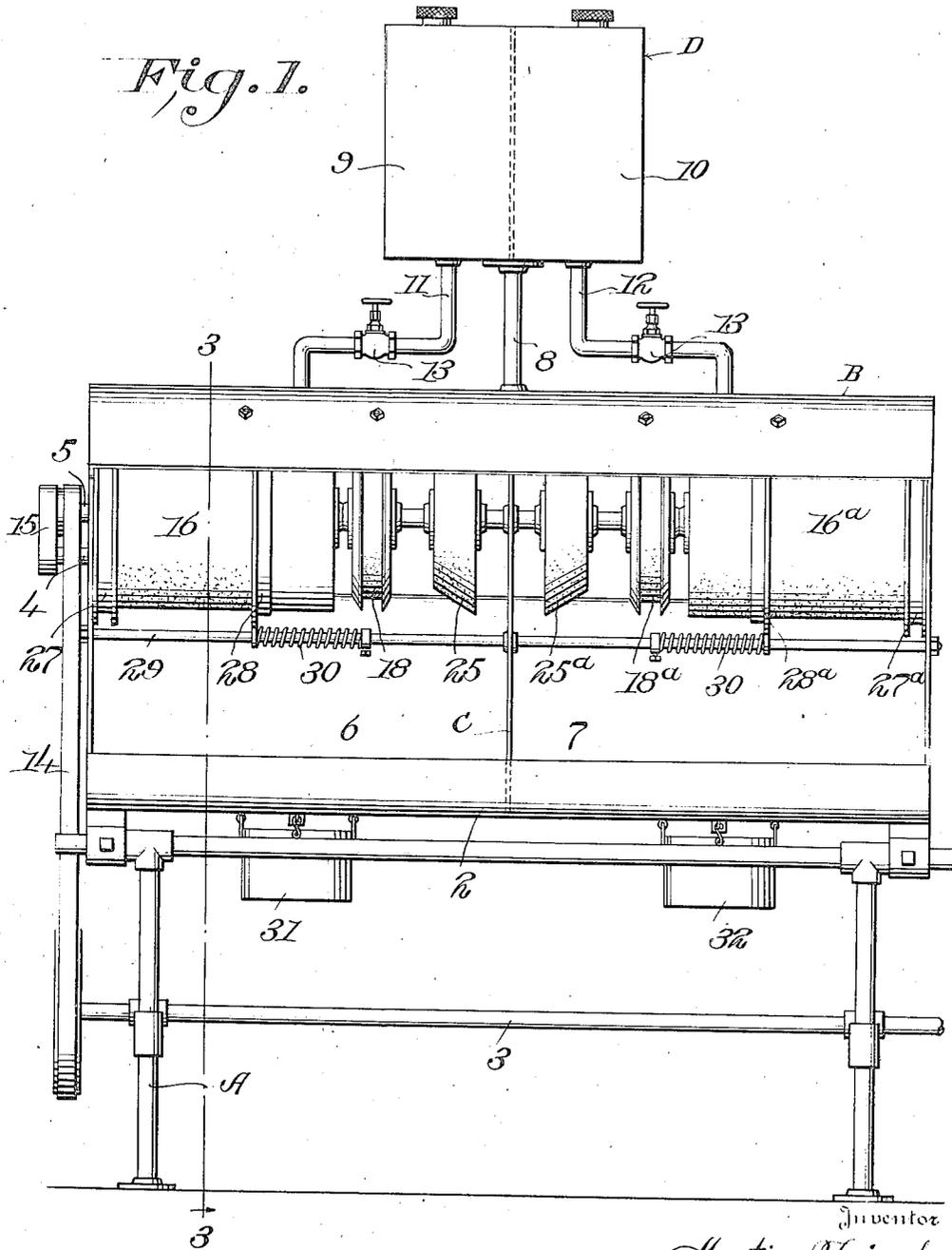


M. FRISCH.  
 SOLE AND HEEL INKING MACHINE.  
 APPLICATION FILED APR. 4, 1914.

1,167,687.

Patented Jan. 11, 1916.

3 SHEETS—SHEET 1.



Witnesses  
*Conrad Luley*  
*Gloyd W. Patch*

334

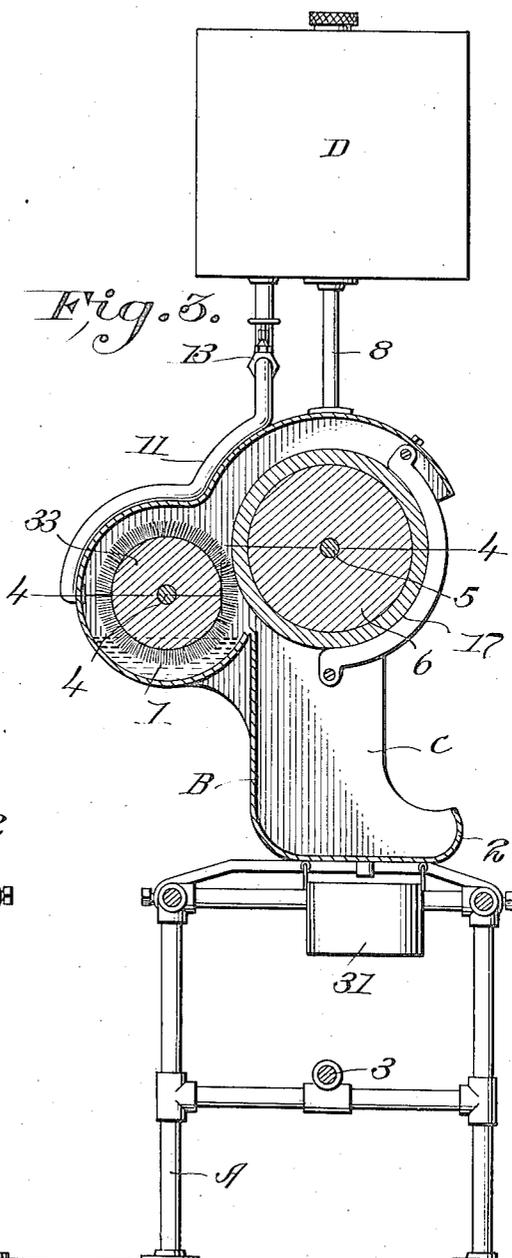
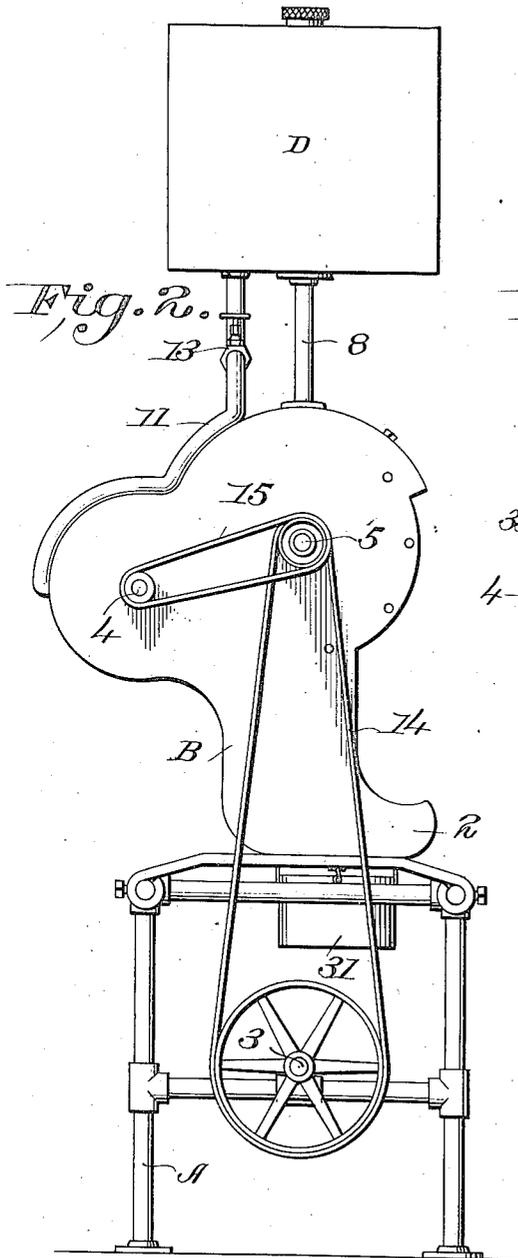
Inventor  
*Martin Frisch*  
*Richard C. Owen*  
 his Attorney

M. FRISCH.  
SOLE AND HEEL INKING MACHINE.  
APPLICATION FILED APR. 4, 1914.

1,167,687.

Patented Jan. 11, 1916.

3 SHEETS—SHEET 2.



Witnesses  
Came & Daily  
Lloyd W. Patch

334

Inventor  
Martin Frisch,  
Richard Owen,  
his Attorney

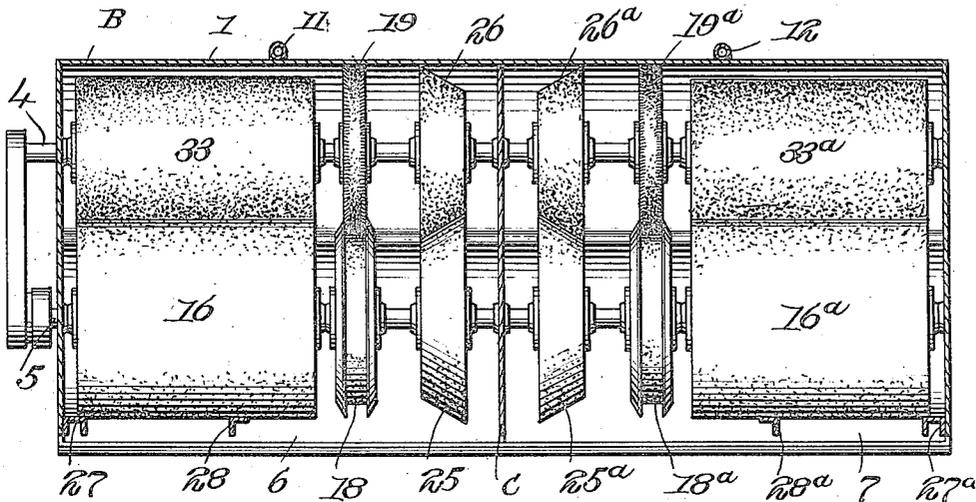
M. FRISCH.  
SOLE AND HEEL INKING MACHINE.  
APPLICATION FILED APR. 4, 1914.

1,167,687.

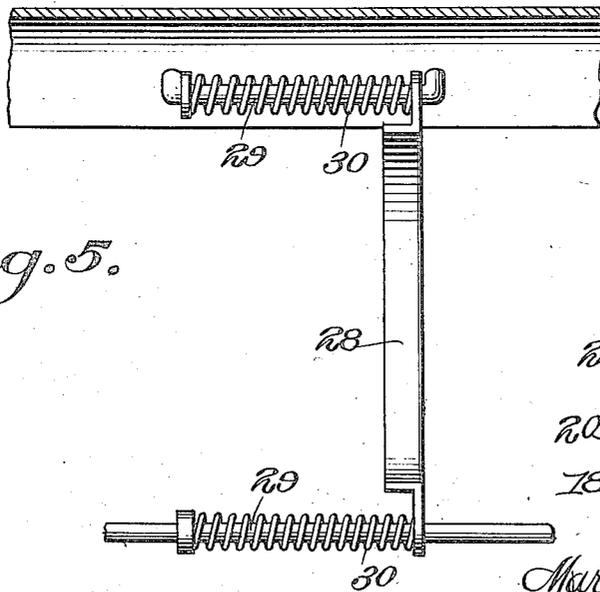
Patented Jan. 11, 1916.

3 SHEETS—SHEET 3.

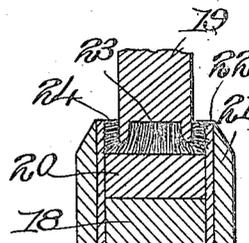
*Fig. 4.*



*Fig. 5.*



*Fig. 6.*



Inventor

*Martin Frisch,*

Witnesses

*Carroll Bailey,*

*Gloyd W. Patch*

By

*Richard Brown,*

*his Attorney*

# UNITED STATES PATENT OFFICE.

MARTIN FRISCH, OF ST. LOUIS, MISSOURI.

SOLE AND HEEL INKING MACHINE.

1,167,687.

Specification of Letters Patent. Patented Jan. 11, 1916.

Application filed April 4, 1914. Serial No. 829,580.

*To all whom it may concern:*

Be it known that I, MARTIN FRISCH, a subject of Hungary, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Sole and Heel Inking Machines, of which the following is a specification.

The object of my invention is to provide a machine with which a smooth, even coat of stain may be applied on the surface of sole, shank and heel and also to the edges of these parts, and to the front edge of the heel without danger of the stain coming in contact with, or being spattered on the upper.

A further object is to so construct the machine that stain of various colors, as for instance, black and tan may be supplied to the machine to stain the shoes in either color and to arrange the parts in such relation that there can be no intermingling of the stain.

This invention involves still other novel features of construction and combination of parts which will be hereinafter more fully described and pointed out in the claims.

In the accompanying drawings: Figure 1 is a view in front elevation, Fig. 2 is a view in elevation from the power end of the machine, Fig. 3 is a transverse vertical sectional view on the line 3—3 of Fig. 1, Fig. 4 is a sectional view of the line 4—4 of Fig. 3, Fig. 5 is a detail view to better illustrate one of the guards to prevent spattering of the stain to the upper, and Fig. 6 is a detail sectional view illustrating the structure of the sole edge inking mechanism.

The frame A of the machine may be built up of tubing as shown in the drawings, or this frame may be composed of casting bolted or otherwise secured together. A casing B is secured on the frame and this casing has an ink font 1 formed on the upper part. At the bottom of the casing is a basin 2. The casing B is divided in the approximate center by a vertical partition C which separates the two sides of the casing into the chambers 6 and 7, the two of which are duplicates and the ink font 1 and the basin 2 extend throughout the length of these two chambers. A drive shaft 3 is secured to the frame and shaft 4 is secured to the casing to extend in the same direction above the ink font 1. A

similar shaft 5 is secured in the frame forward of the shaft 4.

An ink supply tank D is supported by a bracket 8 upon the casing C and this tank D is divided by a partition into the two compartments 9 and 10. A pipe 11 leads from the tank 9 to discharge into the ink font 1 on the side 6 of the partition C and a similar pipe 12 leads from the compartment 10 to discharge into the ink font in the chamber 7. Each of these pipes is controlled by a valve 13. A belt 14 connects the shaft 5 to be driven by the shaft 3, and a belt 15 extends from a pulley on the shaft 5 to a pulley connected to drive the shaft 4.

A sole inking roll 16 is mounted on the shaft 5 in the chamber 6, near the end of the frame and this roll has a felt or other absorbent cover 17 thereon. An ink roll 33 is carried by the shaft 4 to be partly submerged in the ink which is supplied, to be about one inch in depth in the ink font 1. This ink roll or brush 33 is of a diameter that the ends of the bristles carried thereby come in contact with the absorbent covering 17 of the sole roll 16. An edge inking roll 18 is mounted on the shaft adjacent the roll 16 and a brush roll 19 is connected on the shaft 4 to supply ink to the absorbent covering on the roll 18. The structure of the edge inking roll 18 and the ink-supply roll or brush 19 are better shown in Fig. 6. An absorbent covering 20 is connected to the roll 18 and on each side are secured plates 21 which are beveled on their outer edges.

A thin layer 22 of felt is secured to the inner face of each of the plates 21, and it is desired that this layer of felt 22 be supplied with ink as well as the felt 20 so that the thread with which the sole is secured to the welt will be stained or colored. The brush roll 19 has the bristles 23 carried on its face and bristles 24 are mounted to extend from the side edges adjacent this face. By forming the brush roll 19 in this way the stain is applied to both of the felts 22 and to the felt 20. A bevel roll 25 is secured on the shaft 5 and this roll also has an absorbent cover similar to the covering on the rolls 16 and 18. The ink supply roll or brush 26 mounted on the shaft 4, is also beveled on its edge so that it will bear and contact evenly with the entire surface of the roll 25.

110

To prevent the ink spattering from the roll 16 onto the upper of the shoe when the surface of the sole is being stained, I provide a stationary guard 27 mounted on the casing C at the end of the roll 16, and a movable guard 28 mounted to slide endwise on the rods 29 secured to the casing. This guard 28 is normally held at a short distance from the stationary guard 27 by springs 30, and when a shoe of a width greater than the space between the guard 27 and this guard 28, is to be stained, the guard 28 can be moved over against the pressure of the springs to permit the shoe to be placed therebetween.

While I have described only those parts which are arranged in the chamber 6, it will be understood that the parts are similarly arranged in the chamber 7 of the casing and similar reference characters have been applied to those parts as illustrated within the chamber, they being designated in the several views as distinctive of the parts of the chamber 6 by priming these reference characters with "a." The basin 2 is provided in the casing C to catch any drips which there may be from the rolls 16, 18, 25, 25<sup>a</sup>, 18<sup>a</sup> or 16<sup>a</sup>, and outlets are provided from the chambers 6 and 7 to empty into suitable receptacles 31 and 32, placed beneath each of these chambers. By providing the two receptacles 9 and 10, in the tank D, I am enabled to use two colors of ink or stain. For instance, black ink may be supplied to the receptacle 9, and a tan ink to the receptacle 10. In this instance, the rolls 16, 18 and 25 would then be used for black shoes, whereas rolls 16<sup>a</sup>, 18<sup>a</sup> and 25<sup>a</sup> would be used for tan shoes.

From the foregoing illustration and description, it will be seen that I have provided a machine in which the roll 25 may be used to stain or ink the edges of the heel, the breast of the heel, and the face of the shank may be inked by the use of the roll 25. The edge of the sole and welt, together with the top of the welt, and the threads securing the two together, will be inked by the absorbent felts 22 and 20 of the roll 18 without danger of the stain coming in contact with the upper of the shoe, and the faces of the sole and heel may be inked by the roll 16, the guards 27 and 28 preventing the spattering of ink from this roll to the upper of the shoe.

It is evident that the parts might be varied in their arrangement and also in their construction without departing from the spirit and scope of my invention, and hence I do not wish to be limited to the exact structure herein set forth.

I claim:—

1. A sole and heel inking machine comprising in combination, a roll constructed to simultaneously ink the edges of the sole and

welt and the top of the welt, means for rotating said roll, means to supply ink to said roll as the same is rotated, and a guard to protect the uppers of the shoes from being spattered with ink during such inking operation.

2. A sole and heel inking machine comprising in combination, a welt and sole edge inking roll, a heel inking roll, and a sole face inking roll.

3. A sole and heel inking machine, comprising in combination, rolls to ink the edges of the sole and heel, the face of the sole and the shank, and means arranged in conjunction with said sole face and edge inking rolls to prevent spattering of the ink upon the upper.

4. A sole and heel inking machine comprising in combination, means to ink the edges of the heel and the edges of the sole, a roll to ink the surface of the sole, and means to prevent spattering of the ink onto the upper during said latter inking operation.

5. A sole and heel inking machine comprising in combination means to ink the edges of the sole and heel, the face of the sole and the shank, and means to supply ink to all of said inking means simultaneously.

6. A sole and heel inking machine comprising in combination, a welt and sole edge inking roll, a heel inking roll, a sole face inking roll, and simultaneously operated ink-supplying means to charge the several inking means.

7. A sole and heel inking machine comprising in combination, a sole edge inking roll, flanges provided at opposite sides of said roll and provided with an ink-absorbing covering, and means to operate said roll.

8. A sole and heel inking machine comprising in combination, a sole edge inking roll, flanges provided at opposite sides of said roll and provided with an ink-absorbing covering, means to operate said roll, and means to supply ink to said roll and to the absorbent covering of the flanges during the operation thereof.

9. In an inking machine for shoes, the combination with a roll adapted to ink the edges of the sole and welt and the top of the welt, of a pair of guard flanges on opposite sides of the roll, adapted to prevent spattering of the ink upon the upper when a shoe is presented to the roll in either of two operative positions.

10. In an inking machine for shoes, the combination with a roll adapted to ink the edges of a sole and welt, of a flanged plate arranged against said roll at one end to revolve therewith and provided with an absorbent covering adjacent the roll to receive ink, means for rotating said roll and plate, and means to supply ink to the roll and to the absorbent covering of the plate, said

70

75

80

85

90

95

100

105

110

115

120

125

130

parts being so arranged that the edges of the  
welt and sole and the top of the welt are  
inked simultaneously and the flanged plate  
prevents spattering of the ink upon the up-  
5 per of the shoe as the roll and plate are ro-  
tated.

In testimony whereof I affix my signature  
in presence of two witnesses.

MARTIN FRISCH.

Witnesses:

JACOB FISCHER,  
LARUSS FELDMAN.