

No. 657,314.

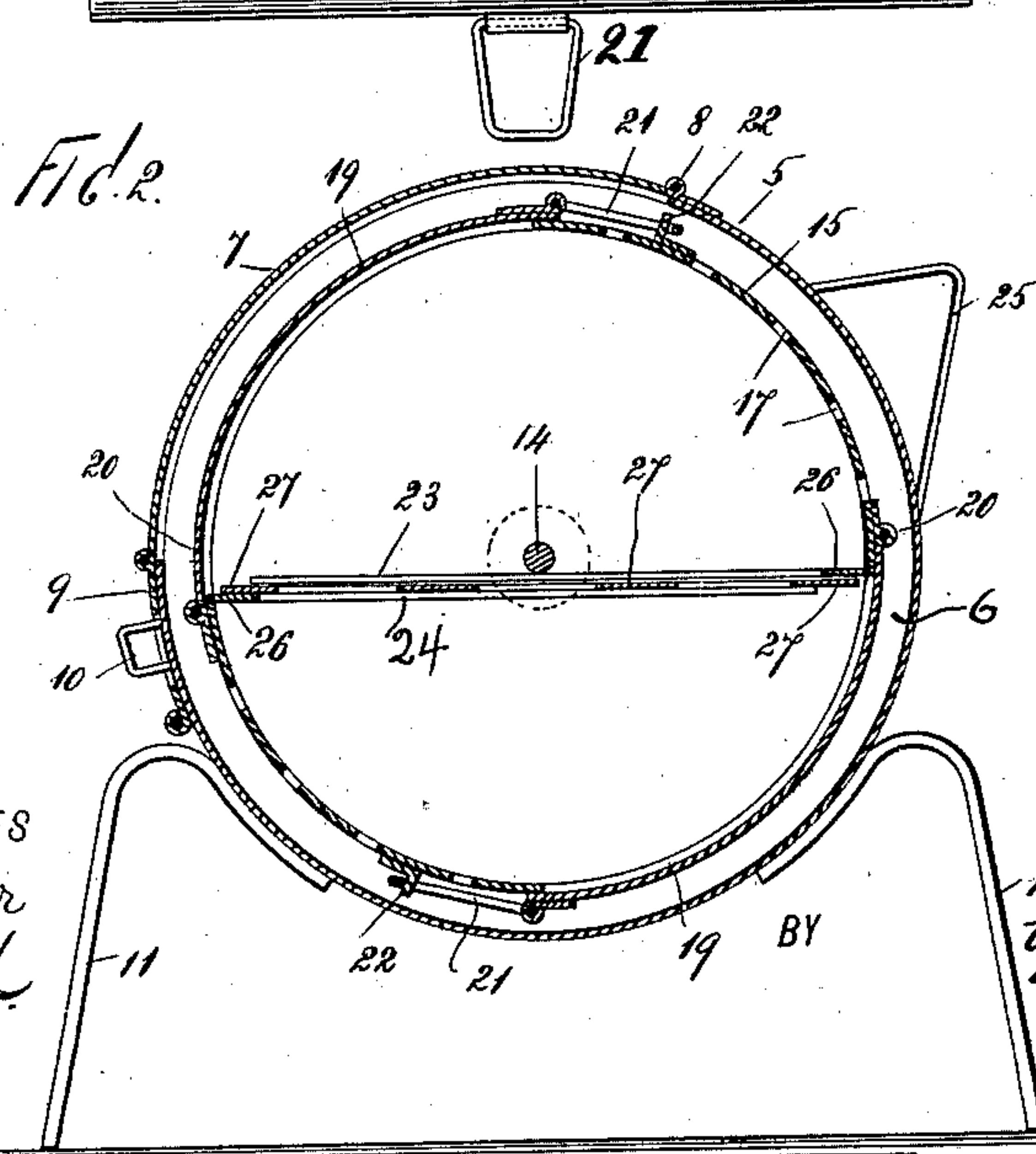
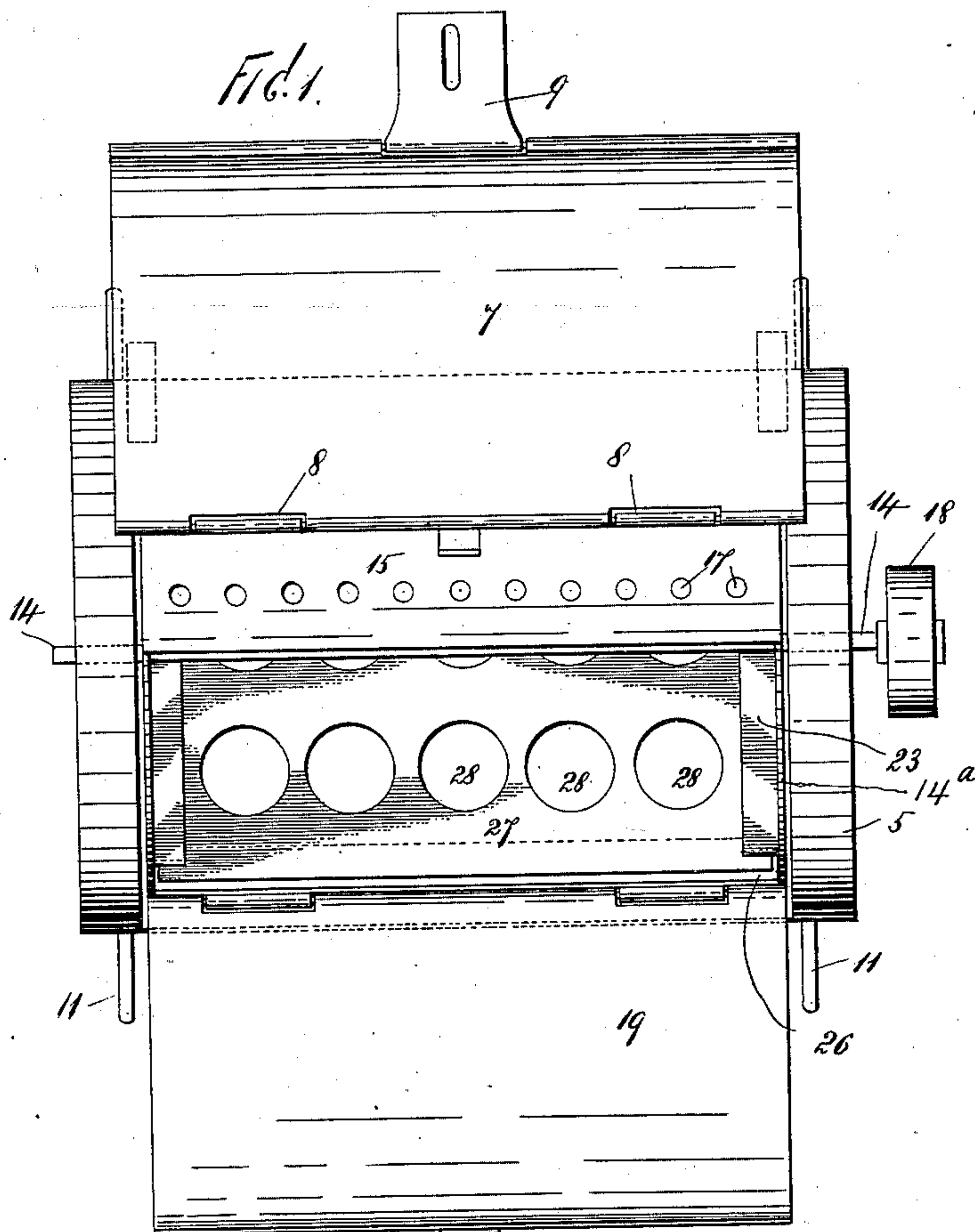
Patented Sept. 4, 1900.

B. FREEDMAN.  
WASHING MACHINE.

(Application filed Dec. 28, 1899.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES  
John Buckler  
G. A. Stewart.

INVENTOR

Bernard Freedman,  
BY  
Edgar Tate & Co.  
ATTORNEYS

No. 657,314.

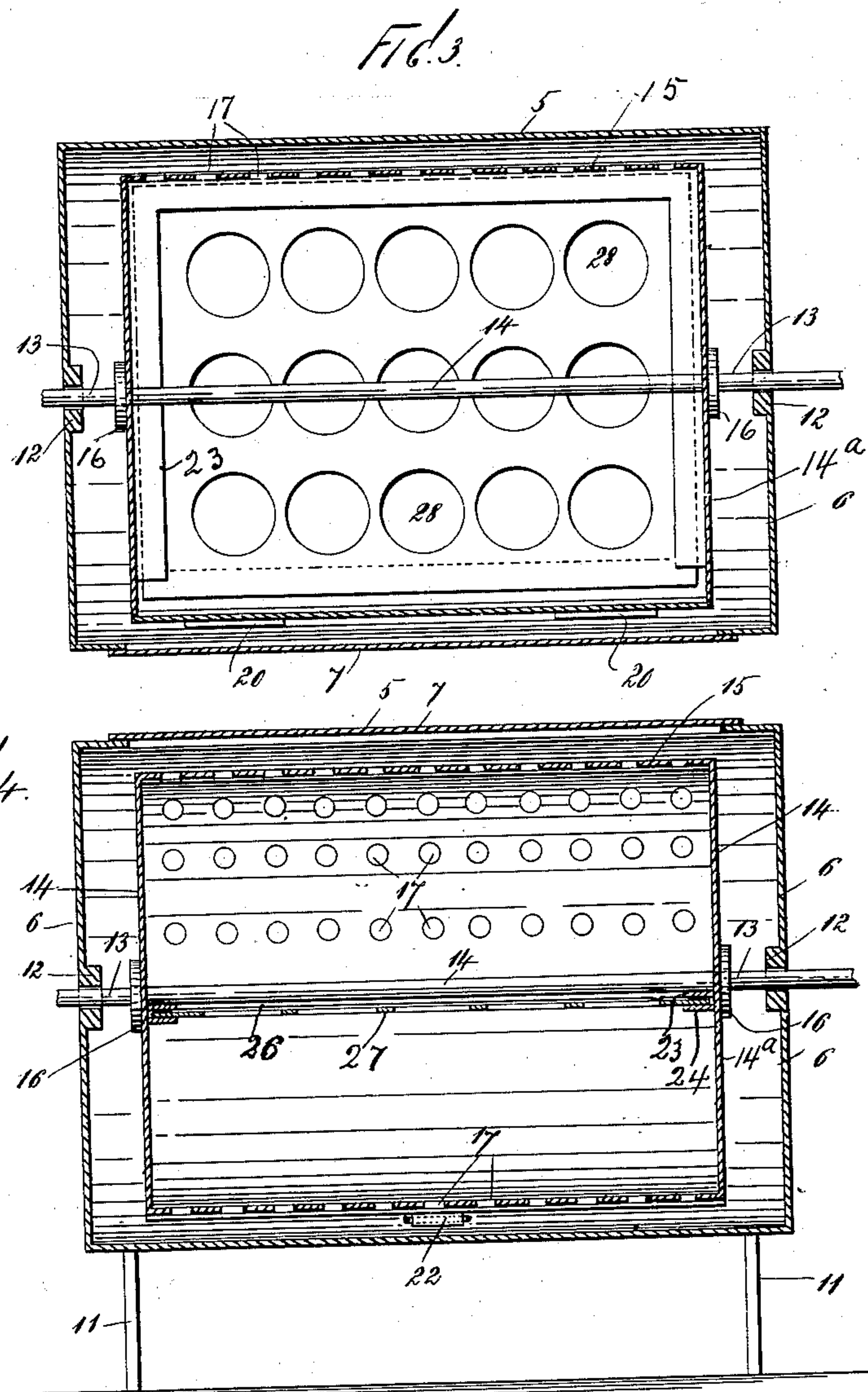
Patented Sept. 4, 1900.

B. FREEDMAN.  
WASHING MACHINE.

(Application filed Dec. 28, 1899.)

2 Sheets—Sheet 2.

(No Model.)



WITNESSES

John Buckler,  
T. A. Stearns

INVENTOR

Bernard Freedman

BY

Edgar T. Sater

ATTORNEYS



# UNITED STATES PATENT OFFICE.

BERNARD FREEDMAN, OF NEW YORK, N. Y.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 657,314, dated September 4, 1900.

Application filed December 28, 1899. Serial No. 741,777. (No model.)

*To all whom it may concern:*

Be it known that I, BERNARD FREEDMAN, a citizen of the United States, residing at New York, (Stapleton,) in the county of Richmond and State of New York, have invented certain new and useful Improvements in Washing-Machines, of which the following is a full and complete specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to washing-machines, and refers to that class of washing-machines which are provided with inner rotatable cylinders in which the "wash" is placed and which operates within the main outer cylinder.

The object of this invention is to provide improved means whereby the withdrawal of the wash from the inner cylinder is facilitated.

My invention consists in the construction and arrangement of parts hereinafter specified.

In the accompanying drawings, forming part of this specification, in which like reference characters denote like parts in the several views, Figure 1 is a plan view of a washing-machine constructed according to my invention, the door of the outer casing or cylinder and one of the doors of the inner casing or cylinder being shown opened. Fig. 2 is a transverse section of the washing-machine shown in Fig. 1, the several doors being shown closed. Fig. 3 is a transverse longitudinal approximately central section thereof, the supports of the outer casing or cylinder being omitted; and Fig. 4, a longitudinal vertical approximately central section thereof.

In the practice of my invention I provide an outer cylinder or casing 5, provided with closed ends or heads 6 and with a door 7, which is pivoted to the cylinder 5 at 8 and which when closed completes the continuous cylindrical formation of said casing. The door 7 is provided at its free edge with a hinged fastening plate or device 9, which operates in connection with a fastening device 10 secured to the cylinder 5. The cylinder 5 is suitably supported at 11. The ends or heads 6 of the casing 5 are provided with inwardly-extended bearings 12, arranged approximately centrally thereof, and journaled in said bearings are the ends 13 of a shaft 14, which passes centrally through the ends 14<sup>a</sup>

of a cylindrical inner casing 15, which is mounted upon said shaft and secured thereto by means of collars 16. The inner casing 15 is plurally perforated, as at 17, and is arranged to revolve, together with the shaft 14, in the bearings 16. In this class of washing-machines the inner casing or cylinder is customarily revolved by power other than manual, and I have shown at 18 a power-pulley fixed to the shaft 14 exterior of one of the outer casing ends 6, and this pulley may be operated or driven by any desired power-transmission element. The inner casing or cylinder 15 is provided with two oppositely-arranged doors 19, which are hinged at 20 and provided at their free edges with hinged fastening devices 21, which operate in connection with fastening devices 22, secured to the casing 15, and when said doors 19 are closed, as shown in Fig. 2, they complete the cylindrical contour of the casing 15. The casing 15 is provided with two series of cleats or strips, respectively 23 and 24, which are secured to the inner walls thereof, and each of said series extends longitudinally of said inner casing at one side thereof and transversely thereof at each end through a predetermined distance. Said series of strips are parallelly arranged and slightly spaced, as clearly shown in the drawings, and are arranged approximately in that longitudinal transverse plane of the casing 15 in which lie the pivotal points 20 of the doors 19, and that portion of each of said series of cleats or strips which extends longitudinally of the casing 15 is so arranged that when the adjacent door 19 is opened it forms a lodge adjacent to the respective pivotal line.

The casing 5 is provided at one side, adjacent the pivotal line of the door 7 thereof, with a supporting-ledge 25, upon which said door is rested when swung into open position, as shown in Fig. 1, and when said door 7 is thus opened and the inner casing 15 is rotated to bring one of the doors 19 thereof into registration with the opening in the casing 5, which is normally closed by the door 7, said door 19 may be opened outwardly through said opening. With the parts in this last-described position, as shown in Fig. 1, the two series 23 and 24 of cleats or strips will lie approximately in a horizontal position, and that portion of the lower series of cleats or strips which extends longitudinally of the



casing 15 will occupy a position at the lower termination of the opening which is normally covered by the door 19. It will thus be seen that with the parts in this position a ledge or shelf 26, consisting of the adjacent portion of the lower series of cleats or strips, which extends longitudinally of the inner casing, is provided, over which and between the two series of cleats or strips 23 and 24 a detachable partition 27 may be inserted in the position shown in the drawings. This partition 27 is provided with a plurality of transverse perforations 28 and extends longitudinally and transversely of the inner casing 15, being arranged therein according to the arrangement of the series 23 and 24 of cleats or strips, which are preferably arranged in the largest unbroken plane transversely and longitudinally of the casing 15, at one side of the shaft 14, as shown in the drawings.

While the wash is being cleansed in the customary manner within the casings 15 and 5, which are ordinarily filled with water, soap, and other cleansing materials, the partition 27 is not inserted between the series of cleats 23 and 24; but when it is desired to withdraw the wash from the inner cylinder 15 this casing is revolved to such an extent as to bring one of the doors 19 into registration with the door 7, and said two registering doors are opened outwardly, as shown in Fig. 1 and as above described, and the partition 27 is inserted between the series of cleats 23 and 24 and above the wash. The said door 19 is then closed and the cylinder 15 rotated to such an extent as to bring the opposite door 19 into registration with the opening which the door 7 normally closes, and it is manifest that with the parts in this position the wash will rest upon and above the partition 27 and may be with ease withdrawn from the casing 15 by merely sliding or pulling the same off from the partition 27 and through the openings in the casings 15 and 5, which are normally closed respectively by the door 19 and the door 7. By withdrawing the wash in this manner I avoid lifting the same from out the casing 15 and the liquid therein, which often results in tearing the wash, and as the latter is lifted out of the cleansing fluids in the casings 15 and 5 by the partition 27 the separate pieces are allowed to drain to a considerable extent and the cleansing fluids and other substances settle into the lower portions of the casings 15 and 5 beneath the partition 27 and may be reused for preliminary cleansing and treating of further washes.

The two series 23 and 24 of cleats, which are parallelly arranged and secured to the inner walls of the casing 15, furnish a firm support for the partition 27 and prevent its displacement within the casing 15, and by means of the specific relative arrangement of the series of cleats, whereby the portions 26 thereof are arranged at opposite sides of the casing 15 and the portions thereof which extend approximately across the ends of said casing

terminate at a slight distance from the inner walls of said inner casing at opposite sides of the latter, the insertion of said partition between said series is greatly facilitated.

I do not limit myself to the specific construction and relation of parts herein shown and described, but reserve the right to vary the same within the scope of my invention.

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

1. A washing-machine provided with a cylindrical rotatable casing, having two outwardly-opening doors oppositely arranged, and two series of cleats or strips arranged parallelly within said casing and approximately in the transverse plane thereof in which an edge of each of said doors lie, each of said series of cleats or strips extending longitudinally of said casing at opposite sides thereof and transversely thereof at the ends thereof through a predetermined extent, the ends of said portions of said cleats or strips which extend transversely of said casing being slightly spaced from the sides of said casing, substantially as shown and described.

2. A washing-machine provided with a rotatable casing having oppositely-arranged hinged doors, two series of cleats or strips connected with said casing interiorly thereof and each extending longitudinally thereof at one side and transversely thereof at both ends, whereby the portion of each of said series which extends longitudinally of said casing is arranged adjacent one of said doors and constitutes a shelf above which a detachable partition may be passed between said series of cleats or strips, substantially as shown and described.

3. A washing-machine of the class described, comprising an outer cylindrical casing, provided with suitable supports, an inner cylindrical casing rotatably mounted therein and provided with oppositely-arranged hinged doors, said outer casing being provided with a hinged door into registration with which said doors of said inner casing are arranged to be brought, said inner casing being provided with two series of parallelly-arranged and slightly-spaced cleats or strips, a detachable partition which is inserted between said series of cleats or strips when either one of the doors of said inner casing and the door of said outer casing are opened in registration, and support devices connected with said outer casing and upon which the door thereof is rested in its open position, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 23d day of December, 1899.

BERNARD FREEDMAN.

Witnesses:

F. A. STEWART,  
V. M. VOSLER.