

(No Model.)

B. F. MATHEWS.
WASHING MACHINE.

No. 351,062.

Patented Oct. 19, 1886.

Fig. 1.

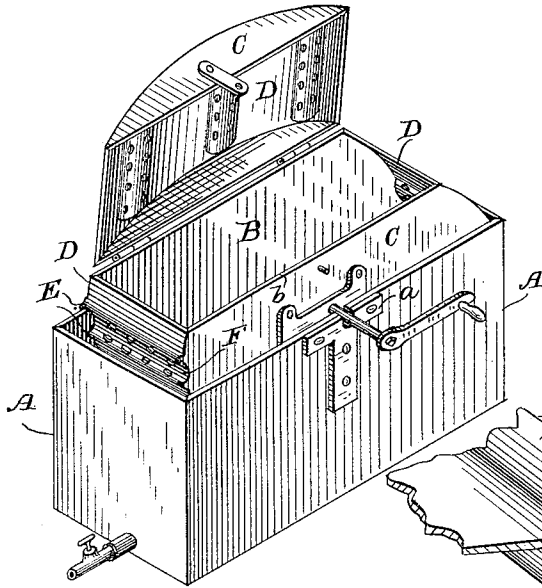


Fig. 4.

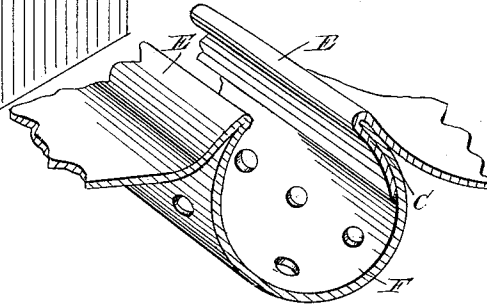
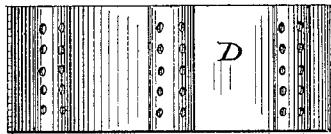
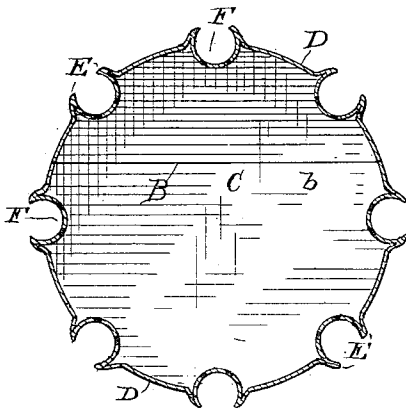


Fig. 2.

Fig. 3.



Witnesses

Jos. S. Latimer
R. T. Campbell.

Inventor

Benjamin F. Mathews
By his Attorney
Frank Sheehy.

UNITED STATES PATENT OFFICE.

BENJAMIN FRANKLIN MATHEWS, OF SAN BERNARDINO, CALIFORNIA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 351,062, dated October 19, 1886.

Application filed March 3, 1886. Serial No. 193,834. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN FRANKLIN MATHEWS, a citizen of the United States, residing at San Bernardino, in the county of San Bernardino and State of California, have invented certain new and useful Improvements in Washing-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention has relation to improvements in washing-machines; and it consists in the construction, novel arrangement, and adaptation of devices, as will be hereinafter more fully set forth and claimed.

The invention is fully illustrated in the accompanying drawings, in which Figure 1 is a perspective view of the machine, showing the drum in an open position. Fig. 2 is an interior view of the drum removed from the boiler, and Fig. 3 is a view of one of the sheet-metal sections comprising the drum. Fig. 4 is a sectional perspective view in detail, showing the manner of forming the drum of narrow strips united at the flanges of the buckets.

Referring by letter to the said drawings, A indicates a boiler which is of rectangular form, and may be of any ordinary or approved construction, with a faucet in one of its end walls, as shown, to draw off the suds or dirty water. This boiler is provided in its side walls, at diametrically-opposite points, with journal-bearings *a*, to receive the journals of the drum, which journals extend from the end or side walls thereof, one of the said journals being adapted to receive a crank-handle, drive-wheel, or other suitable device for turning the drum.

B indicates the drum, which is of a peculiar construction, and is formed entirely of sheet metal galvanized. This drum is composed of the end walls, C C, which are semicircular, with a plain portion, *b*, meeting the hinged cover. These end walls are connected by the circular sides D, forming the body portion, and may be composed of one or more sheets of metal. These sides D have formed therein at suitable intervals overshot buckets, which extend transversely their entire length, and are

perforated for the passage of water from and to the boiler. These buckets are formed by bending the sheets so as to form the parallel external flanges, E E, and pressing the same between these flanges in a curved form, as shown at F, and perforating the same at numerous points. When there is more than one sheet used in the drum or cover thereof, the edges may be made to overlap each other, as clearly shown at *c*, Fig. 4, by means of which there will be no abrading edges exposed on the interior of the drum to injure the fabrics being washed, and narrow metal strips can be economically utilized in constructing the drum, its buckets, and their flanges, and soldered or otherwise connected. The cover is of a construction the same as the body of the drum, having the buckets of substantially the same form, and its end walls are hinged to the said body portion at one end thereof and fastened at the opposite end by a spring or catch, or the like. The flanges E, which serve as water-gatherers for their respective perforated buckets, are extended beyond the periphery of the drum, and converge in curves toward each other, so that in whatever direction the drum be rotated about its axis a flange of each bucket will pick up or gather the water in the boiler, and forcibly direct the same in broken currents through the perforated buckets upon the fabrics inside of the drum.

By reference to Figs. 2 and 4 of the annexed drawings it will be observed that the flanges, lips, or water-gatherers are formed integral with the strips D, which constitute the circumference of the drum, by a process of bending the metal and compressing the bent portions. Fig. 4 also shows the manner of uniting narrow strips of metal to form a drum, which consists in compressing one edge of a bucket between portions of an adjacent strip, so bent, as at *c*, as to form a flange, E, and a close joint. It is by means of these flanges that the buckets are rendered more effective in raising the suds from the boiler and directing the same into the drum upon the fabrics.

In operation it will be seen that when water is placed in the boiler, clothes in the drum, and the latter rotated by a crank or the like, the flanges E and their buckets will catch the water in the boiler and raise it to nearly the highest point of revolution, when it will be

discharged through the perforations of the said buckets into the drum, and thereby shower and thoroughly cleanse the clothes.

Having described this invention, what I claim is—

1. The combination, with a boiler having journal-bearings, as described, of a drum supported in said bearings and provided with peripheral overshot buckets having curved converging flanges, substantially as specified.

2. The within-described rotative washing drum, consisting of sheets of metal having its circular side or periphery D bent to form buckets F, and curved flanges E, substantially as described.

3. The combination of the end walls having the external journals, the circular side or periphery having the buckets formed therein,

and provided with the transverse perforations and external parallel flanges, and the hinged cover, all adapted to serve in a boiler, substantially as specified.

4. The washing-drum described, composed of metal strips bent to form the buckets F, and external flanges, E, said strips being united along their edges to the buckets by means of lapped and compressed joints c, forming external flanges on the buckets, substantially as described.

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

BENJAMIN FRANKLIN MATHEWS.

Witnesses:

F. L. HOLCOMB,
L. H. TAYLOR.