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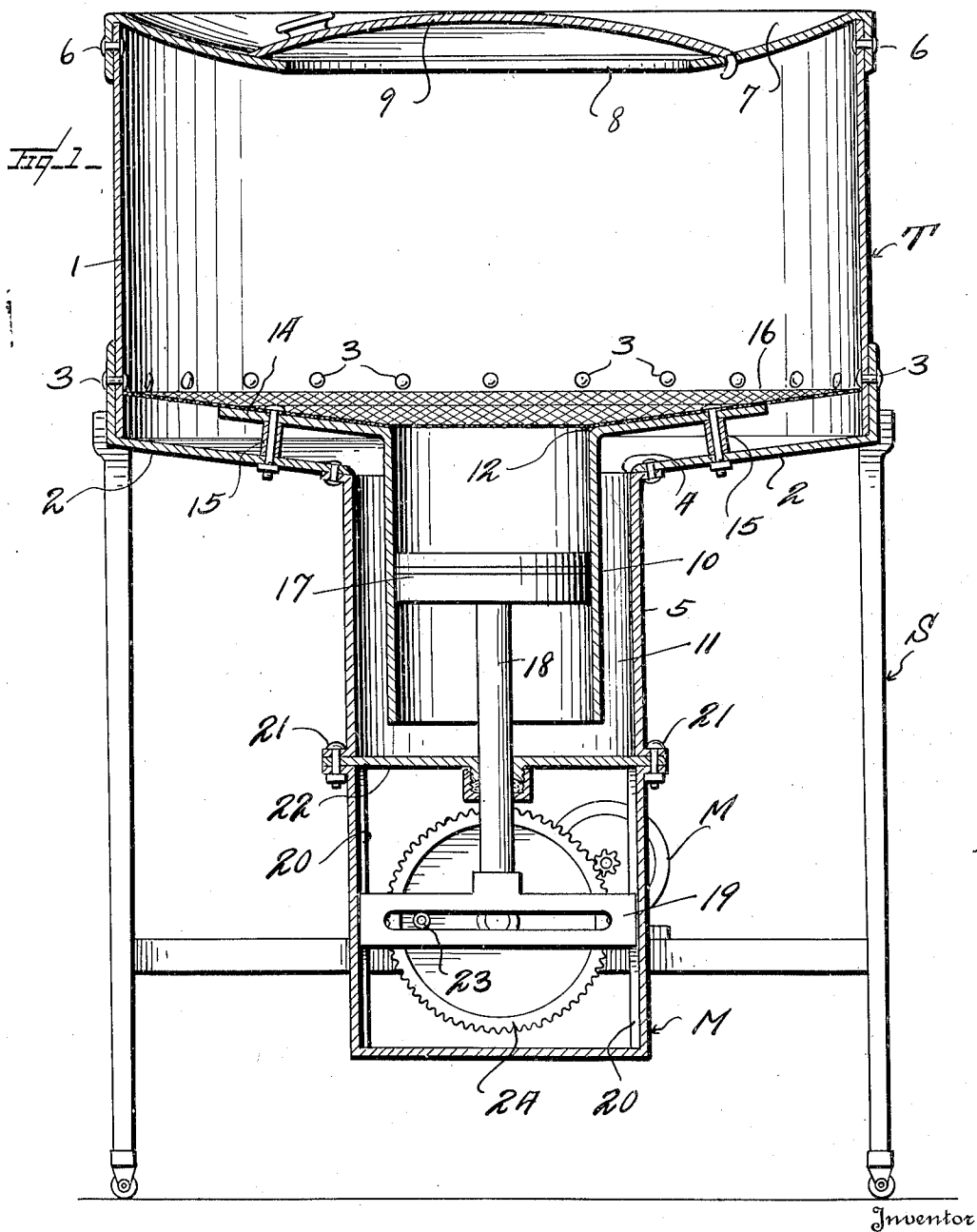
1,605,412

B. M. WILLIAMS

WASHING MACHINE

Filed Feb. 16, 1926

2 Sheets-Sheet 1



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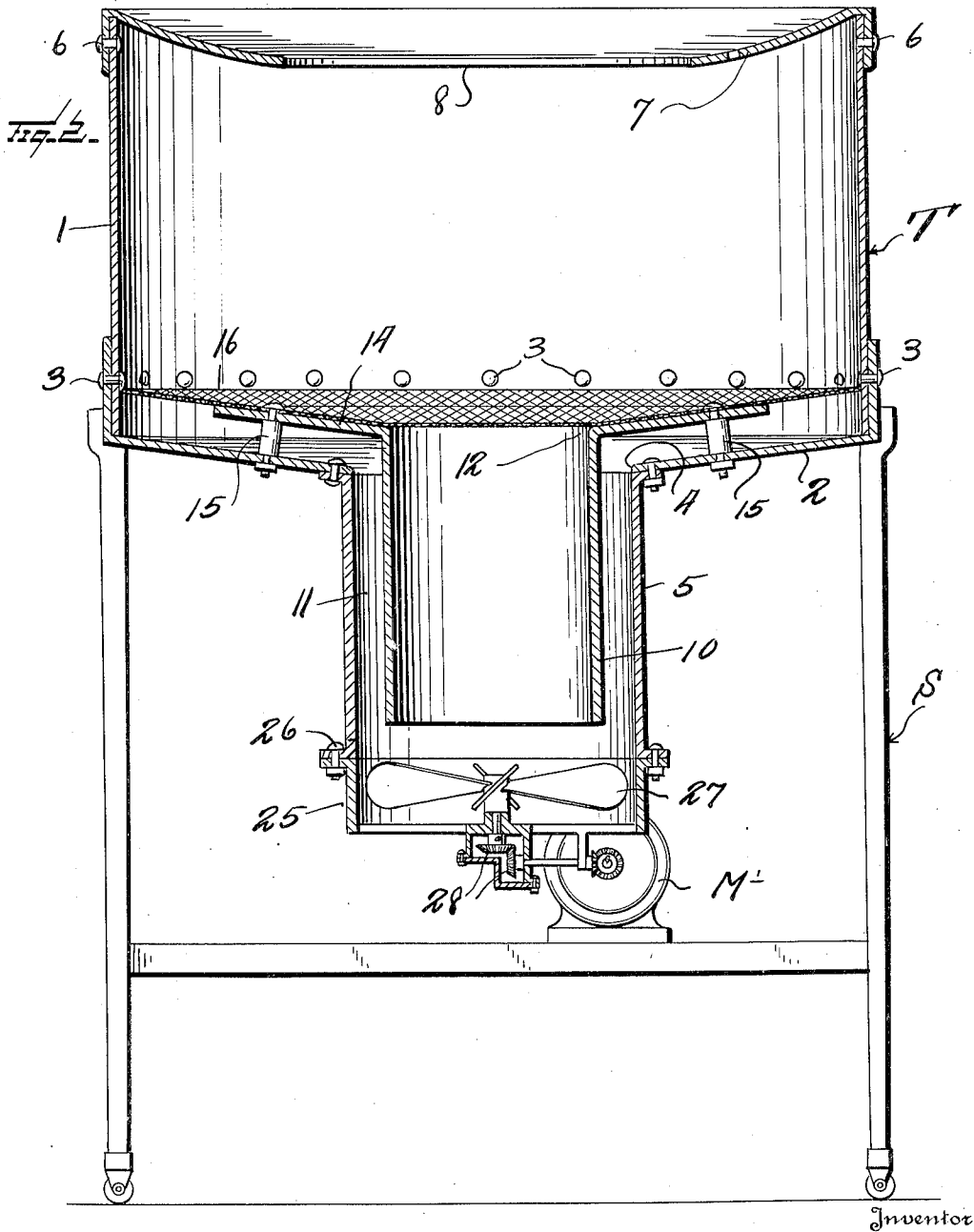
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UNITED STATES PATENT OFFICE.

BRODIE M. WILLIAMS, OF WELCH, WEST VIRGINIA.

WASHING MACHINE.

Application filed February 16, 1926. Serial No. 88,655.

This invention relates to certain improvements in washing machines and it is an object of the invention to provide a machine of this character provided with means whereby fluid may be forced upwardly through the articles within the machine to facilitate the cleansing thereof or to dry such articles.

Another object of the invention is to provide a machine of this kind wherein means is provided to cause a circulation of water within the washing chamber to facilitate the cleansing of the articles.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved washing machine whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein:—

Figure 1 is a view partly in vertical section and partly in elevation illustrating a washing machine constructed in accordance with an embodiment of my invention for effecting a circulation of water through the washing chamber;

Figure 2 is a vertical sectional view illustrating an embodiment of my invention for drying.

As disclosed in the accompanying drawings, T denotes a tank or tub of requisite dimensions and capacity, a side wall 1 of which preferably having its inner surface tinned and its outer surface coated with copper. This wall 1 sets within a bottom head 2 and is riveted or otherwise attached thereto, as at 3. The bottom 2 is substantially concavo convex with its concave face uppermost and is provided at its central part with a relatively large opening 4. This opening 4 is defined by a depending elongated cylinder or tubular member 5.

The upper portion of the tank or tub T has secured thereto by the rivets 6 or the like a top 7. This top 7 is provided with a relatively large central opening 8 which is adapted to be closed by the lid 9. The opening 8 permits the ready application or

removal of articles within the tank or tub T.

Extending from above within the cylinder or tubular member 5 is a cylinder or tubular member 10 of a major diameter less than the mean diameter of the cylinder or tubular member 5 whereby an annular space 11 is provided between the opposed walls of said cylinders or members 5 and 10. The cylinder or member 10 also preferably terminates at a point above but in relatively close proximity to the lower end of the member or cylinder 5. This member or cylinder 10 defines a central opening 12 provided at the central portion of a substantially concavo convex plate 14 supported in desired spaced relation with respect to the bottom 2 through the medium of the interposed stay-bolts 15, said-member or cylinder 10 depending from the plate 14.

Secured to and overlying the upper concave face of the plate 14 is a sheet 16 of wire mesh of requisite gauge, said sheet extending out and having close contact with the inner face of the wall 1 of the tank or tub T. This sheet 16 provides a supplemental floor for supporting the articles applied within the tank or tub T.

In Figure 1, I illustrate an embodiment of my invention to effect a circulation of water within the tank T to facilitate the cleansing of the articles therein. In this assembly, a piston 17 is arranged for reciprocatory movement within the member or cylinder 10 and is provided in an outstanding stem or rod 18. The outer extremity of this rod or stem 18 is provided with a slotted cross head 19 having its extremities engaged within the vertical guideways 20 comprised in the frame F. This frame F is detachably engaged by the bolts 21 or the like with the lower flanged end of the cylinder or member 5. Interposed between the adjacent ends of the frame F and the member or cylinder 5 is a plate 22 closing the lower end of the member or cylinder 5 and through the central portion of which the stem or rod 18 is free to move.

The slotted cross head 19 is operatively engaged through the medium of the wrist pin 23 with the gear wheel 24 rotatably supported as desired by the supporting structure S for the tank or tub T. This gear 24 is in driven connection with a motor M preferably of an electrical type.

As the gear 24 is rotated, the piston 17 will be reciprocated. As the piston moves

upwardly, water is forced up into the tank or tub T through the cylinder or member 10 and at the same time creating a suction to draw water from the tank or tub T downwardly of the cylinder or member 5 through the space 11. When the piston 17 moves downwardly, a reverse flow of water is effected. This action of the piston 17 upon the water, which is preferably saponified, results in an effective cleansing of the articles within the tank or tub T. It is also preferred that the piston 17 be rapidly reciprocated.

In Figure 2, I illustrate an embodiment of my invention whereby the articles within the tub or tank T may be effectively dried. In this arrangement a circular frame 25 is bolted, as at 26, or otherwise secured to the lower flanged end of the member or cylinder 5 and rotatably supported within said frame 25 is a fan 27 the blades of which being arranged on a pitch to throw a blast of air upwardly into the tank T through the cylinder or member 10 and the space 11. When this fan 27 is used the lid 9, hereinbefore referred to, is omitted so that there will be a passage of air up through the tub or tank T and the articles therein to be dried. The fan 27 is in driven connection, as at 28, with a motor M' also preferably of an electrical type.

From the foregoing description it is thought to be obvious that a washing machine constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:—

1. A machine of the class described comprising a tank having an opening in its bottom, a tubular member depending from said bottom and substantially defining the opening therein, a plate arranged within the tank and spaced from the bottom, means for supporting said plate within the tank, said plate having an opening, a tubular member substantially defining said opening and extending within the first named tubular member, a reticulated sheet overlying said plate and extending outwardly into close proximity to the side wall of the tank, said second named tubular member being of a maximum diameter less than the mean diameter of the first named tubular member whereby the portion of the second named member within the first named member is surrounded by a passage, and means for forcing fluid through the second named tubular member and the passage surrounding the same.

2. A machine of the class described comprising a tank having an opening in its bottom, a tubular member depending from said bottom and substantially defining the opening therein, a plate arranged within the tank and spaced from the bottom, means for supporting said plate within the tank, said plate having an opening, a tubular member substantially defining said opening and extending within the first named tubular member, a reticulated sheet overlying said plate and extending outwardly into close proximity to the side wall of the tank, said second named tubular member being of a maximum diameter less than the mean diameter of the first named tubular member whereby the portion of the second named member within the first named member is surrounded by a passage, the outer end of the first named tubular member being closed, a piston working within the second named tubular member, and means for reciprocating the piston.

In testimony whereof I hereunto affix my signature.

BRODIE M. WILLIAMS.