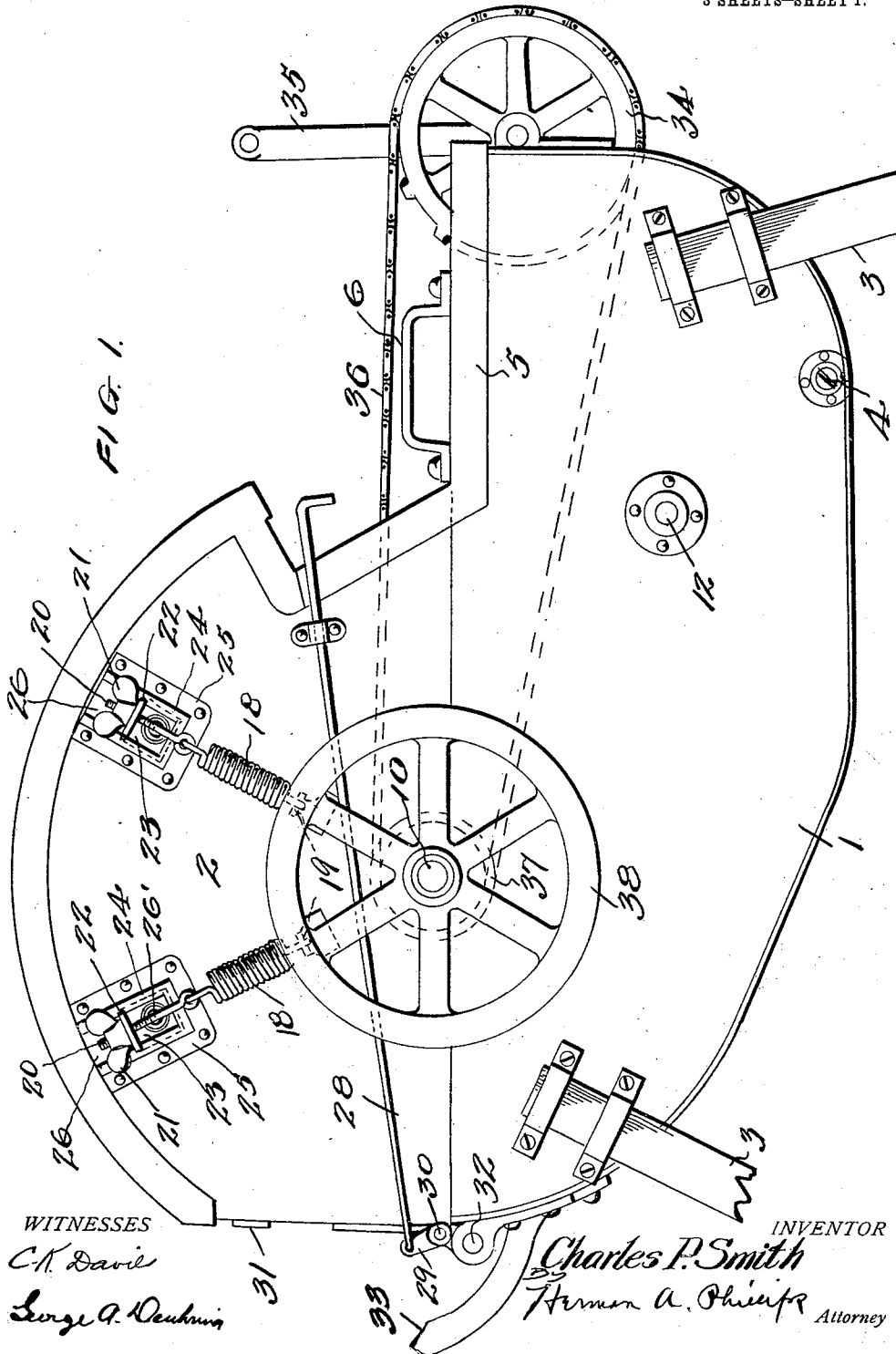


C. P. SMITH.
CLOTHES WASHING MACHINE.
APPLICATION FILED FEB. 27, 1912.

1,065,473.

Patented June 24, 1913.

3 SHEETS—SHEET 1.



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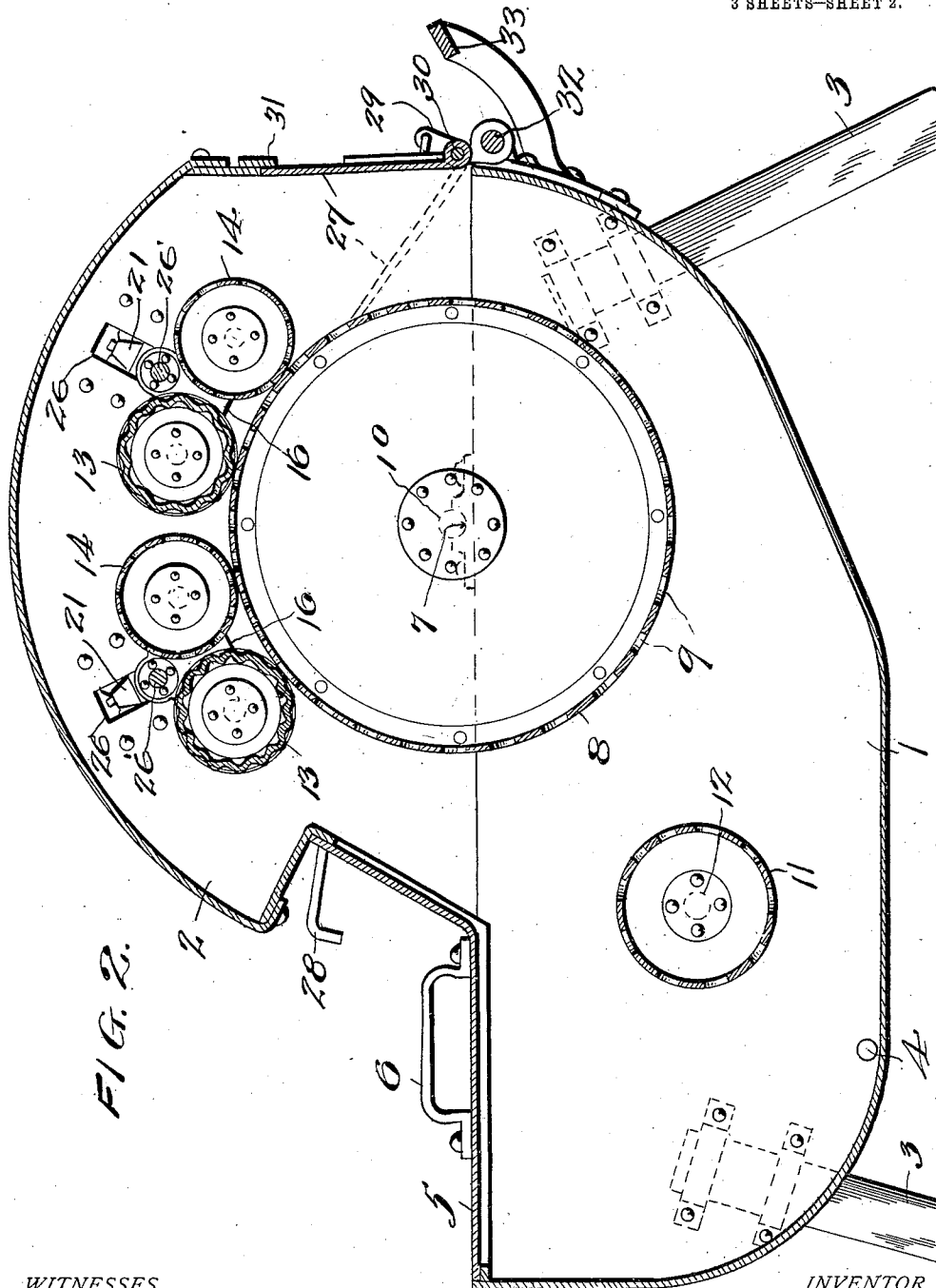


FIG. 2.

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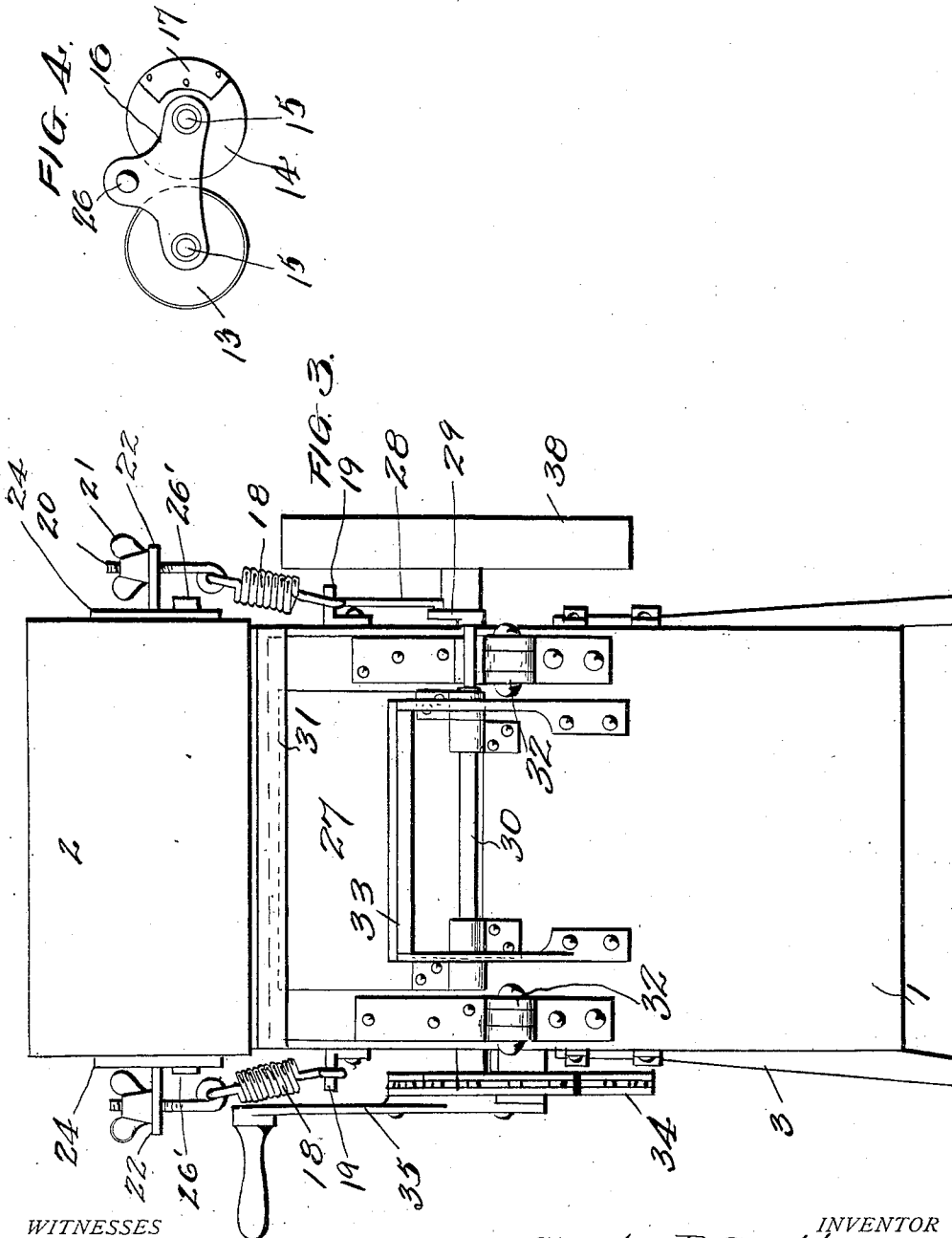
INVENTOR
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WITNESSES

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UNITED STATES PATENT OFFICE.

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CLOTHES-WASHING MACHINE.

1,065,473.

Specification of Letters Patent.

Patented June 24, 1913.

Application filed February 27, 1912. Serial No. 680,207.

To all whom it may concern:

Be it known that I, CHARLES P. SMITH, a citizen of the United States, residing at Leadvale, in the county of Jefferson and State of Tennessee, have invented certain new and useful Improvements in Clothes-Washing Machines, of which the following is a specification.

My invention relates to improvements in clothes washing machines, and is designed especially as a household laundrying device for the purpose of cleansing garments, articles of apparel, and flat pieces, etc.

The prime object of the invention is the provision of a device which will be inexpensive in first cost, efficient in operation, easily manipulated, simple in its construction, and which will require but slight expenditure of power for actuating.

The invention consists essentially in certain novel features of construction and combinations and arrangements of parts as illustrated in the drawings, described in the specification and more particularly pointed out in the claim.

In the accompanying drawings, I have illustrated one example of the physical embodiment of my invention constructed according to the best mode I have so far devised for the practical application of the principles, but it will of course be understood that slight changes and colorable alterations may be made in the invention within the scope of my appended claim without departing from the spirit of the invention.

Figure 1 is a side view in elevation of a washing machine embodying my invention. Fig. 2 is a vertical central sectional view of the machine of Fig. 1 looking in the opposite direction. Fig. 3 is a rear end view of the washing machine. Fig. 4 is a detail view detached of the rollers employed in the washing machine.

Referring to the drawings the numeral 1 indicates the tub of the machine in which a sufficient quantity of water may be held. This tub or receptacle, as in fact the entire casing, including the top or cover 2, is preferably of sheet metal, and is supported upon the legs 3. A plug 4 is located near the bottom of the tub, which closes an outlet for used water, and the tub is further provided with a lid 5 which by means of the handle 6 may be removed for the insertion and

withdrawal of clothing, or articles to be laundered.

Within the tub, and supported upon open bearings, as 7, (Fig. 2) is a hollow drum 8 formed with perforations 9, and provided at its ends with stud shafts 10 which are seated in the bearings 7. A second and smaller drum or roller 11, is journaled by means of its stud shafts 12 in the side walls of the tub. This drum is also perforated and when in use is entirely submerged in the water contained in the tub.

Supported within the cover 2 of the tub 1, are two pairs of rolling devices, which, inasmuch as they are duplicates, will be described in detail as one device. Each rolling device comprises a corrugated impervious roller 13 and a smooth perforated roller 14, both preferably hollow, and each provided with stud shafts 15 journaled in the supporting plate 16 at each end of the rollers. The perforated rollers are adapted to contain soap, and for this reason are provided with a door or closure, indicated at 17 in Fig. 4 through which the soap may be introduced to the interior of the roller. It will be observed in Fig. 2 that the rollers all bear down upon the drum. This condition is made positive by means of pairs of springs, as 18, 18, one at each side of the cover, and attached to the cover at the lower end by clips 19. The upper end of the spring is attached to an eye-bolt 20, which is threaded for the reception of a "butterfly" nut 21 and passes through a flange 22 of a slide plate 23. The slide plate 23 is movable within the guide flanges 24 of the slotted plate 25, and the side walls of the cover 2 are slotted at 26 to coincide with the slotted plate 25.

The slide plate at each side of the cover supports the end of a shaft 26' which extends between the supporting plates 16 for the rollers 13 and 14.

At the rear the cover is provided with an opening that is closed by the hinged door 27, and this door may be actuated from the front end of the machine by means of the rod 28 which is connected to the crank 29 of the hinge bolt or rod 30, a plate 31 being attached to the cover to prevent outward displacement of the door.

The cover is hinged to the tub, as at 32, and may be turned back to expose the in-

terior of the tub, and rest upon the cross arm or support 33 which is attached to the tub.

5 In operation the drum 8 is rotated, and for this purpose a driving sprocket wheel 34 may be turned by means of the crank and handle 35, and through the medium of the sprocket chain 36 which passes over the sprocket wheel 37, the drum may be rotated, 10 a balance wheel 38 being provided for steadying and balancing the power applied.

The clothes, garments, flat pieces, etc., to be washed are first attached to the drum 8. This may be accomplished in numerous 15 ways. A manner of attachment that has proven highly satisfactory is to twist a sleeve for instance, and insert it into the perforation in the drum, and then permit the garment to dangle from the drum. In 20 this manner all the perforations, or many of them may be filled by a portion of a dangling garment. Another mode of attachment is to loosely tie a number of garments in a string and wrap them around the drum. 25 With the garments or other articles attached to the drum, the tub filled with water to entirely submerge the roller 11 and partially submerge the drum 8, and the rubbing rollers bearing down upon the articles at- 30 tached to the drum, the washing machine may be operated by turning the handle and crank 35. In this manner the drum is rotated and carries with it the garments attached thereto. As the garments pass 35 through the water they are soaked, and as they pass under the corrugated and perforated rollers, the spring pressure causes the rollers to "work" and rub the garments which have been soaped from the perforated

rollers 14, and the garments are thus 40 cleansed. The perforated roller 11 acts as a guide for the passing garments, and after the garments have been sufficiently washed, the door 27 is turned to dotted position in Fig. 2. In this position the rotation of the 45 drum brings the garments to position where they may be taken out.

When washing, as the articles are fed over the drum the rollers force the water through the fiber of the goods and the corrugated 50 rollers work out the dirt, the soiled water falling back through the drum 8. In addition to washing the clothes, the continuous dipping of the clothes into and withdrawal from the hot soapy water in the tub tends to 55 bleach the texture thereof.

From the above description taken in connection with the drawings it is evident that I have provided a machine of this class which fulfils all the conditions set forth as 60 the purpose of my invention.

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

In a washing machine the combination 65 with a tub having a hinged cover, and a perforated hollow rotatable drum therein, of spring pressed rollers supported in pairs in the side walls of the cover and bearing on said drum, said pairs each comprising an 70 imperforate corrugated roller and a hollow perforated roller.

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

CHARLES P. SMITH.

Witnesses:

R. R. BELL,
W. I. CARSON.