

(No Model.)

2 Sheets—Sheet 1.

C. G. HUTCHINSON.
BLACKING MACHINE.

No. 475,773.

Patented May 31, 1892.

Fig. 1.

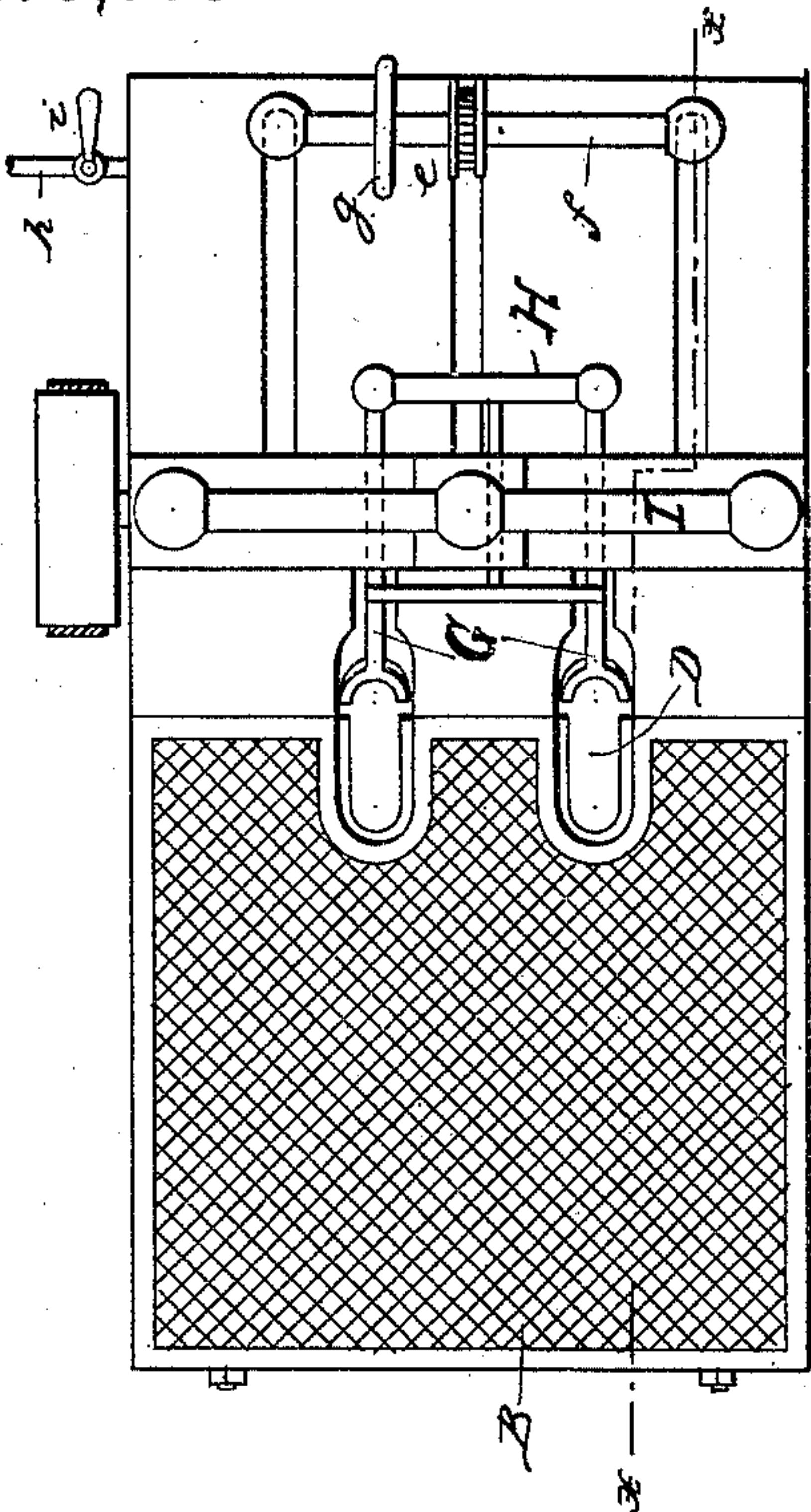


Fig. 2.

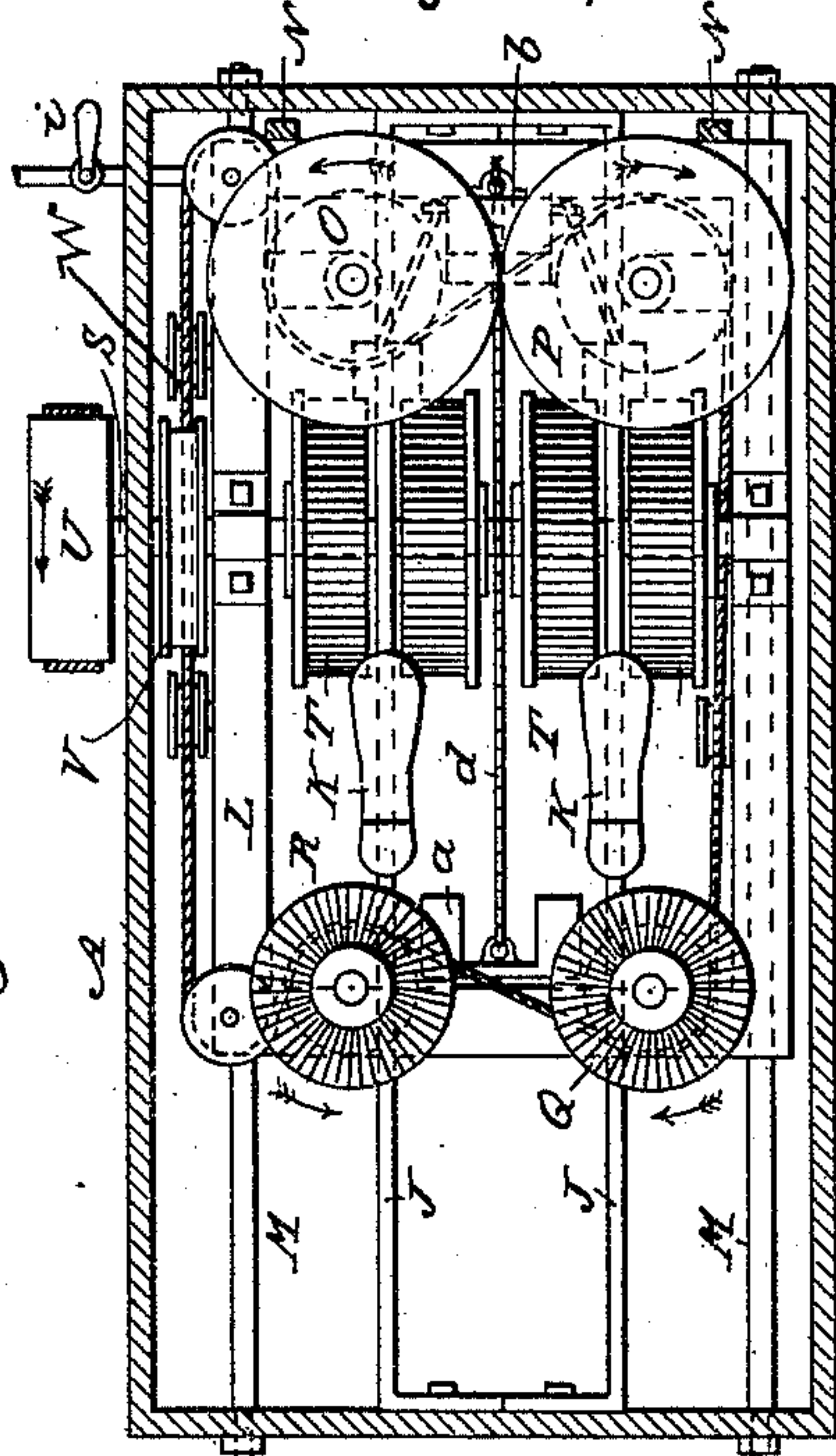


Fig. 3.

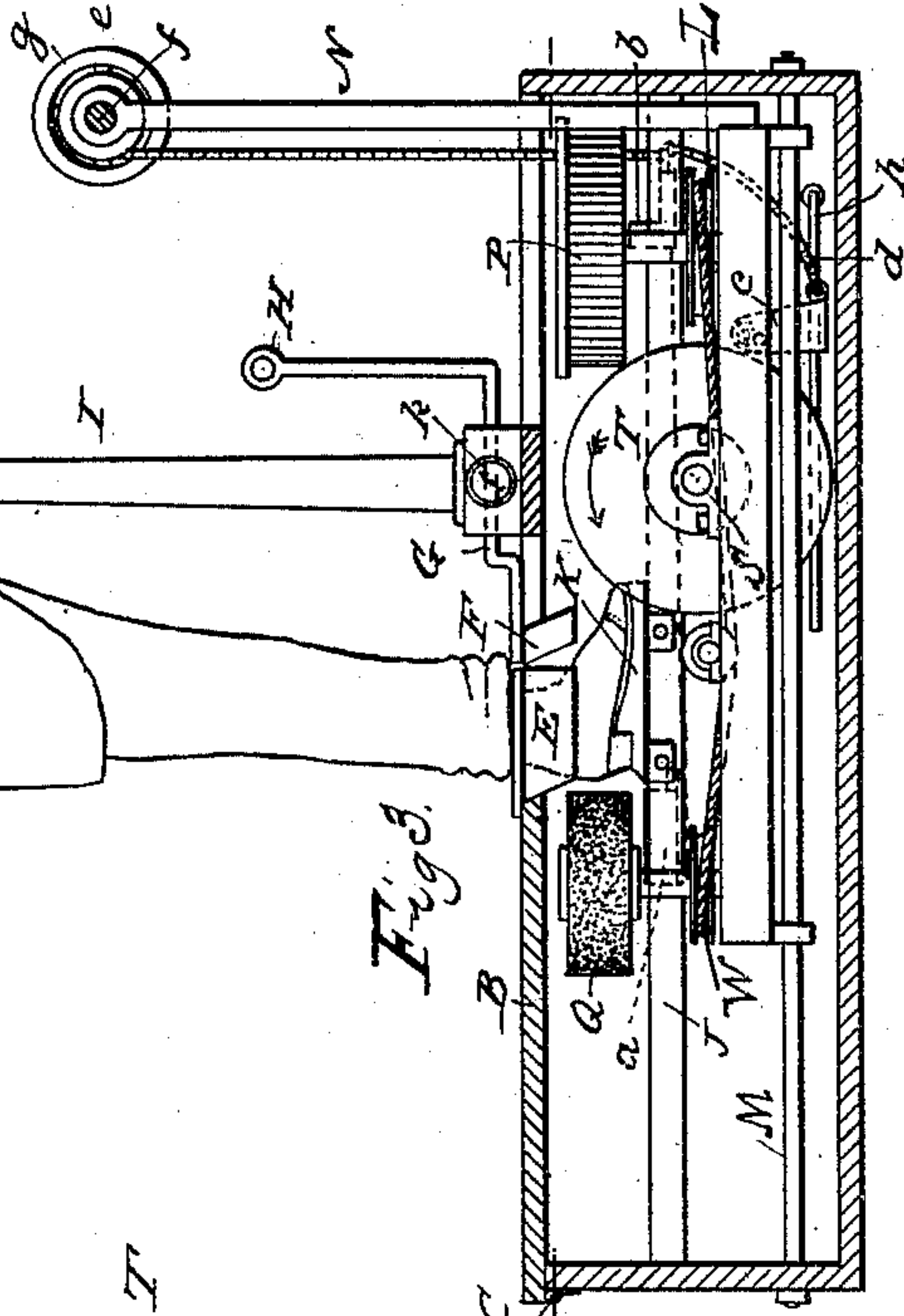


Fig. 4.

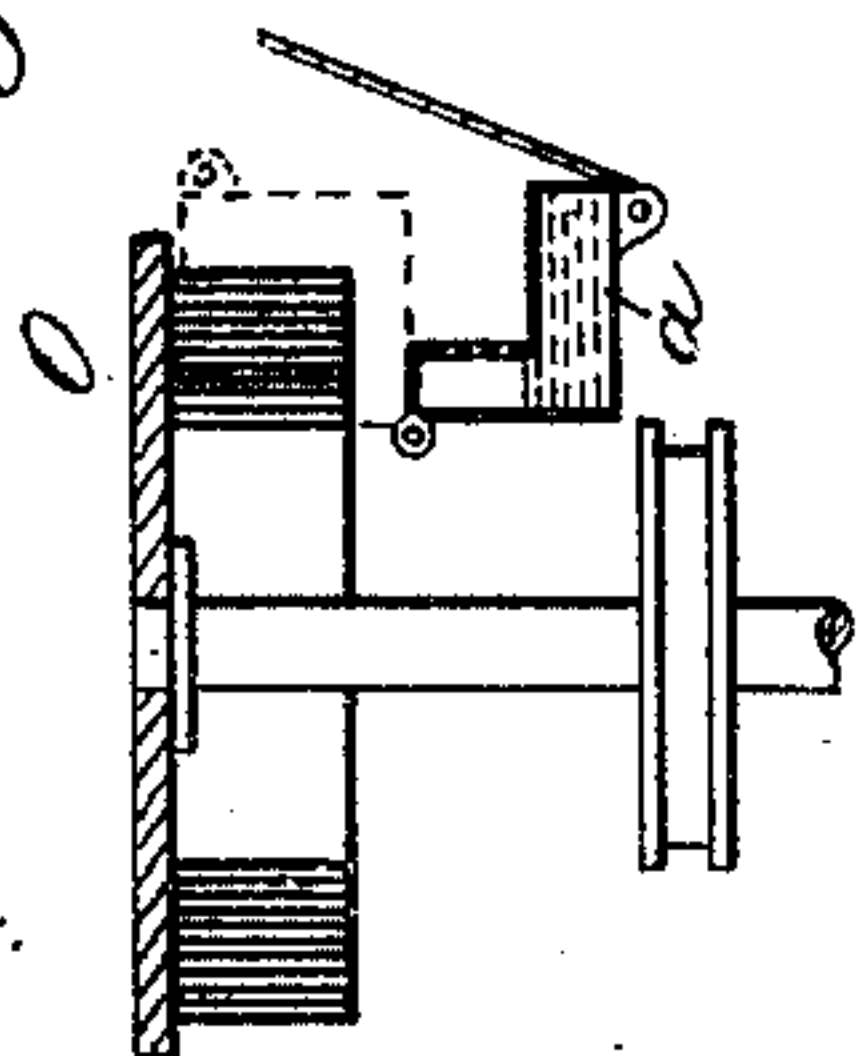
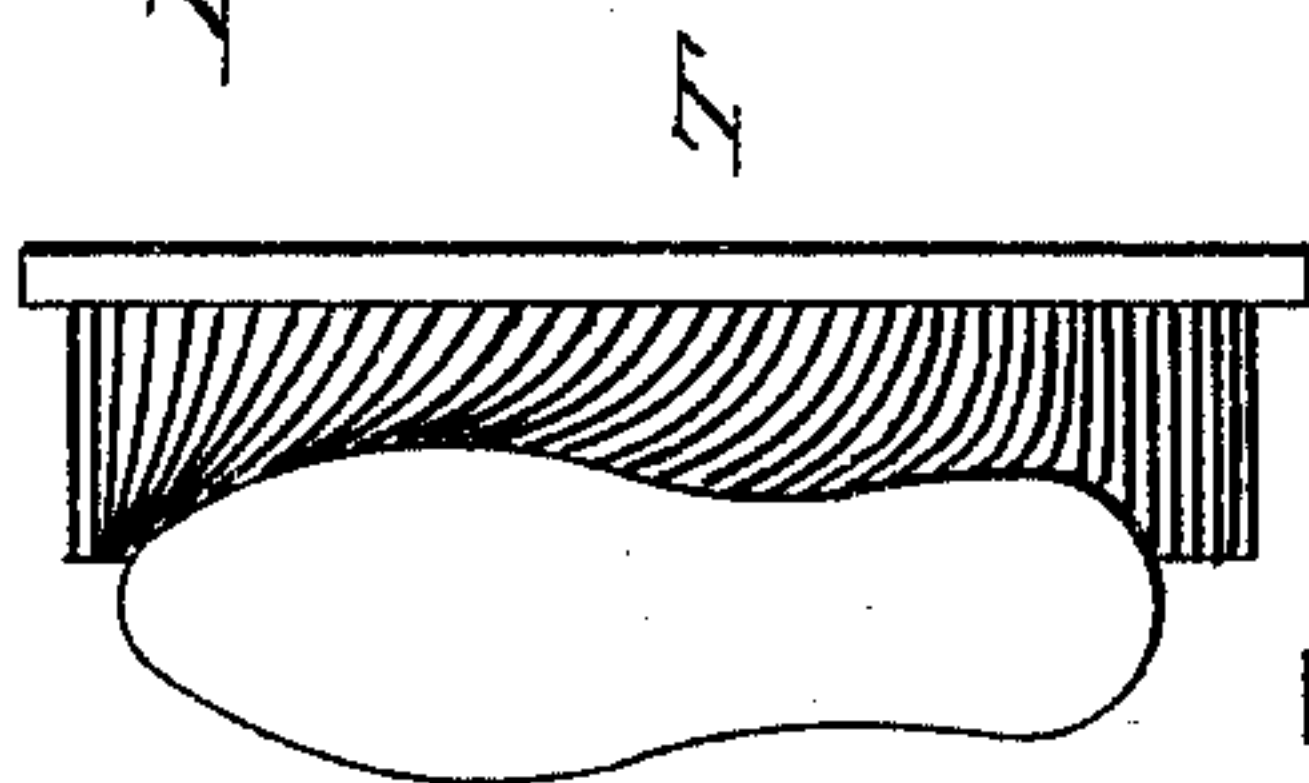


Fig. 5.



WITNESSES:
D. C. Reusch.
Gertrude Ward.

INVENTOR
C. G. Hutchinson.
BY A. M. Pierce.
ATTORNEY

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FIG. 6.

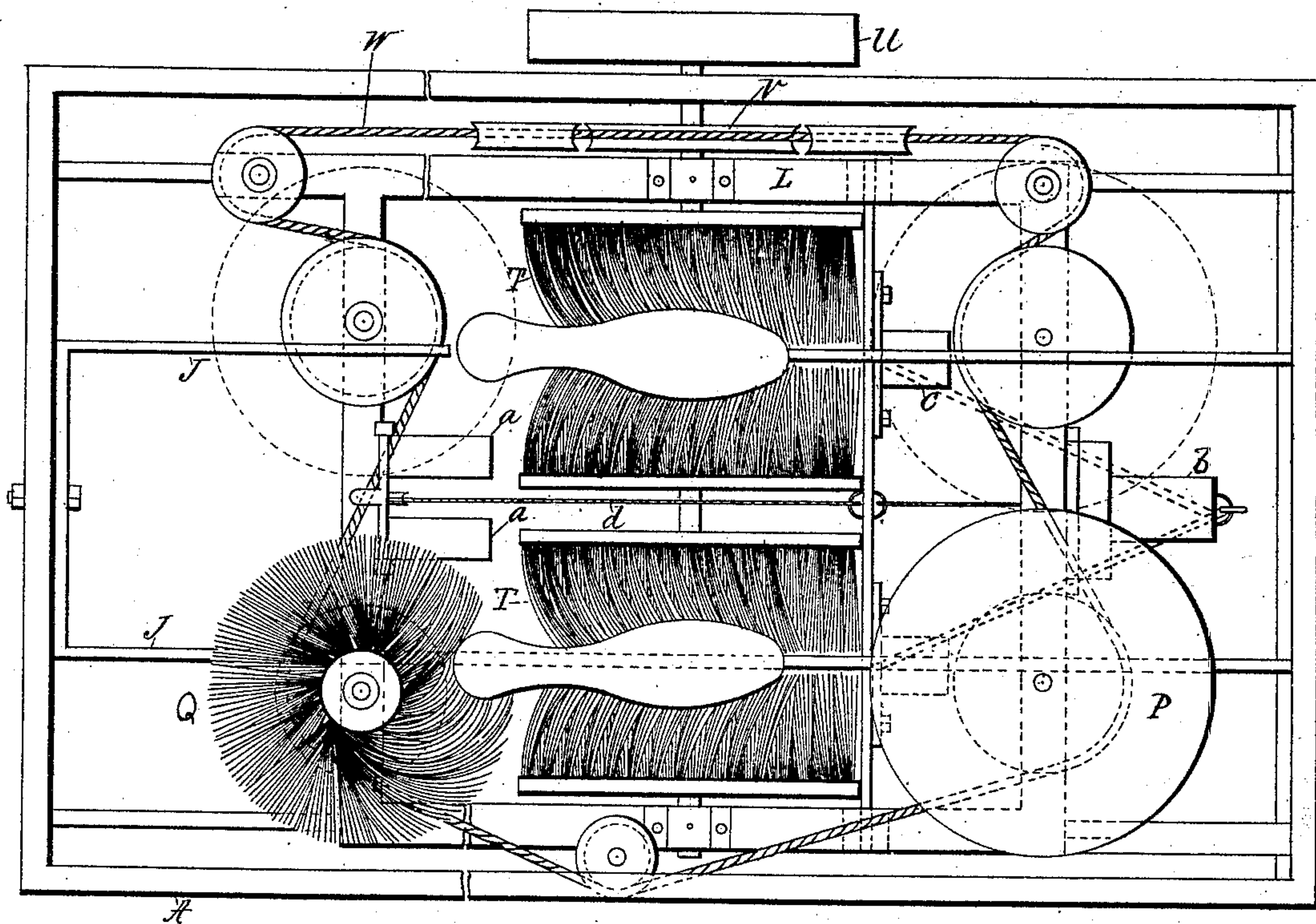
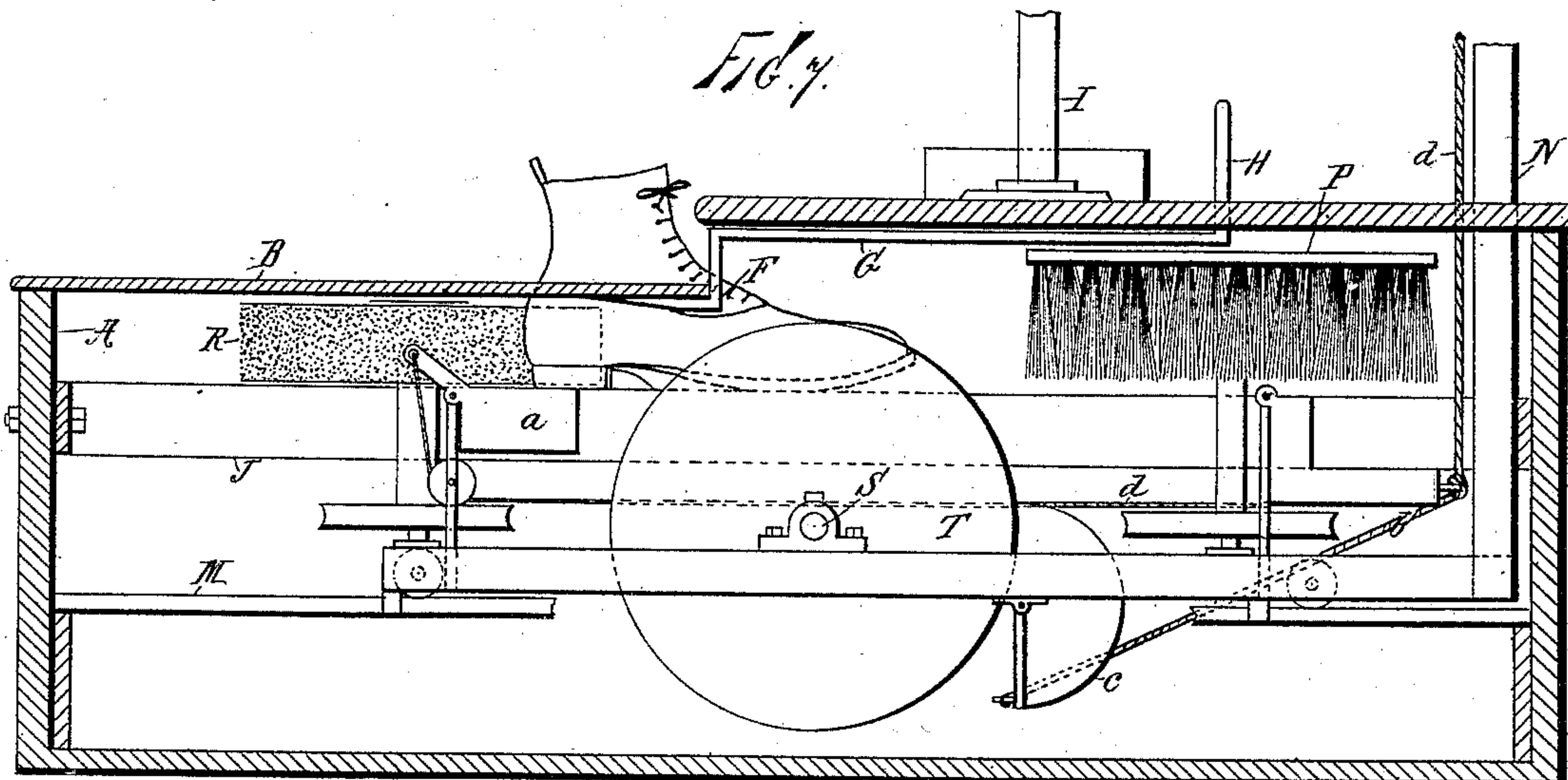


FIG. 7.



Witnesses:
John Buckler,
Wm. H. Weigeltman

Inventor:
C. G. Hutchinson,
By A. M. Pierce Attorney.

UNITED STATES PATENT OFFICE.

CHARLES G. HUTCHINSON, OF NEW YORK, N. Y., ASSIGNOR TO THE C. G. HUTCHINSON SHOE BLACKING MACHINE COMPANY.

BLACKING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 475,773, dated May 31, 1892.

Application filed June 3, 1890. Serial No. 354,145. (No model.)

To all whom it may concern:

Be it known that I, CHARLES G. HUTCHINSON, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Blacking-Machines, of which the following is a specification.

My invention relates especially to devices employed for blacking shoes and boots while on the feet, and has for its object the provision of an effective machine, whereby both shoes will be cleaned, blacking applied thereto, and the shoes polished by one set of brushes in a very brief period of time.

To attain the desired end, my invention consists, essentially, in a support for the feet of the person, guards to shield the upper portion of the shoes and guide the brushes, a single series of brushes, all operating together, means for imparting motion to said brushes, a slidable frame wherein the brushes are rotatably mounted, pivoted liquid-blackening boxes for simultaneously applying blacking to the brushes, and in certain other novel and useful combinations or arrangements of parts and peculiarities of construction and operation, all of which will be hereinafter first fully described, and then pointed out in the claims.

In the drawings, Figure 1 is a plan view of the machine and case. Fig. 2 is a plan view with the top of the case removed. Fig. 3 is a vertical sectional view at line *x x* of Fig. 1. Fig. 4 is a partial section of one of the horizontal brushes. Fig. 5 illustrates the position of one of the vertical brushes when applied to a shoe. Fig. 6 is a plan view of the machine with the top and a portion of the brushes removed, showing the location and arrangement of the blacking-boxes and with the frames supporting the blacking-brushes broken away and contracted to show the position occupied by the heel and side brushes when they are brought in contact with the shoe. Fig. 7 is a side view of the machine, with the side of the case removed, arranged in the same manner as in Fig. 6.

Like letters of reference, wherever they occur, indicate corresponding parts in all the figures.

A is the case, made of any desired material.

The top B is hinged at C for convenience in reaching the interior.

D are openings in the top B, said openings being surrounded on three sides with a guard and guide E.

F is a sliding guard fixed upon a slidable bar G, provided with an operating-handle H, connected to the two guard-bars.

I is a support for the hands of the person whose shoes are being operated upon. At the base of the support I is located a register *k*, which registers the number of times the machine is operated.

J J are bars passing through the case and bearing foot-supports K beneath the openings D in the top B.

L is a slidable frame mounted upon rods M in such a manner as to pass freely from end to end of the inclosing case.

N is an operating-handle secured to the frame L.

Mounted upon spindles projecting from the frame L are horizontal brushes O, P, Q, and R, and upon a driving-shaft S, journaled in the frame L, are vertical brushes T.

U is a driving-pulley upon shaft S for applying power thereto.

V is a grooved pulley fixed upon shaft S.

W is a driving-band passing from pulley V to a pulley upon the spindles of brushes O, P, Q, and R, as particularly indicated by the dotted lines in Fig. 2.

a is a box for holding liquid blacking pivoted between brushes Q and R.

b is a liquid-blackening box pivoted between brushes O and P, and *c c* are boxes pivoted between each pair of brushes T. All of these blacking-boxes are connected to a cord or chain *d*, passing to a pulley *e*, mounted upon a rod *f* of the operating-handle N.

g is a hand-wheel for turning rod *f*.

The construction and arrangement of the blacking-boxes is particularly illustrated in Fig. 4 of the drawings.

h is a steam-supply pipe passing into the case A to any convenient point near the supports K, and *i* is a cock for controlling the steam.

When constructed and arranged in accordance with the foregoing description, the op-

eration of my device is as follows: When power is applied, the whole set of brushes begin to rotate rapidly. The guards and guides F are drawn away from the openings in the top of the case. In putting the feet in position the person to be operated upon steps onto the cover B and places his shoes onto the supports K, pushing his feet well back under the guards. The attendant then pushes the guards and guides F against the front of the shoes, thus covering all of the upper portion of the shoe and holding the pantaloons above the guards. The moving forward of the bar G acts upon the register, showing the fact of the use of the machine each time it is employed. The attendant now draws the slidable frame to the right, bringing brushes Q and R against the heels, and then pushes the frame to the left, bringing first the brushes T against the sides of the shoes, and then the brushes O P over the tops, removing all dirt from the leather. He then turns the wheel *g*, bringing the blacking-boxes against all of the brushes simultaneously and then releases said wheel, the boxes dropping automatically away from contact with the brushes. The frame L is now drawn to the right, daubing the shoes with blacking, and then is returned to the left and back, the brushes now acting as polishers. Steam is admitted by means of the pipe *h* to a point near the shoes or brushes and the polishing movement is again repeated, insuring a perfect luster. After the brushes are returned to the first position and out of all contact with the shoes the guards F are drawn forward and the feet removed from the supports. It will be seen that the entire operation consumes but a very short time. The brushes revolve with such a speed as to effectually remove any dirt from the shoes when first applied, and also to become thoroughly dry after the small quantity of blacking has been applied to the leather.

I have found by careful experiment that by the use of a long fiber or bristle in my brushes, said brushes revolving at a rapid speed, I am enabled to reach all parts of the shoes, the brush conforming to the various inequalities of the surface, (see Fig. 5,) while at the same time the back of the brush remains rigid, revolving in a fixed line.

By the use of my guards for the upper portion of the shoe I not only prevent blacking reaching the kid or the pantaloons, but the peculiar shape of such guards serves to direct the brush against the part of the shoe it is desired to reach, preventing the bristles or fibers from being thrown upward by centrifugal force.

Having now fully described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. In a machine for cleaning, daubing, and polishing shoes, a support for the person, in combination with a series of rotatable brushes provided with rigid backs, adapted and arranged to be brought in contact with all parts

of the shoes, substantially as shown and described.

2. In a machine for cleaning, daubing, and polishing shoes, supports for both feet, in combination with a series of revoluble brushes mounted on a movable frame, whereby the entire series of brushes may be caused to approach or recede from the shoes, substantially as shown and described.

3. In a machine of the character herein specified, the combination, with the movable frame and the means for applying blacking, of a single series of rotatable brushes adapted and arranged to successively clean, daub, and polish shoes while on the feet, substantially as shown and described.

4. In a machine of the character herein specified, a case having two openings in the top thereof for the reception of the feet of the person, and supports for the feet within the case, in combination with a series of rotatable brushes mounted upon a movable frame within the case, substantially as shown and described.

5. In a machine of the character herein specified, the combination, with the inclosing case, the supports for the feet, and the movable brushes, of the connections to the steam-supply, consisting of a pipe passing into the inclosing case and having an open termination within the case for directing steam around the brushes or the shoes being operated upon, substantially as shown and described.

6. In a machine of the character herein specified, a frame carrying a series of rigid-backed rotatable brushes, the frame and brushes being arranged to move by the shoes in a fixed course, substantially as shown and described.

7. In a machine of the character described, the combination, with a series of rotary brushes, of a series of movable blacking-boxes, each of said boxes being connected to a common operating device, whereby their contents may be simultaneously applied to the brushes, substantially as shown and described.

8. In a machine of the character herein specified, the combination, with the supports for the feet, of guides and shields for surrounding the upper of the shoe, said guides and shields extending to a point substantially midway of the instep of a shoe, as shown and described.

9. In a machine of the character herein specified, the combination, with the inclosing case, of a reciprocating frame on which the rotatable brushes are mounted, substantially as shown and described.

10. In a machine of the character herein specified, the combination, with the inclosing case, of the transverse bars bearing the supports for the feet, and the sliding frame carrying the rotatable brushes, said frame being located below the transverse bars, substantially as shown and described.

11. A machine for cleaning, daubing, and polishing shoes in which is comprised a series

of rotary brushes mounted on a common reciprocating frame, and means for imparting motion to said brushes, substantially as shown and described.

5 12. In a machine of the character herein specified, the combination, with the support for the feet, of the four vertical brushes mounted upon a common shaft and arranged to pass at both sides of the shoes, substantially as shown and described.

10 13. In a machine of the character herein specified, the horizontal heel-brushes, vertical side brushes, and horizontal toe-brushes, all provided with rigid backs and revolubly

mounted on a common movable frame, substantially as shown and described. 15

14. In a machine of the character herein specified, a support for the feet, in combination with a series of rotatable brushes mounted in a frame and arranged to move continuously at a distance from the shoes or be brought in contact therewith, substantially as shown and described. 20

CHARLES G. HUTCHINSON.

Witnesses:

GERTRUDE WARD,
A. M. PIERCE.