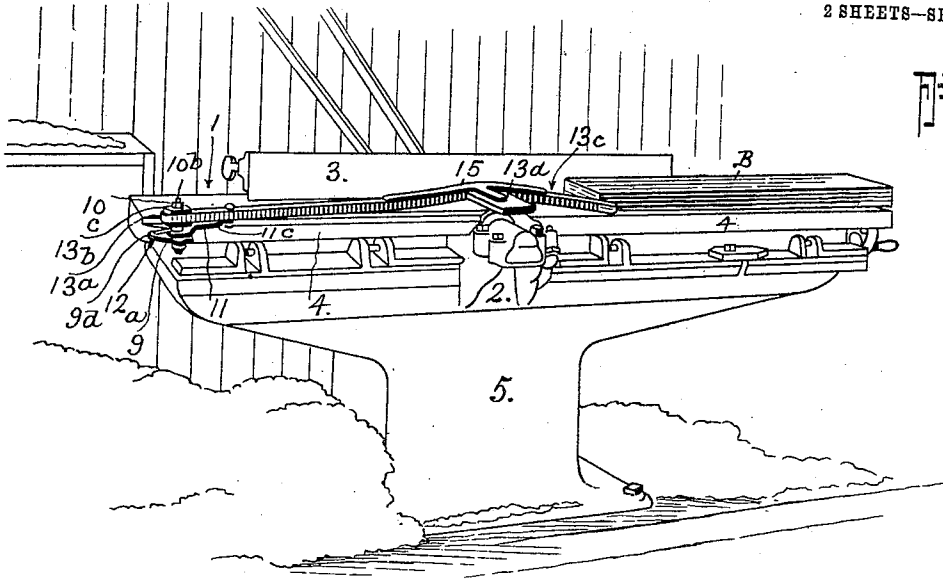


Fig. 1.

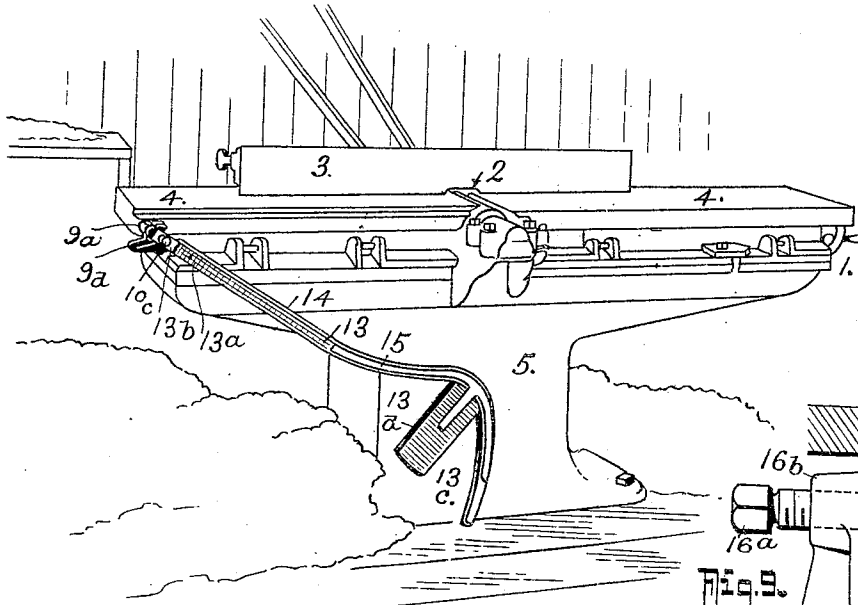


Fig. 2.

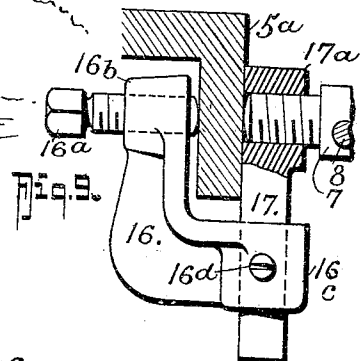


Fig. 3.

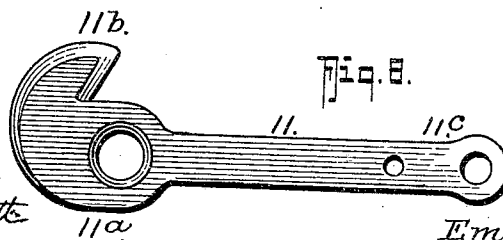


Fig. 4.

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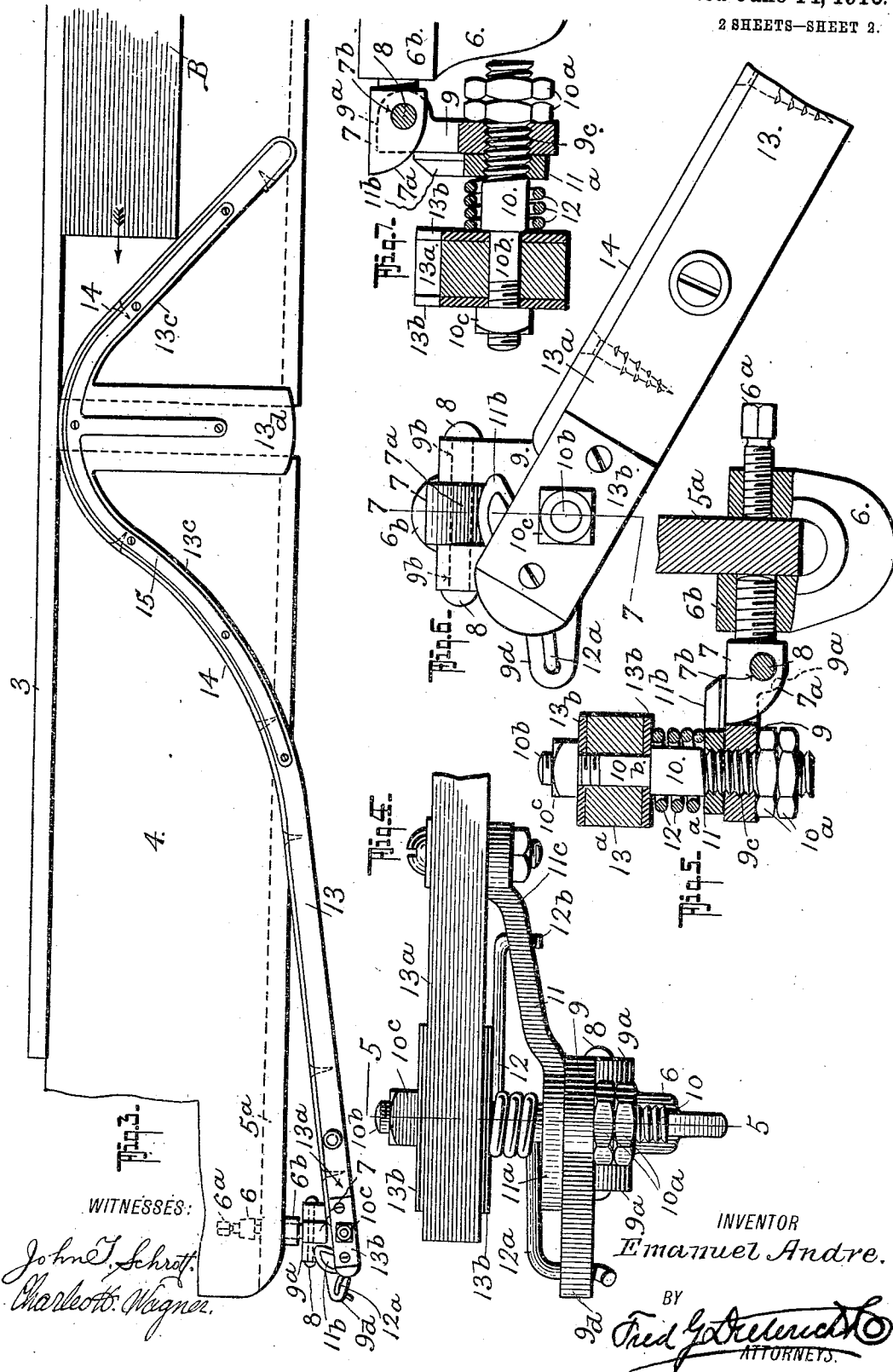
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UNITED STATES PATENT OFFICE.

EMANUEL ANDRE, OF MARINETTE, WISCONSIN.

CUTTER-GUARD.

961,198.

Specification of Letters Patent. Patented June 14, 1910.

Application filed November 19, 1909. Serial No. 528,988.

To all whom it may concern:

Be it known that I, EMANUEL ANDRE, residing at Marinette, in the county of Marinette and State of Wisconsin, have invented a new and Improved Cutter-Guard, of which the following is a specification.

My invention is an improved guard for the rotatable cutters of planing and joining machines and the like, and the invention primarily has for its object to provide a device of the character stated of a very simple and effective construction which can be easily and cheaply manufactured and which will readily serve its intended purposes.

Generically the invention resides in providing a guard member formed of a bar having a substantial spread-U-shaped bend in which a cutter cover plate is located, the bar or arm having a metallic edge facing to be engaged by the board being planed. The bar is pivoted to a hinged support whereby it has edgewise movement in a horizontal plane when on the planer bed and similar movement in a vertical plane to be swung down or folded in front of the planer out of the way at times.

In its more subordinate nature the invention also includes those novel details of construction, combination and arrangement of parts, all of which will be first fully described and then be specifically pointed out in the appended claims, reference being had to the accompanying drawings, in which:

Figure 1, is a perspective view of the invention in use. Fig. 2, is a similar view the guard being shown folded down in front of the planer out of the way when its use is not desired. Fig. 3, is a top plan view of the invention. Fig. 4, is an enlarged detail side elevation of the hinged pivot member. Fig. 5, is a section on the line 5—5 of Fig. 4. Fig. 6, is an enlarged detail side elevation of the hinge member with the guard swung down showing the application of the catch member. Fig. 7, is a section on the line 7—7 of Fig. 6. Fig. 8, is a plan view of the catch member. Fig. 9, is a detail section of a modified form of adjustable bracket.

Referring now to the accompanying drawings in which like letters and numerals of reference indicate like parts, 1 represents the planer machine, 2 the cutting mechanism thereof, 3, the fence or gage, 4 the bed of the machine and 5 the standard or base thereof, all of which form, *per se*, no part of

my present invention and may be of any approved construction.

In carrying out my invention I provide a U-shaped clamp 6 that is removably secured to the front bar 5^a of the planer bed by a set screw 6^a and having a tapped lug 6^b to receive the threaded shank of a hinge piece 7. The hinge piece 7 has a curved under surface 7^a and a hole 7^b to receive the hinge pin or rivet 8 that joins the hinge 9 to the piece 7. The hinge plate 9 has a bifurcated part formed with a lug 9^a on the under side bored at 9^b to receive the pivot or hinge pin or rivet 8. The hinge plate 9 also is bored and tapped at 9^c to receive a pivot bolt 10 which is locked to the plate 9 by check nuts 10^a, as shown. The bolt 10 is also tapped into the bearing end 11^a of a catch 11, which bearing end 11^a has a cover portion 11^b to pass over the hinge piece 7, when the guard is in one position to prevent turning of the hinge plate 9 on the pin 8 to hold the guard from dropping too far down when folded against the side of the machine, when the parts are in the position shown in Fig. 2.

The hinge plate 9 has a lateral extension 9^d with a hole to receive the end 12^a of a coil spring 12 whose coil embraces the bolt 10 and whose other end 12^b passes through a hole in the catch 11, near its upper end 11^c. The bolt 10 has a reduced portion 10^b that passes through the outer end 13^a of the wooden arm 13, and the reinforcing plates 13^b thereof, the plates 13^b and the arm end 13^a being apertured to permit such passage. The member 11 also serves as a brace to support or assist in holding the arm 13 in its proper position with relation to its pivot. A nut 10^c secures the arm 13 from moving off the portion 10^b on which the arm 13 pivots. The arm 13 has a spread U-shaped end 13^c, in which a cutter guard plate or cover 13^d is secured to the arm end 13^c, by screws or otherwise, and the edge of the arm 13 that is engaged by the board B is faced by a metallic strip 14 to protect the same. A brace 15 on top of the arm end 13^c and on the plate 13^d holds them in fixed relation to one another.

The manner in which my invention operates will be best understood by reference to Figs. 1, 2 and 3 of the drawings. The operator starts the board B from right to left, in Fig. 1, which moves the arm 13 away from the fence and gage 3 to expose

the cutters to the board, the arm 13 being spring-pressed toward the fence 3 by the coil spring 12 and serving to hold the board B against the fence as well as to protect that portion of the cutter which is not used. When a board the full width of the planer bed is to be planed, the arm 13 is rocked on the pivot pin 8 to lie in a vertical plane and then let down to the position shown in Fig. 2, when the cam-like portion 11^b of the catch 11 will enter under and contact with the curved portion 7^a of the hinge piece 7 and lock the hinge plate 9 from further movement.

From the foregoing description taken in connection with the accompanying drawings, it is thought the complete construction, operation and advantages of my invention will be readily understood by those skilled in the art to which the invention appertains.

In Fig. 9 is shown a modified form of bracket or clamp 16 having a threaded part 16^b for the set screw 16^a and a bearing 16^c in which the stem 17 is adjustably held by a set screw 16^d, it having a part 17^a threaded to receive the eye piece 7, as shown.

What I claim is:

1. A guard mechanism for planer cutters comprising an arm carrying a guard plate to cover the cutter when in one position, a relatively fixed hinge piece secured to the planer, a hinge plate hinged to said hinge piece, said arm being pivotally mounted at one end on said hinge plate, and means preventing said hinge plate from moving when said arm is in position on the planer bed.

2. A planer cutter guard comprising a clamp removably securable to the planer bed, a hinge piece carried by said clamp, a hinge plate connected to said hinge piece, a pivot bolt carried by said hinge plate, a guard carrying arm pivoted on said bolt, means interposed between said arm and said hinge plate for locking said hinge plate from movement on said hinge piece, and yieldable means continuously tending to move said arm in one direction.

3. A planer cutter guard comprising a clamp removably securable to the planer bed, a hinge piece carried by said clamp, a hinge plate connected to said hinge piece, a pivot bolt carried by said hinge plate, a guard carrying arm pivoted on said bolt, means interposed between said arm and said hinge plate for locking said hinge plate from movement on said hinge piece, yieldable means continuously tending to move said arm in one direction, said hinge plate locking means comprising a catch member connected with said pivot bolt and with said arm to move with said arm and having a projecting portion to ride over said hinge piece when the hinge plate is in one position.

4. A planer cutter guard comprising a clamp removably securable to the planer

bed, a hinge piece carried by said clamp, a hinge plate connected to said hinge piece, a pivot bolt carried by said hinge plate, a guard carrying arm pivoted on said bolt, means interposed between said arm and said hinge plate for locking said hinge plate from movement on said hinge piece, yieldable means continuously tending to move said arm in one direction, said hinge plate locking means comprising a catch member connected with said pivot bolt and with said arm to move with said arm and having a projecting portion to ride over said hinge piece when the hinge plate is in one position, and to ride under said hinge piece when the hinge plate is swung in another position.

5. In a device of the character stated, a clamp removably securable to a planer bed, and a hinge piece removably held by said clamp, a hinge plate having lugs pivoted to said hinge piece, a pivot bolt carried by said hinge plate, a guard carrying arm pivoted on said pivot bolt, a brace on said pivot bolt and connected to said arm, and a coil spring on said pivot bolt having its ends engaging said brace and said hinge plate to move said arm in one direction.

6. In a device of the character stated, a clamp removably securable to a planer bed, and a hinge piece removably held by said clamp, a hinge plate having lugs pivoted to said hinge piece, a pivot bolt carried by said hinge plate, a guard carrying arm pivoted on said pivot bolt, a brace on said pivot bolt and connected to said arm, a coil spring on said pivot bolt having its ends engaging said brace and said hinge plate to move said arm in one direction, and means movable with said arm for holding said hinge plate in fixed relation to said hinge piece at times.

7. In a device of the character stated, a clamp removably securable to a planer bed, and a hinge piece removably held by said clamp, a hinge plate having lugs pivoted to said hinge piece, a pivot bolt carried by said hinge plate, a guard carrying arm pivoted on said pivot bolt, a brace on said pivot bolt and connected to said arm, a coil spring on said pivot bolt having its ends engaging said brace and said hinge plate to move said arm in one direction, said arm comprising a member having a spread-U-shaped portion, and a cutter guard plate carried by said arm in said spread-U-shaped portion.

8. In a device of the character stated, a clamp removably securable to a planer bed, and a hinge piece removably held by said clamp, a hinge plate having lugs pivoted to said hinge piece, a pivot bolt carried by said hinge plate, a guard carrying arm pivoted on said pivot bolt, a brace on said pivot bolt and connected to said arm, a coil spring on said pivot bolt having its ends engaging said brace and said hinge plate to move said arm in one direction, means movable with

said arm for holding said hinge plate in fixed relation to said hinge piece at times, said arm comprising a member having a spread-U-shaped portion, and a cutter guard
5 plate, carried by said arm in said spread-U-shaped portion.

9. In a device of the character stated, a clamp removably securable to a planer bed and a hinge piece removably held by said
10 clamp, a hinge plate having lugs pivoted to said hinge piece, a pivot bolt carried by said hinge plate, a guard carrying arm pivoted on said pivot bolt, a brace on said pivot
15 on said pivot bolt having its ends engaging

said brace and said hinge plate to move said arm in one direction, means movable with said arm for holding said hinge plate in fixed relation to said hinge piece at times, said arm comprising a member having a
20 spread-U-shaped portion, a cutter guard plate carried by said arm in said spread-U-shaped portion, and a metallic facing strip carried by said arm along its board contact-
ing edge.

EMANUEL ANDRE.

Witnesses:

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