

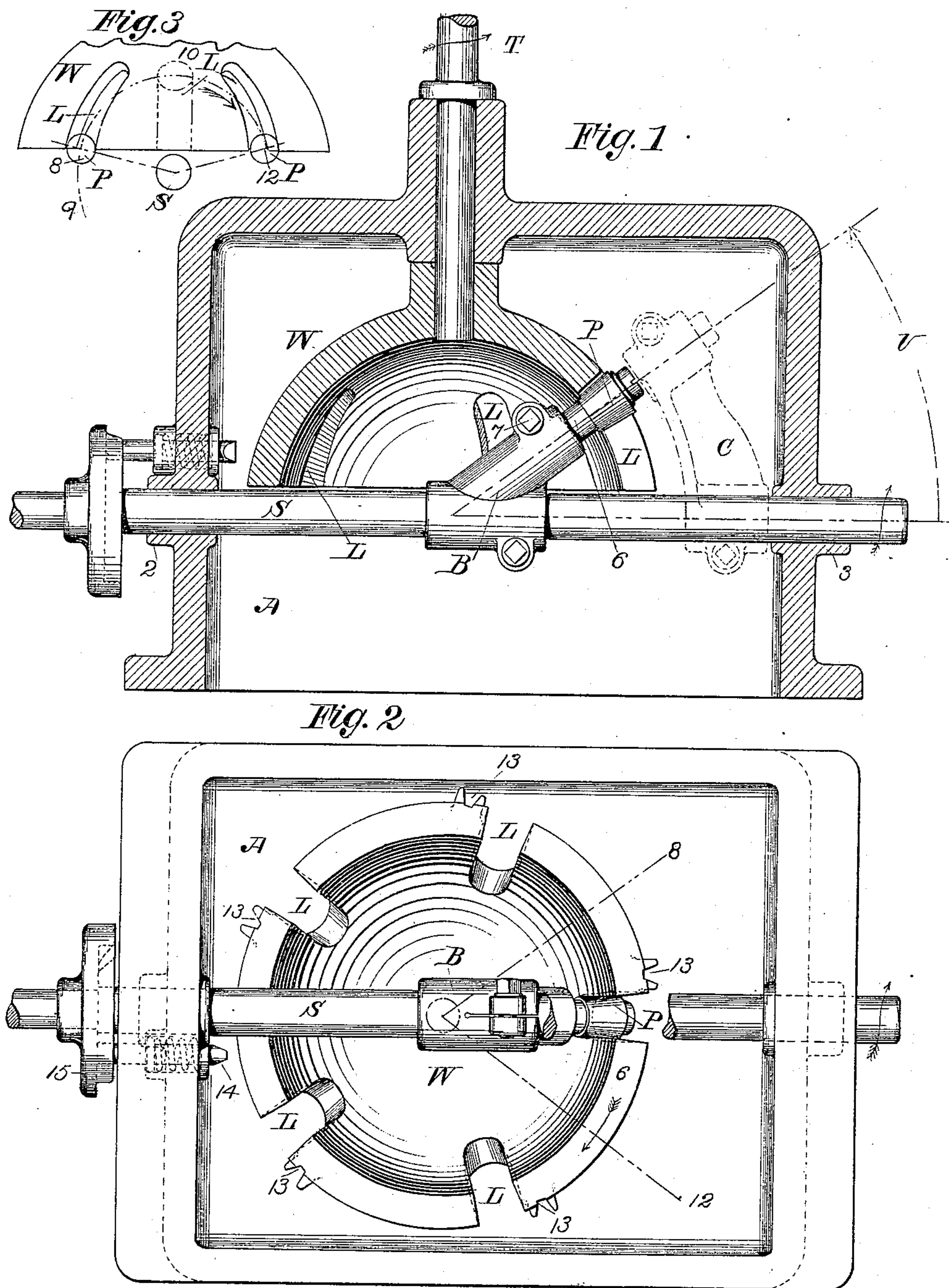
(No Model.)

F. H. RICHARDS.

DEVICE FOR CONVERTING MOTION.

No. 333,161.

Patented Dec. 29, 1885.



Witnesses:
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UNITED STATES PATENT OFFICE.

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DEVICE FOR CONVERTING MOTION.

SPECIFICATION forming part of Letters Patent No. 333,161, dated December 29, 1885.

Application filed October 19, 1885. Serial No. 180,366. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS H. RICHARDS, a citizen of the United States, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Mechanism for Converting Motion, of which the following is a specification.

My invention relates to that class of devices in which continuous rotary motion is converted into intermittent rotary motion; and it consists in the combinations hereinafter described and claimed.

In the drawings accompanying and forming a part of this specification, Figure 1 is a longitudinal vertical section of a mechanism embodying my improvements. Fig. 2 is a view of the under side of the same. Fig. 3 is an explanatory diagram.

Similar characters designate like parts in all the figures.

The operative parts of the mechanism are carried by a frame-work, A, having in this instance a box-shaped form, but of which the construction may be varied according to the circumstances under which the invention is to be used.

S is the continuously-rotating shaft, supported in bearings 2 3. It is to be prevented from having longitudinal motion in said bearings by collars or other suitable means not shown.

T is the intermittently-rotating shaft, standing about vertical to and about in the same plane with shaft S. Said shaft T carries a disk-shaped wheel, W, which is substantially a segment of a hollow sphere having its center about at the axis of shaft S. The wheel has a series of equidistant slots, L, substantially radial thereto, whereby it is operated. As shown in the drawings, said slots are five in number; but four, six, or more may be used equally as well.

The driving-shaft S carries a roller, (or pin,) P, at angle thereto, which angle is indicated at V, and is ordinarily about one-half the angle between two adjacent slots, L. The roller has a stem, 6, which is adjustably fixed in a bracket, B, rigidly attached to shaft S. The

bracket may, if preferred, be constructed as indicated by dotted lines at C, Fig. 1, and placed outside of wheel W.

The roll P is, in practice, made tapering, and the slots conformably shaped for taking up any play arising from wear or otherwise. To effect this, it is only necessary to loosen clamp-screw 7 and adjust stem 6 in the bracket B.

The operation of the above described mechanism will be readily understood from Fig. 3. Wheel W standing, as shown by solid lines, the roll enters a slot at 8, passes on, as indicated by circle 9, to its uppermost position 10, and then to position 12, thus turning the wheel through one division, and bringing the next slot to position 8, ready for the next turn of the roll.

In Figs. 1 and 2 the roll is shown at position 10, positions 8 and 12 being shown in Fig. 2 by dotted lines.

When running at low velocities, the wheel may usually be relied on to remain at rest while disengaged from the roller; but sometimes a holdfast apparatus may be required. For this purpose the wheel may have a series of notches, 13, into which a bolt, 14, may be forced by cam 15 at the moment when said wheel has completed its motion. When the wheel is about to move, just as roll P enters slot L, the bolt may be withdrawn by a spring or by the cam.

Having thus described my invention, I claim—

1. The combination of wheel W, substantially of the form of a spherical segment, having a series of slots, and shaft S, having a roll set inclined thereto and working in said slots, all arranged substantially as described, and for the purpose specified.

2. The combination of wheel W, having slots L, shaft S, bracket B, stem 6, adjustable in said bracket, and the tapered roll P, substantially as described, and for the purpose specified.

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Witnesses:

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