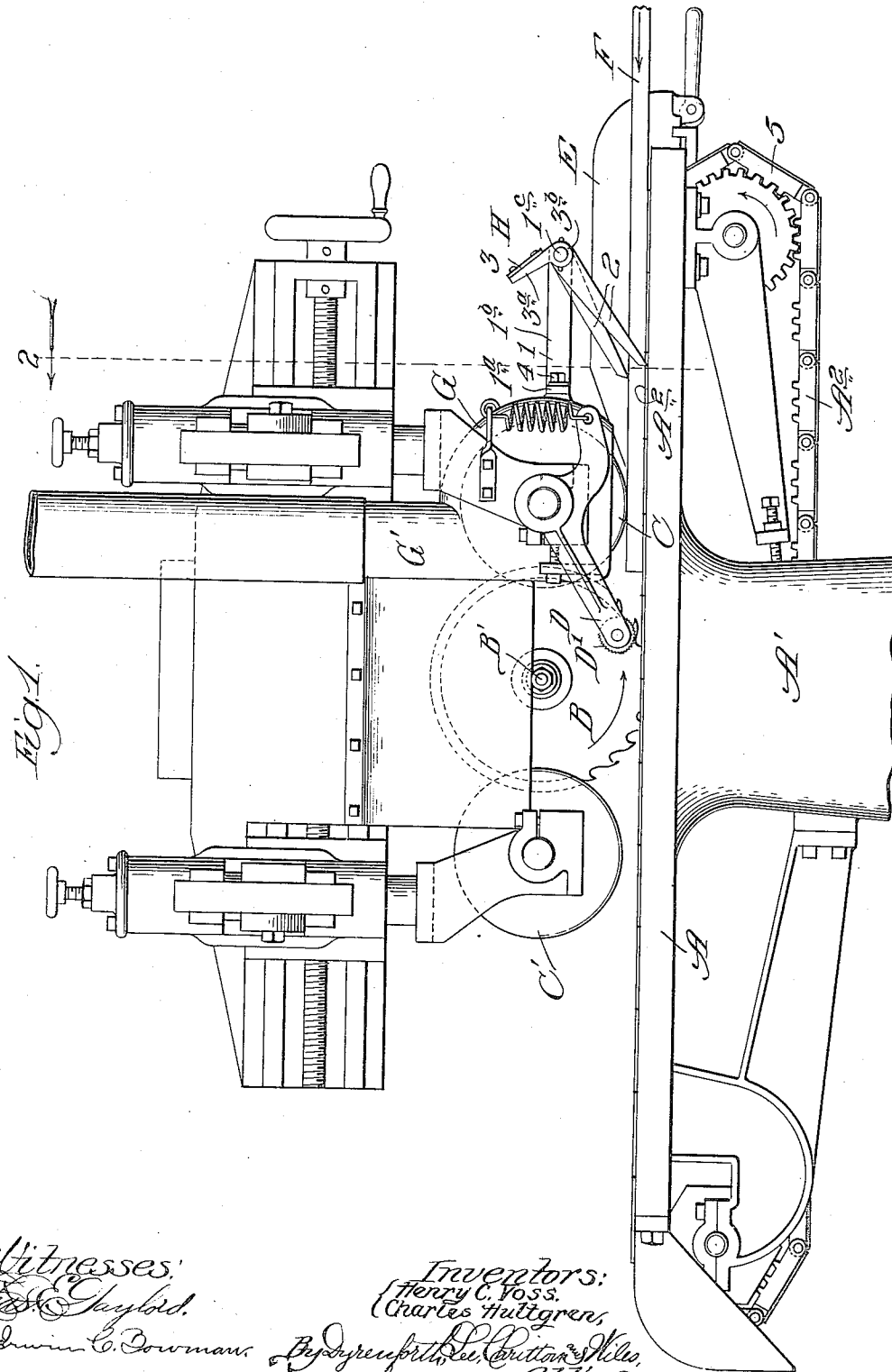


H. C. VOSS AND C. HULTGREN.
SEWING MACHINE GUARD.
APPLICATION FILED NOV. 5, 1917.

1,368,773.

Patented Feb. 15, 1921.

2 SHEETS—SHEET 1.



Witnesses:
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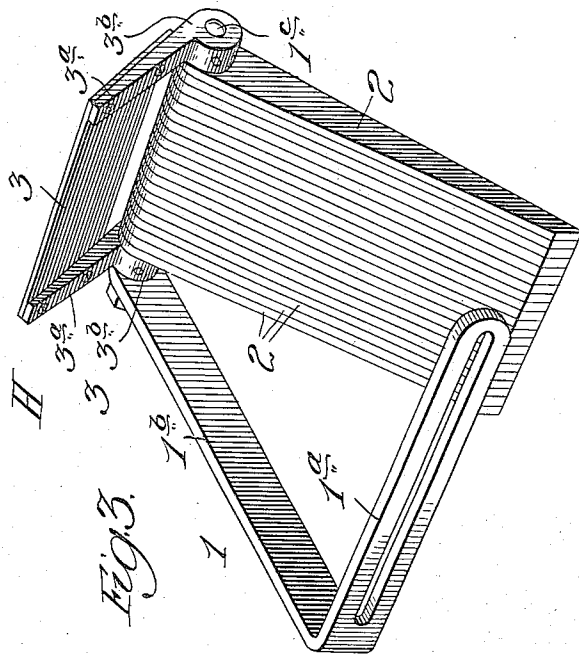


Fig. 3.

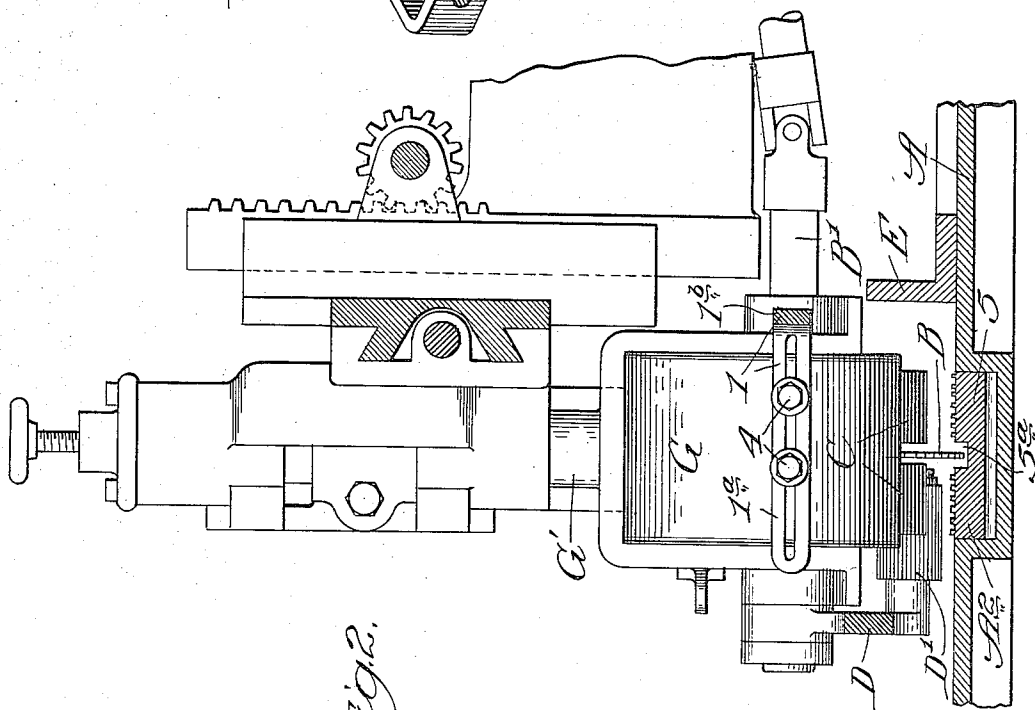


Fig. 2.

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UNITED STATES PATENT OFFICE.

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SAWING-MACHINE GUARD.

1,368,773.

Specification of Letters Patent.

Patented Feb. 15, 1921.

Application filed November 5, 1917. Serial No. 200,315.

To all whom it may concern:

Be it known that we, HENRY C. Voss and CHARLES HULTGREN, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Sawing-Machine Guards, of which the following is a specification.

This invention relates particularly to guards for power-operated saws; and the primary object of the invention is to provide a sawing-machine with a guard, preferably in the form of a self-adjusting screen, adapted to play over the stock or board, as it is fed to the saw and serving to catch or arrest any splinters or fragments of stock which may be hurled or projected violently by the saw toward the operator.

The invention is illustrated, in its preferred embodiment, in the accompanying drawings in which—

Figure 1 represents a broken side elevational view of a sawing machine equipped with the improved guard device; Fig. 2, a broken vertical sectional view taken as indicated at line 2 of Fig. 1; and Fig. 3, an upper rear perspective view of the improved guard or screen.

The drawings represent a sawing-machine of well-known construction, comprising a bed A supported on a standard A', and equipped with mechanism A² adapted to feed the stock or board to the saw; a rotary saw B having an arbor B¹ journaled in the frame above the bed and actuated by any suitable power (not shown); a front pair of rollers C and a rear pair of rollers C¹ co-acting with the bed and feeding mechanism to hold and feed the stock or board in its passage through the machine; a spring-held pivotally-mounted pressure-board D equipped with a serrated roller D¹ adapted to roll on the severed strip of board; a gage or guide E supported on the bed A and extending longitudinally thereof at one side of the path of the board F; and a hood G disposed over the front roll or rolls and having connected therewith a pipe or conduit G¹ which communicates with any suitable suction device (not shown).

H designates the improved guard or attachment, which is applied to a stationary member of the machine, being mounted preferably upon the front side of the hood G.

The device H, in the preferred form 55 which is illustrated, comprises a bracket 1 of angular form, and having a transversely disposed arm 1^a adjustably secured to the hood G, and an arm 1^b extending longitudinally of the machine and equipped at its front end with a transversely-extending pivot-member or shaft 1^c which is rigidly secured to the arm 1^b; a series of inclined gravity fingers, or narrow bars 2, having an inclination rearwardly and downwardly, the upper front ends of said bars being pivotally mounted on the shaft 1^c and the lower ends thereof being adapted to play upon or about the stock or board F as it is fed over the bed to the saw; and a fixedly-secured rearwardly and upwardly-extending guard-plate 3 equipped at its ends with arms 3^a which are provided with bosses 3^b fitted upon and fixedly secured to the shaft 1^c.

The fingers, or pawl-like bars 2, are preferably about one-eighth of an inch thick and of sufficient depth to give the requisite strength. The pivot 1^c is disposed several inches above the bed and several inches in front of the hood G and the fingers 2 are preferably of such length as to form an angle of in the neighborhood of 45° with the bed. In any event, it is desirable that the fingers shall form quite an acute angle with the bed; and it is also desirable that the lower extremities of the fingers shall be beveled, as shown in Fig. 1, so that any splinters or fragments of the board will pass or ride readily over the upper surfaces or edges of the fingers and be arrested by the fixed guard-plate 3, which may form an angle of approximately 90° with the plane of the fingers.

The position of the fingers, or their inclination may vary, depending upon the thickness of the stock, and depending upon the width of the stock. Preferably the fingers, or narrow bars 2, are placed side by side and the outer pivoted ends confined between the bosses 3^b of the fixed arms 3^a. The lower ends of the fingers will play upon and about the board F as it is fed through the machine. It is desirable that the screen comprising the fingers 2 shall be of a width somewhat greater than the width of the endless feed device A², one link of which is shown in section in Fig. 2. In Fig. 1, the board F happens to be narrow enough so that one or

more of the fingers will drop down and rest upon the bed-plate adjacent the edge of the board, while the majority of the fingers will play upon the top surface of the board.

5 The arm 1^a of the bracket 1 is shown provided with an elongated slot, through which extends a cap-screw or bolt 4, which serves to secure the bracket firmly to the hood or stationary member G of the machine.

10 In the form of the machine shown, the feeding mechanism A² comprises an endless conveyer or apron, composed of bar-form links 5, which have a serrated or grooved outer surface. These links are provided
15 with longitudinal grooves 5^a, into which the lower edge of the saw projects, as shown in Fig. 2.

In the operation of a machine of the character illustrated, the board A is fed through
20 the machine in the direction indicated by the arrow, passing first beneath the guard H, then beneath the front rollers C, past the saw B and beneath the rear rollers C¹, the feeding being effected by the endless conveyer A². The saw rotates very rapidly in
25 the direction indicated by the arrow and operates either to cut a kerf in the board or to split the board. Any splinters or fragments of the board which may be caught by
30 the saw will be projected violently toward the front end of the machine. It sometimes happens, to illustrate, that a very narrow strip is being severed from the board, and this may break or may be caught and gouged
35 by the saw, which will project the strip violently toward the front end of the machine. The guard device A serves effectively to catch or arrest the splinters and elongated projectiles, which are sometimes
40 formed in the operation of the machine, thus protecting the operator from injury.

The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitation should be understood therefrom, but the appended
45 claims should be construed as broadly as is permissible in view of the prior art.

What we regard as new and desire to secure by Letters Patent is—

1. An attachment of the character set
50 forth, comprising a bracket having at one end an arm for attachment to a stationary part of a machine and having at the other end a pivot, a fixedly-secured guard-plate projecting from said pivot upwardly and in
55 the direction of feed through said attachment, and a series of thin fingers disposed closely adjacent each other to provide a complete screen and mounted to turn freely on
said pivot and adapted to rest at their free
60 ends upon a bed beneath said arm, said fingers being normally inclined in the direction of feed through said attachment.

2. The combination with a machine comprising a saw and a bed equipped with means
65 for feeding stock to the saw, of a guard comprising a fixedly mounted bracket, a pivot carried by said bracket, a series of thin fingers mounted to turn freely on said pivot and disposed closely adjacent each other to
70 provide a complete screen, said fingers being adapted to extend rearwardly and downwardly and play upon a board as it is fed to the saw, and an upwardly and rearwardly inclined guard-plate fixedly mounted on
75 said pivot and overhanging said screen, whereby splinters deflected upwardly by said screen will be trapped under the overhanging guard-plate.

HENRY C. VOSS.
CHARLES HULTGREN.