(No Model.)

W. H. GOSS.

WASHING MACHINE.

No. 399,610. Patented Mar. 12, 1889.

Fig. 1.

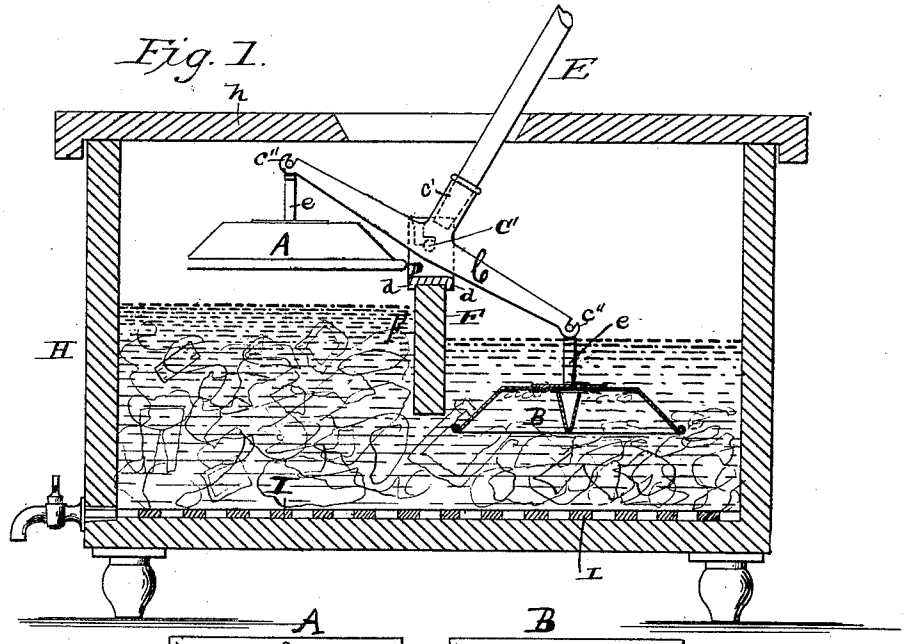


Fig. 2

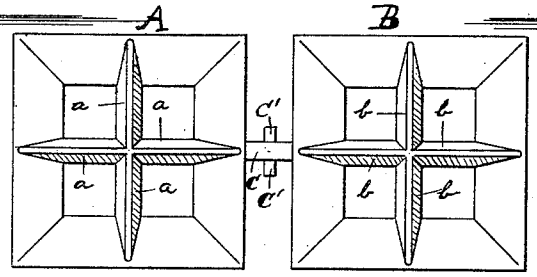


Fig. 3

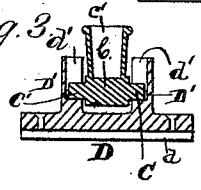


Fig. 4

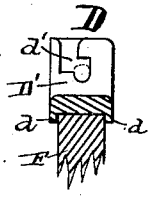


Fig. 5.

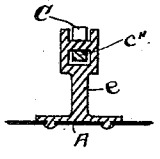
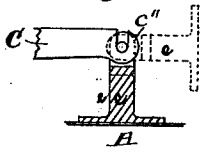


Fig. 6.



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UNITED STATES PATENT OFFICE.

WILLIAM H. GOSS, OF YONKERS, NEW YORK.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 399,610, dated March 12, 1889.

Application filed September 25, 1888. Serial No. 286,335. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. GOSS, a subject of the Queen of Great Britain, and now residing at Yonkers, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is a central vertical sectional view through my improved washing-machine. Fig. 2 is a bottom plan view of the air-compressors. Figs. 3 and 4 are detail sectional views of the lever-fulcrum. Figs. 5 and 6 are detail sectional views of the connections of the levers and compressors.

This invention is an improvement in washing-machines; and its object is to compress air and force the same through the articles submerged in the tank, so that the water will be agitated and carried through the articles with the air, insuring perfect cleansing of the latter without rubbing or beating.

To this end the invention consists in a certain novel construction and arrangement of parts, hereinafter described and claimed, and shown in the accompanying drawings, to which reference is had by letters.

H designates a tank provided with a proper cover, *h*, to prevent splashing of the water.

F is a transverse bar or partition secured centrally in the tank, and having a space below it to permit water and articles being washed to pass thereunder.

I designates a grating or lattice in the bottom of the tank, upon which the articles are placed, so that water can be forced below and entirely through the articles and circulate thereunder in the spaces of the grating.

C designates a lever-bar having a pair of ears or trunnions, C′, at its center, by which it is fulcrumed in a casting, D, secured on top of partition F. This casting D has a pair of depending side flanges, *d d*, embracing the sides of said partition, and is secured thereon by screws, as shown, and it also has two opposite upstanding lugs, D′ D′, which have corresponding key-slots, *d′ d′*, in their inner faces, in which the trunnions C′ are seated. By this arrangement the lever C can be readily removed from the tank. The lever C has a central upstanding socket-piece, *c′*, in which is secured a handle, E, that projects upward through an opening in the lid, and by which the lever-bar is oscillated. The ends of lever C are hooked, as at *c″*, and engage in eyes formed in the upper ends of studs *e e*, that are attached to the air-compressors A B, so that the latter are operated by lever C. These air-compressors are each alike and have downwardly-flaring walls, and, as shown in the drawings, are rectangular in plan, and are divided by V-shaped partitions *a* and *b*, respectively, into four compartments, which are closed at their upper and smaller ends and open at bottom or enlarged ends only.

In operation the compressors A B are unhooked from lever C and removed or the lever and compressors removed together. The articles to be cleansed are then placed in tank H on each side of partition F, and water poured in until the tank is filled about even with the top of partition F. The compressors are then replaced, and, the lever being oscillated by handle E, the compressors are alternately raised and lowered. The water should be of such depth that when the lever C is oscillated to its greatest extent the uppermost compressor should be free from the water, so that air can fill the cells thereof. Then on the return oscillation of the lever this compressor is forced downward. The air in the cells thereof is first compressed by the water, and finally is ejected by the pressure of the water, owing to the conical or pyramidal shape of the cells, and passed downward through the articles beneath it, carrying and forcing the water before it through the articles until it reaches the grating, and escapes either under the partition F or up beside the compressors. In either case the air has to pass through the articles being washed in escaping to the surface, and thus assisting in cleansing and agitating the clothes. The action of each compressor is similar and effected alternately at opposite ends of the tank. The number of cells in the compressors could be varied according to the size of the machine, and, if desired, they might be worked by machinery.

The lifting of the compressors produces a

partial vacuum under them, causing the articles to rise with the compressors, and thus increasing their agitation.

Having described my invention, I claim—

The combination of the tank, the transverse partition therein, and the casting D, having slotted upstanding lugs D′, mounted on said partition, with the lever C, having trunnions engaging the slots in lugs D′, and the compressors mounted on the ends of said lever at opposite sides of the partition, substantially as and for the purpose specified.

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

WILLIAM H. GOSS.

Witnesses:
FRANCIS X. DONOGHUE,
MAGDALENA STEINMETZ.