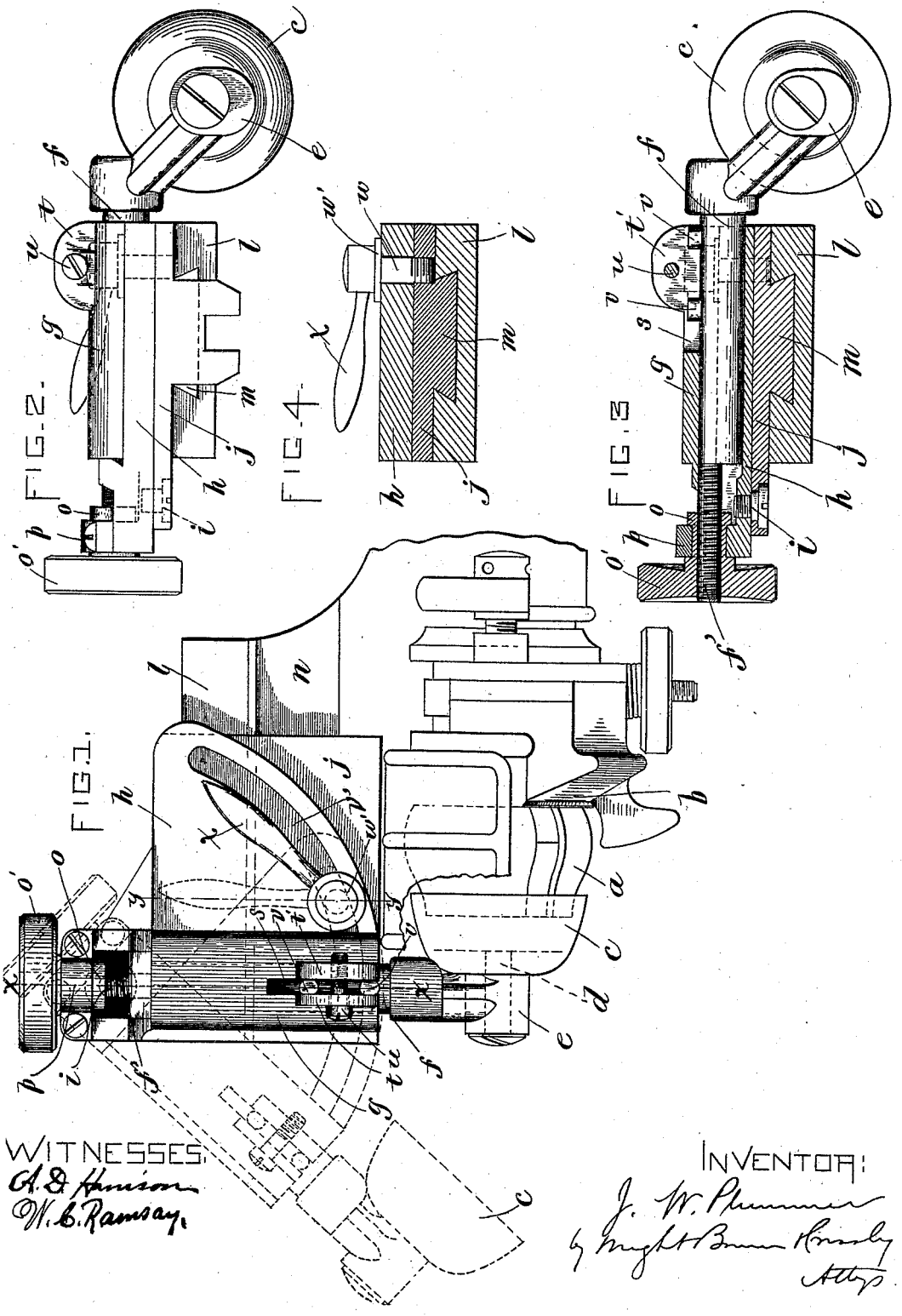
(No Model.)

J. W. PLUMMER.

HEEL TRIMMING MACHINE.

No. 419,880. Patented Jan. 21, 1890.



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HEEL-TRIMMING MACHINE.

SPECIFICATION forming part of Letters Patent No. 419,880, dated January 21, 1890.

Application filed October 7, 1889. Serial No. 326,235. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. PLUMMER, of Somerville, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Heel-Trimming Machines, of which the following is a specification.

This invention relates to heel-trimming machines of the class shown, for example, in Patent No. 411,121, dated September 17, 1889, having a rotary heel-trimming cutter-head mounted on a shaft which is journaled in fixed bearings on the frame of the machine, and is provided with a hood which projects over the end of the cutter that trims the upper or heel seat portion of the heel and prevents the counter of the boot or shoe from being injured by the knives of the cutter-head, said hood being termed a "counter-guard." Means are provided for adjusting the counter-guard forward and backward at right angles with the axis of the cutter-head to adjust it to cutter-heads of different sizes, and the construction is such that the counter-guard can be swung out of place to afford access to the cutter-head when it is desirable to take out and replace the knives thereof.

In the machine shown in Patent No. 411,121, above referred to, and in all other machines of this class of which I am aware, the construction is such that when the counter-guard is released preparatory to swinging it out of place there is no way of preserving its adjustment relatively to the periphery of the cutter-head, the counter-guard being free to move at right angles with the axis of the cutter-head when it is in condition to swing away from the cutter-head, so that in swinging the counter-guard away from the cutter-head and back it is liable to be so displaced as to require readjustment to the periphery of the cutter-head.

My invention has for its object to remedy this defect and permit the counter-guard to be swung away from and back to the cutter without disturbing its adjustment, so that when swung back to place it will necessarily occupy the same relation to the cutter-head that it did before it was swung away.

To this end my invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a top view of a portion of a heel-trimming machine having my improvements. Fig. 2 represents an end view looking from the left in Fig. 1. Fig. 3 represents a section on line x x, Fig. 1. Fig. 4 represents a section on line y y, Fig. 1.

The same letters of reference indicate the same parts in all of the figures.

In the drawings, a represents the heel-trimming cutter-head, which may be constructed like the cutter-head shown in Patent No. 411,121, or otherwise, and is mounted on a shaft which is journaled in bearings in the supporting-frame of the machine. A rest b for the top lift of the heel to be trimmed is provided and means for adjusting said rest; but as said rest and adjusting devices form no part of the present invention it is not deemed necessary to describe the same.

c represents the counter-guard, which is in this case a cup-shaped hood, arranged to partly cover the outer or heel-seat-trimming end of the cutter-head. The counter-guard is provided with a stud d, Fig. 1, which is journaled in a socket e, which is attached to a shank or stud extending at right angles to the axis of the cutter-head when the counter-guard is in operative position.

The shank f is adapted to move endwise in a socket g on a horizontal plate h, which is connected by a pivot i, Figs. 1 and 3, with a carriage j. Said carriage is supported by a fixed table or bracket l, and is movable on said bracket in a direction parallel with the axis of the cutter-head, the carriage having a dovetail rib m, which is fitted in a dovetail groove n, Fig. 1, in the bracket l.

The shank f, which supports the counter-guard, is provided at its rear end with a screw-threaded extension f', which is engaged with a nut o. Said nut is journaled in an ear p on the pivoted plate h, and is provided with a knob o', whereby it may be rotated. The rotation of the nut o causes the shank f to move endwise inwardly or outwardly, as the case may be, and thus adjust the counter-

guard backward or forward, the nut *o* holding the shank and counter-guard at any position to which they may be adjusted. To additionally hold the shank *f* against accidental displacement, I cut a slot *s* in the outer end of the socket *g* and form ears *t t'* on the socket at opposite sides of the slot *s* and insert a screw *u* in said ears. The shank has studs *v v*, that project between said ears, and are firmly grasped thereby when the screw is turned to compress the ears upon said studs. The pivoted plate *h* is provided with a segmental slot *v'*, through which passes a clamping-screw *w*, said screw entering a threaded orifice in the carriage *j* and having a head *w'*, which, when the screw is turned down, clamps the plate *h* against the carriage *j* and holds it firmly, so that it cannot turn on its pivot.

From the foregoing it will be seen that when the screw *w* is loosened the plate *h* can be turned on its pivot *i* to the position shown by dotted lines in Fig. 1, thus separating the counter-guard from the cutter-head. This operation does not affect the adjustment of the counter-guard with relation to the plate *h*, and there is no possibility of accidental inward or outward movement of the counter-guard during the swinging movement, so that when the plate *h* is swung back to the position shown in full lines the counter-guard necessarily occupies the same position with relation to the cutter-head that it occupied before it was swung away from the cutter-head. It will be seen, therefore, that there is no occasion for readjusting the counter-guard after returning it to place, as there is in the machine shown in the patent above referred to.

I claim—

1. In a heel-trimming machine, the combination of the fixed supporting arm or bracket *l*, the carriage *j* thereon, the plate *h*, pivoted to said carriage and provided with a socket *g*, a shank or stud *f*, which is movable in the socket *g*, a counter-guard supported by said shank or stud, means for securing said shank or stud to the socket *g* at any point to which the shank may be adjusted, and thereby holding the counter-guard at any desired position with relation to the pivoted plate, and means for locking the pivoted plate to the carriage *j*, to rigidly hold the counter-guard in its adjusted position and for releasing the plate to permit it to be turned on its pivot with the counter-guard, whereby the counter-guard may be displaced from its operative position without disturbing its adjustment on the pivoted plate, as set forth.

2. In a heel-trimming machine, the combination of the fixed supporting arm or bracket, the carriage *j* thereon, the plate *h*, connected to said carriage by a pivot *i* and provided with a journaled adjusting-nut *o* and a socket *g*, the shank *f*, movable in the socket *g* and provided with a threaded extension engaged with the adjusting-nut, the counter-guard supported by said shank, and the clamping-screw engaged with the carriage and adapted to lock and release the pivoted plate *h*, as set forth.

3. In a heel-trimming machine, the combination of the fixed supporting arm or bracket, the carriage *j* thereon, the plate *h*, connected to said carriage by a pivot *i* and provided with a journaled adjusting-nut *o* and a socket *g*, the shank *f*, movable in the socket *g* and provided with a threaded extension engaged with the adjusting-nut, the ears *t t'* on the socket, and the screw *u*, engaged with said ears, whereby the shank *f* may be clamped and released, the counter-guard supported by said shank, and the clamping-screw engaged with the carriage and adapted to lock and release the pivoted plate *h*, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 2d day of October, A. D. 1889.

JOHN W. PLUMMER.

Witnesses:
C. F. BROWN,
A. D. HARRISON.