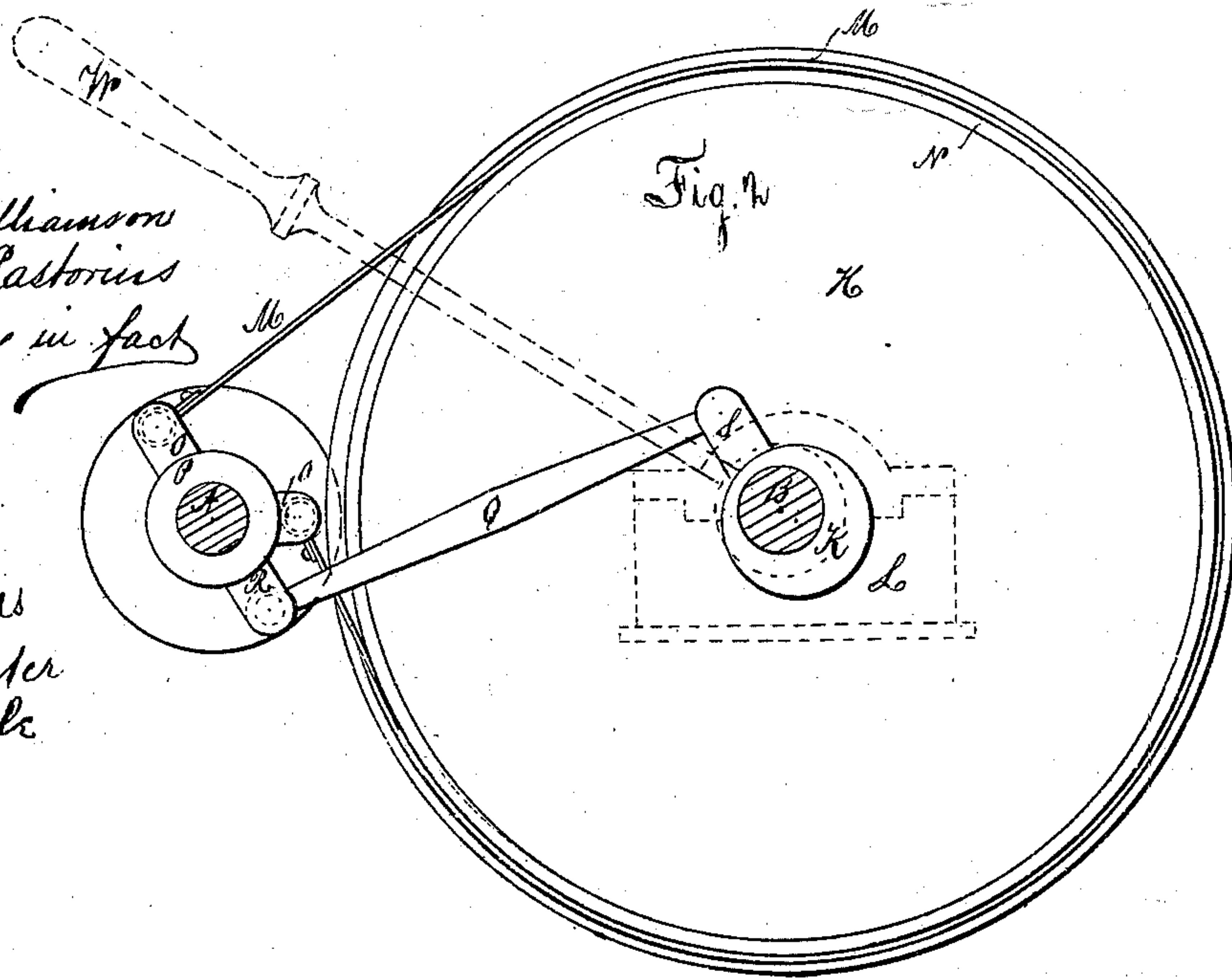
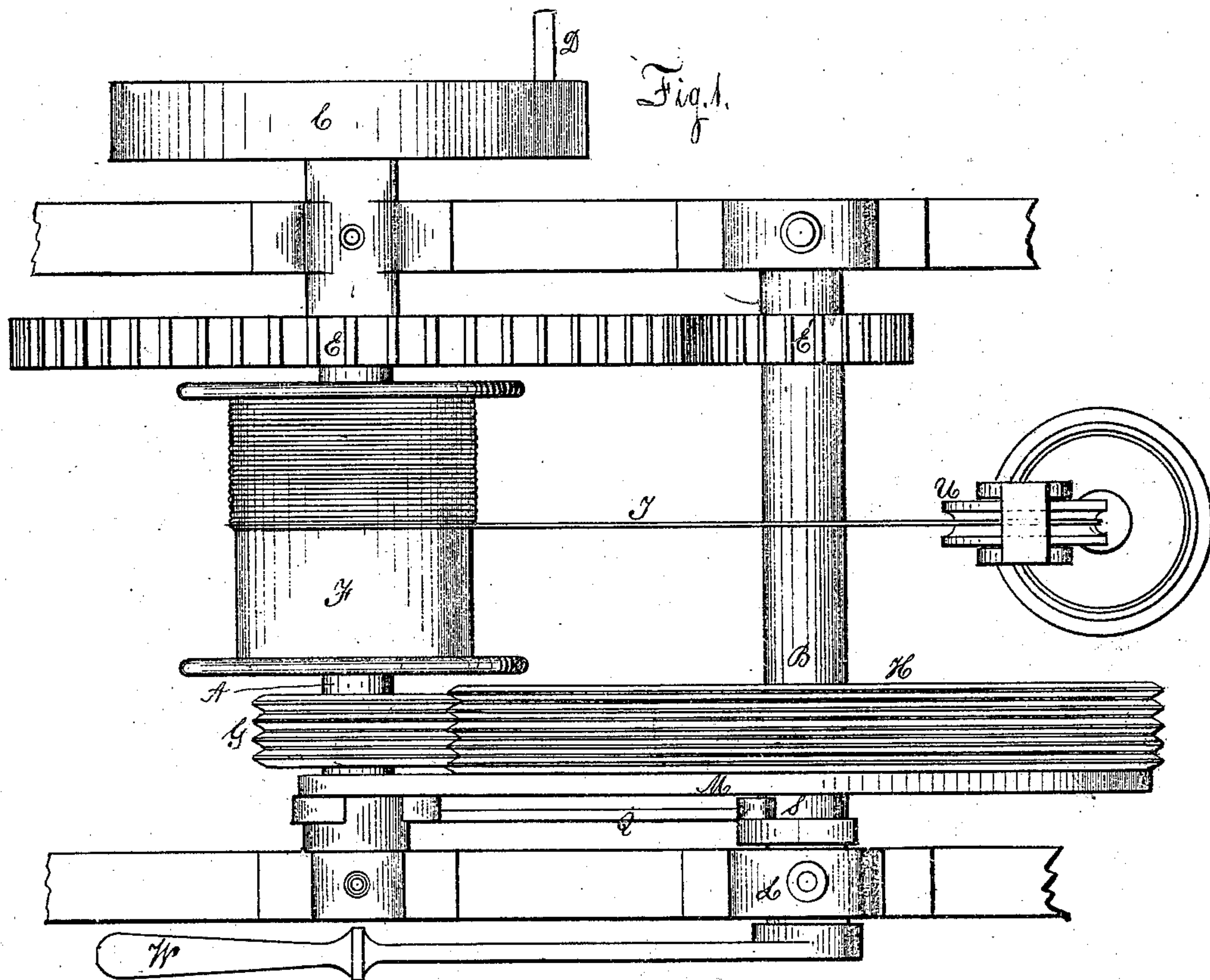


W.C. Williamson,

Hoisting Brake.

No. 106,642.

Patented Aug. 23. 1870.



Inventor
William C. Williamson
By Francis D. Pastorius
his Attorney in fact

Witnesses
Wm. Allister
John Yille

UNITED STATES PATENT OFFICE.

WILLIAM C. WILLIAMSON, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
WILLIAMSON BROTHERS, OF SAME PLACE.

IMPROVED HOISTING-MACHINE.

Specification forming part of Letters Patent No. **106,642**, dated August 23, 1870.

To all whom it may concern:

Be it known that I, WILLIAM C. WILLIAMSON, of the city and county of Philadelphia, and State of Pennsylvania, have invented an Improved Hoisting-Machine; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

My improved hoist is started and stopped with the same lever which throws the friction-wheels in and out of contact, substantially as hereinafter shown and described.

On reference to the accompanying drawing, making part of this specification, Figure 1 is a plan view, and Fig. 2 is a side view of the friction-wheels and brake-strap, and of the mechanism for starting, stopping, and braking the same.

Similar letters refer to similar parts in the several views.

A and B are parallel shafts, which turn in suitable bearings of the housing or framing of the hoist. The former is driven by means of a pulley, C, or crank, D. E is a spur-gear, which takes into the fixed pinion E' on the shaft B. It, together with the drum F, turns loosely and independently on the shaft A. G is a grooved friction-wheel on the shaft A, which takes into or contacts with a large friction-wheel, H, on the shaft B.

The shaft B has a vibrating motion around its outer end as a center, which vibration is caused and controlled by the eccentric K turning in the box or journal L, the end of the shaft being journaled eccentrically in the said eccentric, so that the end of the shaft is advanced to or from the shaft A, and the frictional contact between the grooved friction-wheels is either made or broken.

M is a friction-band, which takes around the rim or flange N of the large friction-wheel H, its ends being fastened to the arms O of the rocker P on the shaft A.

Q is a connecting-rod between the arm R of the rocker and the rock-arm S on the shaft B. The eccentric throws the large friction-wheel out of gear with the small one, and, by means of the link, tightens the friction-band, and thereby prevents the turning of shaft B, and, of consequence, the drum F, through the medium of the toothed gear E E'.

In place of the rocker P, an independent rock-shaft can be used. In that case it will be necessary to use an eccentric on both ends of the shaft B.

The hoisting-rope T is wound around the drum F, and, in this instance, passes over the pulley U; but it can be led and directed to suit the location of the hoist and the means at command.

When there are two eccentrics used on the shaft B, with an independent rock-shaft, an independent band-wheel for the strap or brake can be employed, or a strap-flange or rim can be formed on the drum. An eccentric can be used in place of the rocker P.

The drum F can be fastened on the shaft A to turn with it, in which case the gear-wheels E E' must be dispensed with. As shown, in the present instance they are used merely to increase the power of the hoist.

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

The eccentric K, in combination with the friction band or strap M, the rocker P, link Q, and the rock-arm S, substantially as is herein shown and described.

In testimony whereof I hereunto sign my name to this specification in presence of two subscribing witnesses.

WILLIAM C. WILLIAMSON.

Witnesses:

FRANCIS D. PASTORIUS,
JOHN YILLE.