(No Model.) 2 Sheets—Sheet 1.

S. E. PLUMMER.

RECUTTING MACHINE.

No. 451,433. Patented Apr. 28, 1891.

Fig. 1.

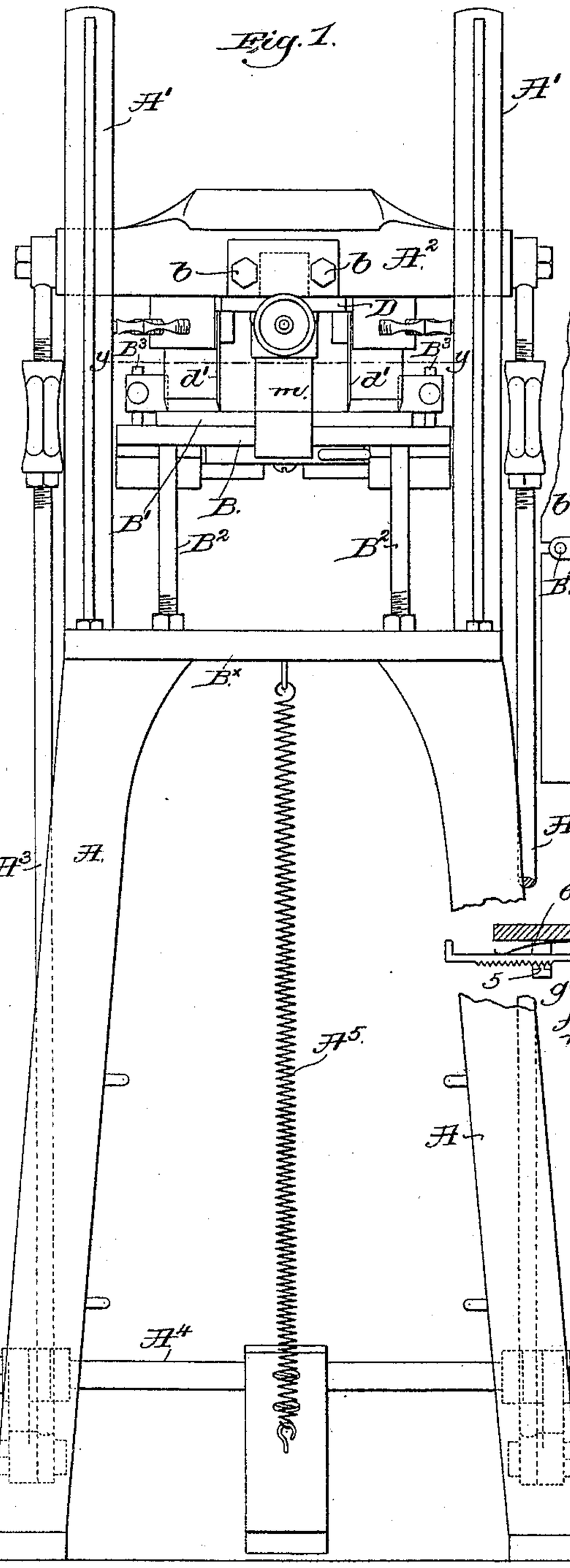


Fig. 13.

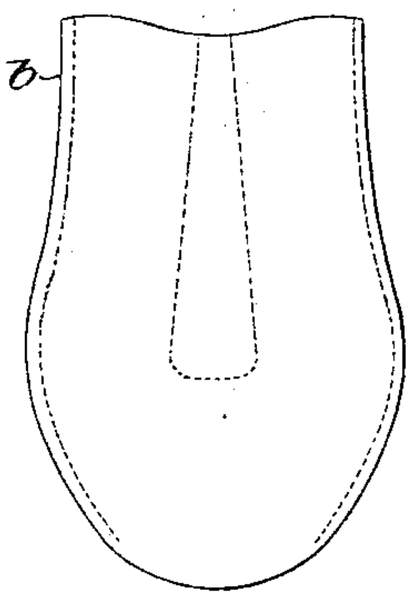


Fig. 12.

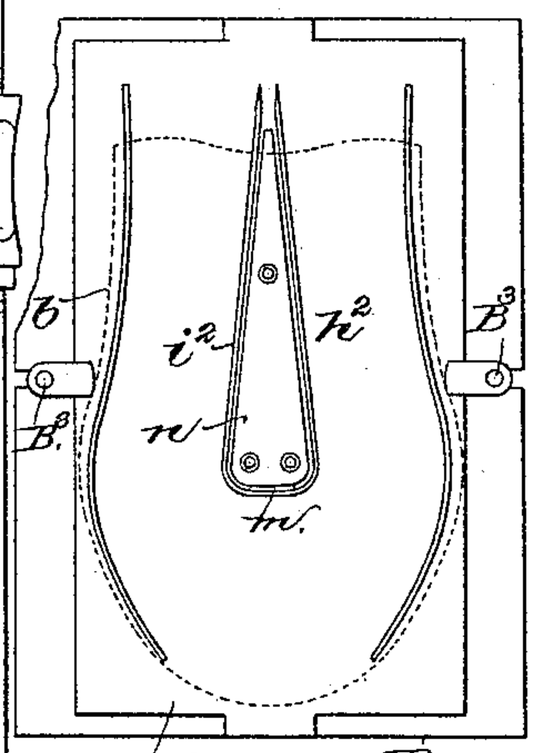
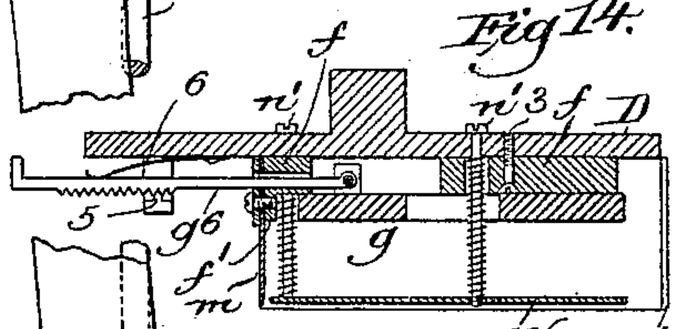


Fig 14.



Witnesses.
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Inventor.
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(No Model.) 2 Sheets—Sheet 2.

S. E. PLUMMER.

RECUTTING MACHINE.

No. 451,433. Patented Apr. 28, 1891.

Fig. 2.

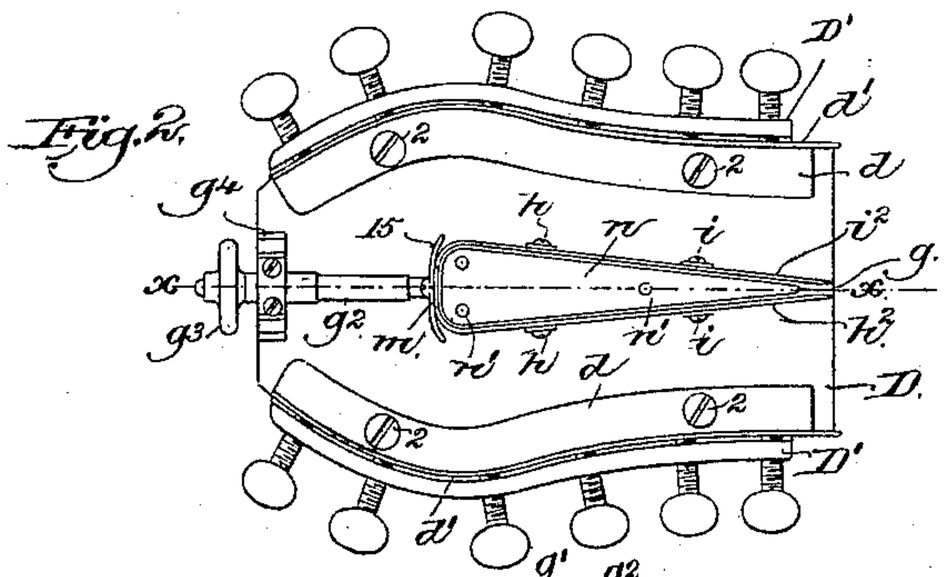


Fig. 6.

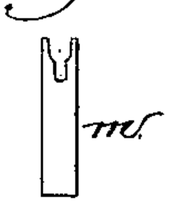


Fig. 3

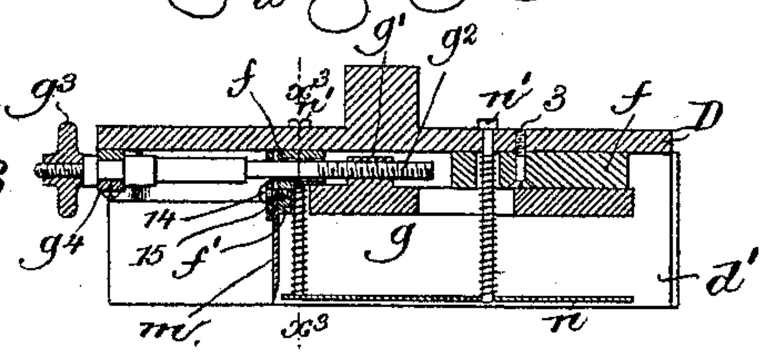


Fig. 7.

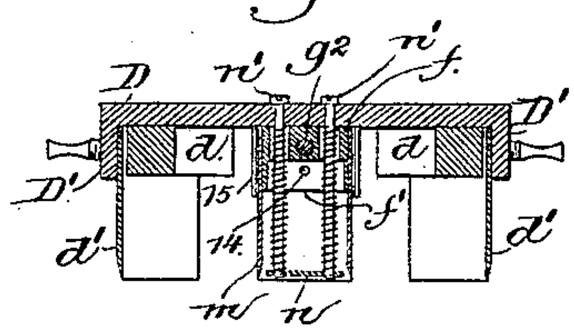


Fig. 4

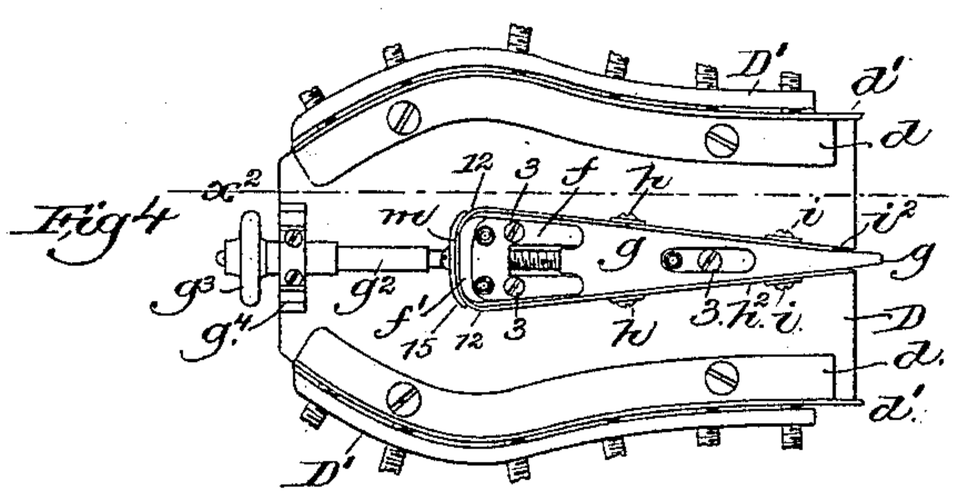


Fig. 8.

Fig. 5.

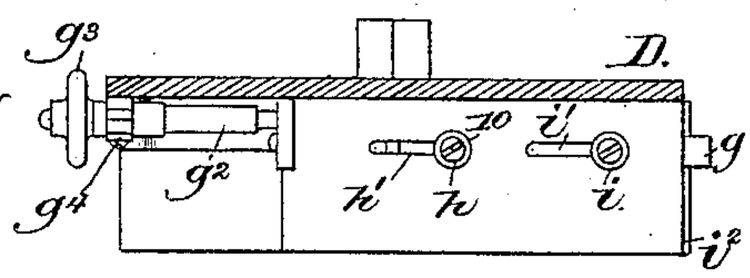


Fig. 9.

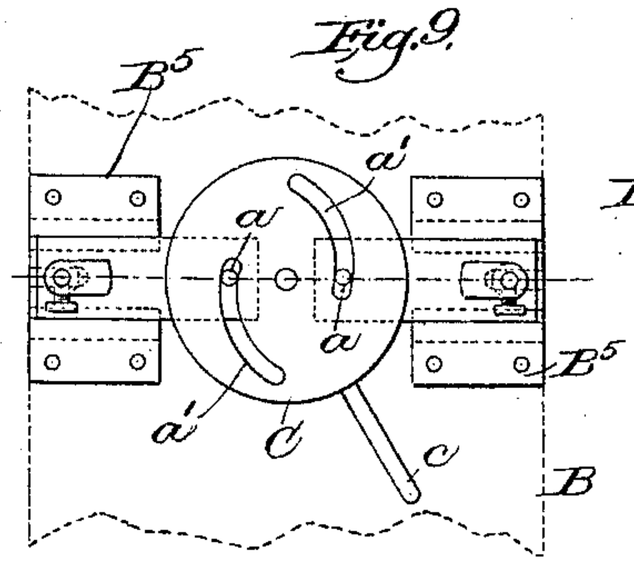


Fig. 11.

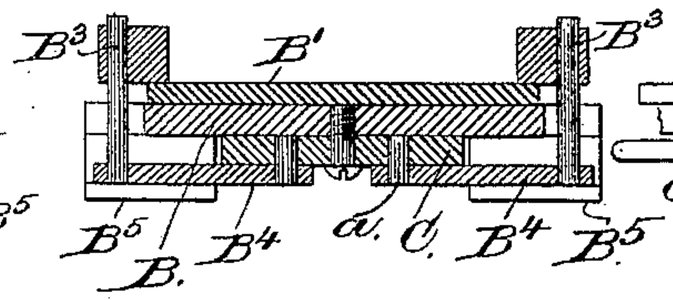
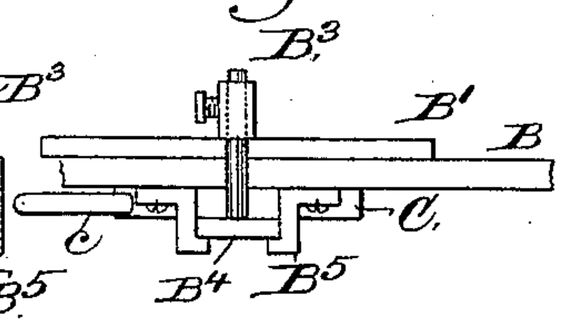


Fig. 10.



Witnesses.
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UNITED STATES PATENT OFFICE.

STEPHEN E. PLUMMER, OF WHITMAN, ASSIGNOR OF ONE-THIRD TO E. GERRY BROWN, OF BOSTON, MASSACHUSETTS.

RECUTTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 451,433, dated April 28, 1891.

Application filed September 17, 1890. Serial No. 365,237. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN E. PLUMMER, of Whitman, county of Plymouth, State of Massachusetts, have invented an Improvement in Recutting-Machines for Boot or Shoe Vamps, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

In the manufacture of boots and shoes the vamps are blocked out by the employment of a pattern which, laid on the leather, is cut about by a hand-operated knife. These blanks are always cut larger than the required size, and are thereafter recut to ultimate shape or form by a second hand operation.

The object of this invention is the production of a machine by which to recut vamps to bring them into ultimate shape.

My improved machine contains an edge-cutter and throat-cutter, which are made adjustable according to the size and width of the vamp.

The particular features in which my invention consists will be hereinafter described, and designated in the claims at the end of this specification.

Figure 1, in front elevation, represents a vamp-recutting machine embodying my invention; Fig. 2, an under side view of the cutting-blade holder; Fig. 3, a section of the same in the line *x;* Fig. 4, an under side view with the ejector removed; Fig. 5, a section on the line x^2 of Fig. 4; Fig. 6, the center blade or cutter removed; Fig. 7, a section in the line x^3, Fig. 3; Fig. 8, a face view of a center blade of a different width; Figs. 9, 10, and 11, details of the gage for the edges of the blank, the said gage being adjustable so as to correctly place in central position one or it may be a pile of blanks, to be cut at one operation; Fig. 12, a partial section below the dotted line *y y*, Fig. 1, chiefly to show the cutting-bed, part of the table-plate, a blank (shown by dotted lines) lying on the bed between the gages shown in Fig. 11, the edge-cutting blades and the throat-cutting blades being shown as set thereon. Fig. 13 is a diagram showing by full lines the vamp as cut from the skin, the dotted lines showing the vamp made therefrom by recutting, and Fig. 14 is a modification to be described.

The frame-work of the machine consists, essentially, of legs A A and uprights A′ A′, slotted for the reception of the ends of the cross-head A^2. The cross-head is adapted to be reciprocated by links A^3, attached to arms of a suitable shaft A^4, adapted to be rocked in any usual manner, the said cross-head being herein shown as normally kept elevated by spring A^5, or in other usual manner.

The table-plate B, supporting any usual cutting-bed B′, is adjustably mounted on adjusting rods or screws B^2 in the table $B^\times$. This table-plate is slotted for the reception of guide pins or studs B^3, connected to and rising from carriages B^4, fitted to slide transversely in guideways B^5, attached to the under side of the said table-plate, the said carriages each having a roller or other stud *a*, which enters a curved or cam slot *a′* in a movable cam-plate C, shown as having a suitable handle *c*. (See Fig. 9.) These guide-pins in practice are separated sufficiently apart to receive between them the blank or pile of blanks to be recut, one of said blanks being shown at *b*, Fig. 12, the said pins being moved toward each other by the cam, so as to cause the said pins by contact with the edges of the blank or blanks to place one or all of them in central position with relation to the center of the cutting-blades to be described, the said pins, in case of the blanks being in a pile, acting to place the edges of all the blanks substantially in line or to right up the pile. This cross-head has attached to it by screws *b*, in usual manner, the shank of a plate D, called the "cutter-carrying plate." This plate has attached to it near each side by screws 2 a blade stop or holder *d*, each stop or holder receiving against it the inner side of an edge-cutting blade *d′*, the said blades, as shown, being clamped to the said stops or holders by clamp-screws d^3, inserted through a flange D′ of the plate D. The stops or holders *d* will in practice be of such shape as to enable the blades, when forced against them by the clamping-screws, to be put into the shape desired for the ultimate shape of the edges of the vamps.

The plate D has secured to its under side by screws 3 a stationary block *f*, having a lip

f' concavo-convex in shape. The block f receives against it a wedge-shaped carriage g, having, as shown, a threaded lug g', with which is engaged an adjusting device, shown as a screw g^2, having a hand-nut g^3, the said screw having a bearing in an ear g^4, so that it may rotate but not move longitudinally. As an equivalent to this adjusting device and to operate the wedge more quickly, I may use a link g^6, having an upturned end (see Fig. 14) adapted to be engaged by hand, the said link being notched to engage a suitable shoulder 5, a spring 6 acting normally to keep the link in engagement with the shoulder. The wedge has projections h i from its side edges, (herein shown as screws,) which pass through long slots h' i' in the blades h^2 i^2, the said screws being provided inside their heads with washers 10, which bear against the outer sides of the said blades to keep them in contact with the said wedge. The blades h^2 i^2 are curved near their inner ends 12 to conform to the curved cut which it is desired to make in the blank to form the throat therein, (shown by dotted lines, Fig. 13,) and the inner extremities of the said blades are grooved to receive in them the opposite edges of the removable center blade m, which may be of greater or less width, according to the size of the vamp. The center blade is held in place by a screw 14, extended through a cap 15 and screwed into the lip f'.

I have provided the throat-cutter with an ejector n, (shown as a plate having attached guide screws or rods n', which are surrounded in usual manner by suitable spiral springs,) such ejector being common in many classes of machine. Longitudinal adjustment of the wedge-block g causes the throat-cutting blades h^2 i^2 to be moved toward or from each other, according to the direction of movement of the said wedge, such movement or adjustment of the said blades enabling their inner ends to be expanded or contracted sufficiently to receive a center cutter of the desired width, according to the size of the vamp to be recut.

In operation, a pile of blanks blocked out will be laid, as described, on the cutting-bed and the gage pins or block thereon will be moved to center the said blanks and then the cross-head will be depressed and the cutting-blades will act on and recut the vamps to ultimate shape, as designated by the dotted lines, Fig. 13.

I claim—

1. In a recutting-machine for vamps, adjustable edge-cutting blades d, combined with separable throat-cutting blades, to operate substantially as described.

2. The edge-cutting blades, combined with the adjustable throat-cutter composed of two separable blades and an interposed fixed center blade, to operate substantially as described.

3. The two separable throat-cutting blades having their inner ends curved, as described, combined with a center cutter m, fitted between the inner ends of said blades, and means to separate the blades, substantially as described.

4. The two slotted throat-cutting blades, combined with the wedge having projections to enter said slots and with means to move the said wedge to move the said blades toward or from each other, substantially as described.

5. In a machine for recutting vamps, the plate D and the edge-cutting blades d', carried thereby, combined with the throat-cutting blades h^2 i^2, curved at their ends, and with a lip f' and plate 15, between which the said curved ends are loosely held, substantially as described.

6. In a machine for recutting vamps, the plate D, the edge-cutting blades d', and the throat-cutting blades h^2 i^2, combined with means co-operating with the said throat-cutting blades, whereby they may be moved toward and from each other, according to the width of the throat to be cut, substantially as described.

7. In a machine for recutting vamps, the plate D, the adjustable edge-cutting blades d', and the adjustable throat-cutting blades h^2 i^2, combined with the ejector g, substantially as described.

8. In a machine for recutting vamps, the plate D, the edge-cutting blades carried thereby, the throat-cutting blades, and the cutting-bed and its support, combined with the adjustable gages to adjust the vamp to be cut into central position with relation to the said cutters, substantially as described.

9. In a vamp-recutting machine, the slotted table-plate, the cutting-bed thereon, and the independent carriages adapted to slide transversely in the under side of the table-plate and having guiding projections B^3, extended through the slots in said plate, and a stud on each carriage, combined with a cam-plate to co-operate with said studs, rotation of the cam-plate moving the carriages simultaneously toward and from each other, substantially as described.

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

STEPHEN E. PLUMMER.

Witnesses:
GEO. W. GREGORY,
A. S. WIEGAND.