2 Sheets--Sheet 1.

G. W. BELL.

Sawing-Machines.

No. 157,782. Patented Dec. 15, 1874.

Fig. 1.

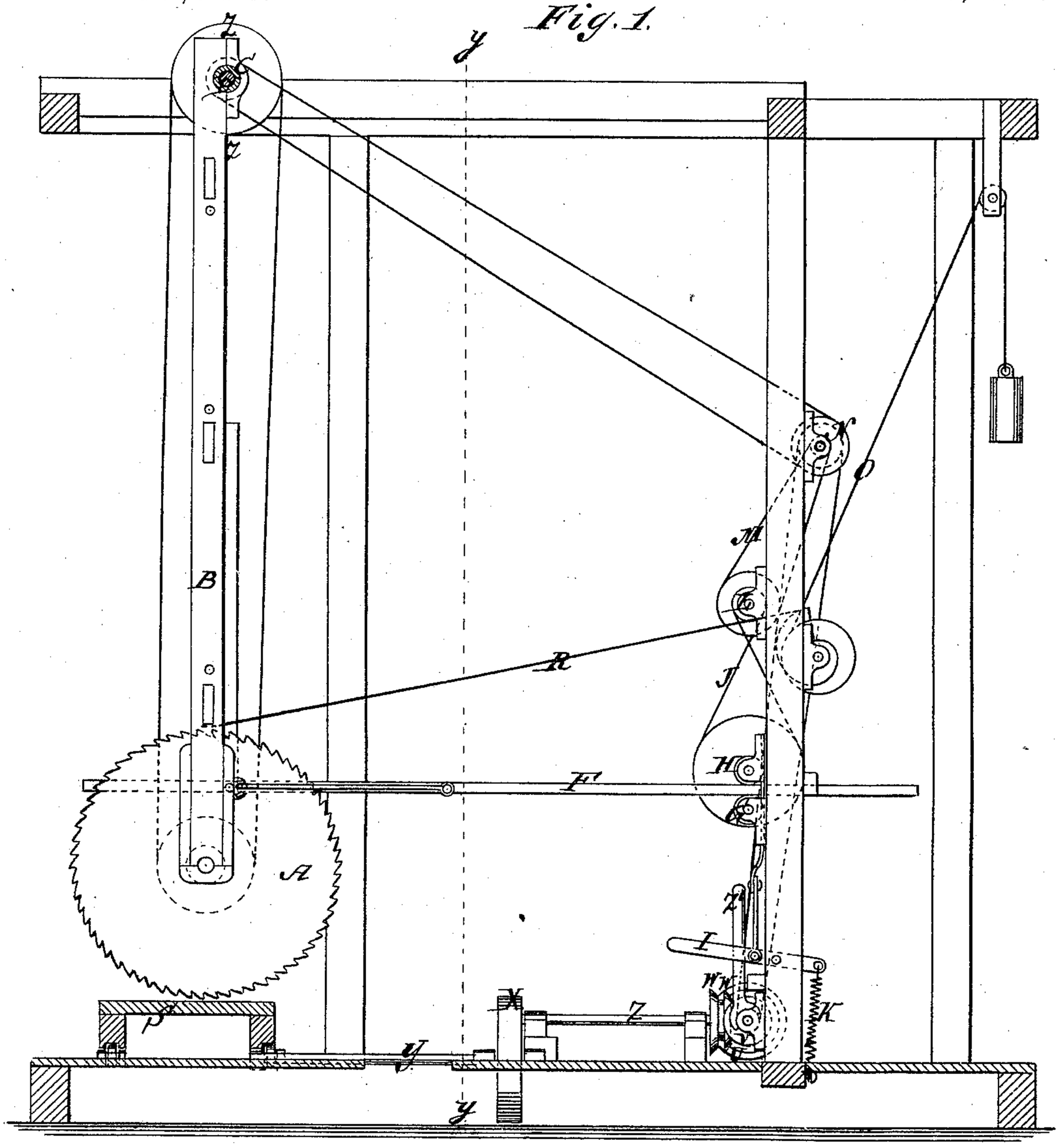

Fig. 3.

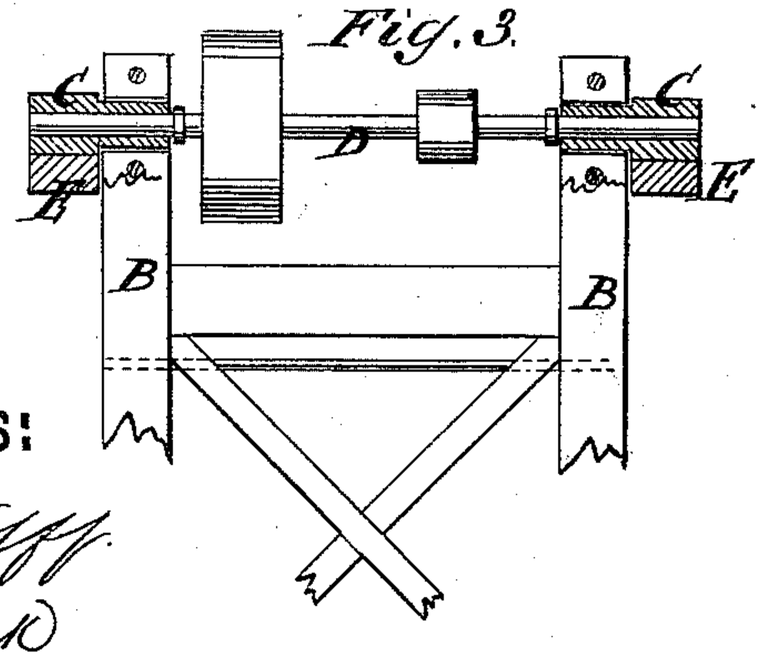

Fig. 4.

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2 Sheets--Sheet 2.

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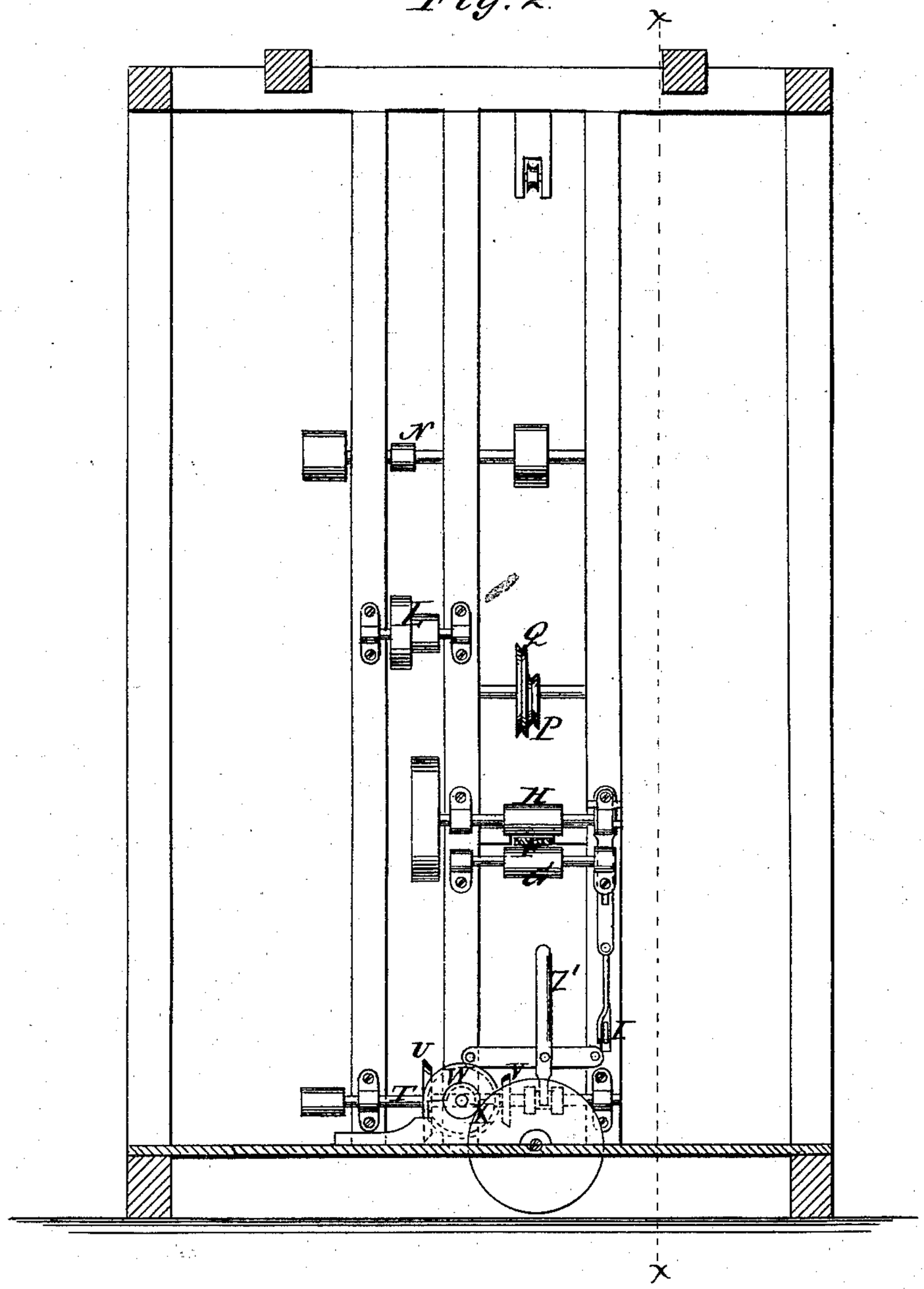
Fig. 2.



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UNITED STATES PATENT OFFICE.

GEORGE W. BELL, OF ORANGE, TEXAS.

IMPROVEMENT IN SAWING-MACHINES.

Specification forming part of Letters Patent No. **157,782**, dated December 15, 1874; application filed May 24, 1873.

To all whom it may concern:

Be it known that I, GEORGE W. BELL, of Orange, in the county of Orange and State of Texas, have invented a new and Improved Sawing-Machine, of which the following is a specification:

The invention will first be fully described, and then pointed out in the claims.

Figure 1 is a longitudinal sectional elevation of my improved machine, taken on the line *x x* of Fig. 2, which is a sectional elevation taken on the line *y y* of Fig. 1. Fig. 3 is a section on the line *z z* of Fig. 1; and Fig. 4 is a side elevation of the pulleys of the apparatus for swinging the saw back by the cord and weight, to allow the log to be shifted along.

Similar letters of reference indicate corresponding parts.

A represents the cut-off saw, which, for a machine for cutting off shingle-bolts, I propose to have about seventy-four inches in diameter. B represents the swing-frame. C represents the sleeve-boxes for the shaft D, which drives the saw, which I propose to employ in consequence of the great weight of the saw and swing-frame, to relieve the shaft of it, by being permanently fixed in the frame E, so as to support the weight. F represents the push-bar which I propose to use for feeding the saw to the log. It is jointed to the swing-frame at one end, and works between the friction feed-rollers G H, one of which, G, is arranged in fixed bearings, and the other in sliding bearings, which are connected with a lever, I, which is forced down on the feed-bar to set it in motion by the hand, and raised to throw it off to stop the bar by a spring, K. The roller, which is in the sliding bearings, is the one which has the power applied, so that the other one, on which the bar rests, will remain at rest when the power is off. It is turned by the belt J from the counter-shaft L, which is turned by a belt, M, from the driving-shaft N. O is the weighted cord for swinging the saw-frame back. It is connected to the pulley Q, and turns the eccentric pulley P on the same shaft, which is so connected with the swing-frame by a cord, R, that, when the feed-rollers G H are thrown out, the weight will, by turning pulley P and winding the rope R upon it, swing the saw back. The eccentric pulley is used so that the leverage of the weight will increase as the resistance of the swing-frame increases.

To feed the log-carriage S along from time to time as the bolts are cut off, I have the counter-shaft T, with a large bevel-wheel, U, on one side, and a smaller one, V, on the other side of wheels W, on a shaft, which gears, by the friction-wheels X, with the shaft Y, which gears with the carriage. The shaft T is capable of shifting endwise slightly, and a shifting-lever, Z′, is connected with it to throw wheel V into gear with wheel W, when the log is to be fed up to the saw, and to throw wheel U into gear when the carriage is to be reversed.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The sleeves C C, combined with the drive-shaft D in the swing-frame B, as and for the purpose described.

2. The pulley P, arranged for increasing the leverage of the weighted cord as the resistance of the saw-frame increases, substantially as specified.

3. The combination of lever I and spring K with power-roll H and supporting-roll G, to enable the push-bar to be operated in the manner described.

G. W. BELL.

Witnesses:
R. H. SMITH,
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