

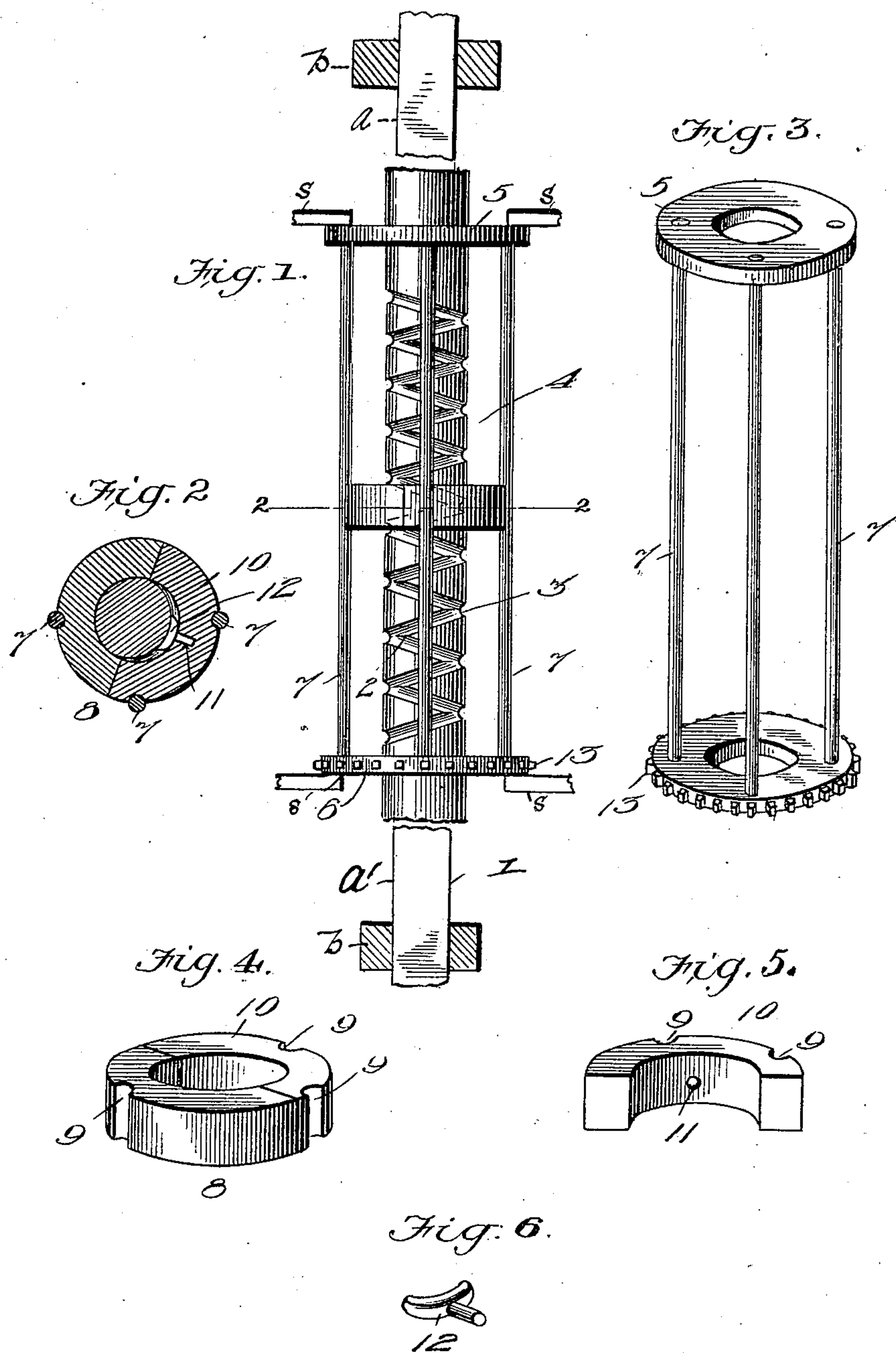
No. 680,372.

Patented Aug. 13, 1901.

O. W. BROWN.
MECHANICAL MOVEMENT.

(Application filed Sept. 6, 1900.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

ORLANDO W. BROWN, OF PITTSBURG, PENNSYLVANIA.

MECHANICAL MOVEMENT.

SPECIFICATION forming part of Letters Patent No. 680,372, dated August 13, 1901.

Application filed September 6, 1900. Serial No. 29,200. (No model.)

To all whom it may concern:

Be it known that I, ORLANDO W. BROWN, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented new and useful Improvements in Mechanical Movements, of which the following is a specification.

My invention relates to a new and useful means for converting a rotary motion into a reciprocating motion; and the object is to simplify and improve the existing art.

With this object in view my invention consists in the novel construction and combination of parts, as will be hereinafter fully described and particularly pointed out and distinctly claimed.

I have fully and clearly illustrated the improvement in the accompanying drawings, wherein—

Figure 1 is a side elevation of the device. Fig. 2 is a cross-section on line 2 2 of Fig. 1. Fig. 3 is a perspective view of the rotative drum or disk-frame. Fig. 4 is a detail view of the collar carried by the drum or disk-frame. Fig. 5 is a detail of one of the collar-sections, and Fig. 6 is a detail of the shoe or dog which engages the spiral grooves.

Referring to the drawings, 1 designates a shaft having square or angular portions *a a'*, mounted slidably and against rotation in suitable bearings *b b'*, the shaft between the portions *a a'* being round, as shown in the drawings, and in this round part are formed two reversely-arranged spiral grooves 2 3, extending for such distance as may be required to accomplish the strokes of the reciprocations. On the end portions of the round section of the shaft are loosely mounted two disks 5 6, connected by a plurality of rods 7. One of the disks is formed with sprockets 13, adapted to carry a sprocket-chain (not shown) connected with a power, and thereby impart rotation to the drum or frame 4. The connected disks are held against endwise displacement or move-

ment by means of stays bearing against the faces of the disks, as indicated.

On the shaft 1, within the disk-frame, is mounted a sectional collar 8, held in the frame by grooves 9 engaging the rods 7. This collar 8 is made up of two semicircular parts or sections, which when assembled as indicated are maintained in relative position by the engagement of the grooves with the rods and the tendency of centrifugal force to separate them at their radial line. One of the sections of the ring or collar 8, as 10, is formed with an interior recess or seat 11, in which is loosely disposed the stem of a shoe 12 to engage in the spirals of the grooves in the shaft, so that when the disks and ring are rotated the shoe will traverse the grooves and reciprocate the shaft.

The sprockets 13 on the disk 4 are adapted to have a chain applied thereon in connection with a power, whereby the disks are rotated and the reciprocation of the shaft attained.

It will be readily perceived that the order of movement may be reversed—that is, the shaft may be rotated and the disks remain stationary rotatively and reciprocative lengthwise on the shaft.

What I claim is—

A mechanical movement comprising a reciprocable shaft formed with reversed spiral grooves in its surface, a collar loosely mounted on the shaft and formed with an interior recess, a shoe loosely disposed in the recess and engaging the spiral grooves, disks loosely mounted on the shaft, and tie-rods connecting said disks and engaging the said collar, and means to rotate the disks with the collar, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

ORLANDO W. BROWN.

Witnesses:

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