

(No Model.)

2 Sheets—Sheet 1.

H. MASTERSON.
SKIVING MACHINE.

No. 488,212.

Patented Dec. 20, 1892.

Fig. 1.

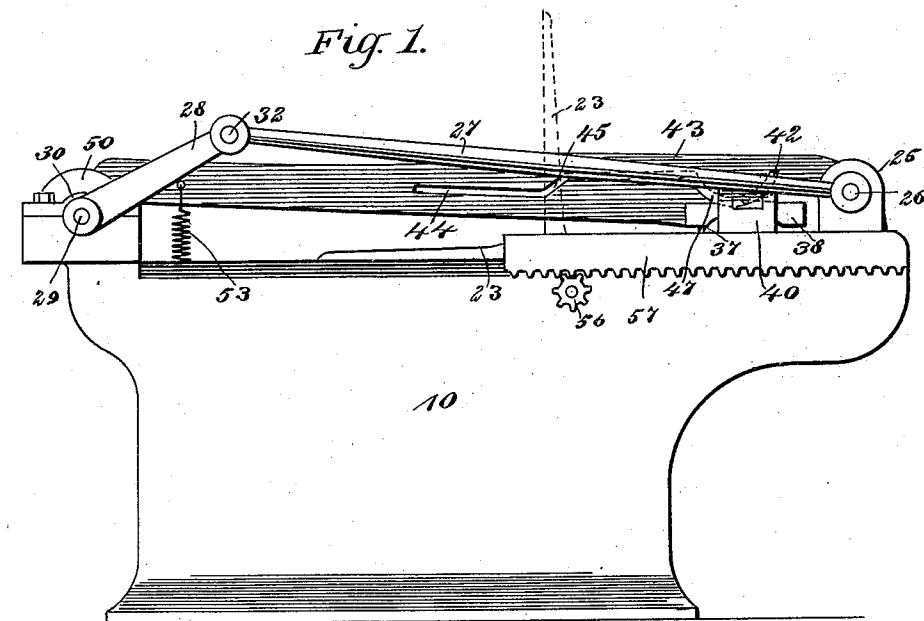
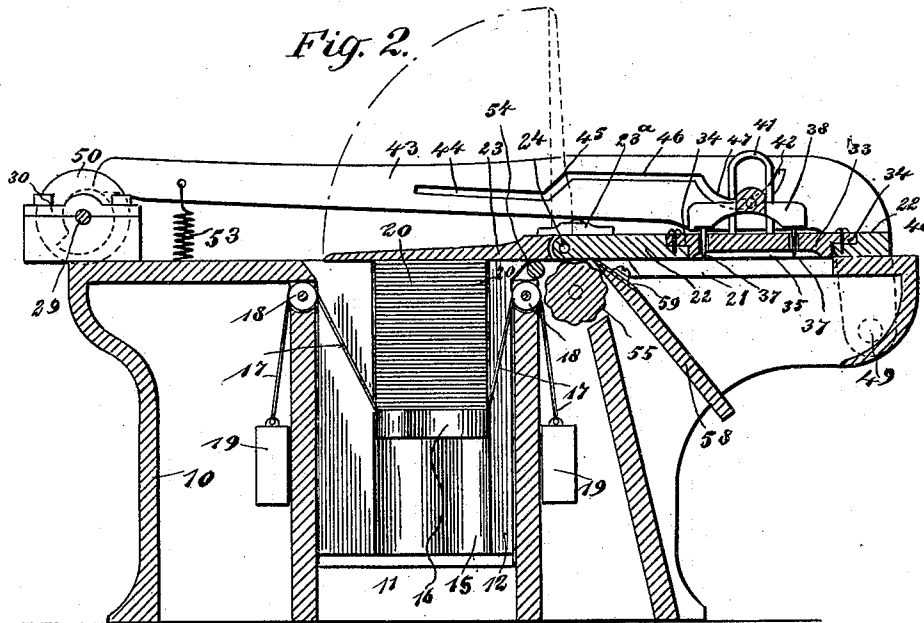


Fig. 2.



WITNESSES:

J. H. Griswell.
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INVENTOR

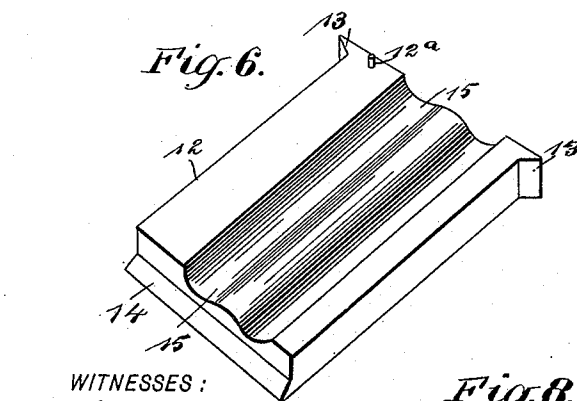
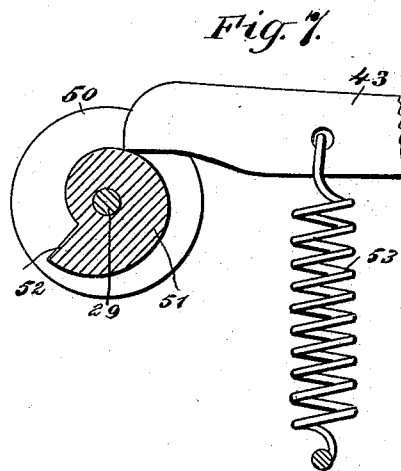
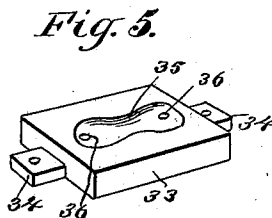
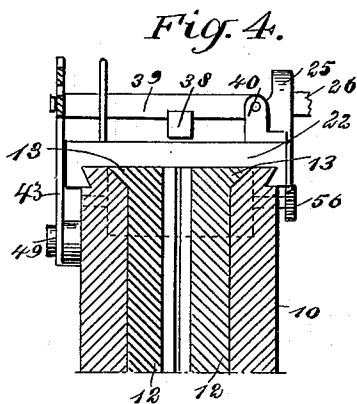
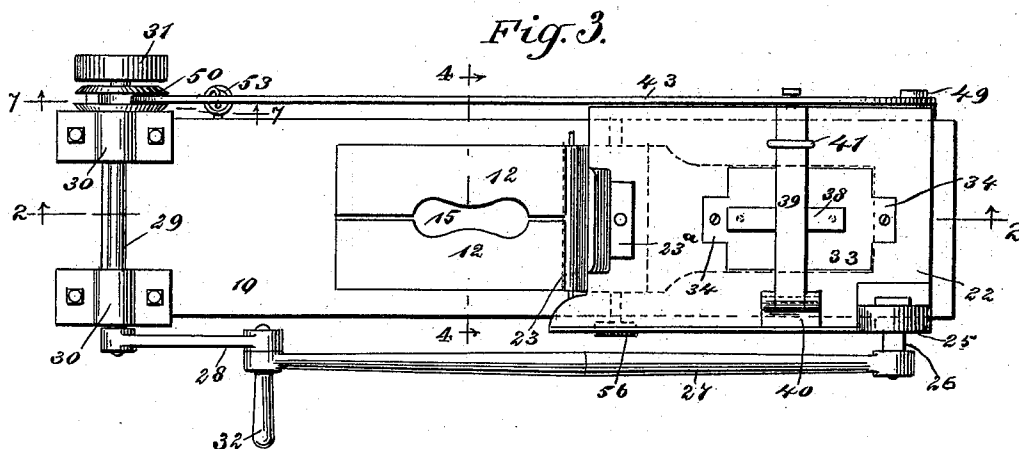
H. Masterson
BY Munn & Co

ATTORNEYS.

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Fig. 8.
20

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UNITED STATES PATENT OFFICE.

HERBERT MASTERSON, OF JEFFERSON CITY, MISSOURI, ASSIGNOR TO
HIMSELF AND JOHN A. LINHARDT, OF SAME PLACE.

SKIVING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 488,212, dated December 20, 1892.

Application filed March 30, 1892. Serial No. 427,096. (No model.)

To all whom it may concern:

Be it known that I, HERBERT MASTERSON, of Jefferson City, in the county of Cole and State of Missouri, have invented a new and
5 Improved Skiving-Machine, of which the following is a full, clear, and exact description.

My invention relates to improvements in machines for skiving the shanks, counters and other pieces of boots and shoes, and the object of my invention is to produce a simple and
10 positive working machine in which a quantity of material to be skived may be placed, and which will then work automatically to skive the several pieces one by one, and deliver
15 them in a prepared state.

To this end my invention consists in a skiving machine, the construction of which will be hereinafter described and claimed.

Reference is to be had to the accompanying
20 drawings forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the machine; Fig. 2 is a vertical longitudinal section on the
25 line 2—2 in Fig. 3; Fig. 3 is a plan of the machine; Fig. 4 is a broken cross section on the line 4—4 in Fig. 3; Fig. 5 is a detail inverted perspective view of the carrying form; Fig. 6 is a perspective view of one-half of the holder
30 which carries shanks and counters; Fig. 7 is an enlarged detail view on the line 7—7 in Fig. 3, showing the cam mechanism for operating the cam lever; and Fig. 8 is a cross section of a skived shank.

35 The machine is provided with a substantial hollow base 10, near the center of which is a vertical well or recess 11, in which the holder for the shanks or counters is located, this holder comprising two vertically separable
40 similar parts 12 one part being preferably provided with a pin 12^a which may project into the opposing part so as to enable them to register accurately, and the sections 12 of the holder have a tapering top flange 13, which is
45 flat on top but inclined on the under side, this flange being adapted to rest in the recess in the top of the machine base or frame and at the sides of the well. The sections 12 have also a bottom flange 14 which extends down-
50 ward and holds their bottoms slightly above the floor and produced centrally in the holder

is a recess 15, shaped to conform with the shape of the shank or counter as the case may be, this recess being produced partly in one section 12 and partly in the other, as shown
55 in Fig. 3.

Different holders are used in the machine according as it is to skive shanks, counters or other articles, and the size and shape of the recess 15 conform to the size and shape of
60 the articles to be skived.

A follower 16 is held to move vertically in the recess 15, the follower being shaped to fit the recess and it is secured at the ends to
65 cords 17 which extend upward over pulleys 18 located on opposite sides of the well 11 and near the top of the same, the outer or free ends of the cords being secured to weights 19 which slide within the base 10 and the pressure of which forces the follower upward so
70 that it will carry up the shanks 20 or other articles which are held in the recess 15.

A slide 22 is held to move longitudinally on the top of the base 10 and over the well 11, and at the front end of the slide is a leaf 23
75 which is flat on its under side and which is hinged to the front edge of the slide 22, as shown at 24 in Fig. 2, and the leaf is held from rising by a button 23^a, which is pivoted on the slide and is adapted to overlap the leaf. The
80 object of the leaf is to cover the recess 15 when the slide moves forward into the position shown in Fig. 2 and thus prevent the shanks or other pieces 20 from being forced upward out of the holder.
85

Near the front end and on one side of the slide 22 is a lug 25, having an outwardly-extending stud 26, to which is pivoted a pitman 27, which extends along one side of the machine and is pivoted at its opposite end to a
90 long crank 28, on a driving shaft 29, which is journaled on one end of the machine in boxes 30, and extends transversely across the machine, the shaft having a driving pulley 31 at one end. The pivot which connects the pit-
95 man 27 and crank 28 is prolonged to form a handle 32, and by means of this the shaft may be turned and the machine driven by hand, if desired.

The slide 22 has centrally therein a carry-
100 ing form 33, which has projecting end lugs 34 to facilitate its attachment to the slide, and

on the under side of the form is a recess 35, which approximates in shape to the shape of the shank or other article to be skived, and different sizes of forms may be used with the different sizes and shapes of the articles to be skived. The form is pierced vertically by holes 36, which extend into the recess 35 and which are adapted to receive brads 37, on the under side of the cross head 38, which is held above the form and is secured to a transverse vertically swinging arm 39, which has one end pivoted in a lug 40 on the slide, is held to move vertically in a keeper 41, and has its opposite end held to slide in a cam slot 42 in the cam lever 43 extending along one side of the machine at the top.

The slot 42 at its beginning is relatively low and straight, as shown at 44, and at a point nearly opposite the rear side of the well the slot extends diagonally upward, as shown at 45, from which point it extends in a nearly horizontal position rearward as shown at 46, and is then again curved downward, as shown at 47. The object of this shape of the slot is to cause the cross head 38 to be depressed so as to have its brads pierce a shank 20 or other article, to be raised so that the brads will not strike the skiving knife, and to be again depressed and raised so as to deliver the skived article at the rear end of the machine. This operation will be described fully below.

The cam lever 43 is bent downward at the rear end of the machine and is pivoted on one side of the machine, as shown at 49. The free end of the lever is held to move on a cam 50 carried by the driving shaft 29. This cam comprises a cam proper 51, shown in Fig. 7, which is produced centrally in a recess of the main cam or pulley, and the cam 51 has an eccentric bearing surface which terminates at one side in an abrupt shoulder 52. The lever 43 rides on the cam and at every revolution of the cam it will be dropped with a jerk, and this operation is adapted to drive the brads 37 into a shank or other article to be skived as described below. The lever 43 is normally pressed downward by a spring 53 which at its upper end is secured to the lever and at its lower end is fixed to the base of the machine.

Immediately behind the well 11 and at the top thereof, is a roller 54, which is arranged just below the slide 22 and leaf 23 and is adapted to facilitate the easy feeding of the machine. Behind this is a corrugated or roughened roller 55 which serves as a feed roller and is adapted to carry the shanks or other articles to the knife. The shaft of the feed roller 55 projects through the side of the frame or base 10 and is provided with a pinion 56, which meshes with a rack bar 57, formed on one side of the slide 22 and consequently the feed roller will be turned in unison with the movement of the slide.

A knife holder 58 is arranged immediately behind the feed roller 55 and has an inclined upper end to which is fixed a common form

of skiving knife 59 which extends upward so as to nearly touch the under surface of the slide 22.

The operation of the machine is as follows: When the driving shaft 29 is started, the crank 28 and pitman 27 cause the slide 22 to be moved back and forth upon the top of the machine. When the slide is near the front end of the machine, the brads 37 will be held directly above the shanks 20 and the cam lever 43 will be in a raised position, and the machine is timed so that at this point the shoulder 52 of the cam 51 passes beneath the free end of the cam lever 43 and the spring 53 draws the lever violently downward and it carries with it the arm 39 and cross head 38, thus driving the brads 37 into the top shank 20. The shaft is then raised above the top of the holder, in which position it is held by a gradual lifting of the cam 51 on the lever 43, and as the slide 22 moves backward it carries the top shank with it over the roller 54, at which point the arm 39 is raised by its free end passing through the diagonal part 45 of the slot 42 and the brads are thus drawn upward so as not to interfere with the skiving knife. The shank is carried backward by the feed roller 55 and is skived by the knife 59, and as the central portion of the shank is drawn upward into the recess 35, the knife will cut most upon the edges so as to thin it at these parts, as shown in Fig. 8. After the skived shank passes the knife the lever 43 is raised by the cam 51, and the cross head arm 39 is also carried upward into the upper rear end of the curved portion 47 of the slot 42, thus lifting the brads 37 entirely out of the shank and permitting the same to drop downward at the rear end of the machine which is slotted at the top as shown at 21 in Fig. 2, to permit this action to take place.

It will be understood that any article may be skived in the machine by simply making the holder sections 12 and the form 33 to fit said articles; and to enable the holder sections to be easily removed and replaced the leaf 23 is provided, and the leaf may be swung upward at any time by simply turning the button 23^a and lifting the leaf.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent,—

1. A skiving machine, comprising a vertical open topped holder, a reciprocating slide held to move above the holder, a knife arranged beneath the slide, a carrying form held in the slide, and vertically movable brads mounted in the form and adapted to engage the articles in the holder, substantially as described.

2. A skiving machine, comprising an open topped holder, a follower held to move therein, a reciprocating slide adapted to move over the holder, a roller and knife arranged beneath the slide, a carrying form carried by the slide, movable brads held in the form and

adapted to engage the articles in the holder, and a cam mechanism for moving the brads, substantially as described.

3. A skiving machine, comprising an open topped holder, a movable follower mounted therein, a reciprocating slide held to move over the top of the holder, a roller and skiving knife arranged beneath and adjacent to the slide, a form carried by the slide and adapted to register with the holder, and a cam operated fastening device to secure an article in the form, substantially as described.

4. A skiving machine, comprising an open topped holder, a slide held to reciprocate above the holder, a roller and knife arranged beneath and adjacent to the slide, a form carried by the slide and adapted to register with the holder, a cross head mounted above the form and having downwardly - extending brads piercing the form and adapted to engage the articles in the holder, and a cam operated lever mechanism for raising and lowering the cross head, substantially as described.

5. In a skiving machine, the combination of the holder, the reciprocating slide, the form carried by the slide, the movable cross head having brads adapted to pierce the slide and enter the holder, the transverse arm to which the cross head is secured, the cam lever ar-

ranged at right angles to the transverse arm and having a cam slot to receive the same, and a revolving cam to raise and lower the cam lever, substantially as described.

6. A skiving machine, comprising an open topped holder having a follower therein, a reciprocating form held to slide above the holder, a knife arranged beneath the path of the form, and cam operated mechanism for lifting articles from the holder and retaining them in the form, substantially as described.

7. In a skiving machine, the combination with the reciprocating form and the cutting mechanism arranged adjacent thereto, of the two part removable holder arranged beneath the form and having a recess to receive the articles to be skived, substantially as described.

8. The combination of the frame, the central movable holder therein, the reciprocating form-carrying slide, the leaf hinged to the slide and adapted to overlap the holder, a skiving knife held beneath the path of the slide and a fastening device to hold down the leaf substantially as described.

HERBERT MASTERSON.

Witnesses:

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JACOB STEININGER.