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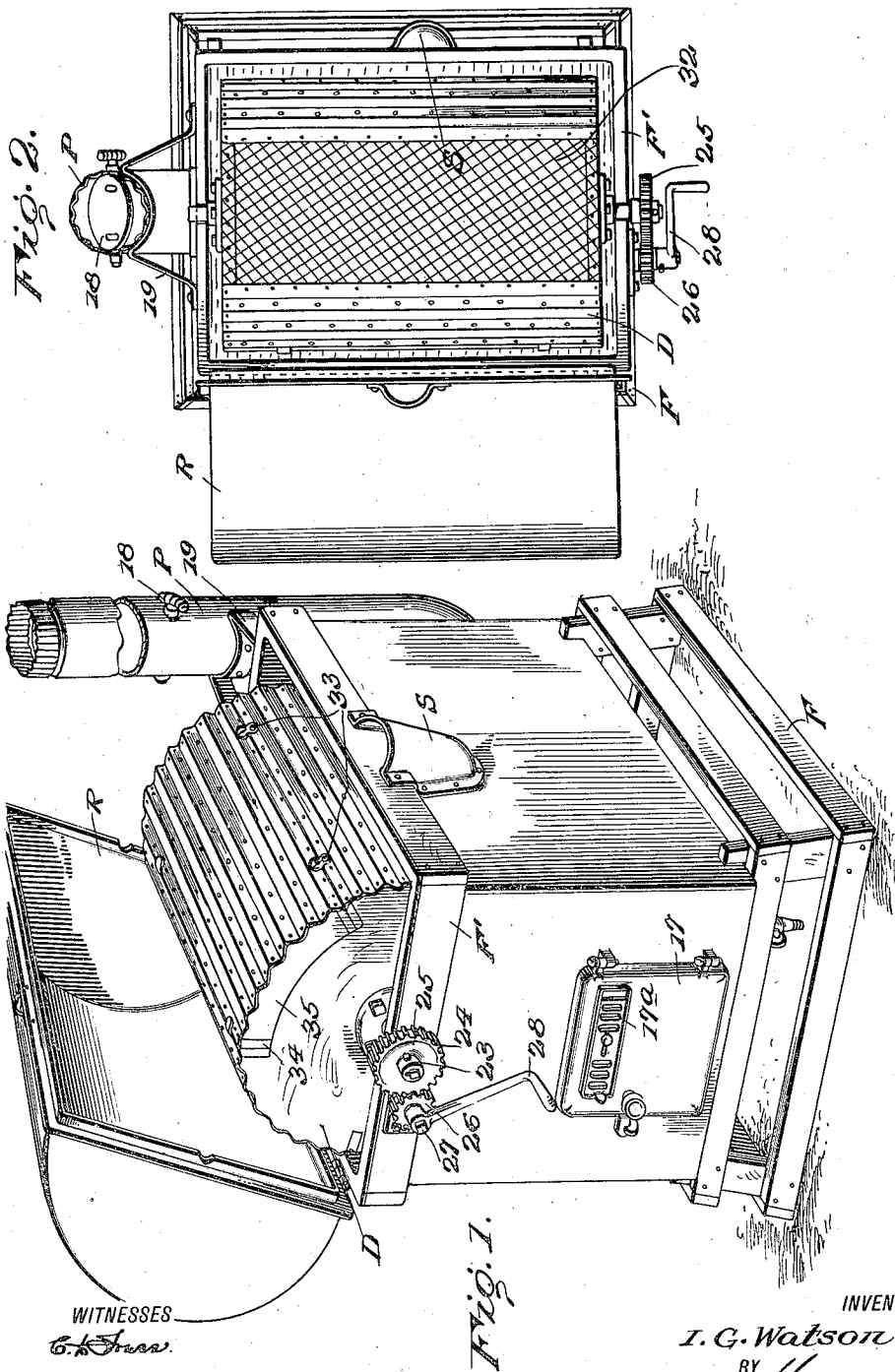
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COMBINED WASHING MACHINE AND PRESERVING APPARATUS

Filed Nov. 14, 1922

3 Sheets-Sheet 1



WITNESSES
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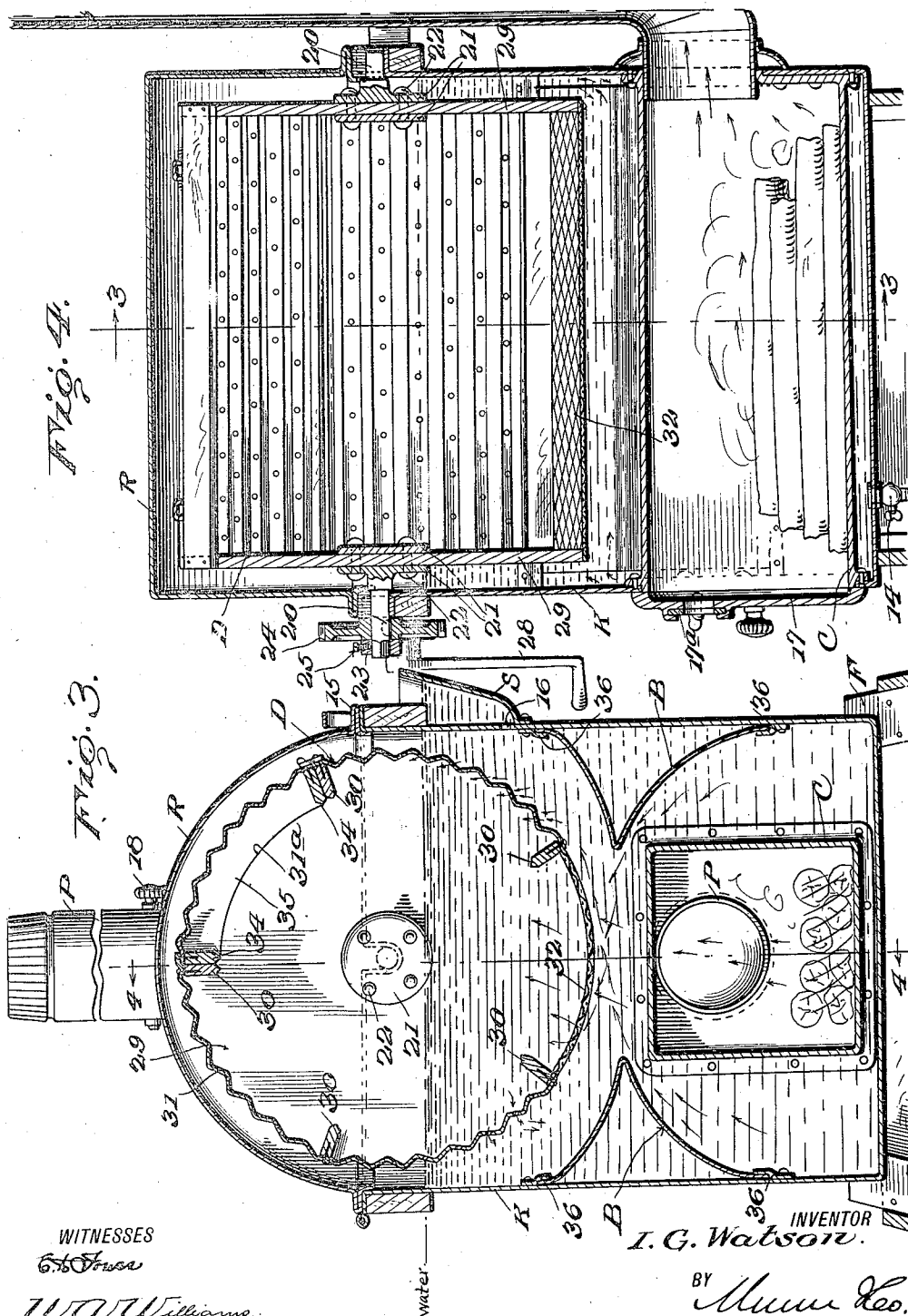
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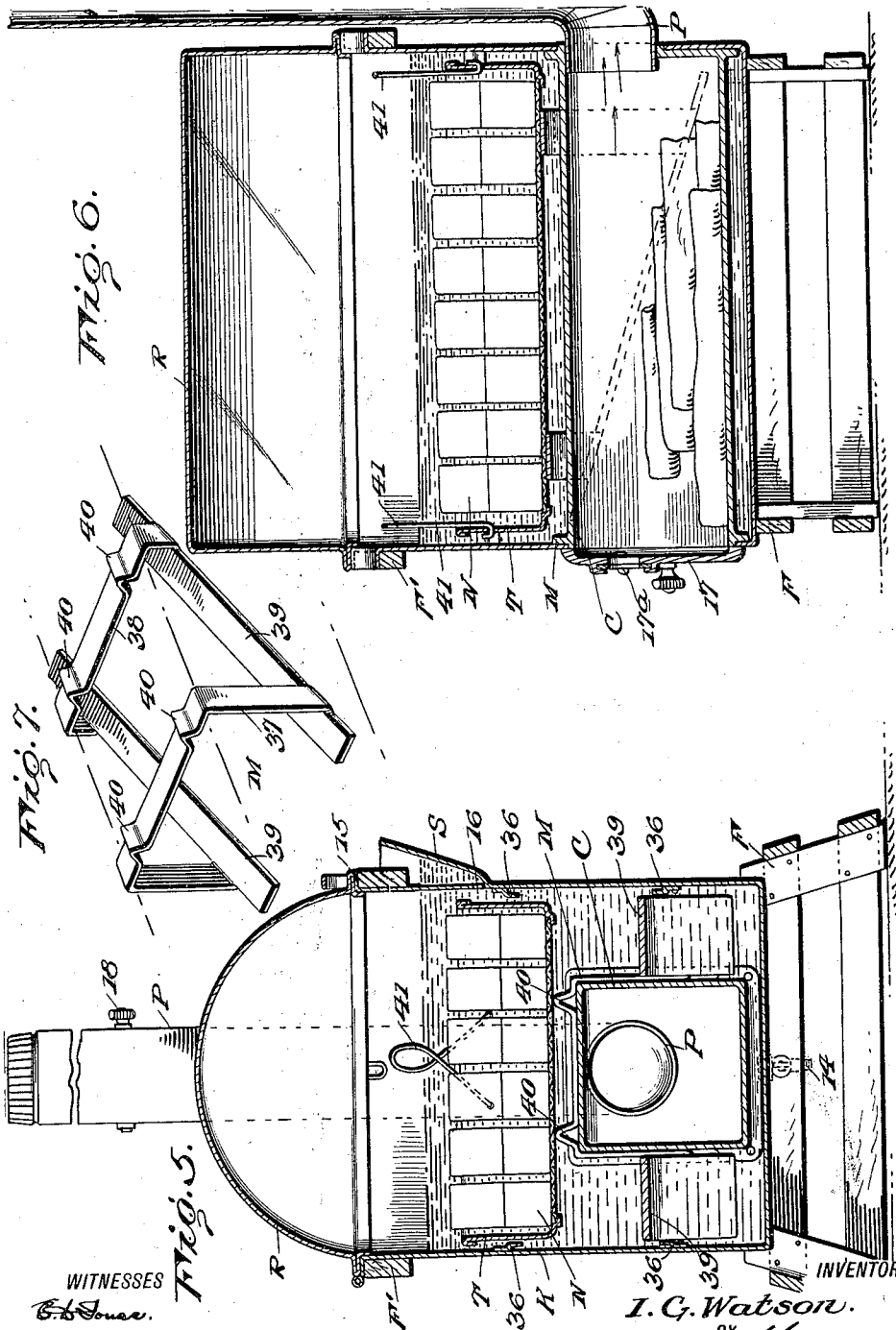
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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE.

IRA GAYLORD WATSON, OF ANDERSON, SOUTH CAROLINA.

COMBINED WASHING MACHINE AND PRESERVING APPARATUS.

Application filed November 14, 1922. Serial No. 600,907.

To all whom it may concern:

Be it known that I, IRA GAYLORD WATSON, a citizen of the United States, and a resident of Anderson, in the county of Anderson and State of South Carolina, have invented certain new and useful Improvements in Combined Washing Machines and Preserving Apparatus, of which the following is a specification.

My invention primarily relates to washing machines and the purpose of my invention is the provision of a washing machine of extremely simple, durable and inexpensive construction which is operable to effect with thoroughness and dispatch the washing of clothes by alternately subjecting them to boiling water and steam. It is also a purpose of my invention to provide a washing machine so constructed as to permit of the substitution of certain small parts by means of which the machine can be readily converted into an apparatus for preserving fruit and similar foods in cans or jars.

I will describe one form of combined washing machine and preserving apparatus embodying my invention and will then point out the novel features thereof in claims.

In the accompanying drawings:

Figure 1 is a view showing in perspective one form of washing machine embodying my invention.

Figure 2 is a top plan view of Figure 1.

Figure 3 is a transverse sectional view taken on the line 3—3 of Figure 4.

Figure 4 is a longitudinal sectional view taken on the line 4—4 of Figure 3.

Figure 5 is a view similar to Figure 3 showing the washing machine converted into a preserving apparatus.

Figure 6 is a longitudinal section of the apparatus shown in Figure 5.

Figure 7 is a perspective view of the supporting bracket and baffle plates embodied in the apparatus shown in Figures 5 and 6.

Similar reference characters refer to similar parts in each of the several views.

Referring specifically to the drawings and particularly to Figures 1 to 4 inclusive, the washing machine as herein embodied comprises a metallic container K which is preferably of rectangular formation, and is adapted to be supported in spaced relation to the ground by means of a wooden frame designated generally at F. The container is preferably formed of sheet metal with its upper side open and surrounded by a wooden

frame F' to which is hingedly secured a semi-circular cover R provided on all its sides with a laterally extending flange 15 adapted to engage the upper edges of the container to support the cover in closed position. Water is adapted to be supplied to the container through a spout S which as shown in Figure 3 is in communication with the container through an opening 16 whereby, the water level in the container is indicated in the spout so that the operator of the machine can readily determine the amount of water in the container without lifting the cover. The water may be drained from the container through a cock 14 located at the bottom of the container as clearly shown in Figure 4.

For the purpose of heating the water in the container K, I provide a stove in the form of an elongated rectangular casing C co-extensive in length with the container K, and as shown in Figure 4 with its forward end extending through a suitable opening formed in the side of the container. This end of the casing is adapted to be closed by a door 17 having a shutter 17^a for controlling draft openings through which air is admitted to the casing. The rear end of the casing C is in communication with a pipe P which extends upwardly at the rear end of the container for conveying the waste products of combustion from the stove. This pipe is provided with a damper 18, and the pipe is securely held in vertical position by means of a bracket 19.

The clothes receiving drum is designated generally at D, and is rotatably mounted within the container by means of stub shafts 20 fixed to the end walls of the drum by means of discs 21 and bolts 22 in the manner clearly shown in Figure 4. These stub shafts 20 are journaled in suitable bearings formed in the frame F, with the forward stub shaft projecting exteriorly of the container and squared to receive a collar 23 formed on the hub of a gear 24 and through which extends a set screw 25 for securing the gear to the shaft. The gear 24 meshes with a smaller gear 26 keyed to the stub shaft 27 carrying an operating crank 28. As shown in Figures 1 and 3, the drum D comprises disc-shaped end walls 29 made of wood or other suitable material and connected by wooden bars 30 and upon which latter is supported a corrugated sheet metal member 31 which forms the major portion of the

drum. The remainder of the drum is formed by a foraminous member 32 preferably formed of wire screen. The member 31 is formed at intervals with perforations to allow the percolation of water and steam through and into the drum, and in the present instance I have provided a section of the member 31 in the form of a door, such door being indicated at 31^a and provided for the purpose of introducing and removing clothes to and from the drum. This door 31^a is held in closed position in any suitable manner such as by the latches 33, and it includes bars 34 and arcuate end bars 35 which together form a frame for rigidly supporting the door upon the drum.

As illustrated to advantage in Figure 3, the arrangement of the clothes receiving drum with respect to the container K is such that the lower portion of the drum is at all times submerged within the water in the container, while the remaining or upper portion is at all times disposed above the water and within the cover R. For the purpose of controlling the circulation of boiling water within the container and in such manner as to direct the water upwardly into the drum, I provide a pair of baffle plates B, each of which is of substantially V-shaped formation in cross section and formed of resilient metal so that by slightly compressing the same transversely the free longitudinal edges thereof are constricted to permit of their insertion in grooves formed between one side wall of the container and brackets 36 secured to the inner side of the container in the manner shown in Figure 3. The resiliency of the baffle plates B is such that when once inserted to engage the brackets 36 they are securely retained therein, the two plates coacting with each other to direct the circulating water to a point directly above the stove, thus insuring the passage of the boiling water into the drum.

In the operation of the washing machine, water is introduced into the container through the spout S until it reaches the level shown in Figure 3, or to any level in which a portion of the drum is at all times submerged. By means of the heat generated from the burning fuel in the stove, the water is heated to a boiling point, and under this boiling action the water is caused to circulate completely around the casing C of the stove, the baffle plates B directing the water upwardly into the lower portion of the drum. With the water heated to a boiling point, the steam generated thereby naturally rises to the upper portion of the container formed by the cover R. The clothes are now introduced into the drum, and by slowly rotating the drum through an actuation of the crank 28, the clothes are caused to engage the bars 30 and are thus carried

upwardly of the drum and dropped into the boiling water within the drum. When the drum rotates, the boiling water and steam passes into and out of the drum through the perforations. However, because of the size of the perforations the circulation of water and steam is somewhat limited so that the clothes are not subjected to the maximum cleaning action of which the water and steam is capable. However, when the foraminous member 32 passes into the boiling water, a sudden influx of a large quantity of boiling water into the drum takes place which naturally surges through the clothes and thus effects a removal of the dirt from the clothes. When the foraminous member 32 reaches the upper part of the chamber formed by the cover R, the steam which has accumulated in the cover is suddenly admitted to the drum where it serves to increase the agitation of the boiling water therein in effecting removal of the dirt from the clothes. This action of the boiling water and steam being successively admitted in bulk to the drum continues during the rotation of the drum so that in practice when the drum is rotated first in one direction for a predetermined number of turns and then in the opposite direction so as to expose all parts of the clothes to the action of the steam and water, all dirt is completely removed from the clothes.

To rinse the clothes, the water used in washing is removed from the container by opening the cock 14, and after the container is emptied fresh water is introduced into the spout S preferably to the level shown in Figure 3 whereupon rotation of the drum is again effected.

Referring now to Figures 5 and 6, I have shown the washing machine just described converted into a preserving apparatus for heating the contents of jars or cans in effecting a preservation thereof. To convert the washing machine into the preserving apparatus, the drum D is removed and also the baffle plates B, and in place of the latter a frame M is placed in the container in embracing relation with respect to the casing C of the stove. As shown in Figure 7, this frame M comprises a pair of U-shaped brackets 37 and 38 having parallel arms of different lengths which are connected by baffle bars 39 substantially co-extensive in length with the casing C. By this arrangement the baffle bars are supported in inclined position within the container and at opposite sides of the casing C in the manner clearly shown in Figure 6 so that the lower end of the baffle bars are disposed at the rear end of the casing. The purpose of this particular arrangement of the baffle bars is to effect the circulation of the boiling water from the rear end of the stove to its forward end, it being a well known fact that in stoves of this

kind the greatest heat is generated by the point where the products of combustion leave the stove. The horizontal portions of the brackets 37 and 38 are bent to provide up-
5 standing projections for supporting a basket T in spaced relation to the stove. The basket T is formed with a foraminous bottom to allow of the free circulation of boiling water into the basket and into contact with cans N
10 containing the material to be preserved. The opposite ends of the basket are provided with handles 41 which are of such a length as to normally project above the level of the boiling water within the container so that the
15 operator can readily withdraw the basket from the water.

From the foregoing description, it will be clear that the heating of the contents of the cans N is readily effected through the me-
20 dium of boiling water, and that the circulation of the water is so controlled as to be equally and uniformly heated throughout the area of the container.

Although I have herein shown and de-
25 scribed only one form of combined washing machine and preserving apparatus embodying my invention, it is to be understood that various changes and modifications may be made herein without departing from the spirit of the invention and the spirit and
30 scope of the appended claims.

What I claim is:

1. An apparatus of the character described

comprising a water container, a second con-
tainer mounted therein constructed of fo- 35
raminous material, a heating compartment also mounted therein, water passages around the side, top and bottom walls of said heat-
ing compartment, a plurality of baffle plates substantially V-shaped in cross section and 40
secured by their diverging edges to the inner side walls of said water container, and the unsecured edge thereof extending toward the center of said container above the heating
compartment and substantially parallel to 45
the top thereof as and for the purpose set forth.

2. An apparatus of the character described comprising a water container, brackets se-
cured to the inner side walls of said water 50
container and coacting therewith to form grooves, a second container mounted therein constructed of foraminous material, a heat-
ing compartment also mounted therein, 55
water passages around the side, top and bottom walls of said heating compartment, a plurality of baffle plates of substantially V-
shaped formation in cross section formed of resilient material and having their diverging
edges seated within said grooves, said baffle 60
plates coacting with said heating compartment to decrease the size of the water passages to form a substantially narrow outlet at the top thereof as and for the purpose set forth.

IRA GAYLORD WATSON.