No. 734,863. PATENTED JULY 28, 1903.

L. S. & J. N. HEALD.

SASH TRIMMING MACHINE.

APPLICATION FILED MAY 4, 1901.

NO MODEL.

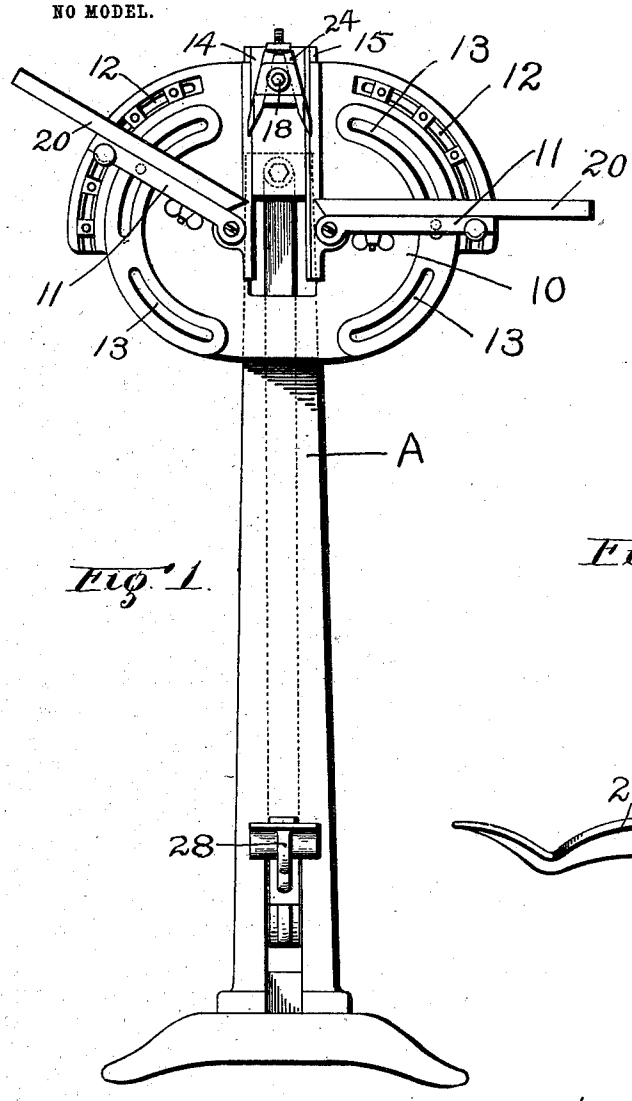

Fig. 1.

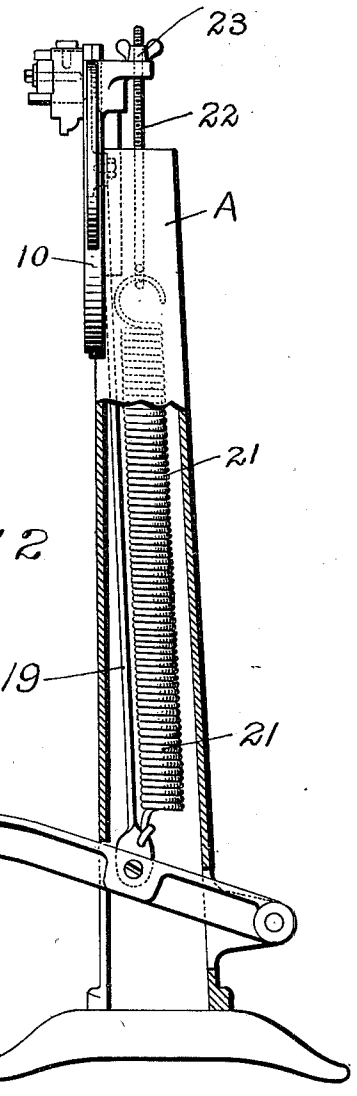

Fig. 2.

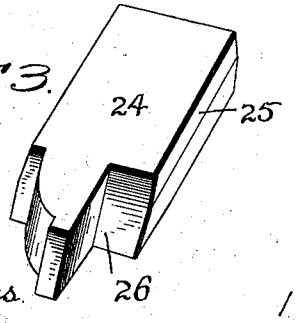

Fig. 3.

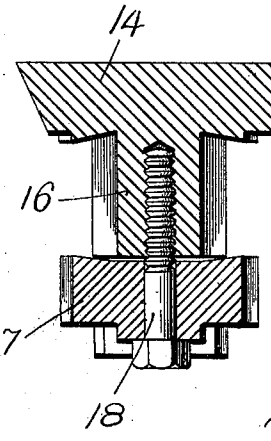

Fig. 4.

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No. 734,863. Patented July 28, 1903.

UNITED STATES PATENT OFFICE.

LEANDER S. HEALD AND JAMES N. HEALD, OF BARRE, MASSACHUSETTS.

SASH-TRIMMING MACHINE.

SPECIFICATION forming part of Letters Patent No. 734,863, dated July 28, 1903.

Application filed May 4, 1901. Serial No. 58,775. (No model.)

To all whom it may concern:

Be it known that we, LEANDER S. HEALD and JAMES N. HEALD, citizens of the United States, residing at Barre, in the county of Worcester and State of Massachusetts, have invented a new and useful Sash-Trimming Machine, of which the following is a specification.

This invention relates to that class of machines employed for trimming or cutting off the ends of pieces of sash at various angles; and the objects of this invention are to provide an improved form of cutting-knife for use in machines of this character, to provide means for securing the cutting-knives so that they will not interfere with or limit the motion of the vertically-movable head, and to provide a more rigid and less expensive form of machine than has heretofore been employed.

To these ends this invention consists of the cutting-knife as an article of manufacture and of the combinations of parts in a sash-trimming machine, as hereinafter described and more particularly pointed out in the claims at the end of this specification.

In the accompanying drawings, Figure 1 is a front view of a sash-trimming machine constructed according to this invention. Fig. 2 is a side view thereof, partially broken away. Fig. 3 is a perspective view of one of the cutting-knives, and Fig. 4 is an enlarged transverse sectional view of the vertically-movable head.

In the use of that class of sash-trimming machines to which this invention relates it has heretofore been the practice to employ chisel-shaped knives or cutting-blades having a contour of uniform horizontal cross-section throughout their entire lengths, the outline of which corresponds with the section of the sash to be trimmed therewith. These cutting-knives or chisels have heretofore been arranged vertically. In practice we have found the use of cutting-knives of this construction to be objectionable, as such knives are apt to warp or twist while being tempered, and in order to produce a satisfactory grade of work such knives have to be carefully finished along their entire length to prevent inequalities or projections thereon from scratching or marring the work being trimmed. Furthermore, in the use of prior sash-trimming machines care had to be exercised in order not to bring the vertically-movable head down onto the work. To avoid these objections and to provide a form of sash-trimming machine in which the downward motion of the vertically-movable head is not thus limited or restricted, we have devised an improved form of trimming-knife and have provided means for securing the same in an inclined position in the vertically-movable head, so that its cutting-face will be located at one side thereof.

Referring to the accompanying drawings and in detail, A designates the machine standard or post. Bolted or otherwise formed with or secured rigidly to the machine-standard A is a vertical plate 10. Pivotally mounted on the vertical plate 10 are adjustable tables or supports 11. The tables 11 may be set to different inclinations by means of stops mounted in slots 12 in the plate 10, and the tables may be clamped in their adjusted positions by bolts threaded into said tables through slots 13 from the rear side of the plate 10.

The clamping-bolt slots 13 in a machine constructed according to our invention are preferably located both below and above the center of the vertical plate 10, so that the tables 11 may be inclined in either direction from a horizontal position.

Carried by the tables 11 are grooved wooden bed-pieces 20 for supporting the sash-sections to be trimmed or cut off.

In the class of sash-trimming machines to which our invention relates the vertical plate 10 has usually been adjustably connected with the machine-standard A, but in practice we prefer to secure these parts rigidly together and to employ interchangeable wooden pieces 20 of the proper shape to hold the sash-sections being operated upon or trimmed in position to be engaged by the knives without adjustment or movement of the plate 10.

The vertically-movable head 14, as shown most clearly in Fig. 4, consists of a dovetailed slide which fits into ways in the vertical plate 10 and is secured therein by a retaining-piece or gib 15. A lug or projection extends out from the face of the slide 14, and bolted to the projection 16 by a bolt 18 is a

clamping-plate or cover 17. The connections for operating the vertically-movable head may be of any ordinary or approved construction.

As illustrated most clearly in Fig. 2, a treadle 28 is pivotally mounted in the machine-standard and is connected to the vertically-movable head by a rod or pitman 19. These parts are normally held in their raised or lifted position by a long coiled spring 21, connected at its upper end to an eyebolt 22, threaded onto which is a wing-nut 23 for adjusting the tension of the lifting-spring 21.

The form of trimming-knife which we preferably employ is most clearly illustrated in Figs. 1 and 3. As shown in these figures, a trimming-knife constructed according to our invention comprises an inclined shank 24, the edges of which may be inclined or beveled, as at 25, a cutting-face 26, which is vertical when the knife is secured in position in the head of the machine and which corresponds in contour with the sections of sash to be trimmed, and the knives may be sharpened by grinding their rear faces at a slight angle, as illustrated in Fig. 1. In practice the cutting-face of the knife we have usually formed at an angle of about fifteen degrees to the shank 24, but this angle may be varied as desired, it simply being necessary that the knives should extend out sidewise far enough from the clamp on the vertically-movable head so that the vertically-movable head may be moved up and down without being brought into engagement with the work.

In our cutting-knives it is to be noticed that the trimming-surfaces having the contour of the sash to be trimmed are comparatively short, and on this account our knives can be more cheaply finished than the forms of vertical knives which have heretofore been employed in this class of machines and less care has to be exercised in preventing the same from warping or springing when being tempered.

We are aware that changes may be made in practicing our invention by those who are skilled in the art without departing from the scope thereof as expressed in the claims. We do not wish, therefore, to be limited to the construction herein shown and described; but

What we do claim, and desire to secure by Letters Patent of the United States, is—

1. In a sash-trimming machine, the combination of a vertically-movable head, sockets on the opposite sides of said head which incline outwardly from their upper to their lower ends, trimming-knives, each having a cutting-face corresponding to the beading of the sash to be operated upon, with a bevel-edged shank extending at an oblique angle therefrom, which shanks engage said inclined sockets, a clamping-plate, and a bolt for said clamping-plate for clamping the knives in place to extend out from opposite sides of the vertically-movable head.

2. In a sash-trimming machine, the combination of a vertically-movable head having an inclined socket at each side thereof for receiving the trimming-knife shanks, which sockets incline outwardly from their upper ends toward their lower ends, and a clamping-plate and bolt for clamping two knives in said sockets, so that said knives will extend out from opposite sides of the vertically-movable head, substantially as described.

3. As an article of manufacture, a cutting-blade for sash-trimming machines, having a cutting-face corresponding to the molding or contour of the sash to be operated upon, with a bevel-edged shank extending at an oblique angle from the cutting-face, so as to adapt the knife to extend out from the side of the cutter-head when clamped therein, the lower edge of the knife being ground at an incline to form a chisel-like cutting edge.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

LEANDER S. HEALD.
JAMES N. HEALD.

Witnesses:
A. N. ELLIOTT,
JOHN C. BARTHOLOMEW.