J. BELL.

Wringers and Mangles.

No. 157,364. Patented Dec. 1, 1874.

Fig: 1

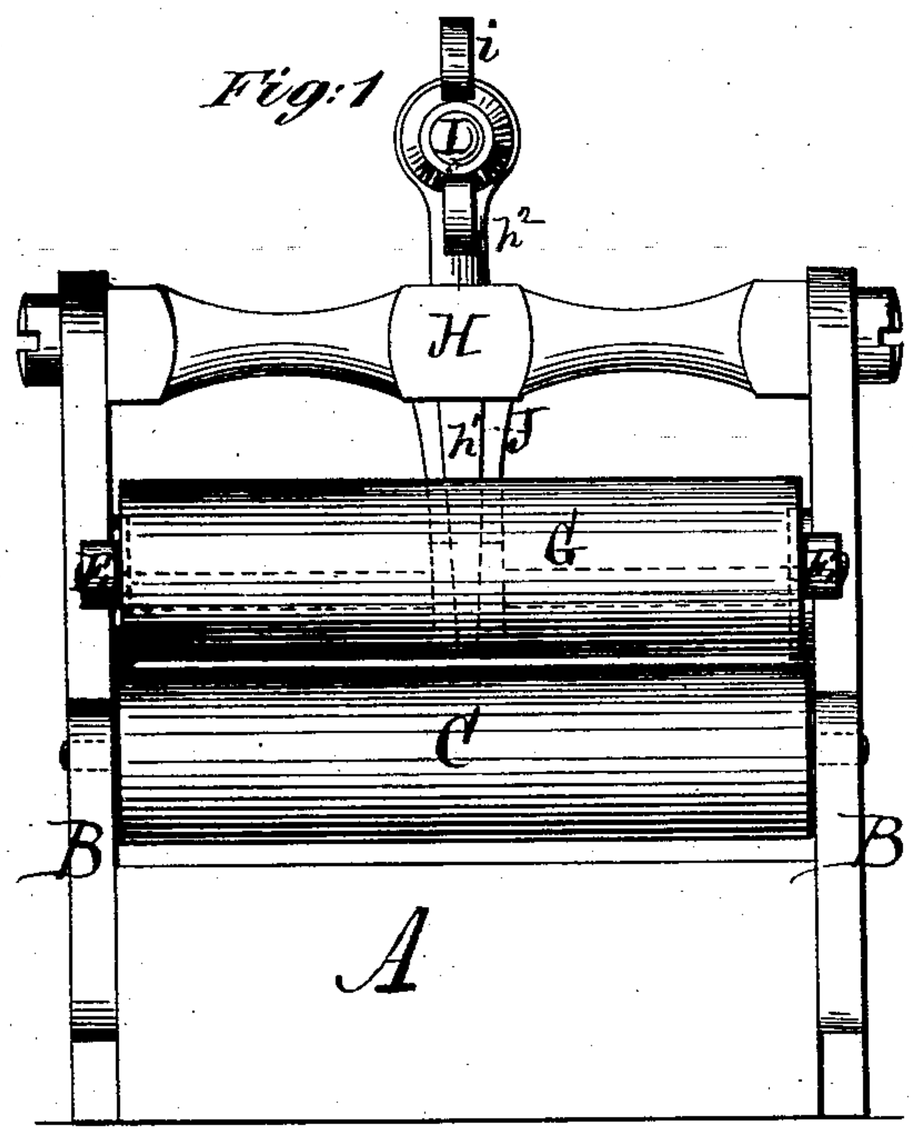
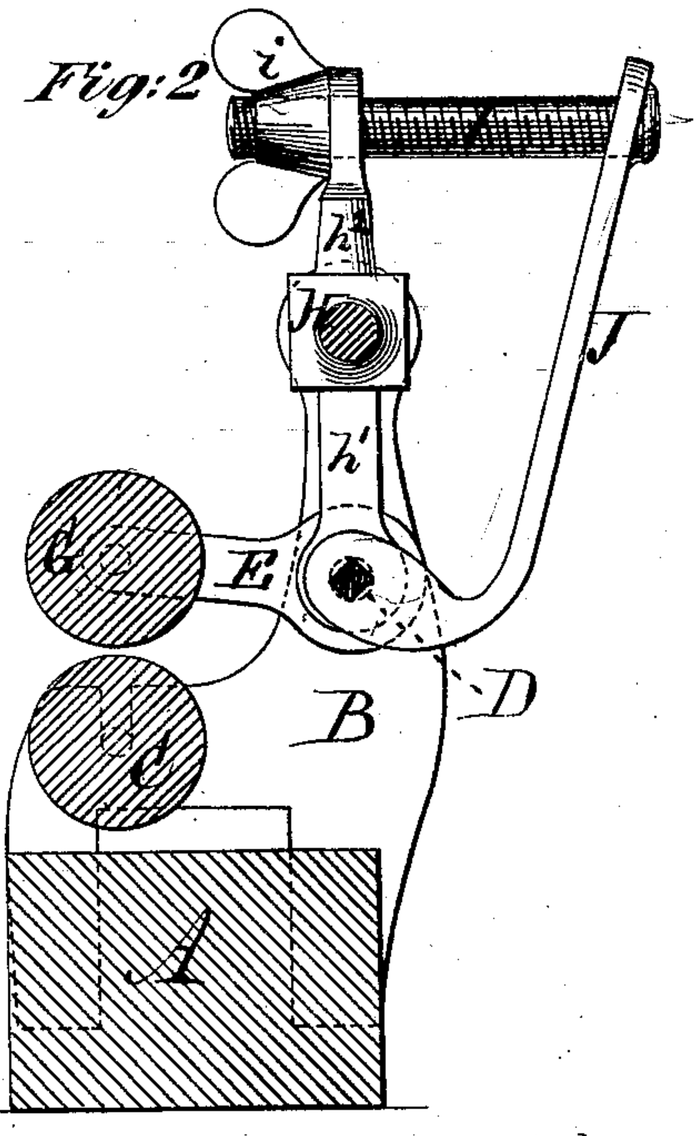


Fig: 2



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UNITED STATES PATENT OFFICE.

JAMES BELL, OF STRATHMIGLO, NORTH BRITAIN, ASSIGNOR TO THOMAS BELL, OF CATSKILL, NEW YORK.

IMPROVEMENT IN WRINGERS AND MANGLES.

Specification forming part of Letters Patent No. **157,364**, dated December 1, 1874; application filed April 20, 1874.

To all whom it may concern:

Be it known that I, JAMES BELL, of Strathmiglo, in the county of Fife, North Britain, have invented certain Improvements in Mangles or Wringers, of which the following is a specification:

My invention relates to certain improvements which are designed more particularly for application to the rolls of mangles, although they may be applied to wringers and similar apparatus with equal readiness.

The invention consists in the combination, with the stationary roll, of a pressure-roll journaled in arms attached to a torsion-bar having its bearings in the frame of the machine, and having attached thereto a lever-arm, adjustable by means of a set-screw, whereby a spring of great stiffness and strength is obtained.

In the accompanying drawing, Figure 1 is a front view of a mangle embodying my invention. Fig. 2 is a transverse vertical section of the same.

To the base or platform A is attached two standards or plates, B B, in the lower portion of which the stationary roll C is journaled in any suitable manner. At points in the plates B above the axis of the stationary roll are two round holes, in which the ends of the torsion-bar D have their bearings. This torsion-bar is angular (preferably square) in its cross-section, and is made stout and strong enough to enable it to bear the necessary amount of strain, but elastic enough to allow it to twist when sufficient power is applied. Near its ends (preferably between the plates B) are attached the inner ends of bars E, in the outer ends of which the pressure-roll G is journaled. The upper ends of the plates B B are connected by a cross-head, H, from the lower side of which a bar, h', extends downward, and the torsion-bar D passes through the same, so as to turn freely therein, but at the same time be supported and braced thereby. From the upper side of the cross-head a bar, h^2, extends upward, and has an eye formed near its upper end. A rigid bar or lever, J, has its lower end forked; and near the ends of the forks are angular holes, corresponding in form and size to the torsion-bar D, through which angular holes said torsion-bar passes, so that the pressure-roll G may be raised and lowered by depressing or elevating the lever J. Near the upper end of the bar or lever J is an eye, through which passes a screw-bolt, I, which also passes through the eye in the bar h^2, and is provided with a nut, i, for tightening or loosening it.

When the nut i is screwed up so as to adjust the pressure-roll G to the proper degree of pressure upon the stationary roll C, as the machine is operated, the only elasticity required is what results from the twisting or torsion of the bar D. Thus a spring of great stiffness and strength is obtained with great economy of material.

When desired one or more additional pressure-rolls may be arranged below the stationary rolls, and adjusted in the manner above described.

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

The combination of the torsion-bar, provided with lateral arms, and a pressure-roller, with a lever-arm attached to the torsion-bar, and adjustable by a set-screw for regulating the pressure of the pressure-roller, substantially as described.

JAMES BELL.

Witnesses:
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