H. CARPENTER.

WASHING-MACHINE.

No. 189,841. Patented April 24, 1877.

Fig. 1.

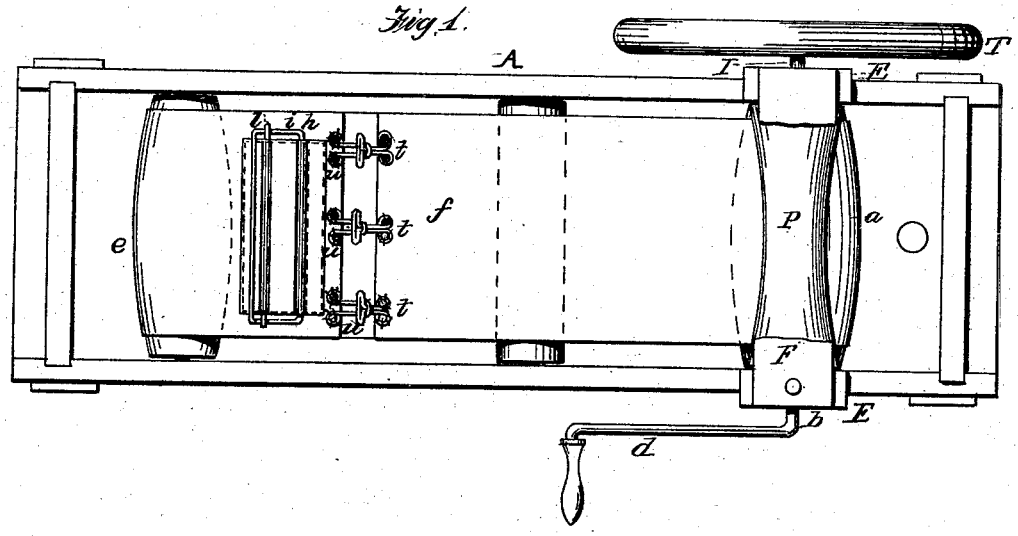
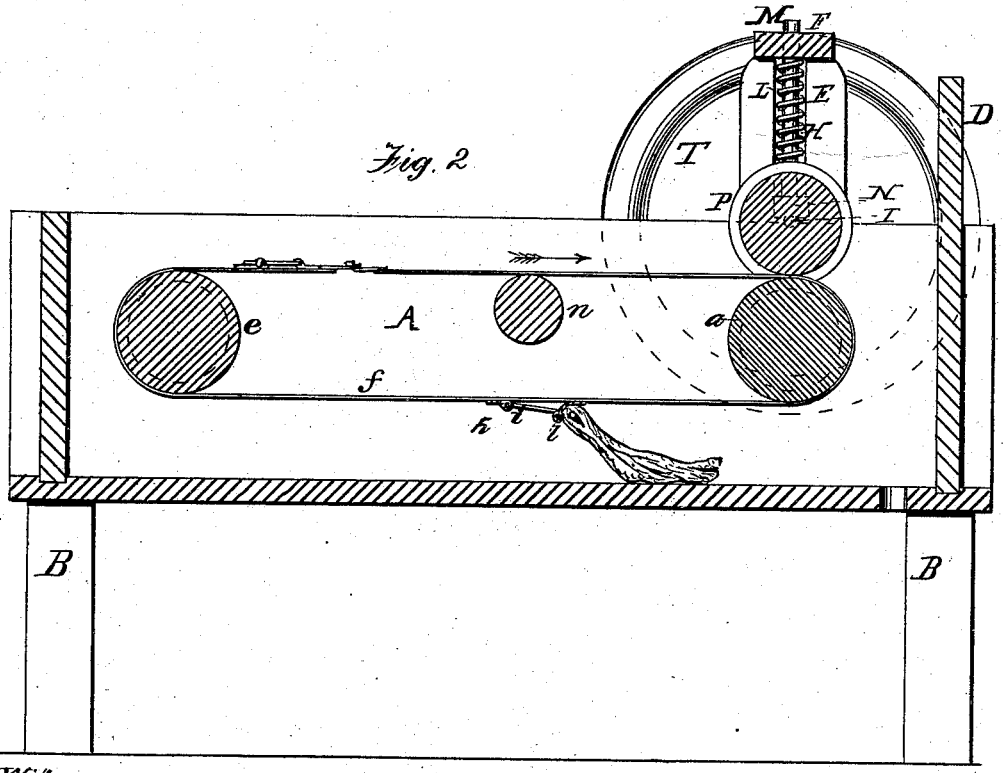


Fig. 2



Witnesses:
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UNITED STATES PATENT OFFICE.

HARVEY CARPENTER, OF PLAIN CITY, OHIO.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **189,841**, dated April 24, 1877; application filed January 17, 1877.

To all whom it may concern:

Be it known that I, HARVEY CARPENTER, of Plain City, in the county of Madison and State of Ohio, have invented a new and useful Improvement in Washing-Machines, of which the following is a specification, reference being had to the accompanying drawings.

The invention relates to an improvement in washing-machines; and consists in the devices hereinafter specifically described, the object being to furnish a machine that will thoroughly and effectually cleanse clothing and analogous articles.

Figure 1 is a top view of a device embodying the elements of the invention. Fig. 2 is a central vertical longitudinal section of same.

In the accompanying drawings, A represents the tub, provided with the legs B and extended backing D, to afford a support to which a clothes-wringer may be attached. At a suitable place on the sides of the tub A are secured the standards E, extending upward a proper distance, their upper ends being connected by the brace F. The standards are provided with the slots H, to receive the ends of the axles I, in which the ends of the axles have a vertical movement, caused by the tension of the helical spring L, arranged in one of the slots H around the post M, and resting upon the journal-block N, beneath which the axle I is situated. The end of the axle I opposite the spring L is furnished with a fly-wheel, T, of suitable weight to impart momentum to the concave roller P, placed upon the axle I, thereby decreasing the labor and exertion required in operating the machines in common use. Immediately beneath the roller P is situated the convex roller *a*, the convexity of which fits closely within the concavity of the roller P, and is mounted upon the axle *b*, provided on one end with the crank *d*, whereby power is applied. The convex roller *e* is secured a proper distance from and on a horizontal plane with the roller *a*, over which rollers is passed the endless carrier-belt *f*, composed of any suitable material, preferably of cotton or other flexible fabric. Upon the carrier *f*, at certain intervals, are furnished the fastening attachments *h*, composed of the loop *i* and cross-bar *l*, upon the ends of which loop the bar has a free sliding movement, the bar being placed near the free side of the loop and retained by any desirable means.

It is obvious that when it is desired to widen the distance between the side of the loop *i* and cross-bar *l*, for the purpose of inserting the articles to be cleansed between them, the bar *l* must be moved toward the other side of the loop *i*, which is consummated by lessening the tension of the carrier, or by the elasticity of the material of which the carrier is composed. When the bar *l* has been forced from the free side of the loop *i* and the clothing inserted between them, the elastic power of the belt will draw the cross-bar toward its former position, and thereby prevent the articles so fastened from becoming disengaged from the belt and remaining unwashed in the bottom of the tub. The roller *n* is placed midway between the convex rollers *a e*, to facilitate the revolution of the carrier-belt. The ends of the carrier-belt are connected and secured by the hooks *t* and eyes *u*, the hooks being fastened to one end of the belt, and the eyes in a corresponding position on the other end. The part of the hooks that extends beyond the edge of the material of which the belt is composed is T-shaped, while the same portion of the loops or eyes is in the form of the letter U. To unite the ends of the belt it is only necessary to turn the hook edgewise, force it through the loop, and return it to its former position. Thus a smooth surface is presented to the rollers and the belt properly fastened.

In the operation of the machine water is placed in the tub and clothing fed to the fastenings *h*. Power is then applied to the crank *d*, by means of which the rollers P, *a*, *e*, and *n* are caused to rotate, thereby imparting motion to the belt *f*, which, now having the clothing attached, passes over the rollers *a*, *e*, and *n*, and between the rollers P and *a*. This opera-

tion is continued until the articles are clean, when they are removed and replaced by others and the movement repeated.

What I claim as my invention, and desire to secure by Letters Patent, is—

The concave roller P, in combination with the convex rollers *a* and *e*, connected by the belt *f*, which is furnished with the loop *i* and sliding bar *l*, substantially as shown and described.

In testimony that I claim the foregoing improvement in washing-machines, as above described, I have hereunto set my hand.

HARVEY CARPENTER.

Witnesses:
ASA CONVERSE,
WILLIAM ALLEN.