

G. C. SWEET & W. O. WOODMAN.

Friction Clutches.

No. 150,443.

Patented May 5, 1874.

Fig. 1.

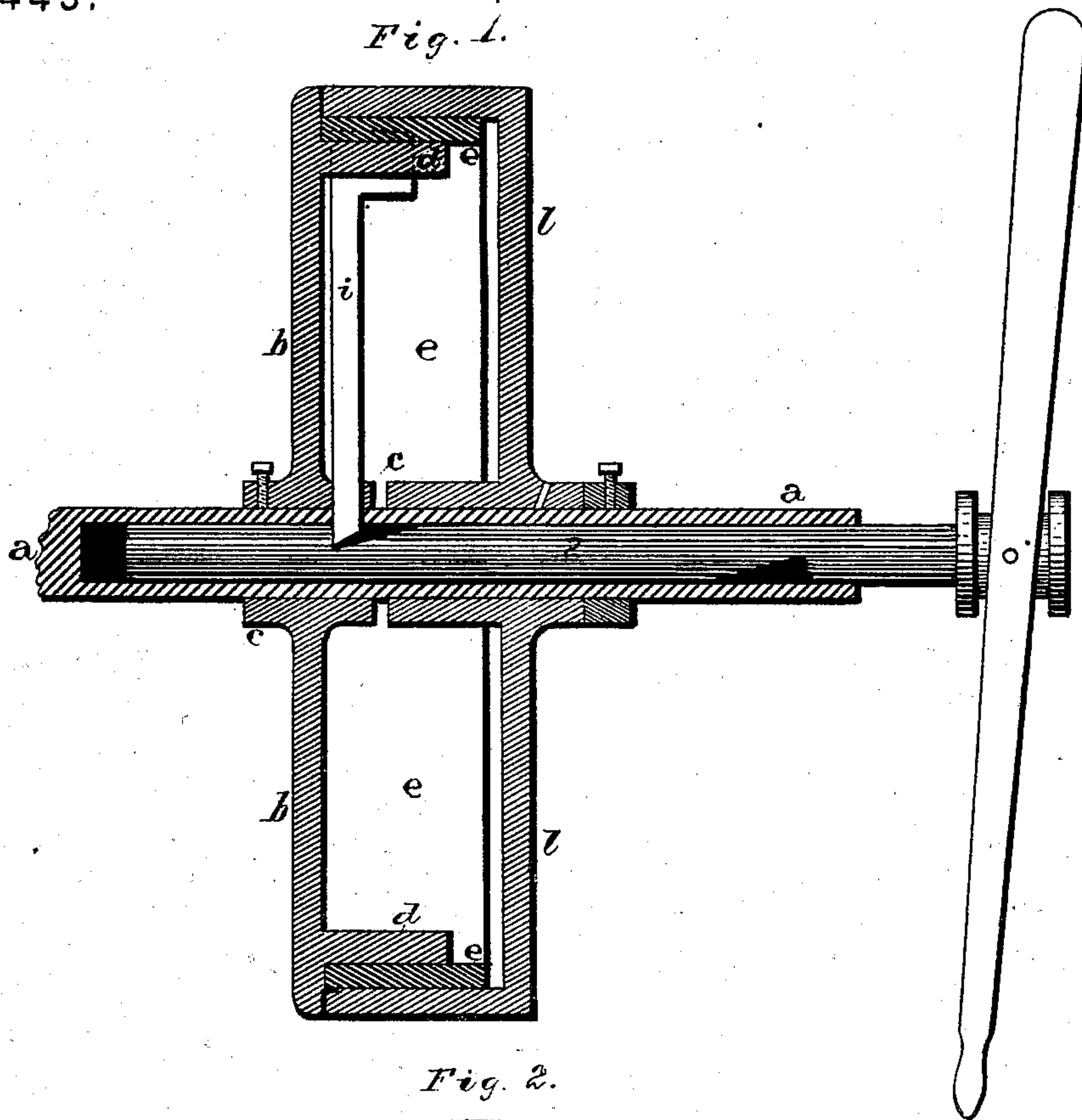
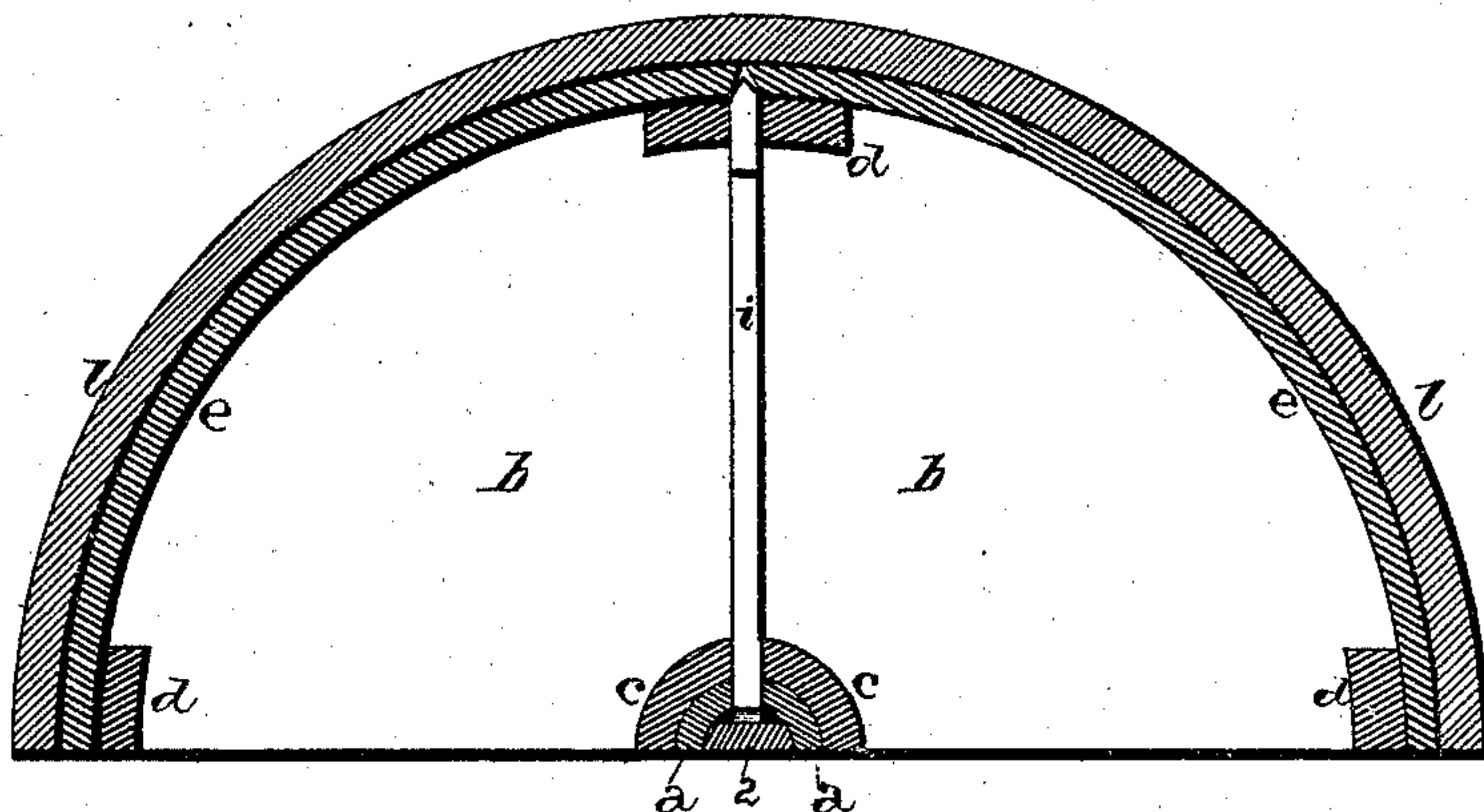


Fig. 2.



WITNESSES.

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INVENTORS.

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per
F. A. Lehmann, Atty.

UNITED STATES PATENT OFFICE.

GEORGE C. SWEETT AND WILLIAM O. WOODMAN, OF NORWICH, CONN.

IMPROVEMENT IN FRICTION-CLUTCHES.

Specification forming part of Letters Patent No. **150,443**, dated May 5, 1874; application filed April 15, 1874.

To all whom it may concern:

Be it known that we, GEO. C. SWEETT and WM. O. WOODMAN, of Norwich, in the county of New London and State of Connecticut, have invented certain new and useful Improvements in Pulleys; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

The nature of our invention relates to an improvement in friction-pulleys; and it consists in the arrangement and combination of devices, which will be more fully described hereafter, whereby the pulley can be made to revolve with the shaft or allowed to turn idly upon it, as may be desired.

a represents the shaft, to which the flange *b* is secured by means of the collar *c* and set-screw. Formed upon the inner side of this flange are a number of studs or projections, *d*, around which is placed the expansible split ring *e*. Extending outward, and passing through the shell of the shaft, the collar *c*, and one of the projections *d*, is a sliding rod, *i*, having a wedge-shaped end, which fits in a V-shaped notch cut in the inner side of the ring *e*, as shown in Figure 2. The end of the

shaft *a* is bored out, so as to receive a sliding notched rod, 2, which is moved back and forth by a hand-lever attached to its outer end. The inner end of the rod *i* rests in the notch formed in the top of the sliding rod 2, so that, when the rod 2 is moved by the hand-lever, the inclined side of the notch will act as a lever to force the rod *i* outward, which movement causes the ring *e* to expand outward; and, by frictional contact with the inner side of the loose pulley *l*, bind the two together, and cause the pulley to revolve with the shaft. The rod 2 may have one or two notches cut in its sides, so that the rod may be reversed when so desired.

Having thus described our invention, we claim—

The combination of the hollow shaft *a*, sliding notched rod 2, flange *b*, rod *i*, split expansible ring *e*, and loose pulley *l*, substantially as shown and described.

In testimony that we claim the foregoing we have hereunto set our hands this 11th day of April, 1874.

GEO. C. SWEETT.
WM. O. WOODMAN.

Witnesses:

WM. P. MYERS,
JAMES E. HILL.