

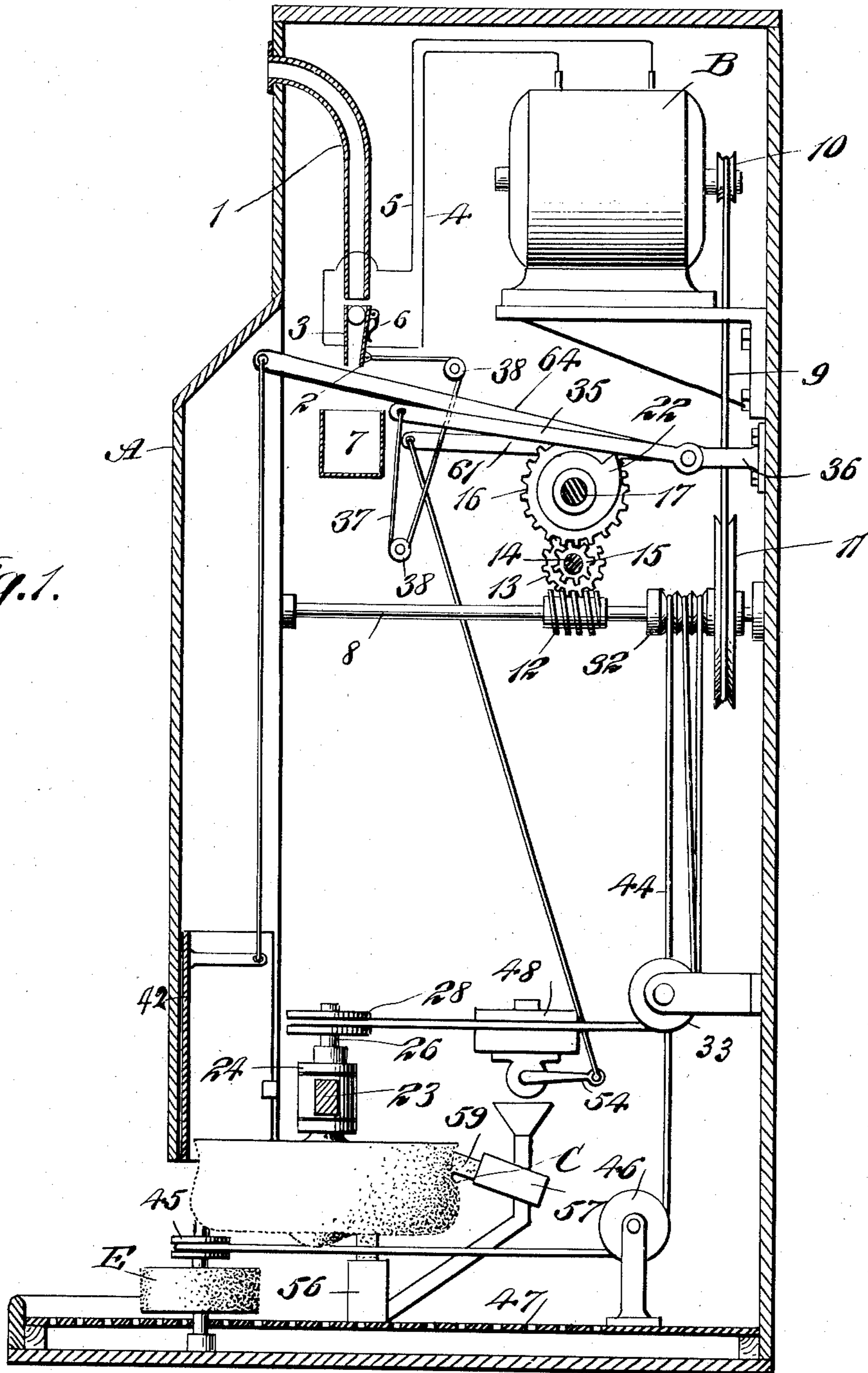
E. F. STRATTON.
SHOE POLISHING MACHINE.
APPLICATION FILED DEC. 20, 1907.

928,341.

Patented July 20, 1909.

3 SHEETS—SHEET 1.

Fig. 1.



Witnesses
Julius H. Smith
J. E. Hardenberg, Jr.

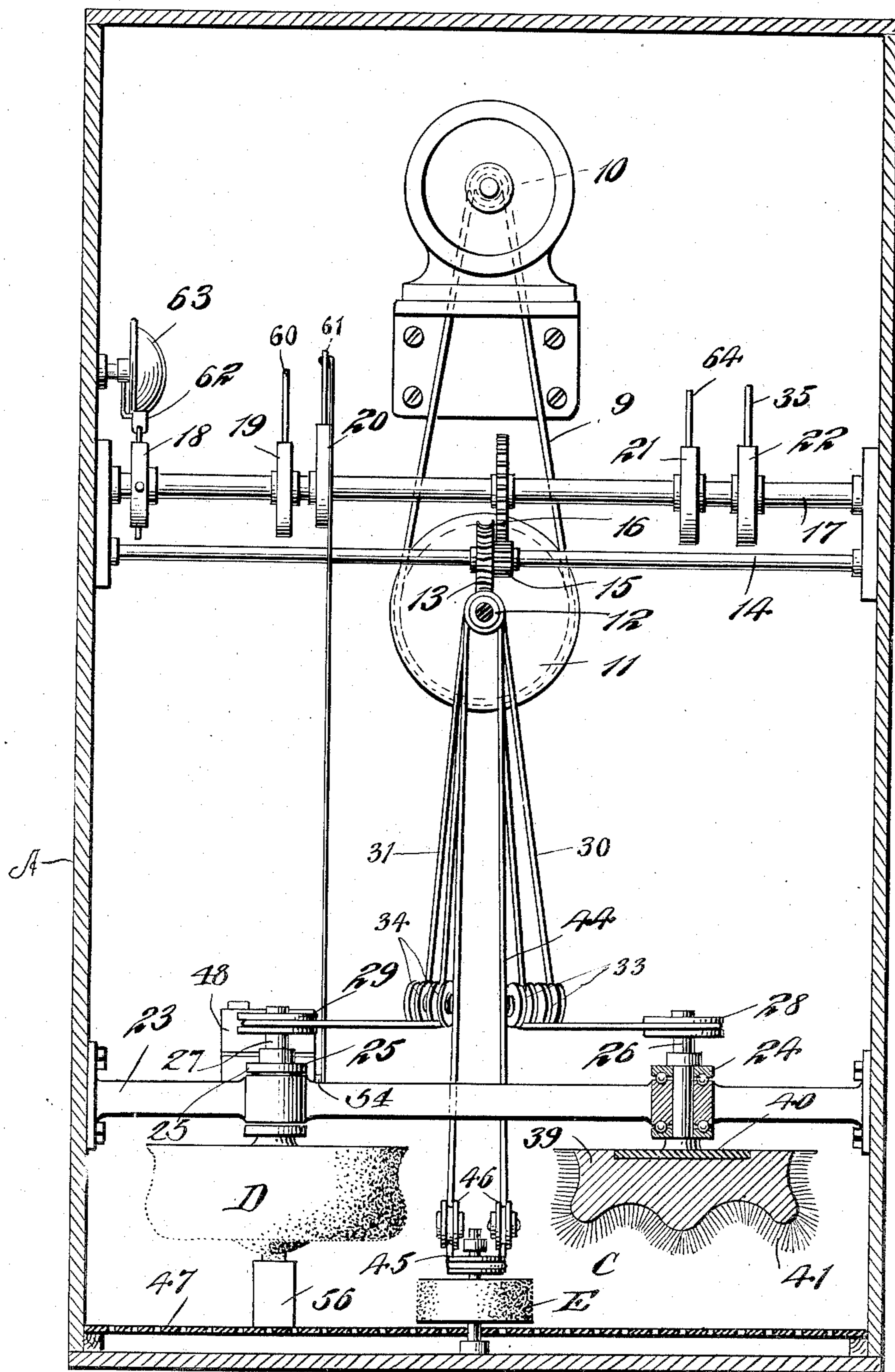
Inventor
Edmund F. Stratton
By his Attorneys
Gifford & Bull

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Witnesses
Julius K. [Signature]
J. E. Hordernberg, Jr.

Fig. 2.

By his Attorneys

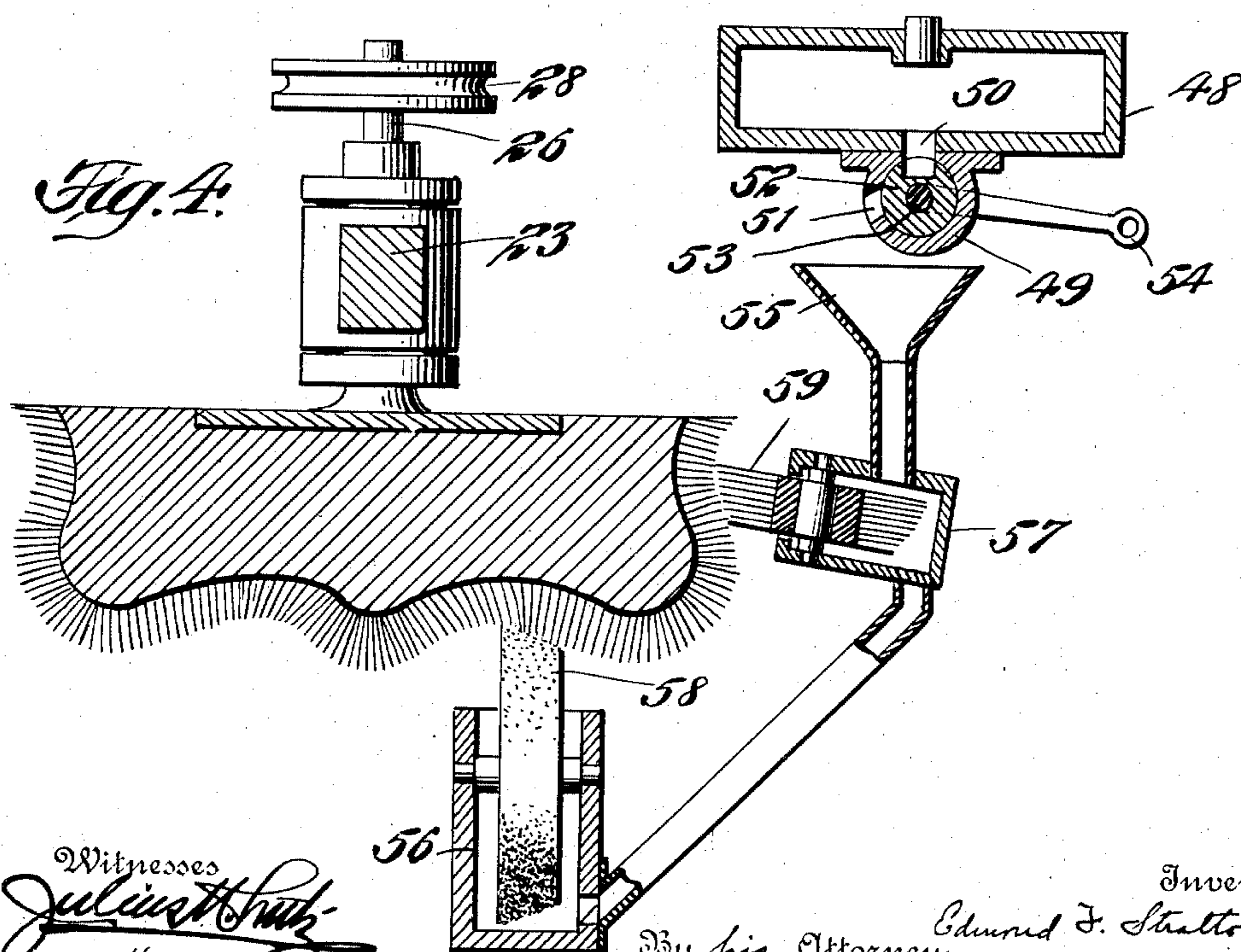
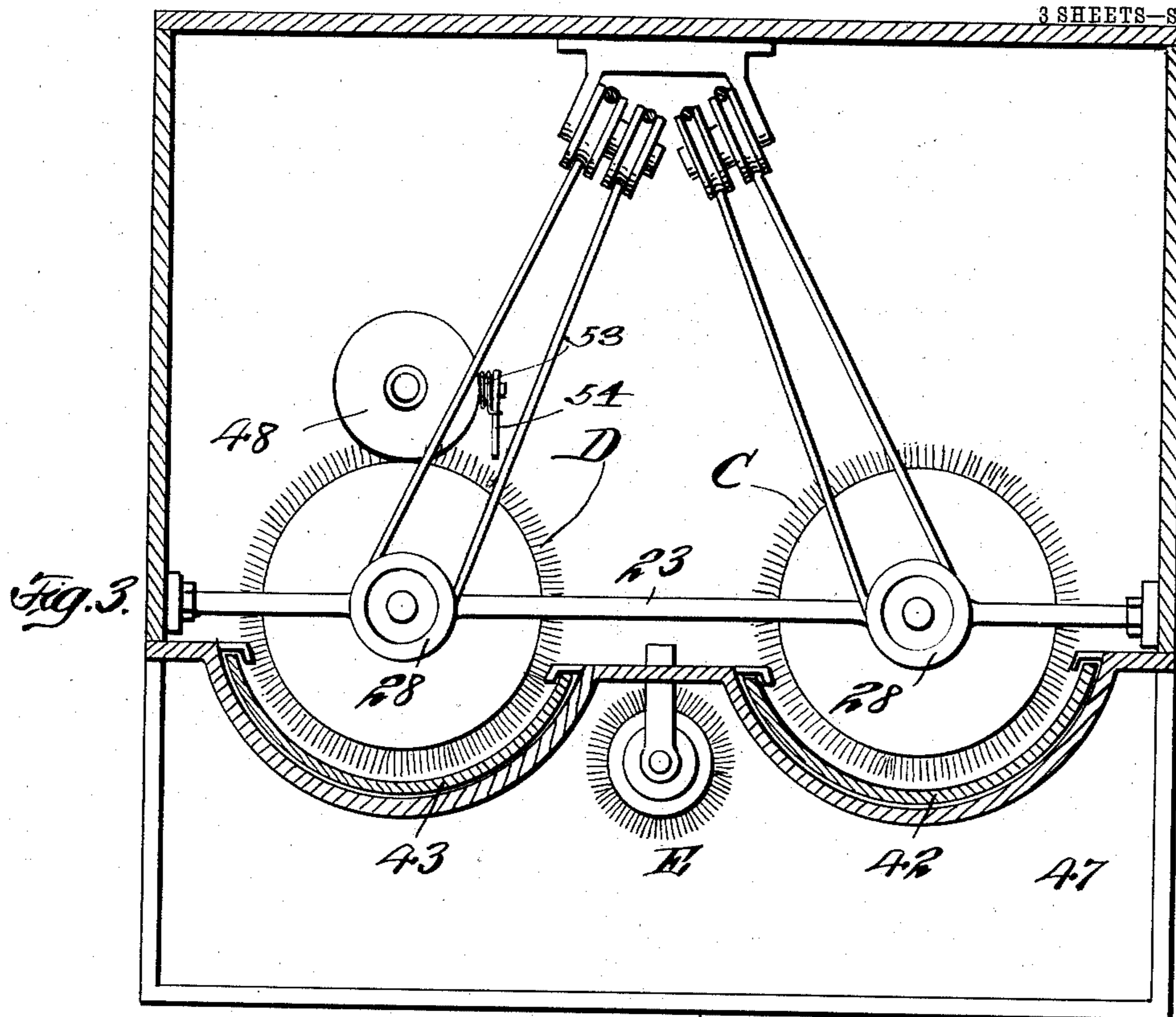
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UNITED STATES PATENT OFFICE.

EDMOND F. STRATTON, OF NEW YORK, N. Y.

SHOE-POLISHING MACHINE.

No. 928,341.

Specification of Letters Patent.

Patented July 20, 1909.

Application filed December 20, 1907. Serial No. 407,272.

To all whom it may concern:

Be it known that I, EDMOND F. STRATTON, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county of New York and State of New York, have invented certain new and useful Improvements in Shoe-Polishing Machines, of which the following is a specification.

It has been my purpose to provide a machine capable of construction at a comparatively small cost, the number of parts comprised in which is few and they being so disposed as to be easy of access for the purpose of repair or adjustment. At the same time I have embodied in my improved machine a novel form of brush designed to conform to the contour of a shoe operated upon, while obviating the necessity of changing the position of the brush during the course of the operation.

Certain novel features of inception and control of the polishing operation and of the supply of blacking will also be fully set forth in the following description:

I do not desire to limit myself to the preferred application of my invention as set forth hereafter and shown in the drawings herewith, as modifications may be made without departing from the spirit or scope of my invention which consists in the combination and construction of parts as set forth in the claims hereto appended.

In the accompanying drawings like characters of reference denote like parts in all the figures.

Figure 1 represents a view in side elevation of my improved machine the side of the machine casing being removed and parts being shown in section; Fig. 2 represents a view in front elevation of my improved machine with the front of the machine casing removed parts being shown on section; Fig. 3 represents a sectional view in top elevation; Fig. 4 represents a detail view in section of the blacking brush and means of supplying blacking thereto.

Turning now to a description of the figures in detail and considering Fig. 1, reference letter A denotes the casing inclosing the machine. At one side of the casing is placed a coin slot with chute 1 to conduct the coin after insertion; adjacent the bottom of chute 1 are located members 2 and 3 secured to the casing A by suitable insulated supports and connected by wires 4 and 5 with a motor B.

Member 2 is provided with a spring 6 by means of which the member is pressed toward member 3 to a sufficient degree to prevent the escape of a coin conducted into position between these members by chute 1. In this manner a coin having been inserted in the machine is caught and retained between members 2 and 3, the circuit to the motor is thereby completed and the operation of the machine is secured until member 2 is pulled in a direction away from member 3, as will be hereafter described, permitting the coin to drop into a suitable receptacle 7, the circuit to the motor being thereby broken. Supported between bearings on the front and rear walls of casing A is a shaft 8, driven from the motor B by belt 9 running over pulleys 10 and 11; mounted on the shaft 8 is a worm 12 driving pinion 13 mounted on a second shaft 14 supported between bearings on the side walls of the casing A: A second pinion 15, on shaft 14, preferably formed integral with pinion 13, meshes with a third pinion 16 mounted on a third shaft 17, supported between bearings on the side walls of the casing A. The various pinions are so arranged that shaft 17, or the cam shaft as it will hereafter be designated, will be driven at a slow rate of speed, being adapted to make one revolution during each completed operation of the machine for polishing purposes. Mounted on the cam shaft 17 are cams 18, 19, 20, 21, and 22, for purposes hereafter to be described.

Near the bottom of the casing A between the side walls thereof is placed a supporting bar 23 (see also Fig. 2) provided with vertical bearings 24 and 25 in which are mounted shafts 26 and 27. These shafts are each provided with a horizontal pulley, 28 and 29 respectively, and are driven by belts 30 and 31 running over the pulley 32 on shaft 8 (pulley 32 being grooved for three belts) and guided by pairs of pulleys 33 and 34 suitably supported from the back wall of the casing A. At the bottom of the shafts 26 and 27 are mounted brushes C and D, the construction of which will be hereafter described in detail.

In Fig. 1 a rod 35 pivoted at the rear of the casing on a suitable support 36 is shown as resting on cam 22; adjacent the outer end of the rod a connecting member 37 leads around suitably supported pulleys 38 to the spring-pressed member 2 in such a manner that the member 2 will be pulled back to

effect the release of a coin retained between it and member 3, upon the lifting of the rod 35 about its pivoted end. Cam 22 is adapted to lift the rod 35, resting thereon, at the end of each revolution of the shaft 17, thereby checking the operation of the machine as has been described. The operation of other rods to be hereafter specified in connection with cams 18, 19, 20 and 21, is similar to that of rod 35 and cam 22.

Turning now to Fig. 2, brush C is shown in section. The brush preferably consists of a circular body 39 of wood or other suitable material, secured to a plate 40 carried on the end of the shaft 26. The periphery of the body 39 is concaved, while the under face is formed with an annular groove, the convex center portion of the face being preferably constructed to extend below the rounded edge of the face. The body 39 is provided on its periphery and under face with bristles 41 of desired rigidity, the contour of the brush when thus completed being the same as that of the body 39. The construction of the brush D is like that of brush C, but brush D in the construction shown being the brush used to apply the blacking to the shoes operated upon, more pliable bristles may be used. It will readily be seen that in accordance with the polishing material used and the style of work desired, the surfaces of the brushes may be covered with any desired material and one or more additional brushes may be supplied to effect additional phases of the polishing operation.

Referring to Fig. 3 it will be seen that the front of the casing A is formed with flat center and side portions and that on each side of the center portion the face is rounded out to conform to the form of the circular brushes; below a point adjacent the top of each brush the correspondingly rounded casing front is cut away and doors 42 and 43 movable upward are arranged normally to conceal the brushes. In front of the flat center portion of the casing front I preferably place a stiff bristle brush E of comparatively small size revolved by belt 44 running around pulley 45, back through the casing front and under pulleys 46, and up and over pulley 32 on shaft 8. The brush may be used to clean the shoes of dirt preparatory to the polishing operation; the dirt thus removed falls through the grating 47 above the extending portion of the casing bottom.

In Fig. 4 is shown the means at present preferred by me for supplying liquid blacking to the blacking brush D. A blacking can 48 is suitable secured to the side wall of the casing, to the rear of and above brush D; the bottom of the can is provided with a circular valve casing 49 with inlet from the can 50 and outlet 51; a recessed valve 52 is adapted to turn in the valve casing, the recess being normally in register with inlet 50

and receiving a supply of blacking from the can. A shaft 53 projecting from the valve 52 through the valve casing 49 is provided at its end, outside the can 48, with a lever arm 54 which when raised will bring the recess in valve 52 into register with outlet 51 and discharge the blacking contained in the recess. The normal register of the recess and inlet 50 is secured by means of a spring around shaft 53 (as indicated in Fig. 3). The blacking is discharged into a divided funnel 55 leading to chambers 56 and 57; chamber 56, located beneath the brush D, is provided with an auxiliary brush 58, mounted on bearings in the side of the chamber, revolved by contact with the brush D, and adapted to take the blacking from the bottom of chamber 56 and distribute it on the under face of brush D; in like manner the chamber 57, preferably disposed at an angle and provided with auxiliary brush 59, is adapted to distribute blacking on the periphery of brush D.

I will complete the description of my improved machine by setting forth the operation thereof in connection with Fig. 2. A coin having been inserted in the slot the motor is thereby started and brushes C, D and E are revolved. Brush E being exposed, dirt may be removed from the shoes and meanwhile cam 19 raises a lever 60 connected with the door 43; the door is raised and brush D is exposed. Also cam 20 raises a lever 61 suitably connected to and raising blacking can valve lever 54, a supply of blacking being thereby discharged and distributed on brush D as above described. The person operating the machine places one shoe against the brush D, using the under face to distribute blacking on the toe and upper surface of the shoe and the concave periphery to distribute blacking on the sides of the shoe and heel portion. When one half of the period assigned to the blacking operation has elapsed the cam 18, by means of one of the four cam points with which it is provided, raises bell lever 62 to strike the bell 63, at which signal the other shoe is to be subjected to the blacking operation. At the end of the blacking period the bell is again struck, cover 43 is released, and cover 42 is raised by means of its connections with lever 64 which rests on and is raised by cam 21. One shoe is then subjected to the polishing brush, the bell is struck a third time to indicate the elapse of half of the polishing period, the second shoe is polished, and the fourth ring of the bell indicates the end of the operation; the cover 42 is thereupon released, the coin is allowed to drop, upon cam 22 raising lever 35, as has been described, and the motor ceases to operate.

It will be evident that in place of my novel form of brush members there may be inserted other forms as desired, such, for ex-

ample, as a brush member substantially of the form shown in brush member E, without in any way altering the construction or operation of the machine.

5 Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

10 1. In a shoe-polishing machine, a casing provided with an opening, a brush within the casing adjacent said opening, a drive shaft within the casing, a second shaft within the casing, a connection between the drive shaft and said second shaft, a connection between the drive shaft and said brush, a cover normally closing the opening in said casing, and means for lifting said cover, said means comprising a cam on said second shaft, a pivoted lever resting on said cam and a connection between the lever and the cover.

20 2. In a shoe polishing machine, a casing, a drive shaft within the casing, a second shaft and connections between said second shaft and the drive shaft, a brush within the casing, a connection between the brush and said drive shaft, a blacking receptacle adjacent the brush, a recessed valve member in said receptacle, and means for operating the valve to supply blacking to the brush, said means comprising a cam on said second shaft, a pivoted lever resting on said cam, and a connection between said pivoted lever and the valve.

30 3. In a shoe polishing machine, a brush, means for operating the brush, and means for supplying blacking to the brush, said supply means comprising a shaft driving connections between said shaft and the operating means, a cam on the shaft, a lever resting on the cam a blacking receptacle and connec-

tions between said lever and said receptacle, said lever being adapted to be elevated by said cam upon the operation of said operating means.

4. In a shoe polishing machine a casing provided with an opening, a cover closing said opening, a brush within said casing, a blacking receptacle adjacent said brush, a shaft within said casing, a plurality of cams on said shaft, a pivoted lever resting on each of said cams, a connection between one of said levers and the cover, and a connection between the other of said levers and the blacking receptacle.

5. In a shoe polishing machine, a casing provided with an opening, a brush within said casing, a blacking receptacle adjacent the brush and provided with a valve, a shaft within said casing, a plurality of cams on the shaft, a pivoted lever resting on each of said cams, a connection between one of said levers and the cover, and a connection between the other of said levers and said valve.

6. In a shoe polishing machine, a casing, a brush within said casing, a blacking receptacle adjacent the brush, a drive shaft within the casing, a second shaft, connections between the drive shaft and the brush and between the drive shaft and the second shaft, a cam on said second shaft, a pivoted lever resting on said cam, and a connection between the lever and the blacking receptacle.

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

EDMOND F. STRATTON.

Witnesses:

T. E. HARDENBURGH, Jr.,

R. B. CAVANAGH.