

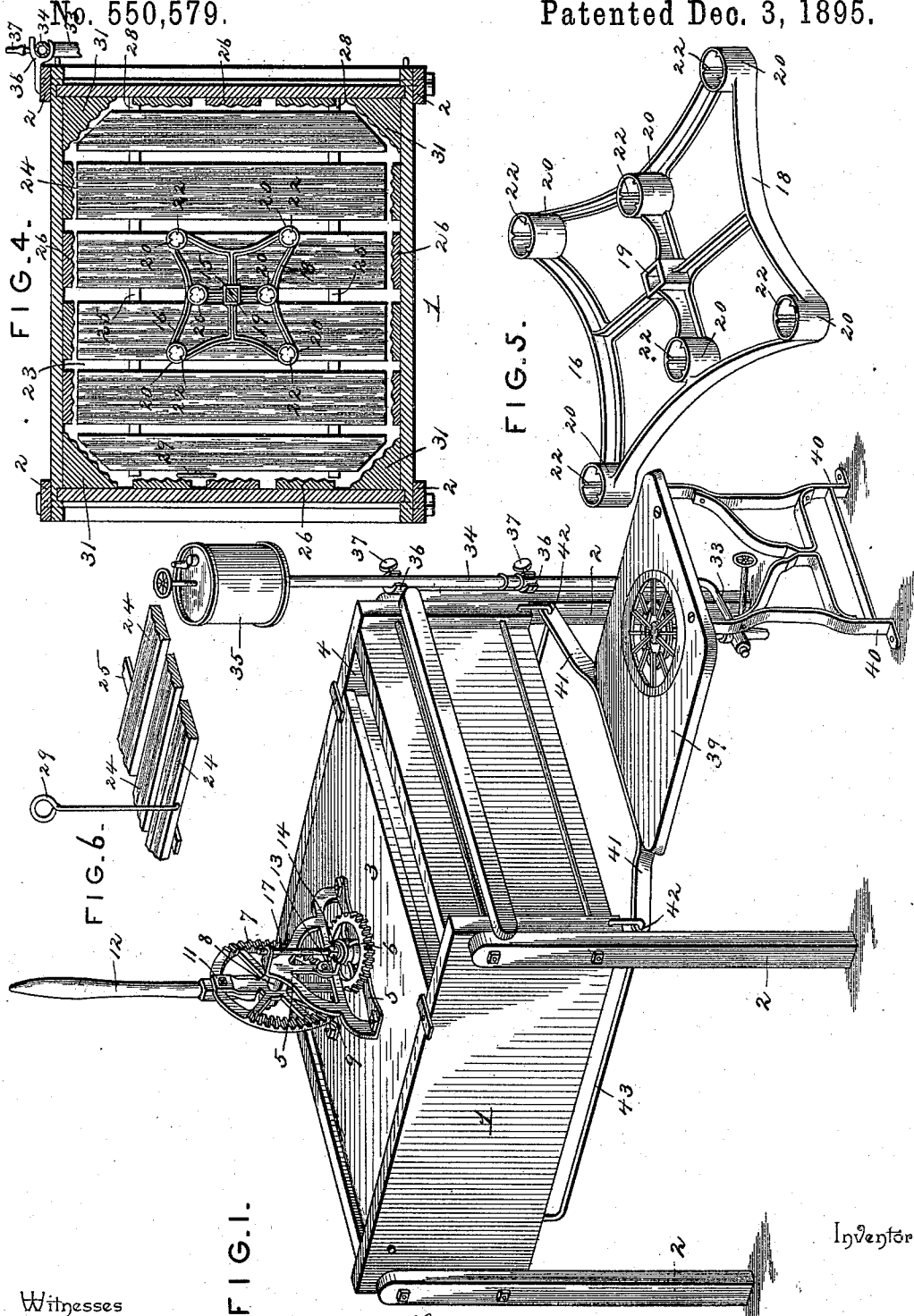
(No Model.)

2 Sheets—Sheet 1.

P. T. BENBOW.
WASHING MACHINE.

No. 550,579.

Patented Dec. 3, 1895.



Witnesses

Harry L. Amer.
J. H. Riley

By His Attorneys.

Paris T. Benbow.

Cashow & Co.

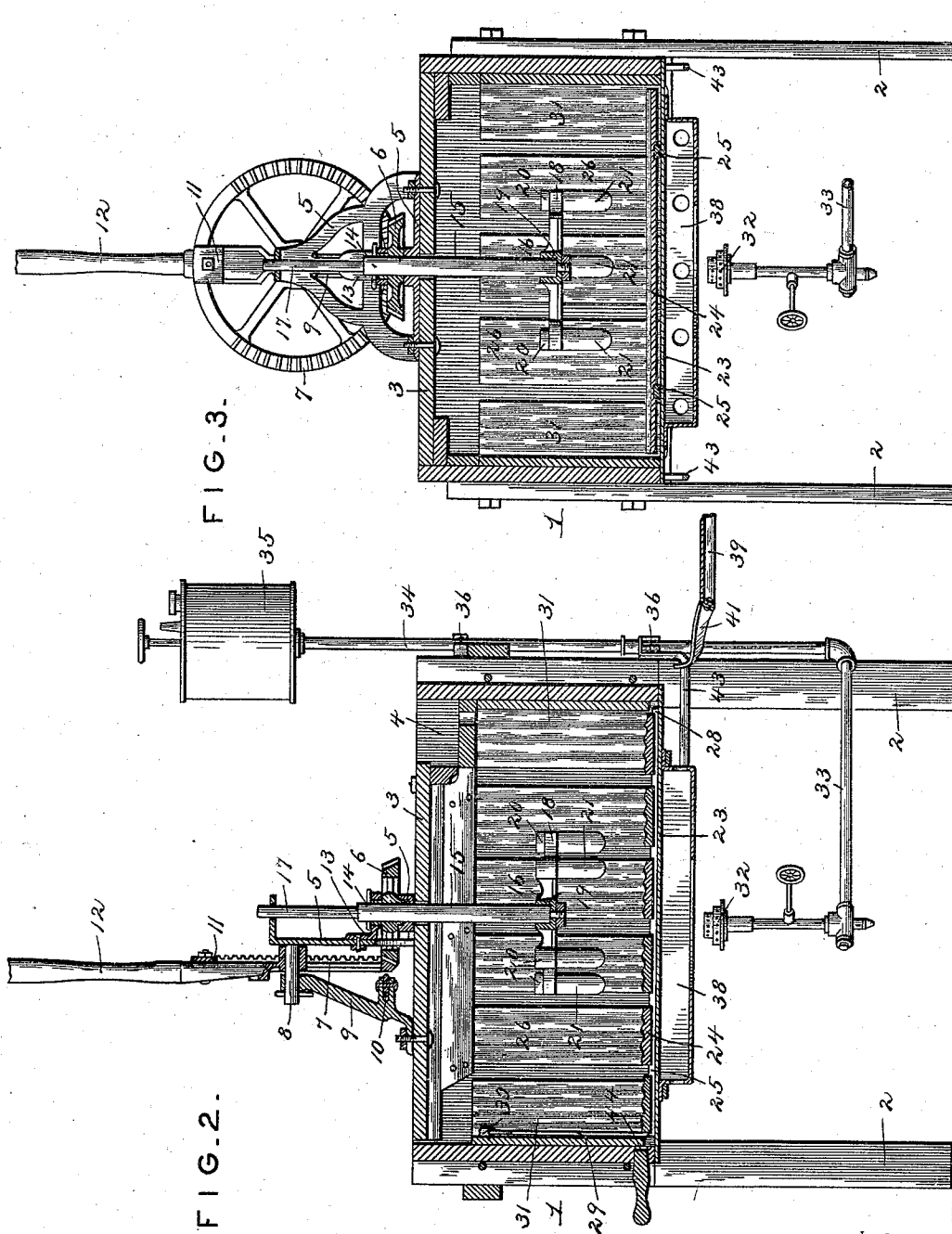
(No Model.)

2 Sheets—Sheet 2.

P. T. BENBOW.
WASHING MACHINE.

No. 550,579.

Patented Dec. 3, 1895.



Inventor

Witnesses

Harry L. Amer.
J. P. Riley

By *his* Attorneys.

Paris T. Benbow.

C. Snow & Co.

UNITED STATES PATENT OFFICE.

PARIS T. BENBOW, OF ST. LOUIS, MISSOURI.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 550,579, dated December 3, 1895.

Application filed August 2, 1894. Serial No. 519,270. (No model.)

To all whom it may concern:

Be it known that I, PARIS T. BENBOW, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented a new and useful Washing-Machine, of which the following is a specification.

This invention relates to improvements in washing-machines.

The object of the present invention is to improve the construction of washing-machines, to enable clothes to be rapidly and thoroughly washed without liability of injuring the fabrics, and to enable the hot water necessary for washing to be heated in the washing-machine body or tub.

A further object of the invention is to enable the heating apparatus employed for heating water in the tub or body to be arranged at one side of the same for other purposes, such as cooking starch, heating, and the like.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended.

In the drawings, Figure 1 is a perspective view of a washing-machine constructed in accordance with this invention, the heating apparatus being shown arranged at one side of the washing-machine body. Fig. 2 is a central vertical sectional view of the same. Fig. 3 is a similar view taken at right angles to Fig. 2. Fig. 4 is a horizontal sectional view. Fig. 5 is a detail perspective view of the agitator. Fig. 6 is a detail view of a portion of the bottom washboard or rubbing-surface, illustrating the construction of the locking-handle.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a washing-machine body, preferably rectangular in section and supported by legs 2, and the body is provided with a hinged cover 3 and has at one side of the same a receptacle 4, the outer side of which is adapted to have a wringer readily secured to it. The cover has mounted upon it a bearing-bracket 5, in which is journaled a horizontally-disposed pinion 6, which meshes with a cog-wheel 7, journaled on a stub-shaft 8 of the bearing-bracket, and the stub-shaft is supported by a standard or brace 9, which carries

a horizontally-disposed antifriction-wheel 10, adapted to hold the cog-wheel into mesh with the pinion.

The cog-wheel is designed to be oscillated and is provided at its lower portions and sides with cogs, and it has at its top a skeleton socket 11, in which is secured an operating-handle 12. The horizontal pinion is detachably journaled in the bearing-bracket by means of a removable plate 13, and it is provided with a central polygonal opening, in which is loosely mounted the polygonal portion 14 of a shaft 15, carrying an agitator 16. The upper portion 17 of the agitator-shaft is rounded and is journaled in an arm of the bearing-bracket, and the agitator-shaft is capable of vertical adjustment to accommodate itself to different quantities of clothes being washed.

The agitator consists of an open or spider frame 18, having flanged side and cross bars and provided with a central rectangular socket 19, receiving the lower extremity of the agitator-shaft and provided at its corners and at its opposite sides with cylindrical sockets 20, receiving the reduced upper ends of clothes-carrying pins 21 and provided with inwardly-projecting ribs 22, engaging the pins 21 and preventing the same from turning in their sockets.

The agitator is designed to carry the clothes being washed over the sheet-metal bottom 23 of the washing-machine body. A rubbing-surface is arranged on the bottom of the body and consists of a series of grooved or corrugated bars 24, arranged at intervals and connected by strips 25, arranged at right angles to the corrugated bars 24 and having its side edges oppositely beveled and fitting in dovetailed recesses of the bars 24. The bottom rubbing-surface or washboard is adapted to be removed. The strips 25 project from one side of the rubbing-surface or washboard and engage under adjacent vertically-disposed grooved or corrugated bars 26, secured to the inner faces of the sides of the body, and these projecting ends 28 prevent the bottom corrugated bars from floating. The rubbing-surface of the side of the body adjacent to the projecting ends 28 terminates short of the bottom of the body to form a recess for the reception of the said ends 28.

The bottom bars are held down at the op-

posite side of the washing-machine body by wire handle 29, consisting of a stem and an upper loop, which when the bars 24 are in place engages under a stop 30 of the washing-machine body. The vertically-disposed corrugated bars 26 terminate short of the bottom of the body and provide spaces, and those spaces adjacent to the projecting ends of the bars 25 receive the same.

The body is supported by triangular corner-blocks 31, having their exposed vertical faces corrugated to form continuations of the rubbing-surface of the sides of the washing-machine body, and they prevent hot water from coming in contact with the edges of the sides and injuring the body.

Water in the washing-machine body is heated by a liquid-hydrocarbon burner 32, arranged on a horizontal arm 33 of a vertical tube 34, which carries a reservoir or tank 35 for gasoline or other liquid hydrocarbon. The vertical tube 34 is arranged in vertically-aligned bearings 36, which are open and in which the vertical tube is secured at any desired adjustment by clamping-screws 37. The burner is adapted to be arranged under the bottom of the washing-machine body, to which is secured the substantially-rectangular flame-protector 38, constructed of sheet metal and having a central opening to receive the flame and provided with suitable draft-openings.

The burner is adapted to be swung to one side of the body under a stove-top 39, provided at its outer end with a leg 40 and having an opening or stove-hole, under which is located the burner. The inner end of the stove-top has secured to it a bar 41, projecting from opposite sides of the same and provided with eyes or openings 42, receiving horizontally-disposed guide-rods 43, arranged beneath the washing-machine body and having their ends bent upward and secured to the same. These guide-rods permit the stove-top

to be readily moved under the washing-machine and withdrawn from under the same, when desired.

The washing-machine body is provided at one side with a vent-opening 44, and a removable plug is provided for the opening. By removing the plug the water may be readily drawn from the body.

It will be seen that the washing-machine body is simple and comparatively inexpensive in construction; that it is capable of rapidly effecting the operation of washing without liability of injuring the fabrics, and that it is adapted for heating the water necessary for the operation of washing and of enabling starch to be readily cooked.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

An agitator frame or spider, consisting of a single casting, and composed of inwardly curved flanged side-bars, and diametrically disposed flanged cross-bars, provided with a central rectangular socket to receive a shaft, said frame being provided at the corners and at two of its sides at the points of juncture with the cross-bars, with vertically disposed cylindrical sockets, located within the frame and provided on their inner faces with vertically disposed oppositely beveled ribs adapted to engage clothes carrying pins, whereby the latter are firmly fixed in the sockets, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

PARIS T. BENBOW.

Witnesses:

C. D. GREENE, Jr.,

H. G. GREENE.