

(No Model.)

J. NEWBY.

STOP MOTION FOR QUILLING FRAMES.

No. 250,949.

Patented Dec. 13, 1881.

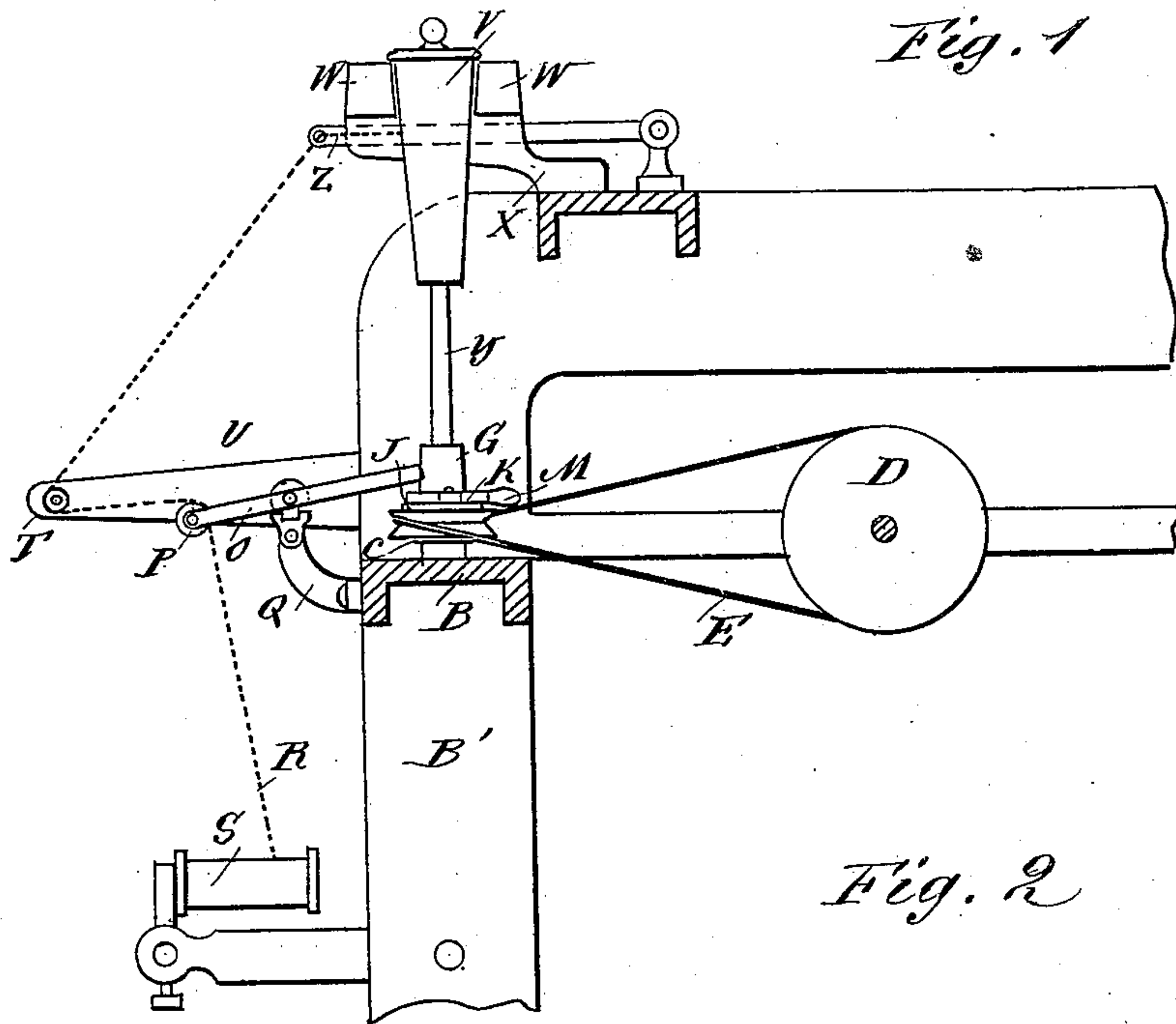


Fig. 1

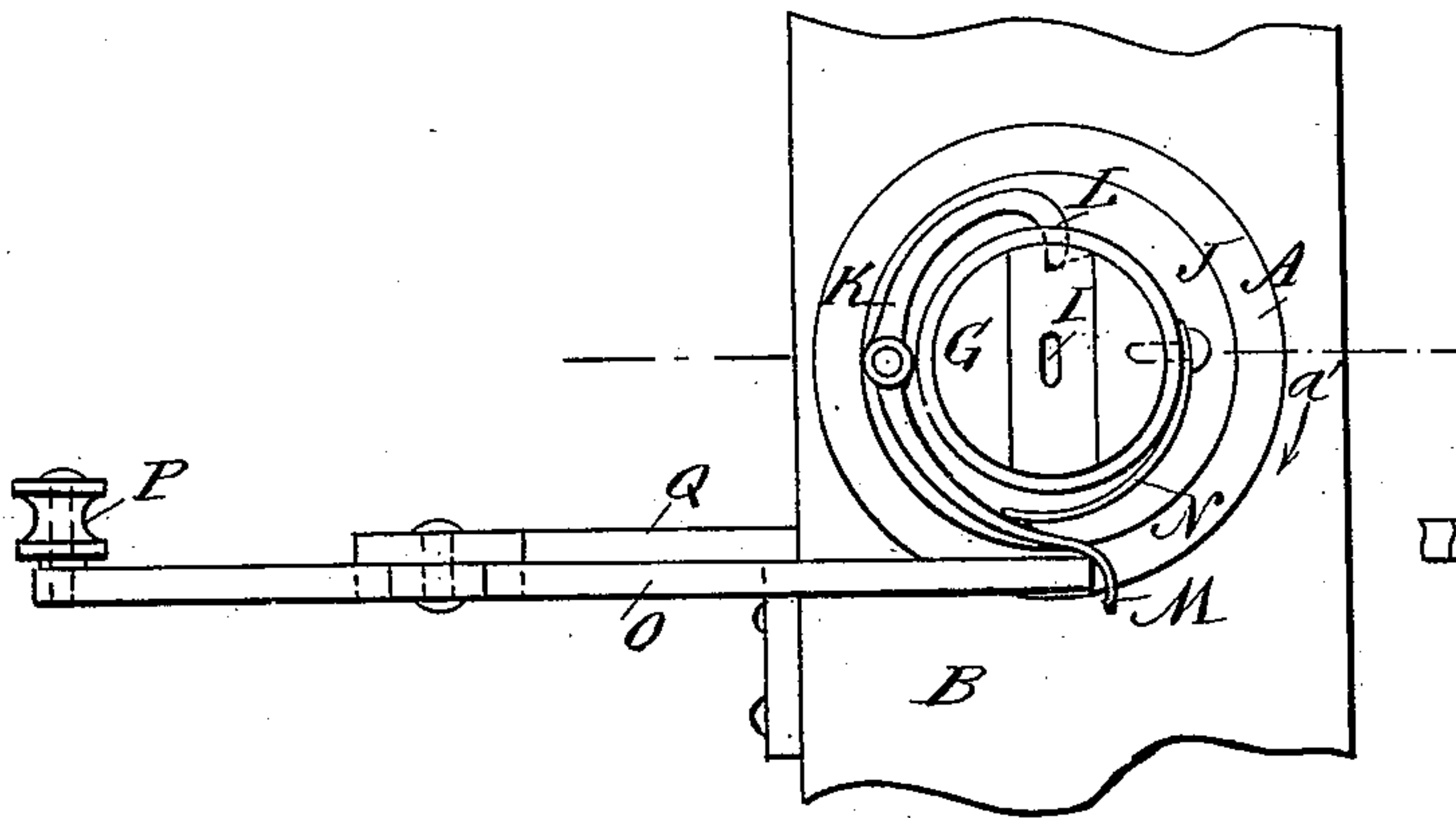


Fig. 2

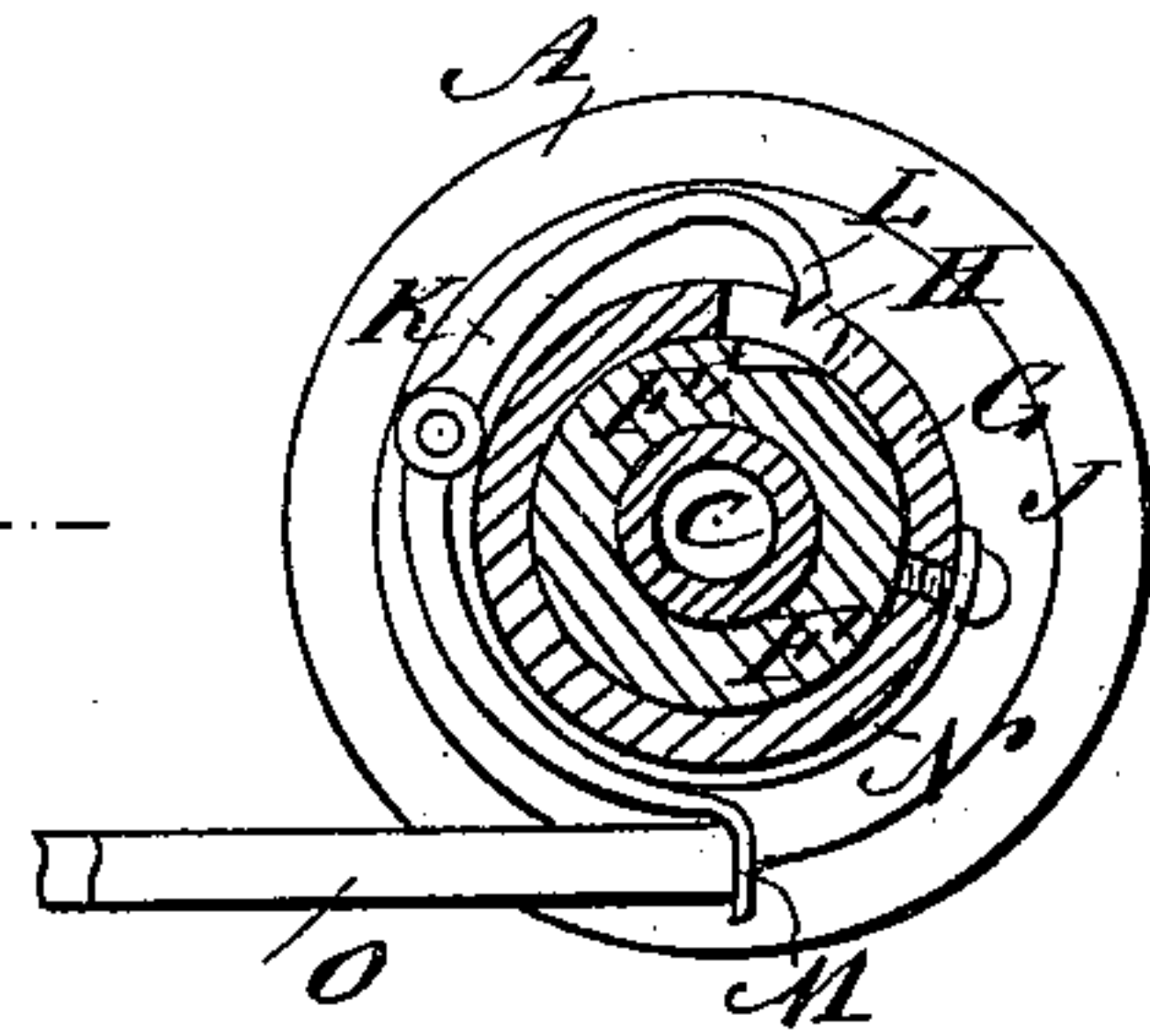


Fig. 3

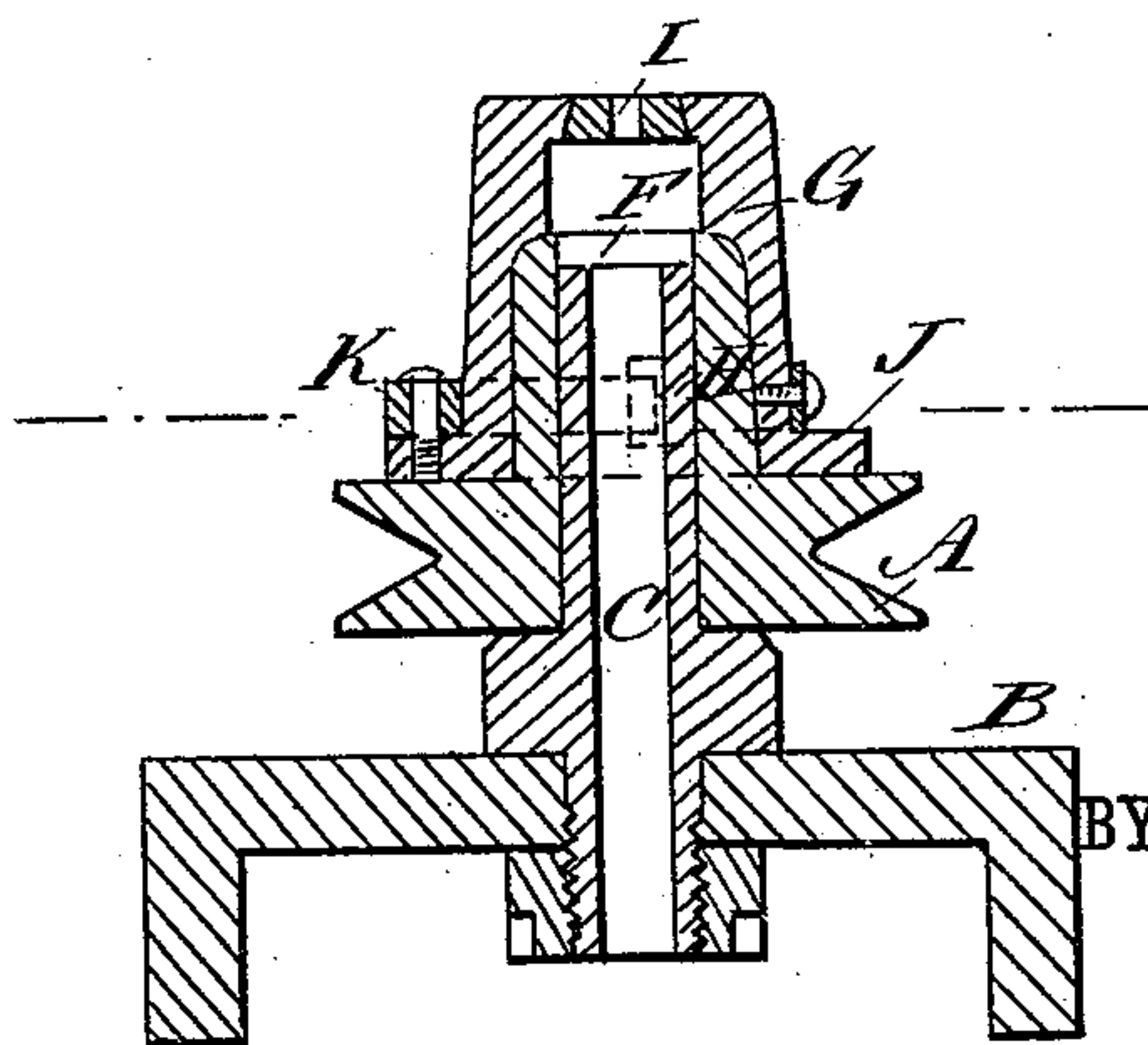


Fig. 4

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STOP-MOTION FOR QUILLING-FRAMES.

SPECIFICATION forming part of Letters Patent No. 250,949, dated December 13, 1881.

Application filed April 1, 1881. (No model.)

To all whom it may concern:

Be it known that I, JAMES NEWBY, of Paterson, in the county of Passaic and State of New Jersey, have invented a new Improvement in Stop-Motions for Quilling-Frames, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved device for stopping the rotation of the spindles of quilling-frames, in case the silk thread that is being wound from the reel upon the bobbin breaks.

In the accompanying drawings, Figure 1 is a cross-sectional elevation of a quilling-frame provided with my improvement. Fig. 2 is a plan view of the cap, the spring-pawl, and the lever, showing the end of the spring-pawl passed into the recess on the projection of the pulley. Fig. 3 is a horizontal sectional elevation of the cap and the projection on which it fits, showing the end of the pawl withdrawn from the recess in the projection. Fig. 4 is a cross-sectional elevation of the cap and the projection on which it fits.

A grooved pulley, A, is mounted on a vertical shaft, C, of the rail B of the frame B', and is rotated from the pulley D by means of the belt E. This pulley A is provided with a vertical, cylindrical, or slightly-conical projection, F, having a recess, F', on the side, and over the projection F a cap, G, fits with an aperture, H, in the side, and an outward annular flange, J, at the bottom, this flange resting on the top of the pulley A. A semicircular rod, K, with a projection or pawl-tooth, L, passing into the aperture H of the cap G at one end, and with a projection, M, at the other end, is pivoted on the flange J, and is acted upon by a spring, N, which presses the end with the projection M outward, thereby pressing the end with the tooth L inward—that is, toward the vertical central axis of the cap G. A lever, O, with a grooved pulley, P, at the outer end, is pivoted to an arm, Q, of the rail B, the inner end of this lever O reaching about to the central line of the cap G. The thread R passes from the reel S over the pulley P, over a pulley, T, on an arm, U, projecting farther from the frame B' than the pulley P, and through an aperture on the end of a vertically-vibrating lever, Z, and to the bobbin V, which

rests between the conical rollers W of an arm, X, of the frame B'. The top of the cap G is provided with an aperture, I, to receive the lower end of a vertical spindle, Y, on which the bobbin V is mounted.

The operation is as follows: As the pulley T projects farther from the frame than the pulley P, and is on about the same horizontal line with it, the tension of the thread R keeps the outer end of the lever O lowered and the inner end raised; but as soon as the thread R breaks, the outer end of the lever O is released, causing the inner end to drop upon the flange J of the cap G. As this cap rotates in the direction of the arrow a', the projection M of the semicircular rod K will strike against the end of the lever O, whereby the spring N is pressed against the cap G, and the tooth L is withdrawn from the recess F', into which it has been pressed by the action of the spring N. The lever O prevents the cap G from rotating, and as the pawl-tooth L has been withdrawn from the recess F' of the projection F of the pulley A, this pulley will rotate without rotating the cap G or the spindle Y, and the bobbin V, which is thus stopped as soon as the thread R breaks. This is of great advantage, especially in quilling silk, for if the bobbin rotates when the thread R is broken, the silk or the bobbin will be burned, or will receive a certain gloss which makes it valueless. As soon as the thread is knotted and passed over the pulley P, the inner end of the lever O will be raised, and the cap G, spindle Y, and bobbin V will revolve with the pulley A.

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

The combination, with the pulley A, having the vertical projection F, and provided with the recess F', of the cap G, provided with the recess H, spring N, pawl and rod K L, the lever O, having pulley P at the end, the pulley T, the spindle Y, and mechanism for rotating pulley a, all substantially as herein shown and described.

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Witnesses:

JOHN RITCHEY,
JOHN HIGGINS.