

E. Y. WHITE.
 DRY CLEANING APPARATUS.
 APPLICATION FILED OCT. 22, 1909.

1,038,468.

Patented Sept. 10, 1912.

2 SHEETS—SHEET 1.

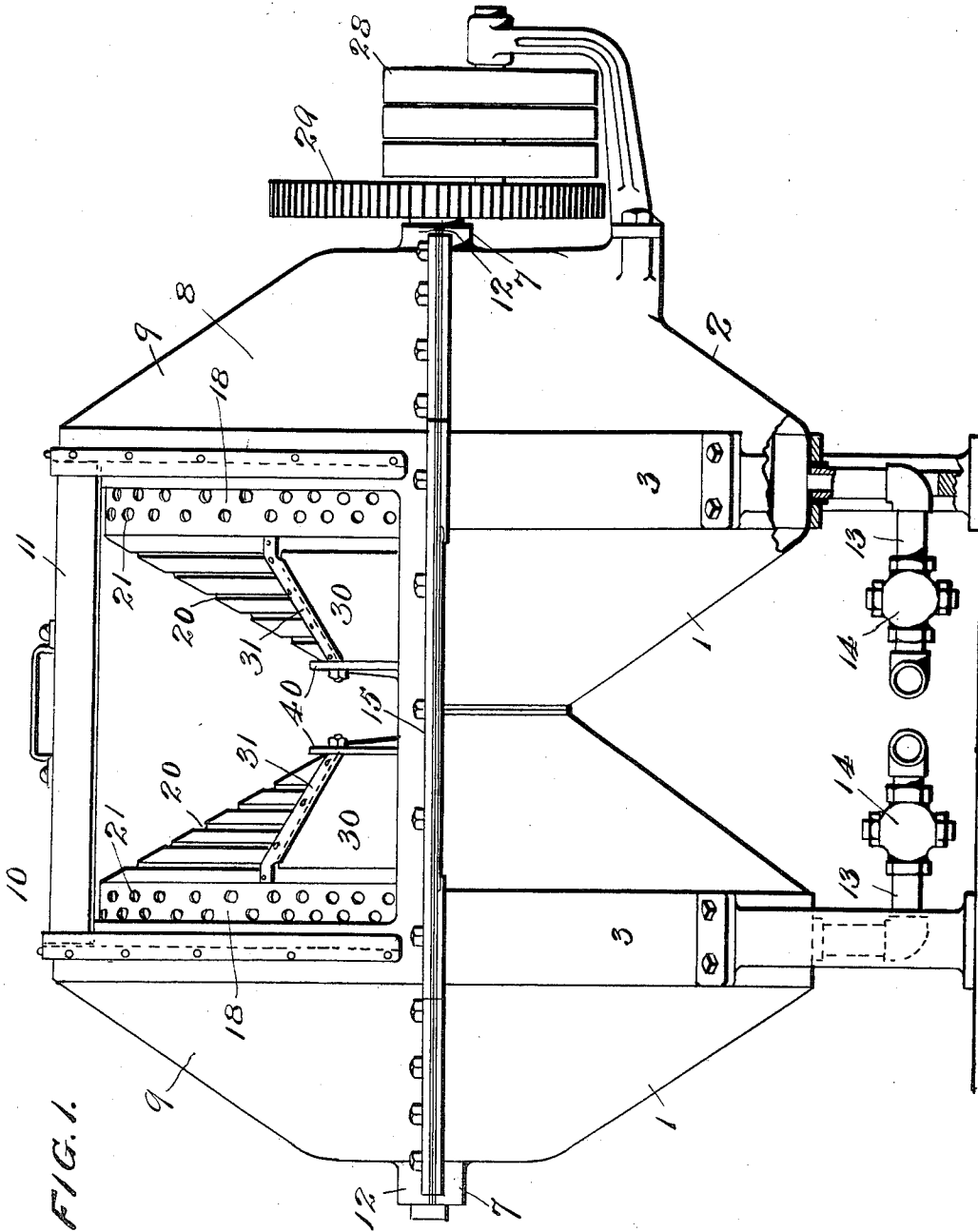


FIG. 1.

WITNESSES

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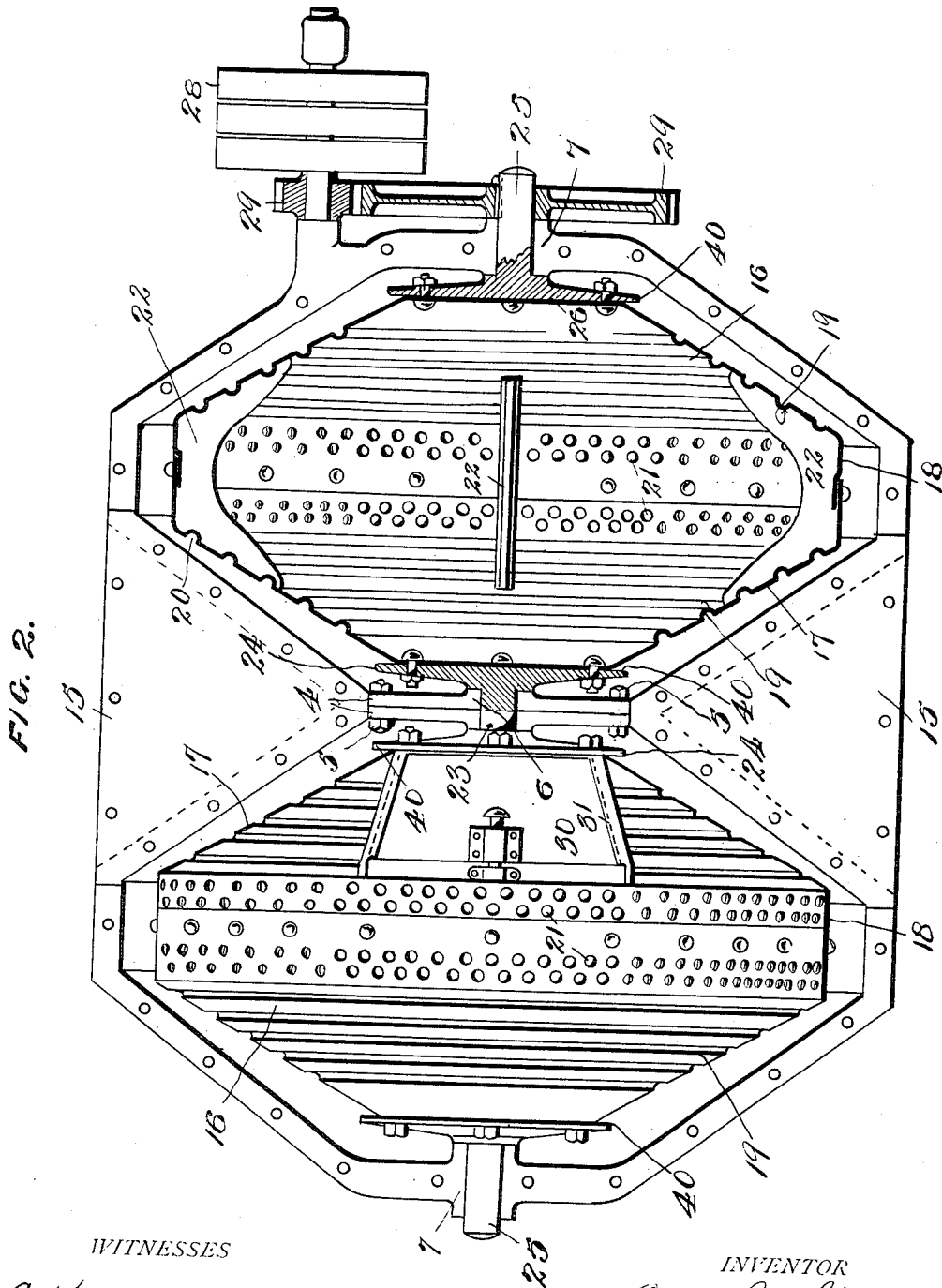
E. Y. White
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 Attorney

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UNITED STATES PATENT OFFICE.

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DRY-CLEANING APPARATUS.

1,038,468.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDWARD Y. WHITE, a citizen of the United States, residing at San Antonio, in the county of Bexar and State of Texas, have invented certain new and useful Improvements in Dry-Cleaning Apparatus, of which the following is a specification.

Among the principal objects of the invention are to reduce to a minimum the amount of cleansing fluid employed; to provide an efficient cleansing and scrubbing action by simple means; and to introduce certain improved features of construction which will be described.

The characteristics and advantages of the invention will be hereinafter pointed out so far as is necessary in connection with a detailed description of the accompanying drawing which illustrates an exemplifying structure in which the invention is embodied.

Figure 1 is a side elevation of a machine embodying the invention with the casing cover open to disclose the cylinders, and Fig. 2 is a plan view of the machine with the upper half of the casing removed, one of the cylinders being shown in longitudinal cross-section.

The lower half of the casing is divided into two sections designated by the reference character 1. Each of these sections is substantially V-shaped in longitudinal section, but as in the specific construction shown the sloping sides 2 of the casing may be connected through a short cylindrical portion 3. The bottom sections 2 are connected by means of the semi-circular disks or headers 4 and bolts 5. At the center of the disks is formed a semi-cylindrical bearing 6 and in the outer end of each of the sections 1 is a bearing 7. These bearings support the journals of the cylinders. The upper section 8 of the casing is conveniently formed with ends 9, which are shaped to conform to the contour of the lower sections 1, and with the upper central cylindrical portion 10 connecting the portions 9. In the cylindrical central portion is a rotatable sliding door 11 giving access to the interior of the casing and to the cylinders. The upper section 8 of the casing is removably bolted to the lower half and in the outer ends of the upper section are half-bearings 12 corresponding to the lower half-bearings 7 carried by the lower casing sections.

The V-shape of the bottom sections 1 di-

vides the casing into two parts. At the bottom of each of the sections is connected a pipe 13 and valve 14 for introducing and discharging the cleansing compound. The space between the V-shaped adjacent sides 60 of the bottom casing sections where they join the upper section of the casing is bridged by plates 15 which are bolted under the top section.

Within the casing are the cylinders 16 65 which may be substantially identical in construction. The body of the hollow cylinders may be of sheet copper or other suitable material and the cylinders are shaped to approximately conform to the shape of the bottom casing sections in one of which each of the cylinders revolves. That is, the cylinder has a V-shaped longitudinal section with convergent sides 17 which may be joined at the periphery by the short cylindrical portion 18. The sides of the cylinder are provided with interior annular corrugations 19, and these corrugations may conveniently be formed by crimping the material of the cylinder so as to form exterior annular recesses 20. In another construction the corrugations 19 may consist of cleats fastened to the inside of the cylinder walls. The cylindrical section 18 of the cylinder is provided with a suitable number of perforations 21, and within each cylinder at the periphery is a suitable number of blades or paddles 22.

The cylinders are supported at the center of the machine by a journal 23 resting in the bearing 6. The journal is provided at each end with the flange 24 bolted to the end of the adjacent cylinder. At the outer ends the cylinders are supported by journals 25 provided with flanges 26 to which the cylinders are bolted. The edges 40 of flanges 24 and 26 extend considerably outward beyond the adjacent face of the cylinders. By this means any cleansing fluid running down the sides of the cylinders drops off the edges of the flanges back into the casing without coming into contact with the bearings. This is important because if the gasoline is allowed to have access to the bearings it quickly washes out the lubricant allowing the bearings to run dry. The exterior recesses 20 in the cylinders also aid in protecting the bearings because fluid running down the faces of the cylinders is caught in these recesses and so returned to the lower portion of the 110

casing. The cylinders are rotated by pulleys 28 and gearing 29 connected to one of the journals 25. On their adjacent faces the cylinders are provided with doors 30 which
5 slide in guides 31.

The casings of dry cleaning machines have heretofore been made cylindrical so that a large quantity of cleansing fluid has been necessarily employed. The fluid ele-
10 ment of the cleansing compound is principally gasoline and is therefore quite expensive. By making the lower part of my casing in V-shape I am able to use a small amount of cleansing fluid and at the same
15 time accomplish equally good results.

To charge the machine a quantity of cleansing fluid is put in each half of the casing. Usually gasoline mixed with soap is put in one section and clear gasoline in
20 the other. The clothes are then placed in the drum in the cleansing section of the casing and the drums are rotated. The blades or paddles 22 insure that the clothes are carried around in the drum until they
25 approach the top of it. The clothes then drop to the bottom of the drum and as they fall are released from their compact condition caused by the wedging effect of the V-shaped sides and open out, enabling
30 the fabric to assume new positions at every rotation. As the fabrics fall to the bottom of the drum they encounter the corrugations 19 and are rubbed by the corrugations as they are compressed together again at
35 the bottom by the wedging effect of the V-shaped sides. The cleansing fluid is continuously circulated through the drum through perforations 21 by the stirring action of the drum and its paddles. When
40 the clothes have been sufficiently cleansed in the first drum they are removed and submitted to the rinsing action of clear gasoline in the second drum, and at the same time a new batch of garments may be placed in
45 the first drum and the process continued indefinitely. Because of the small amount of fluid which it is necessary to use in my machine I obtain economical results greatly

superior to anything that has heretofore been accomplished to my knowledge.

I have shown and described only one specific form of my invention. It is to be understood that the invention is capable of embodiment in many different forms.

I claim:

1. In a cleansing apparatus, the combination of a casing substantially diamond-shaped in cross section, a similarly shaped perforated drum mounted in bearings in the casing, said drum having a series of annular draining grooves on the outer surface thereof, said outer grooves forming inner annular rubbing ridges, and a plurality of blades or paddles on the inner periphery of the drum.

2. In a cleansing apparatus, the combination of a casing substantially diamond shaped in cross section, a similarly shaped perforated drum mounted in bearings in the casing, said drum having a series of annular draining grooves on the outer surface thereof, said outer grooves forming inner annular rubbing ridges, and annular flanges at both ends of the drum to prevent the cleansing material from gaining access to the bearings.

3. In a cleansing apparatus, the combination of a pair of casings substantially diamond-shaped in cross section, a pair of similarly shaped perforated drums mounted in bearings in the casings, said drums having series of annular draining grooves on the outer surfaces thereof, said outer grooves forming inner annular rubbing ridges, and said drums being connected to rotate together in such a manner that the operations of cleaning and rinsing fabrics may be simultaneously and continuously carried on.

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

EDWARD Y. WHITE.

Witnesses:

P. LUNA,

FREDERICK MURPHY.