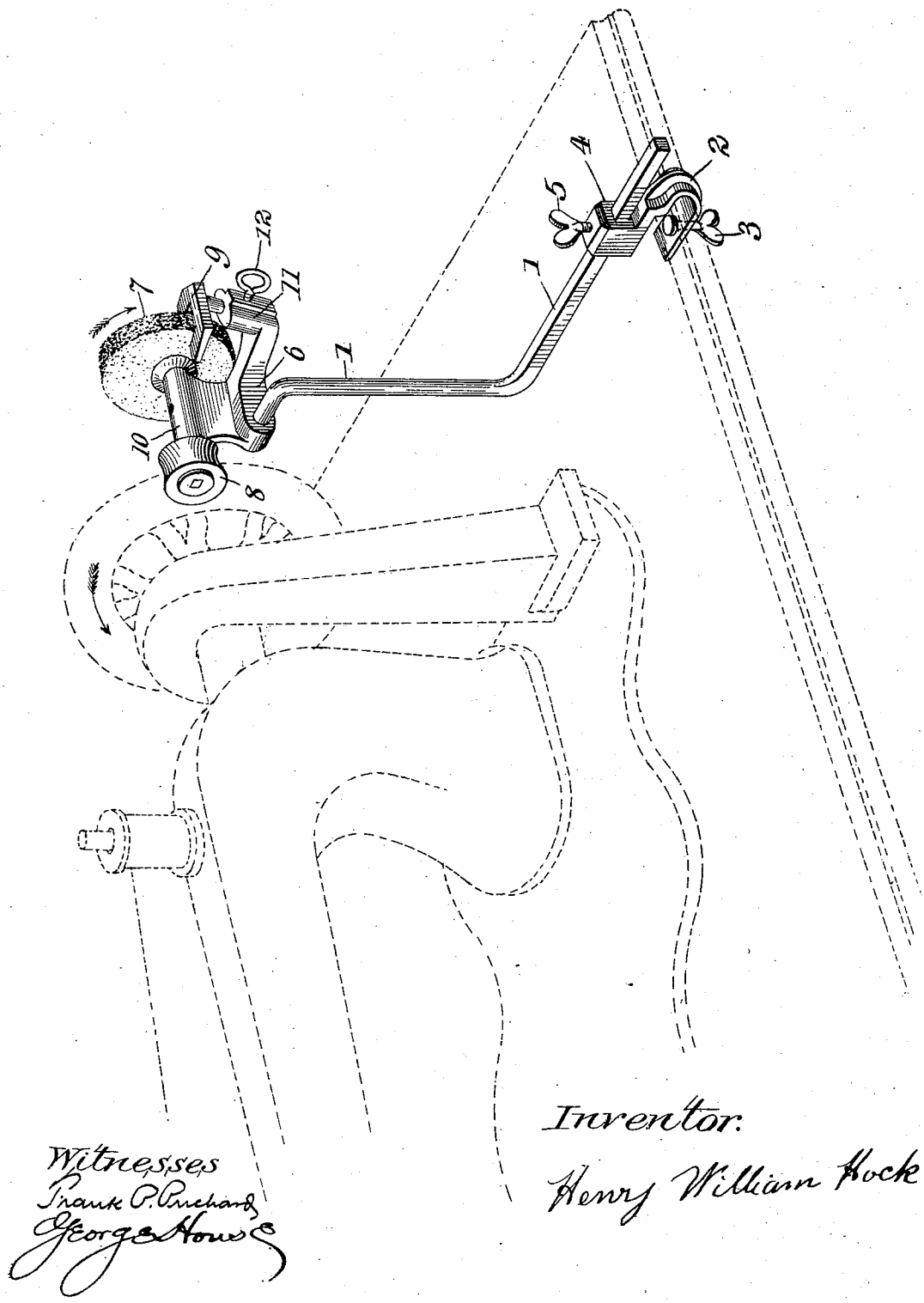
(No Model.)

H. W. HOCK.

GRINDING ATTACHMENT FOR SEWING MACHINES.

No. 473,000. Patented Apr. 19, 1892.



Witnesses
Frank P. Richard
George Howes

Inventor:
Henry William Hock

UNITED STATES PATENT OFFICE.

HENRY WILLIAM HOCK, OF CHESTER, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO WILLIAM S. McMANUS, OF SAME PLACE.

GRINDING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 473,000, dated April 19, 1892.

Application filed November 14, 1891. Serial No. 411,928. (No model.)

To all whom it may concern:

Be it known that I, HENRY WILLIAM HOCK, a citizen of the United States, residing at Chester, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Sewing-Machine Attachments; and I do hereby 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.

The invention relates to certain new and useful improvements in grinding attachments for sewing-machines, and has for its object to provide a grinding attachment for sharpening scissors and other edged tools adapted to be detachably and adjustably secured to the machine stand or table, so as to be operated by the usual fly-wheel carried by the overhanging arm of the machine.

In the accompanying drawing the attachment is shown in perspective as applied to a machine of ordinary construction, the latter being shown in outline.

Referring to the drawing the numeral 1 denotes an arm of generally L-shaped form, forming part of the attachment and constituting the standard by which the grinding-wheel and tool-rest are supported.

The figure 2 indicates a clip or clamp adapted to embrace the edge of the machine stand or table and to be adjustably and detachably secured thereto by means of thumb set-screw 3, bearing against the under side of the table, as will be readily understood from the drawing. On the upper side of the clamp 2 is a bearing-block 4, adapted to receive and support the horizontal part of the standard or arm 1. This part of the arm is preferably made angular or square in cross-section, and the bearing is correspondingly shaped, this being for the purpose of preventing the arm from turning in the bearings.

The numeral 5 denotes a thumb-screw tapped into the top or side of the bearing 4, by means of which the arm 1 may be adjusted and held in any position required by the size of the fly-wheel or the width of the table.

At the upper end of the vertical part of the arm 1 is rigidly mounted a bracket 6, said bracket carrying the grinding-wheel 7 and its driver 8, as well as the rest 9 for the blade of the scissors or other instrument to be sharpened. The grinding-wheel 7 is formed of any suitable grinding material and is fixed on one end of a short shaft journaled in a bearing 10, rigidly mounted on the bracket. At the opposite end the shaft of the grinding-wheel carries a small driving-wheel 8, preferably faced on its periphery with rubber or other material, causing it to take a firm hold on the fly-wheel of the machine, though this is not essential.

The figure 11 denotes an inclined boss or projection in which is adjustably held the stem or shank of the tool rest or support 9. It will be observed that the boss 11 is inclined in a downward direction toward the grinding-wheel. The object of this arrangement is to permit the adjustment of the rest 9 relatively to the face of the wheel, so as to grind an edge at any desired angle. The rest 9 is a flat plate, preferably cut out at its center so as to straddle the grinding-wheel, as represented in the drawing, though it may be otherwise formed. It is provided with an oblique or inclined shank sliding in an opening in the boss 11, a thumb-screw 12 being provided for the purpose of securing the tool-rest in any desired position of adjustment.

The manner of applying and adjusting the attachment will be readily understood from the drawing.

The device is adapted for attachment to any of the different makes of sewing-machines having the usual fly-wheel. To adjust the attachment to position, it is only necessary to secure the clamp 2 to the edge of the machine table or stand a little to the right of the vertical plane of the face of the wheel. The arm 1 is then adjusted in the bracket 4 until the driving-wheel 8 is brought in contact with the periphery of the fly-wheel of the machine, when the arm is secured in place by the set-screw 5. The tool-rest 9 is adjusted up or down, according as it is desired to grind a long bevel or a short bevel on the blade of the instrument. Owing to the inclined standard, as before described, the tool-rest may be adjusted vertically into such position relative to the axis of the grinding-wheel as to give

the blade any sort of an edge. The rest, it will be understood, is held in a horizontal position at all times, the shank being inclined to the plane of the rest, so as to maintain its horizontal position in its different adjustments.

I do not intend to limit myself to the shape or specific construction of the parts herein shown and described, as it is obvious that changes may be made therein without departing from the spirit or scope of the invention.

Having thus described my invention, what I desire to claim is—

1. In a grinding device, the combination of a grinding-wheel and an adjustable tool-rest, the latter consisting of a flat horizontal plate having an inclined stem mounted in inclined bearings, so as to be adjustable relatively to the face of the wheel, so as to grind an edge at any desired angle, substantially as described.

2. The combination of the bracket 6, the grinding-wheel 7, the inclined bearing 11, and the horizontal tool-rest embracing the edge of the wheel and having an inclined shank or stem, substantially as described.

3. A grinding attachment for sewing-machines, consisting of the clamp 2, having the bearing-block 4 and the thumb-screws 3 and 5, the L-shaped arm 1, the horizontal part adjustably secured in sliding bearings in the clamp 4, and the vertical part carrying the bracket 6, a shaft journaled in bearings on the bracket and having at one end the driving-wheel 8 and at the other the grinding-wheel 7, the inclined boss 11, and the tool-rest 9, having an oblique stem or shank adjustable in the bearing-boss 11 by means of the thumb-screw 12, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY WILLIAM HOCK.

Witnesses:
FRANK P. PRICHARD,
GEORGE E. HOUSE.