

2 Sheets—Sheet 1.

No. 507,814.

Patented Oct. 31, 1893.



WITNESSES:
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C. H. HELMS & C. REINDERS.
MACHINE FOR SHAPING AND CUTTING COUNTERS.

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Fig. 3.

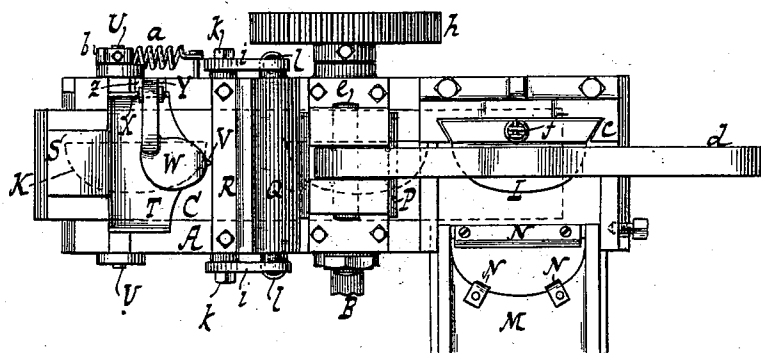


Fig. 4.

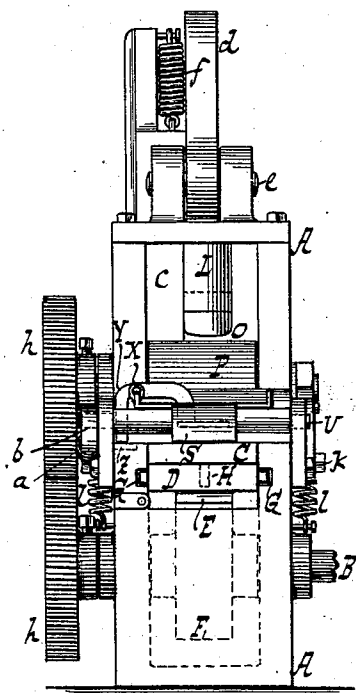
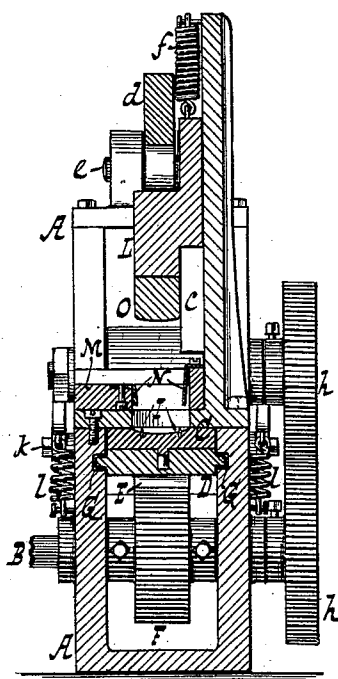


Fig. 5.



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UNITED STATES PATENT OFFICE.

CHARLES H. HELMS, OF POUGHKEEPSIE, AND CHARLES REINDERS, OF NEW YORK, N. Y.

MACHINE FOR SHAPING AND CUTTING COUNTERS.

SPECIFICATION forming part of Letters Patent No. 507,814, dated October 31, 1893.

Application filed March 9, 1893. Serial No. 465,292. (No model.)

To all whom it may concern:

Be it known that we, CHARLES H. HELMS, residing at Poughkeepsie, in the county of Dutchess, and CHARLES REINDERS, residing at New York, in the county of New York, State of New York, citizens of the United States, have invented new and useful Improvements in Machines for Shaping or Cutting Counters and other Articles, of which the following is a specification.

This invention relates to a machine for shaping or cutting such articles as counters for boots and shoes, insoles, blinker leathers and the like and the invention consists in the novel features pointed out in the following specification and claims and illustrated in the annexed drawings in which—

Figure 1, is a side elevation of the machine. Fig. 2, is a side elevation partly in section and showing parts of the machine in a different position than in Fig. 1. Fig. 3, is a plan view of the machine. Fig. 4, is a front elevation of the machine. Fig. 5, is a section along $x-x$ Fig. 1.

In the drawings the letter A indicates a frame or support and B is a driving shaft which is suitably oscillated, so as to impart a reciprocating or forward and backward motion to a carrier C. This carrier is supported on a plate or bed D having a rack E engaged by the gear or connection F on shaft B. The bed D reciprocates in suitable guides or ways G in frame A. The carrier C is placed on the bed D and is held by pegs or studs H so as to travel or reciprocate with the bed but said carrier can be readily taken off the bed and replaced whenever required by simply running the bed out of the frame A. The carrier has a seat or hollow provided with prongs or holders I onto which the blank or counter to be shaped is pressed by plunger L. The seat is to be shaped to correspond to the goods to be turned out by the machine. Said blank is placed over the seat or prongs I onto a suitable opening in die M. Said die has springs or spring fingers N at its opening to prevent the blank going through until the plunger descends and forces the blank past the resistance of fingers N onto the hollow

seat and into engagement with the holders or points I on carrier C. The face or working end O of the plunger L is convex or shaped to correspond to the hollow or seat in the carrier C so that the blank is forced thoroughly into the seat and into firm connection with prongs I to prevent slipping on the forward stroke of the carrier. Said face O is dove-tailed or made removable on the plunger L so as to be taken off and replaced when required. The die M is also slidable or removable on its seat or frame A for obvious reasons. When the carrier C makes its forward stroke it carries the blank under the press rollers P Q and against the cutter or blade R where the blank is trimmed or shaped. The forward end of the carrier also strikes against the tail piece S of a rocking receiver, composed of a plate T jointed at U to the frame A. This action of the carrier causes the point or end V of the receiver plate to be forced or pressed onto the carrier so that on the continued forward stroke of the carrier the counter or shaped blank is scooped or stripped from out of the seat and off the prongs I onto the receiver plate as indicated in Fig. 3 where a counter K is shown in dotted outlines.

To the receiver plate T is jointed a holder W at X said holder having an arm Y which on the holder swinging toward the receiver plate strikes against a spring pad or cushion Z on the frame A so that the holder is pressed against the receiver. The shaped blank K stripped from the carrier by the receiver enters between the latter and the holder and is there held or clamped so as to remain on the receiver when the carrier makes its return stroke. When the carrier C has returned or moved back sufficiently to clear the tail piece S the spring a acting on arm b throws the receiver T away from the carrier. At the same time the arm Y is carried or lifted away from spring or cushion Z and the pressure of holder W on the receiver is taken off allowing the finished blank to slip or drop off the receiver into any suitable basket or receptacle. The carrier C moves back until its seat with the prongs I is again underneath the plunger L so that the latter on its next stroke will fasten

another blank on the prongs and the carrier again moves forward. The plunger L travels in a suitable way or guides *c* and is actuated by a lever *d* fulcrumed at *e*. When the lever

5 is released a spring *f* raises the plunger.

The press roller P has its shaft *g* connected to shaft B by suitable gears or connections *h*. The press roller Q is journaled in arms *i* jointed at *k* to the support A and said roller is forced
10 toward the carrier by springs *l*. The rollers P Q are advantageously covered with rubber or soft material. The motions can be imparted to the driving shaft B and lever *d* by any suitable well known power arrangement (not shown) or the machine might be
15 adapted to be run by hand. The roller P is shown pressed by springs *m*. We have found it of advantage to not only gear the roller P to the shaft B but also to place connecting
20 gears between shaft B and the roller Q or its shaft.

What we claim as new, and desire to secure by Letters Patent, is—

1. The combination with a reciprocating
25 carrier, means for reciprocating the same, and a cutter extending over the carrier, of a rocking receiver rocked by the action of the reciprocating carrier to strip the article therefrom, substantially as described.

30 2. The combination with a carrier and actuating mechanism substantially as described therefor of a cutter and a movable receiver for taking the article from the carrier, said receiver having a tail piece adapted to be engaged by the carrier for moving the receiver
35 toward the carrier and a spring or actuator for moving the receiver away from the carrier, substantially as described.

3. The combination with a carrier and actuating mechanism substantially as described
40 therefor of a cutter and a movable receiver for taking the article from the carrier, said receiver having a tail piece adapted to be engaged by the carrier for moving the receiver
45 toward the carrier and a spring or actuator for moving the receiver away from the carrier, said receiver being provided with a movable holder having an arm and a spring or cushion Z for actuating the arm to move the
50 holder toward the receiver as the latter is moved toward the carrier, substantially as described.

4. The combination of a carrier, having a rack, a driving-shaft geared to the rack for
55 reciprocating the carrier, a presser-roller operated by the driving-shaft, a cutter extending over the carrier, and a rocking receiver rocked by the action of the carrier for stripping the article therefrom, substantially as
60 described.

5. The combination of a reciprocating carrier, having a seat for the article to be cut and shaped, means for reciprocating the carrier, a cutter extending over the carrier, and

a rocking receiver-plate rocked by the action
65 of the carrier for stripping the article therefrom, substantially as described.

6. The combination with a carrier and actuating mechanism substantially as described
70 therefor of a cutter and a movable receiver normally held away from the carrier, said receiver having a tail piece adapted to be engaged by the carrier for moving the receiver toward the carrier, substantially as described.

7. The combination of a carrier, provided
75 with a seat for the article to be cut and shaped, and with prongs for holding the article, means for reciprocating the carrier, a cutter extending over the carrier, a rocking receiver rocked
80 by the action of the carrier for stripping the article therefrom, and a plunger having a convex face for forcing the blanks into the seat of the carrier, substantially as described.

8. The combination of a carrier, having a
85 seat for the article to be cut and shaped, and prongs for retaining the article, means for reciprocating the carrier, a cutter extending over the carrier, a rocking receiver-plate
90 rocked by the action of the carrier for stripping the article therefrom, and a reciprocating plunger provided with a removable convex face for forcing the blanks into the seat of the carrier, substantially as described.

9. The combination with a reciprocating
95 carrier, having a depressed seat for the article to be cut and shaped, means for reciprocating the carrier, a plunger for forcing the blanks toward the carrier, a die for holding
100 each blank in position for the action of the plunger, a cutter extending over the carrier, and a rocking receiver-plate rocked by the action of the carrier for stripping the article therefrom, substantially as described.

10. The combination with a carrier and actuating mechanism substantially as described
105 therefor of a cutter, a receiver for taking the article from the carrier, a plunger for forcing the blanks toward the carrier and a die for holding each blank in position for the action
110 of the plunger, said die having springs or spring fingers at its opening, substantially as described.

11. The combination with a carrier and actuating mechanism substantially as described
115 therefor of a cutter, a rocking receiver-plate rocked by the action of the carrier for taking the article from the carrier, a plunger for forcing the blank toward the carrier and a die for holding each blank in position for the action
120 of the plunger said die being made removable and said plunger having its face made removable, substantially as described.

12. The combination of a reciprocating carrier, having a seat for the article to be cut
125 and shaped, a plunger for forcing the article toward the carrier, a die for holding each blank in position for the action of the plunger,

a cutter extending over the carrier, a spring-pressed presser-roller P, a yielding presser-roller Q interposed between the spring-pressed roller and the cutter, and a rocking receiver
5 arranged in rear of the cutter for stripping the article from the carrier, substantially as described.

In testimony whereof we have hereunto set

our hands in the presence of two subscribing witnesses.

CHARLES H. HELMS.
CHARLES REINDERS.

Witnesses:

WM. C. HAUFF,
E. F. KASTENHUBER.