F. W. DUSTIN.

Improvement in Washing Machines.

No. 115,721. Patented June 6, 1871.

Fig. 1.

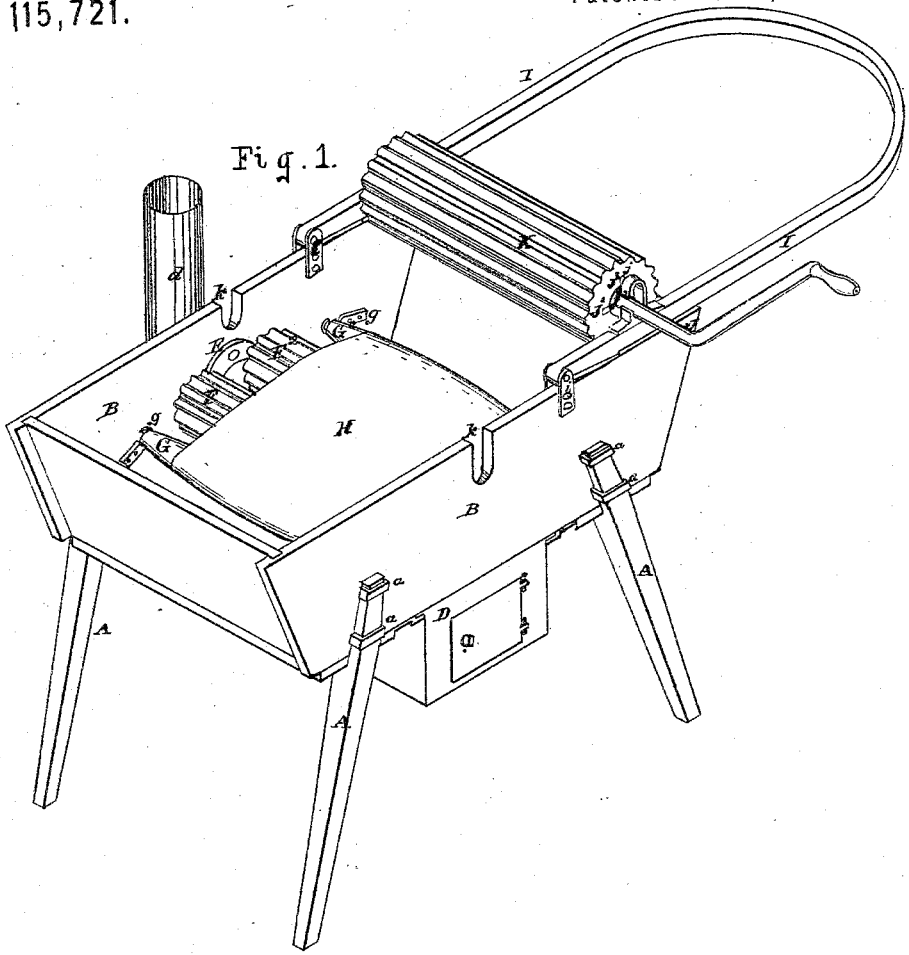
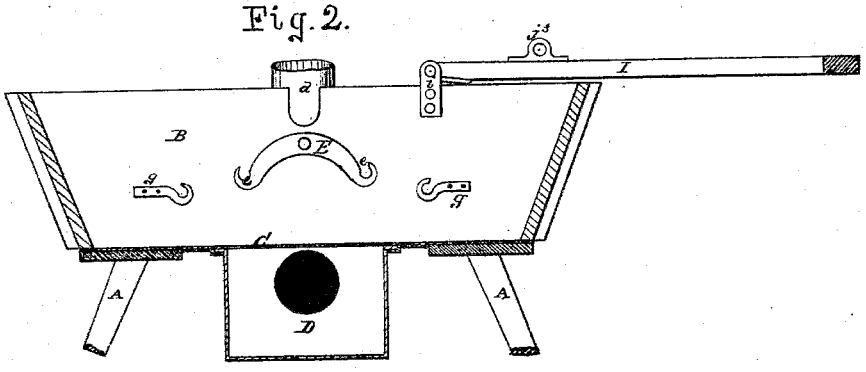


Fig. 2.



Attest.

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UNITED STATES PATENT OFFICE.

FRANCIS W. DUSTIN, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. 115,721, dated June 6, 1871.

I, FRANCIS W. DUSTIN, of the city and county of St. Louis and State of Missouri, have invented a certain Improved Washing-Machine, of which the following is a specification.

Nature and Object of the Invention.

The subject-matter of my invention is an improved washing-machine having removable washing mechanism, a removable heating-stove, and removable legs, to facilitate cleaning the tub, rollers, &c., and to adapt the whole to be packed in least possible compass for shipping.

Description of the Drawing.

Figure 1 is a perspective view of my washing-machine, the pressure bow and roller being thrown back. Fig. 2 is a longitudinal section of the box, giving an interior elevation of one side, the other side being similar thereto.

General Description.

A are removable legs, held in eyes or staples *a*. B is the box, having a galvanized iron or zinc bottom, C. D is a charcoal-stove, having a pipe or chimney, *d*, and supported on slide-cleats d^2, the stove admitting of being drawn out endwise when not required. E is a yoke having hooked ends *e*, giving journal-bearing to the gudgeons of the grooved rollers F F^2. *g* are ears attached to the sides of the box, and in whose hooked ends turn the gudgeons or journals of the idler-rollers G G^2. The rollers G G^2 have greater diameter at the middle than at the ends to prevent the endless sheet H from working to the side of the box. *i* are ears fixed to the upper edge of the box, and giving fulcrum-bearing to the ends of the bearing-bow I. The bow-lever I has attached to it ears *j* j^3, giving journal-bearing to the crank-shaft J of the grooved roller K. The ear j^3 has a circular hole for reception of one end of the crank-shaft; but the ear *j* is elongated in a direction perpendicular to the side of the bow I, as shown in Fig. 1, so as to give an upper and lower bearing to the shaft, and allow between them space for an opening, j^2, through one side, through which the shaft may be removed from the ear, the other end being then drawn endwise from the ear j^3. The shaft J has radial wings J^2 which enter the roller and hold it firmly to the shaft, and all the roller-gudgeons have similar wings to those J^2, and for a like purpose. *k* are rounded notches in the upper edge of the sides to receive the ears *j* j^3 when the pressure-roller K is in its operating position over the rollers F F^2.

Operation.

The operation of my machine is as follows: A small quantity of hot water is placed in the tub, and the bow I swung over from the position shown so as to bring the roller K upon the endless sheet H. The clothing to be washed is placed upon the sheet H at one side of the roller K, which is turned so as to bring the clothes beneath it, the sheet H revolving and the rollers F F^2 G G^2 rotating by the pressure of the moving clothes upon them. When the mass of clothes has almost passed through beneath the roller K the rotation is reversed and they are drawn back beneath it, and this action is repeated until the clothes are cleansed. The pressure of the roller K upon the clothing is regulated by the pressure of the hand of the operator upon the bow I. By this arrangement the pressure is made uniform whatever may be the thickness of the mass of clothing passing beneath the roller, and the pressure can be regulated with ease to the requirements of the case, whether washing fine and frigile articles or those heavy and coarse.

A uniform pressure cannot be applied by means of a spring or springs, as the mass of clothing will always be thicker at one part than another, (usually at the midlength,) and consequently the pressure of the springs would be insufficient when the ends were passing through.

Claims.

I claim as my invention—

1. The combination, with the tub B′, yokes E, bearing-bow I, rollers F F^2 G G^2 K, and endless sheet H, of the hook-bearings *e g j*, constructed and arranged substantially as described, by which all of said rollers and said "sheet" are adapted to be readily removed.

2. The improved washing-machine herein shown and described, composed of box or tub B, with legs A and metallic bottom C, stove D, rollers F F^2 G G^2 K, endless sheet H, bearing-bow I, and crank-shaft J, and said legs, stove, rollers, and endless sheet being removable, and all combined and arranged as represented, for the purposes set forth.

In testimony of which invention I have hereunto set my hand.

FRANCIS W. DUSTIN.

Witnesses:
SAML. KNIGHT,
J. BAKER.