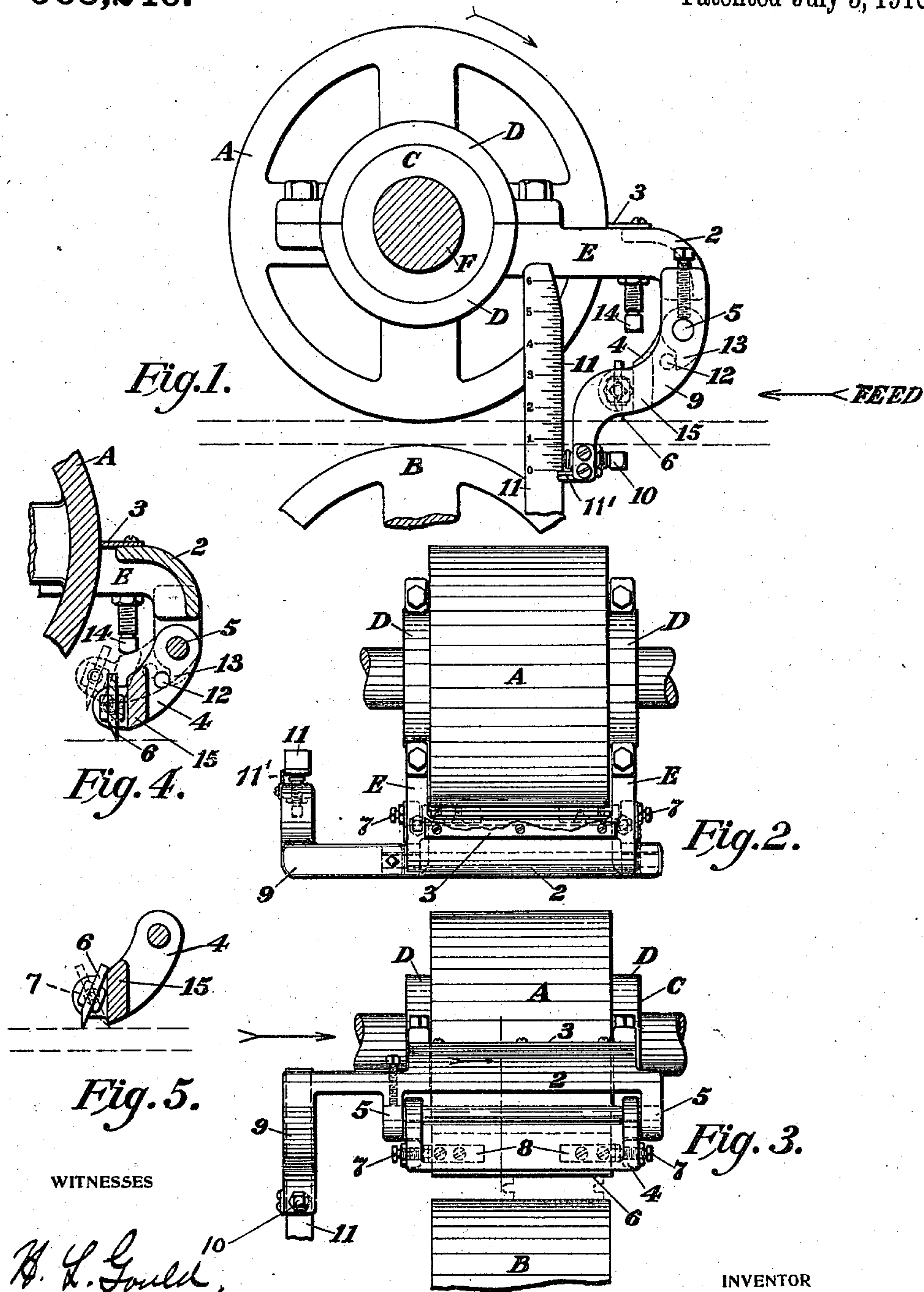


H. A. PERKINS.
STOCK SCRAPER FOR WOOD PLANING MACHINES.
APPLICATION FILED NOV. 1, 1909.

963,246.

Patented July 5, 1910.



WITNESSES

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STOCK-SCRAPER FOR WOOD-PLANING MACHINES.

963,246.

Specification of Letters Patent.

Patented July 5, 1910.

Application filed November 1, 1909. Serial No. 525,723.

To all whom it may concern:

Be it known that I, HIRAM A. PERKINS, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented a new and Improved Stock-Scraper for Wood-Planing Machines, of which the following is a specification.

My invention relates to a device for clearing the surface of lumber from shavings, dust or splinters which follow from the action of the cutter heads, and which if allowed to remain would pass under the adjacent feed roll and produce indentations on the surface, thus practically destroying the work of the surfacing cutters, and it consists in a construction and arrangement of parts whereby all the difficulties heretofore experienced with such devices have been overcome.

Stock scrapers as heretofore used have been liable to breakage, chiefly on account of the feed roll being adjusted too low and when a piece was fed out, the roll and the scraper dropped so low that the next piece would strike the scraper and break it owing to lack of yielding capacity. My device corrects this and other troubles.

In the accompanying drawings, Figure 1 is a side elevation of my invention; Fig. 2 is a plan view; Fig. 3 is front elevation, Fig. 4 is a transverse section looking in the direction of the arrow in Fig. 3, and Fig. 5 is a detail view of the scraper.

Similar letters and figures refer to similar parts in all the drawings.

A and B are respectively upper and lower feed rolls of a planing machine which are located in the rear of one or more of the cutter heads, and which are usually called "pulling out" rolls. The hubs C of the upper roll project some distance beyond the face of the roll, and arms E are swung thereon by means of box caps D, which with a corresponding portion of the arms E form a journal box on hubs C, such boxing being so fitted as to allow the arms E free movement around the center of the feed roll. The arms E are rigidly connected by the bar 2 in front of the feed roll, and to this bar I attach a roll scraper 3, which may be of any approved form or material.

4, Figs. 3 and 4, is a supplemental frame pivoted at 5, Figs. 1, 3 and 4, to the arms E, and carrying at its lower extremity a hard

steel scraper 6. This scraper is preferably also pivoted to swing approximately axially with reference to its thickness, in the frame 4, by means of pivot screws 7, Figs. 2, 3 and 5, which are countersunk into ears 8 secured to the scraper knife 6.

An extension 9 of the frame E is carried out to one side of the track of the lumber through the machine, and the lower end thereof has a set screw 10, with check nut for fixed adjustment.

11 is a post attached to a stationary part of the machine and the set screw 10 bears against one face of this post, thus preventing the frame E and connected parts from swinging downward beyond a point required to insure contact of the scraper 6 upon the face of the stock which latter is indicated by dotted lines in Figs. 1 and 3. To prevent the supplemental knife frame 4 from swinging too far forward or downward and thus prevent its proper action on the lumber, I attach to the arms of frame E, stops or lugs 13, Figs. 1 and 4, against which pins 12 or other suitable projections on frame 4 strike. A set screw 14 prevents frame 4 from swinging upward and coming in contact with the roll A. Post 11 is also utilized (with finger 11') as an index or rule to indicate the height of the feed roll from the work table or bed.

The scraping knife 6 is permitted to swivel on pivot screws 7, only a short distance, being prevented by the cross bar 15 in the supplemental yoke from taking only a slight angle; the object of this is to allow the knife to assume a scraping position upon the stock as shown in Fig. 5; and in case a reverse feed motion is used on the planing machine the knife can tilt over to the opposite angle as shown in dotted lines, Fig. 5, and thus not be liable to catch into the surface of the stock and mar it.

From the above description it will be seen that the frame E is free to swing upward about the axis of the roll A, and also may rise and fall with the roll when adjusted for various thicknesses of stock: furthermore the supplemental knife frame 4 is free to swing upward independently of the main frame, and this motion is backward in the direction of the feeding of the stock and the scraper knife itself may swing on its axial supports within proper limits. The weight of the supplemental frame 4, and

scraper 6, always keeps the latter in contact with the stock, and in case any rigid obstruction meets it, it can retreat by either or all of the three free adjustments above described.

By this construction I avoid the objection which has rendered previous stock scrapers useless, viz; breakage by uneven and splintered stock passing through the machine; and at the same time I insure constant contact of the scraper knife with the stock and consequent thorough cleaning of the surface before passing to the pulling out rolls.

It is not essential to my invention that the frame E be hinged on the feed roll hubs, it being only necessary for it to be pivoted to the carrier or boxes supporting the rolls, so as to rise and fall with the roll as it is adjusted to the thickness of the stock. I prefer, however, that the frame E should swing concentrically, or nearly so, with the axis of the upper feed roll.

What I claim as my invention and desire to secure by Letters Patent is:

1. In a stock scraper for a wood planer, a supporting frame suitably pivoted upon an upper feed roll or its carrier, a scraping knife attached to said frame, and means for retaining the scraper and its supporting frame in relative working position at any adjustment of the feed roll.

2. In a stock scraper for a wood planer, a supporting frame suitably pivoted upon an upper feed roll or its carrier, a supplemental frame pivoted to the supporting frame and a scraping knife suitably attached to said supplemental frame, operating substantially as described.

3. In a stock scraper for wood planer, a supporting frame pivoted upon an upper feed roll or its carrier, substantially concentrically to said roll, a supplemental frame pivoted to the supporting frame, a scraping knife attached to the supplemental frame and means for retaining the support-

ing frame and the scraping knife in operating position at any adjustment of the feed rolls.

4. In a stock scraper for a wood planer, a scraping knife pivoted approximately axially with reference to its thickness, and suitable stops on its sustaining bar or frame, whereby the knife automatically assumes a scraping position as the feed changes in direction.

5. In a stock scraper for a wood planer, a supporting frame pivoted upon an upper feed roll or its carrier, a scraping knife attached thereto, an arm or extension attached to said supporting frame, a guide post fixed to a convenient part of the machine and acting to retain said supporting frame in operating position at any point of vertical adjustment of the feed roll.

6. In a stock scraper for a wood planer a supporting frame pivoted upon an upper feed roll or its carrier, a supplemental frame pivoted to the main frame, a scraping knife carried by the supplemental frame, stops on said supporting frame arranged to prevent too extreme adjustment of the supplemental frame, all operating substantially as described.

7. In a stock scraper for a wood planer, a supporting frame pivoted to the feed roll or its carrier, a guiding post attached rigidly to a convenient part of the machine, an extension of said supporting frame resting against one face of the guiding post, graduations on another face of the post, and an index finger on said extension, whereby the relative vertical position of the roll and scraping knife is indicated.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HIRAM A. PERKINS.

Witnesses:

GRACE GRAHAM,
NORMAN A. PRINCE.