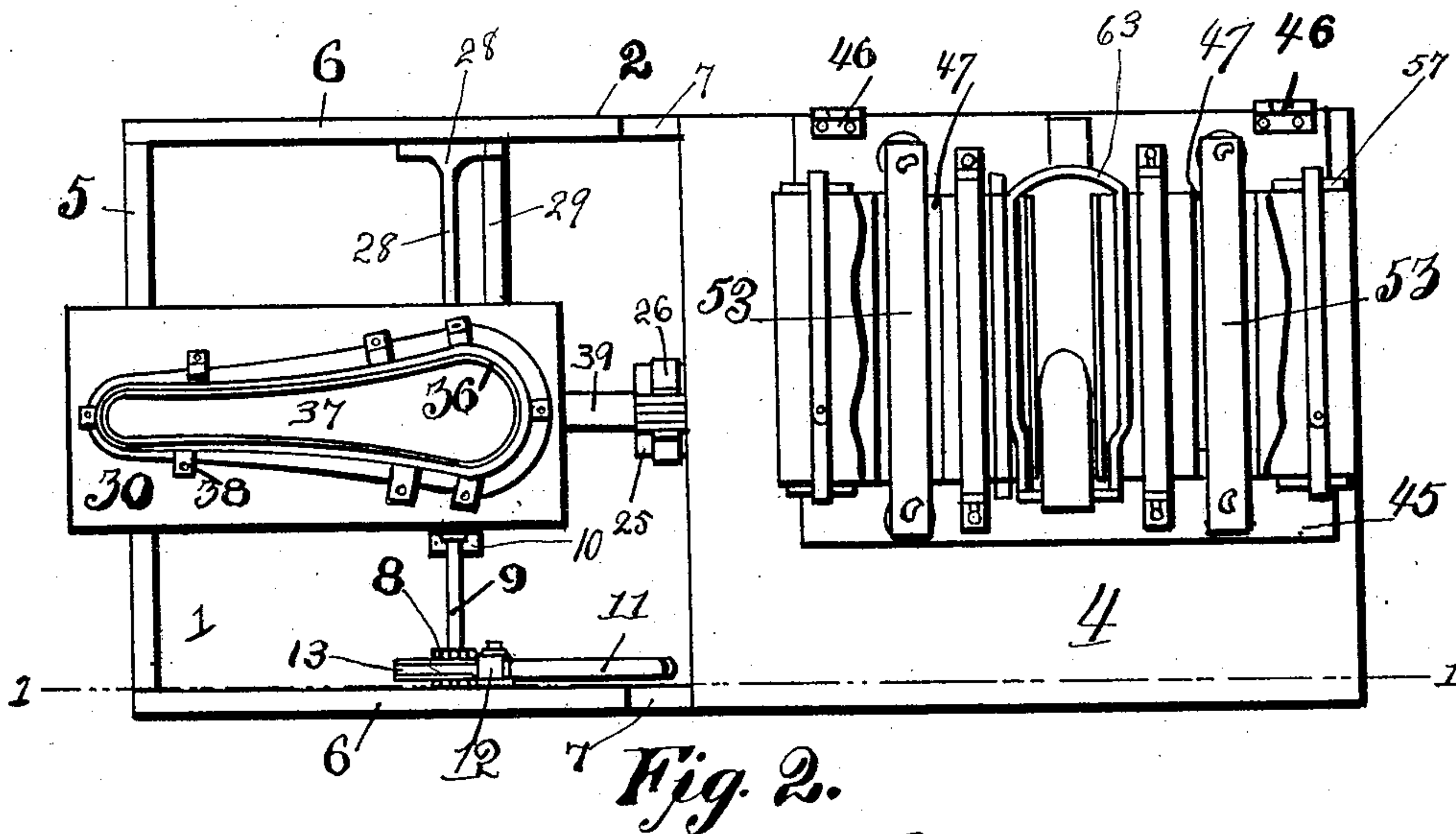
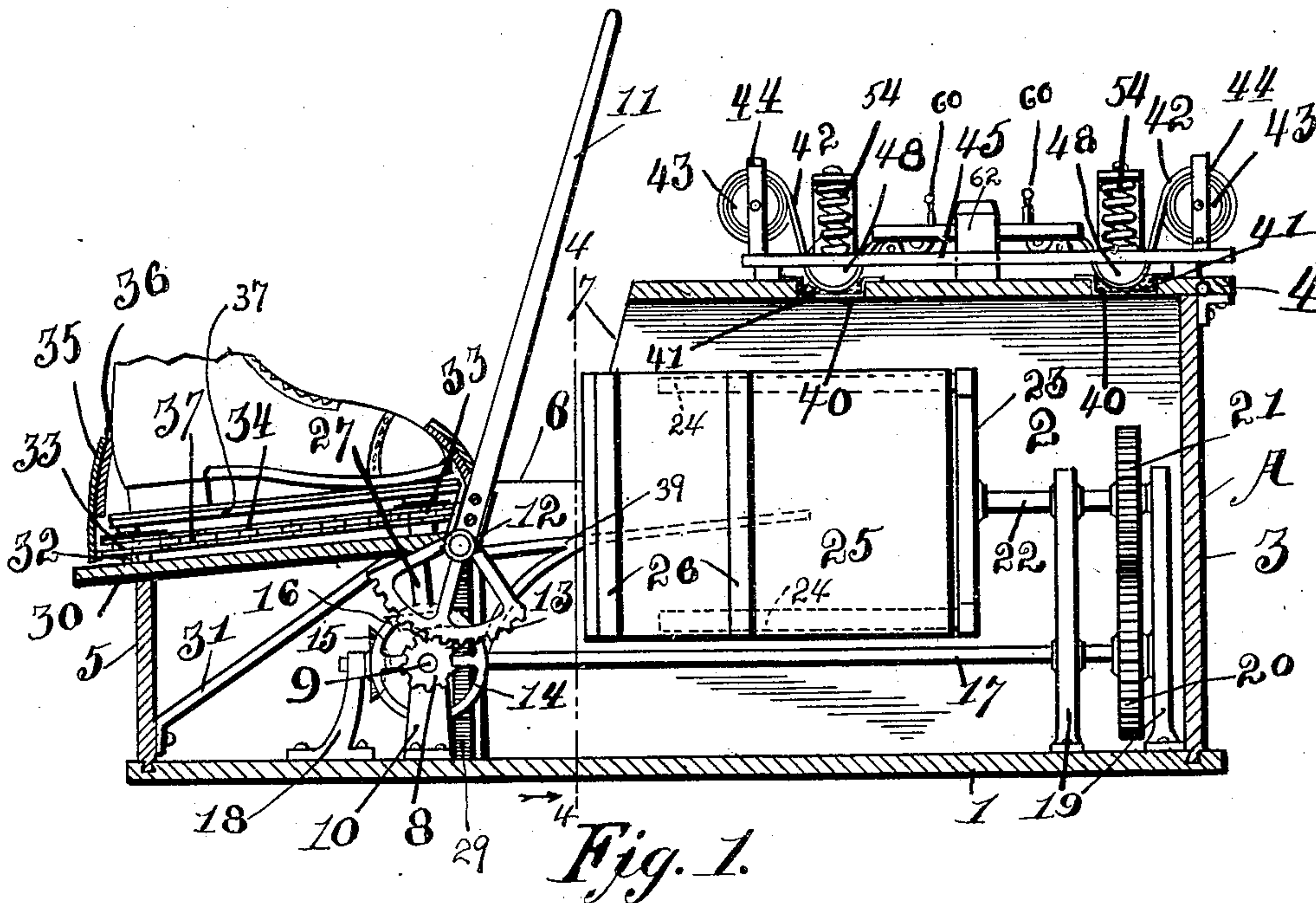


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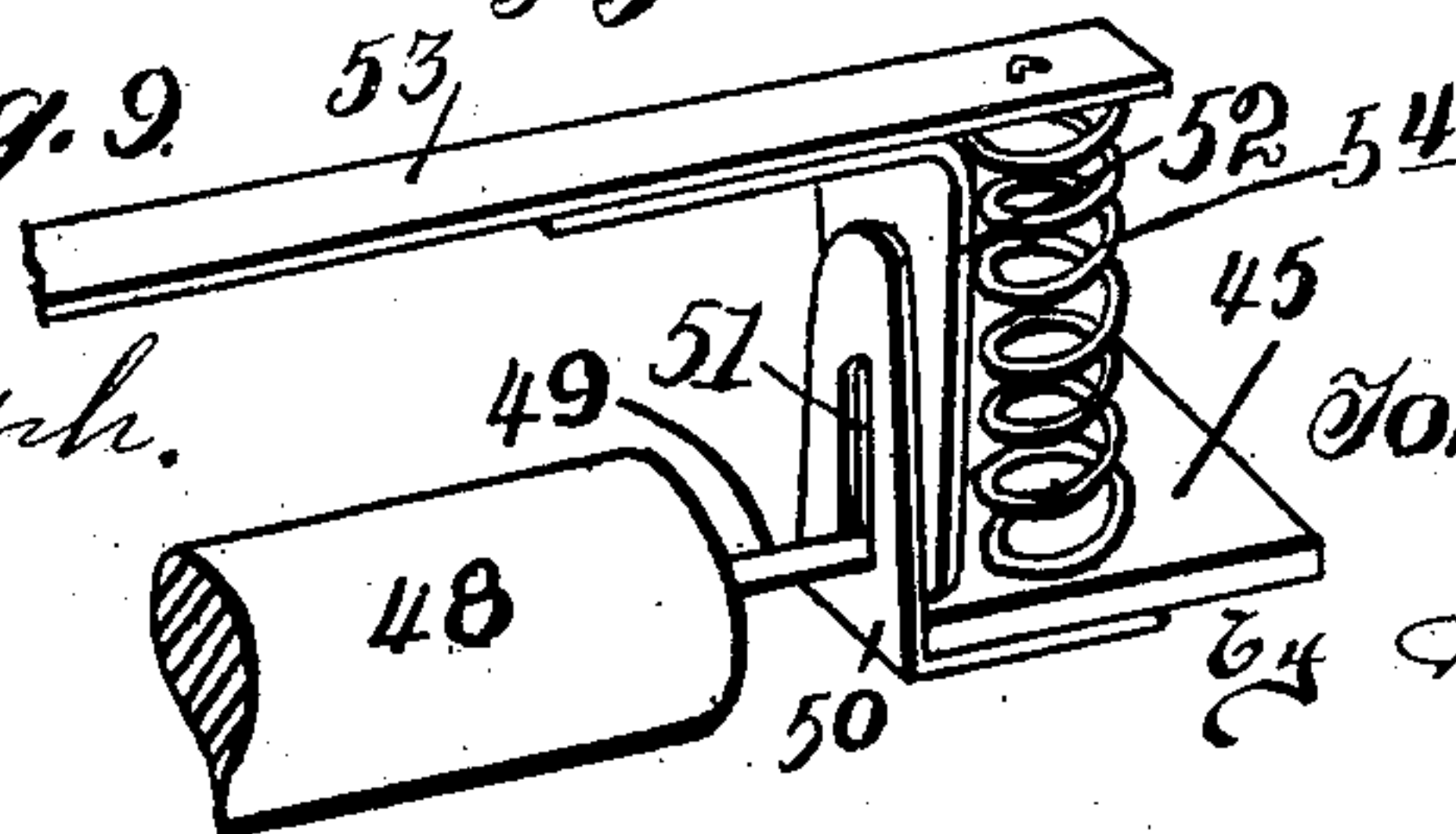
920,884.

Patented May 4, 1909.

3 SHEETS—SHEET 1.



Witnesses:
C. A. Rudolph.
John S. Powers.

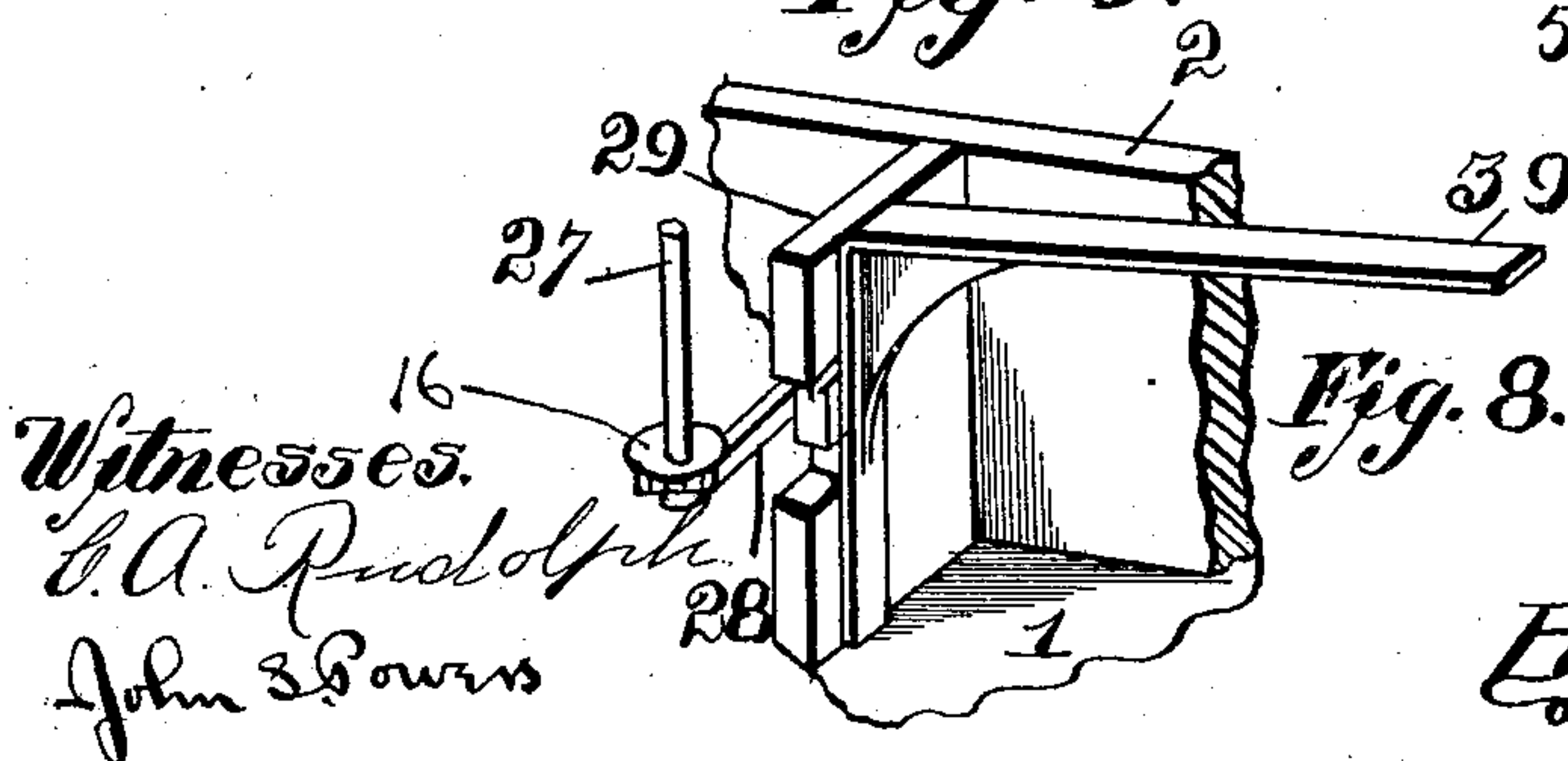
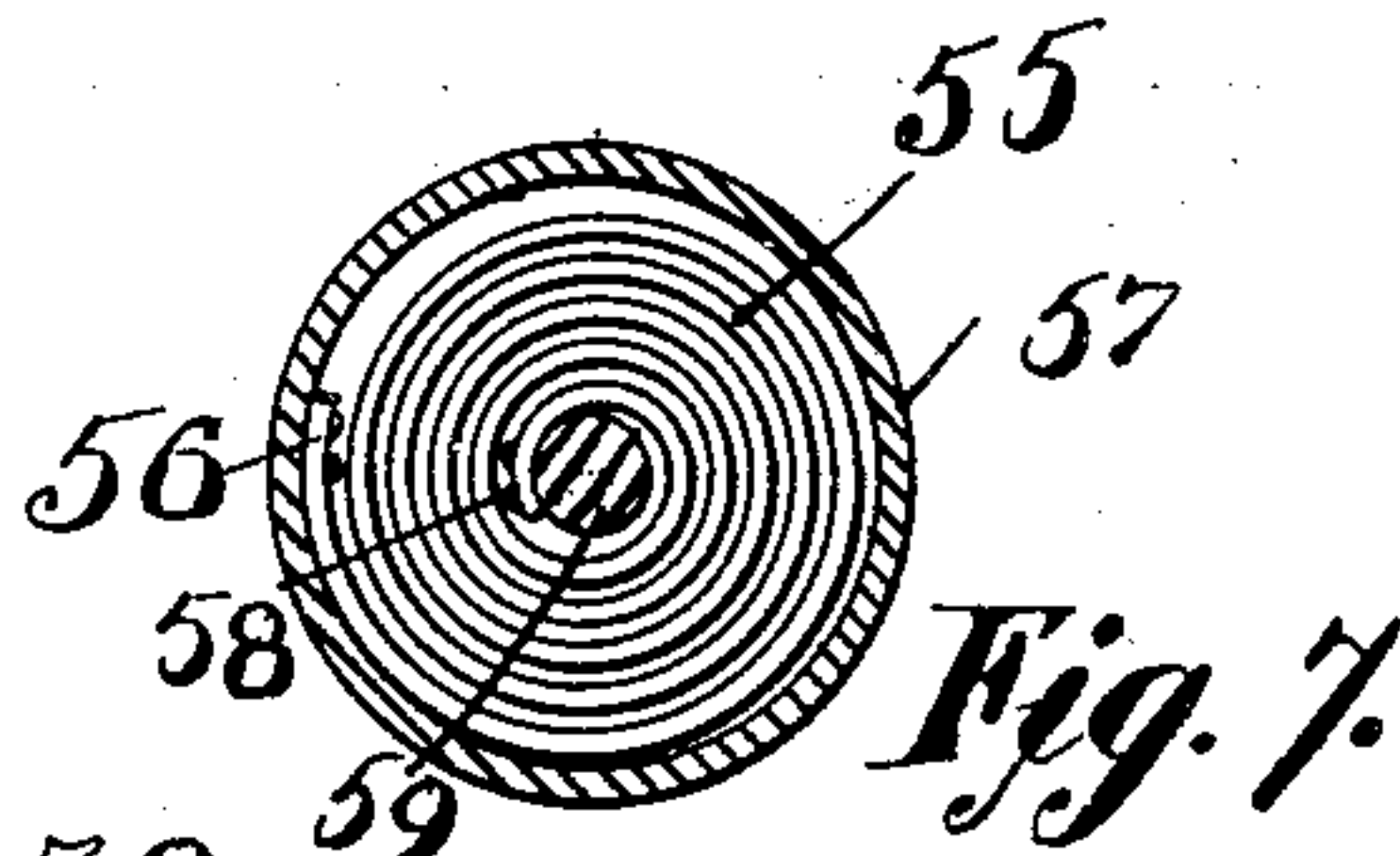
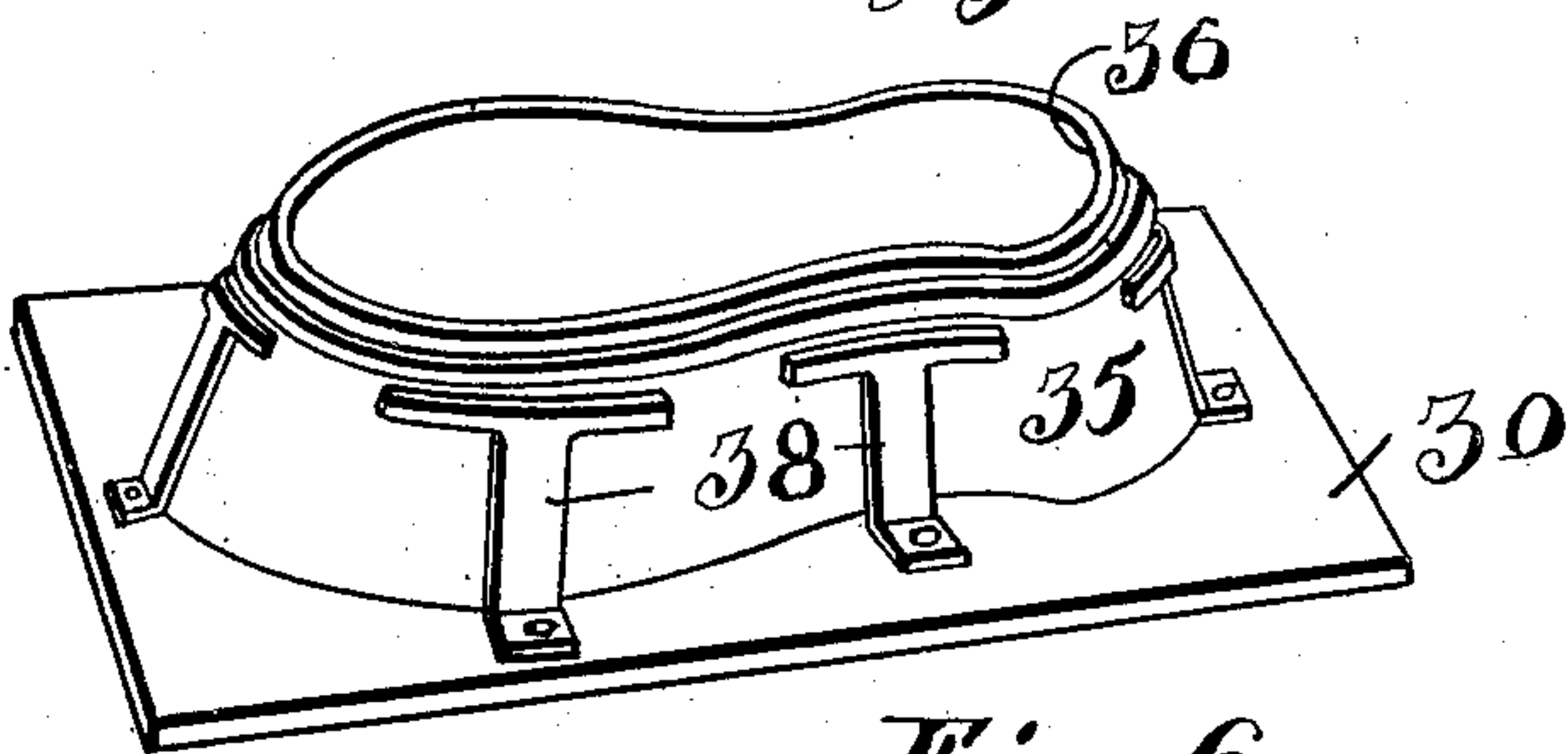
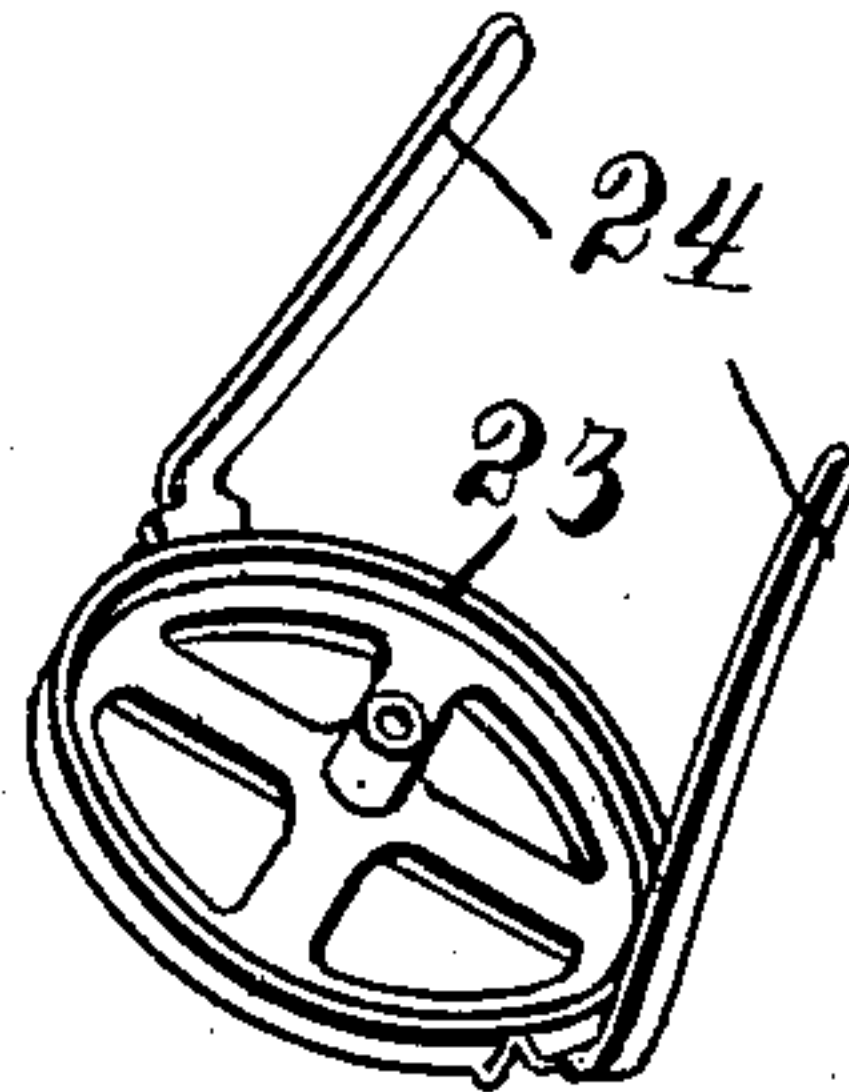
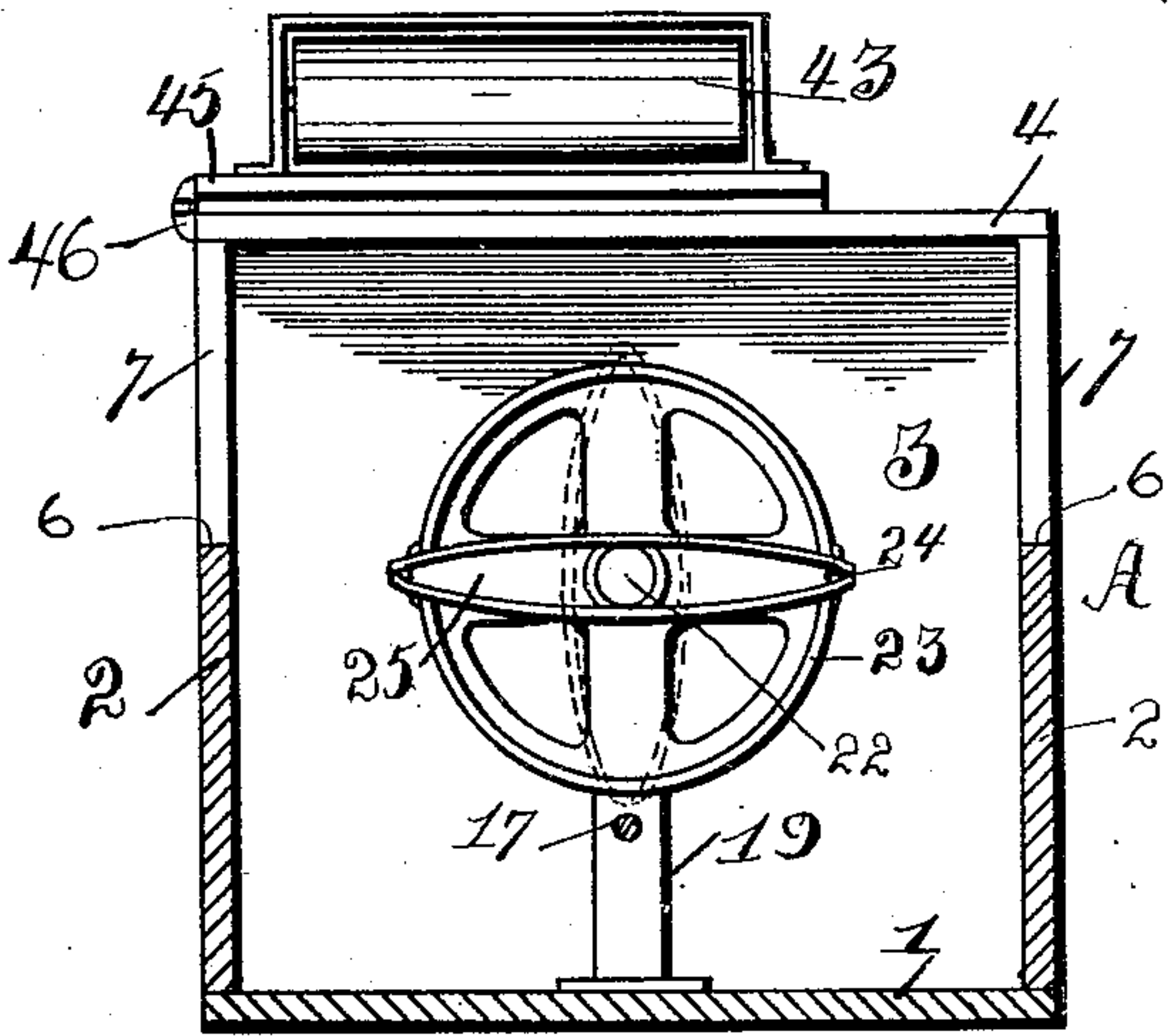
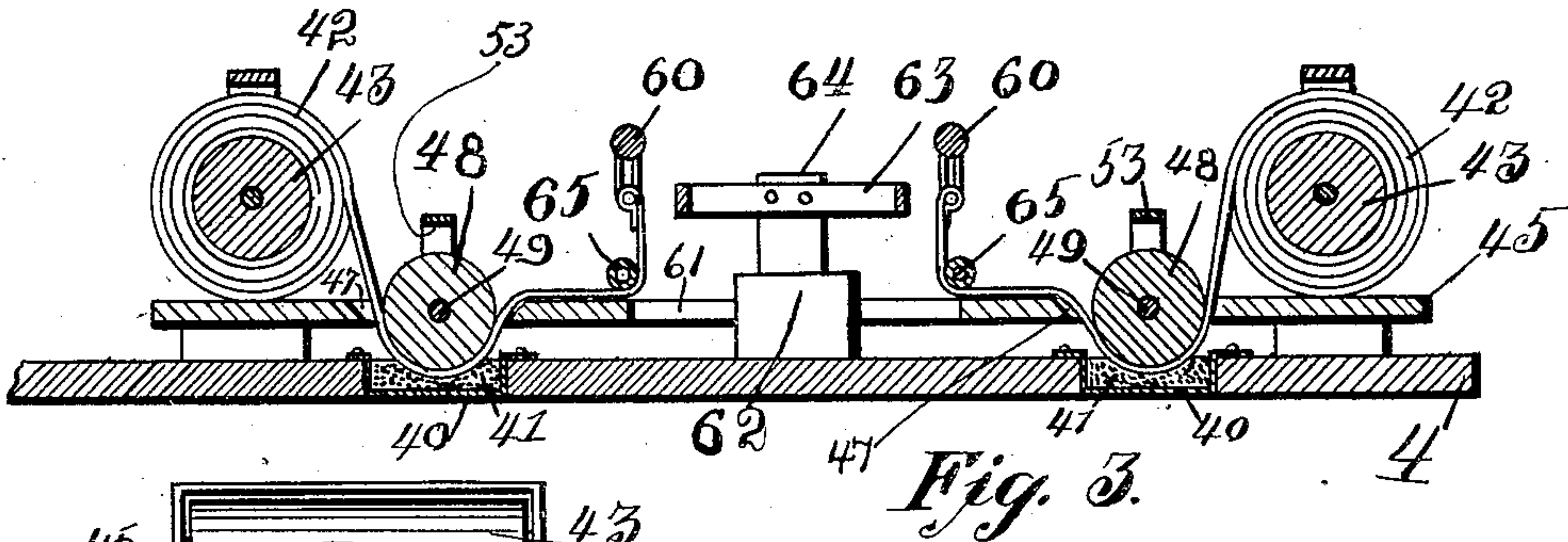


Inventor.
John C. C. Scheer.
Attorneys.

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3 SHEETS—SHEET 2.



Witnesses.
C. A. Rudolph
John S. Bowers

Inventor.
John C. C. Scheer.
By A. C. Everett & Co.
Attorneys.

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3 SHEETS—SHEET 3.

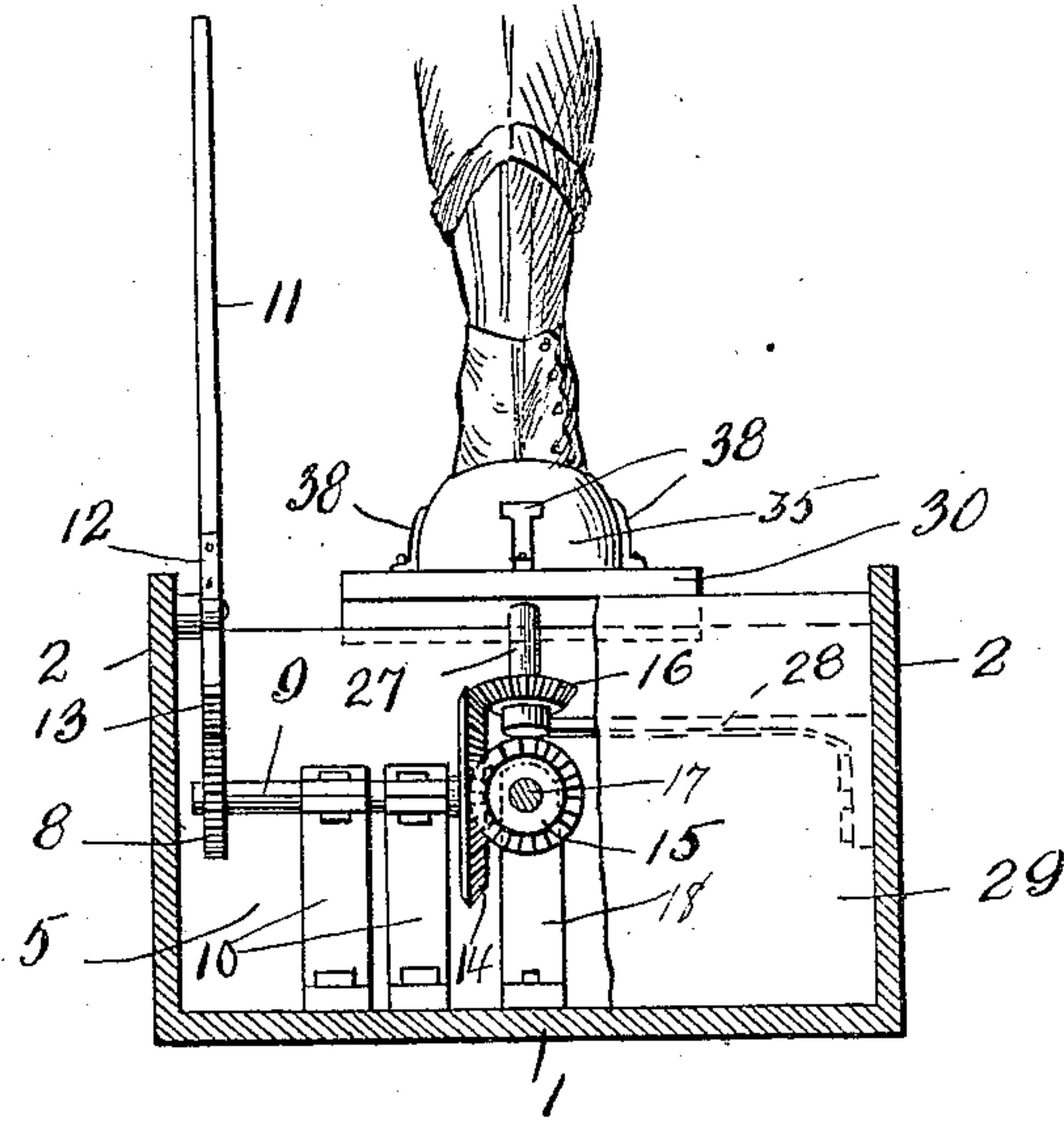


Fig. 10.

WITNESSES:

Samuel Paine
A. A. Butler

INVENTOR

John C. Scheer

BY

W. C. Everett & Co

Attorneys

UNITED STATES PATENT OFFICE.

JOHN C. C. SCHEER, OF BEAVER FALLS, PENNSYLVANIA, ASSIGNOR OF TWO-FIFTHS TO
RICHARD BOETHELT, OF NEW CASTLE, PENNSYLVANIA.

MACHINE FOR BLACKING AND POLISHING SHOES.

No. 920,884.

Specification of Letters Patent.

Patented May 4, 1909.

Application filed September 9, 1905. Serial No. 277,725.

To all whom it may concern:

Be it known that I, JOHN C. C. SCHEER, citizen of the United States of America, residing at Beaver Falls, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Machines for Blacking and Polishing Shoes, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to certain new and useful improvements in machines for blacking and polishing shoes, and pertains to that particular type in which a series of movable wipers are employed, which are so constructed and arranged as to reach all parts of the shoe.

The invention particularly contemplates paste applying mechanism and polishing mechanism which may be continuously motor operated or intermittently manually operated. These devices and the shoe supports, together with the gearing employed are mounted in an inclosed housing.

The construction outlined above, contemplates a machine in which the polishing mechanism is easily accessible for the insertion of a shoe, and in which the work may be performed quickly and thoroughly. In the furtherance of these functions, another advantage accruing from the present invention is the easy operation of the polishing mechanism which requires a minimum degree of labor for manual operation and of power for motor operation.

The detailed construction will appear in the course of the following description, in which reference is had to the accompanying drawings forming a part of this specification, like numerals designating like parts throughout the several views, in which:—

Figure 1 is a longitudinal section through the shoe-supporting plate and through the machine housing upon line 1—1 of Fig. 2. Fig. 2, is a top plan view thereof. Fig. 3, is a central longitudinal section of the paste applying mechanism. Fig. 4, is a transverse section on line 4—4 of Fig. 1, looking in the direction of the arrow. Fig. 5, is a perspective view of the rotary wiper holder. Fig. 6, is a perspective view of one of the polishing devices, especially intended for the edge of the shoe. Fig. 7, is a transverse vertical section of the spring reel upon which the paste applying material is wound. Fig. 8, is a detailed

perspective view illustrating the shoe rest, supported in the housing, and Fig. 9, is a detail fragmentary perspective view, showing the manner of mounting the paste applying presser rolls. Fig. 10 is a transverse vertical sectional view of the shoe polishing mechanism, taken through the line of the operating shaft in Fig. 1, this view, however, showing the supporting plate and the shoe holder in end elevation, and also showing a shoe in the holder.

The machine, as constructed, in accordance with my invention, embodies a housing or casing A formed with a bottom 1, side walls 2, a rear wall 3, a top 4 and a front wall 5. The front wall 5 is approximately half as high as the rear wall 3 and the top 4 is approximately of half the length of the bottom 1. In order to insure easy access to the several parts, the casing A is left open throughout the space between the edges of the front wall 5 and the top 4 and the side walls 2 are cut into substantially right angular form, thereby having horizontal edges 6 and oblique edges 7 between said front 5 and top 4.

The parts above detailed constitute the arrangement and construction of the casing A, in which is supported the polishing and paste applying mechanisms.

As shown, power is transmitted to a drive pinion 8 keyed upon a transverse shaft 9 which is supported in bearings 10 secured upon the floor 1, through the agency of a hand operated lever 11 fulcrumed in bracket 12 secured to the adjacent side wall 2. The latter carries at its lower end a rigidly secured sector 13 that meshes with the drive pinion 8.

A bevel pinion 14 is keyed upon the shaft 9 at a distance from the pinion 8. The pinion 14 is at all times in mesh with a smaller bevel pinion 15 carried by a horizontal shaft 17 and with another pinion 16 carried by a vertical shaft 27. The pinion 15 operates the mechanism for polishing the upper surface of the shoe and the pinion 16 operates the mechanism for polishing the edges of the soles and the sides of the shoe. These pinions are rotated simultaneously by the pinion 14 so that two shoes may be polished at one time, the sole and side portions of the one by the mechanism operated by the pinion 16, and the upper surface of the other by the mechanism operated from pinion 15. The pinion 15 is keyed upon a longitudinal

shaft 17 mounted adjacent the base of the casing A, said shaft being journaled at the end adjacent said pinion in a bearing 18 supported from the floor 1. The other end of the shaft 17 is journaled in a pair of spaced vertical bearings 19 secured to the floor 1. Keyed upon the shaft 17 and interposed between the bearings 19, is a pinion 20, which meshes with the superimposed pinion 21 keyed upon a longitudinal stub shaft 22, likewise journaled in the upper portions of the bearings 19. The shaft 22 carries at its end a comparatively heavy fly wheel 23 illustrated in detail in Fig. 5. To this fly wheel are secured in any desired manner, a plurality of resilient fingers on arms 24 of which I have shown two diametrically oppositely disposed. Wound about the fingers 24 is a sheet of polishing material 25, which is secured in position by a plurality of elastic bands 26 passing thereabout. The polishing sheet 25 and the mechanism for rotating the same comprises the devices for polishing the upper surface of the shoe.

The mechanism for polishing the edges of the soles and sides of the shoe embodies a vertical shaft 27, upon which the pinion 16 is keyed, and each shaft is supported in a laterally extending bracket bearing 28, which is secured to a recessed partition 29, attached to one of the walls 2 (see Fig. 8). The shaft 27 passes through a supporting plate 30, which is held upon the partition 29 and the front wall 5, and is strengthened by a diagonally extending brace 31 secured to said front wall 5. A stub shaft 32 is mounted on the rear portion of the plate 30. Sprockets 33 are rigidly mounted upon the shafts 27 and 32, and over said sprockets 33 a chain 34 is passed, which carries a flexible apron 35, provided on its inner face with a sheet of wiping material 36. A shoe holder 37 is mounted on the plate 30, above the space surrounded by the chain 34, as clearly shown in Fig. 1. The apron 35 is caused to conform to the contour of the shoe by a series of exteriorly arranged inclined guides 38, which are preferably T-shaped and possess an arrangement similar to the contour of the sole of the shoe.

The foregoing mechanisms constitute the elements for polishing the edges of the sole and the sides of the shoe, which are adapted to be operated simultaneously with the mechanism previously described for polishing the upper surface of the shoe.

For the purpose of supporting the shoe within the wiper 25, I have provided an L-shaped bracket or rest 39, secured to the partition 29, preferably disposed to lie at a slight incline, so as to place the shoe in better position with respect to the wiper, the construction and arrangement of this L-shaped bracket being clearly shown in Fig. 8.

The mechanism for applying paste or

blackening to the shoe is preferably mounted upon the top 4 of the casing A, this arrangement being for convenience and not for necessity, as any other arrangement may be as equally well employed. The paste applying mechanism comprises a pair of spaced pans 40 secured in the top 4 and lying flush therewith. Polishing material 41 is placed in the pans 40, and is applied to the shoe by the movement of a sheet 42. The paste applying mechanism is duplicated on each side of the center of the plate 45, so as to have independent transverse sheets and mechanism therefor for each of the paste pans 40 and the sides of the shoe adjacent thereto. Hence, inasmuch as the mechanisms are identical, a description of the paste applying mechanism at a single side of the plate 45 will suffice. The sheet 42 is wound upon the reel 43 which has its ends journaled in bearings 44. The bearings 44, as well as the rest of the paste applying mechanism, are mounted upon a plate 45 which is hinged as at 46, to one side of the top 4. The plate 45 is provided with transverse openings 47, through which extend presser rolls 48. As shown in Fig. 9, presser rolls 48 are formed with reduced ends 49, which extend through a bracket 50, mounted on the underside and at opposite points of the plate 45 and provided with a longitudinal slot 51 for the reception of said reduced ends 49 of said rolls 48. The reduced ends 49 are secured in the apertured arms 52, depending from a transversely arranged cross bar 53. The cross bar 53 is preferably, though not necessarily, laterally adjustable, and is held to the plate 45 by virtue of retractile springs 54 having one end secured to said plate 45, and the other end secured to said cross bar 53. The bar 53 is supported against said plate by depending arms 52 which rest upon the upper surface thereof. The reels 43 have secured in their ends a retractile coil-spring 55 having its outer end secured as at 56 to a tubular extension 57 mounted upon the end of the reel and having its inner end secured as at 58, to a transverse shaft 59, passing from said reel and upon which the latter rotates. The function of the spring 55 is to rewind said reel after the sheet 42 has been unrolled therefrom. For the purpose of facilitating the movement of the sheet 42 and unwinding the same from the reel, I have secured to the free end thereof a handle 60.

In the central portion of the plate 45 is an opening 61, through which projects a stationary shoe rest 62 rigidly secured upon the top 4 of the casing A. As an aid in guiding the movement of the wipers over the shoe, I have positioned upon the plate 45, adjacent said opening 61, a substantially oval shaped metallic frame 63 rigidly secured to brackets 64 on each side thereof, said brackets being fastened to the plate 45.

In operation, one shoe is placed upon the rest 37 so as to be surrounded by the wiper 36, and the other shoe is placed upon the bracket 39 so as to be surrounded by the wiper 25. This is the position in which the shoes are placed in the polishing operation, after the paste has been applied. When the shoes are thus positioned, oscillating motion is imparted to the lever 11 by hand which swinging on its fulcrum 12 through the agency of the sector 13, imparts alternating rotary motion to the pinion 8, which, through the several connecting gears, and chains, simultaneously operates the wipers 36 and 25, which alternately move in opposite directions at each oscillation of said sector, the frictional contact between the shoe and the wiper thereby causing the latter to impart a high and lasting polish to the shoe.

In applying paste to the shoe, the latter is positioned upon the rest 62, within the frame 63, and the several handles 60 of the wipers 42 are then drawn independently over the surface of the shoe. The wiper is firmly pressed into the paste or blacking 41 by virtue of the spring pressed roll 48, so that as the material in the pans 40 is exhausted, or diminished, the said roll will constantly exert pressure to retain the wiper against the same. When the handle of the wiper is released, the spring 55 will rewind the reel and return the wiper to initial position. For the purpose of facilitating the movement of the paste applying sheets 42, I have trained the same over friction rollers 65, located adjacent the opening 61 in the plate 45.

Having fully described my invention, I claim:—

1. A shoe shining machine embodying a stationary housing, a drive pinion mounted in said housing, independent sets of gear

trains connected to and operated by said drive pinion, an endless chain driven by one of said gear trains and operating on a vertical axis, an apron carried by said chain for polishing the sides of the shoe sole and shoe upper, a frame driven by the other of said gear trains simultaneously with the driving of said chain, and turning on a horizontal axis, an apron carried by said frame, and means for imparting motion to said drive pinion.

2. A shoe shining machine embodying a housing, a drive pinion mounted therein, independent sets of gear trains connected to and operated from said drive pinion, an endless chain and a frame driven with simultaneous movement from said drive pinion through the agency of said gear trains, the chain turning on a vertical axis, and the frame turning on a horizontal axis, an endless apron carried by the chain and an endless apron carried by the frame, and means for imparting rotary motion alternately to said drive pinion.

3. A shoe shining machine embodying a housing, a drive pinion mounted therein, independent trains of gearing connected to and operated by said drive pinion, an endless chain and a frame connected to one of the elements of each of said gear trains, the chain revolving around a vertical axis, and the frame around a horizontal axis; an endless apron carried by the chain, and an endless apron carried by the frame, stationary brackets constituting shoe rests located within said endless aprons, and means for imparting motion to said drive pinion.

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

JOHN C. C. SCHEER.

Witnesses:

H. C. EVERT,
E. E. POTTER.