

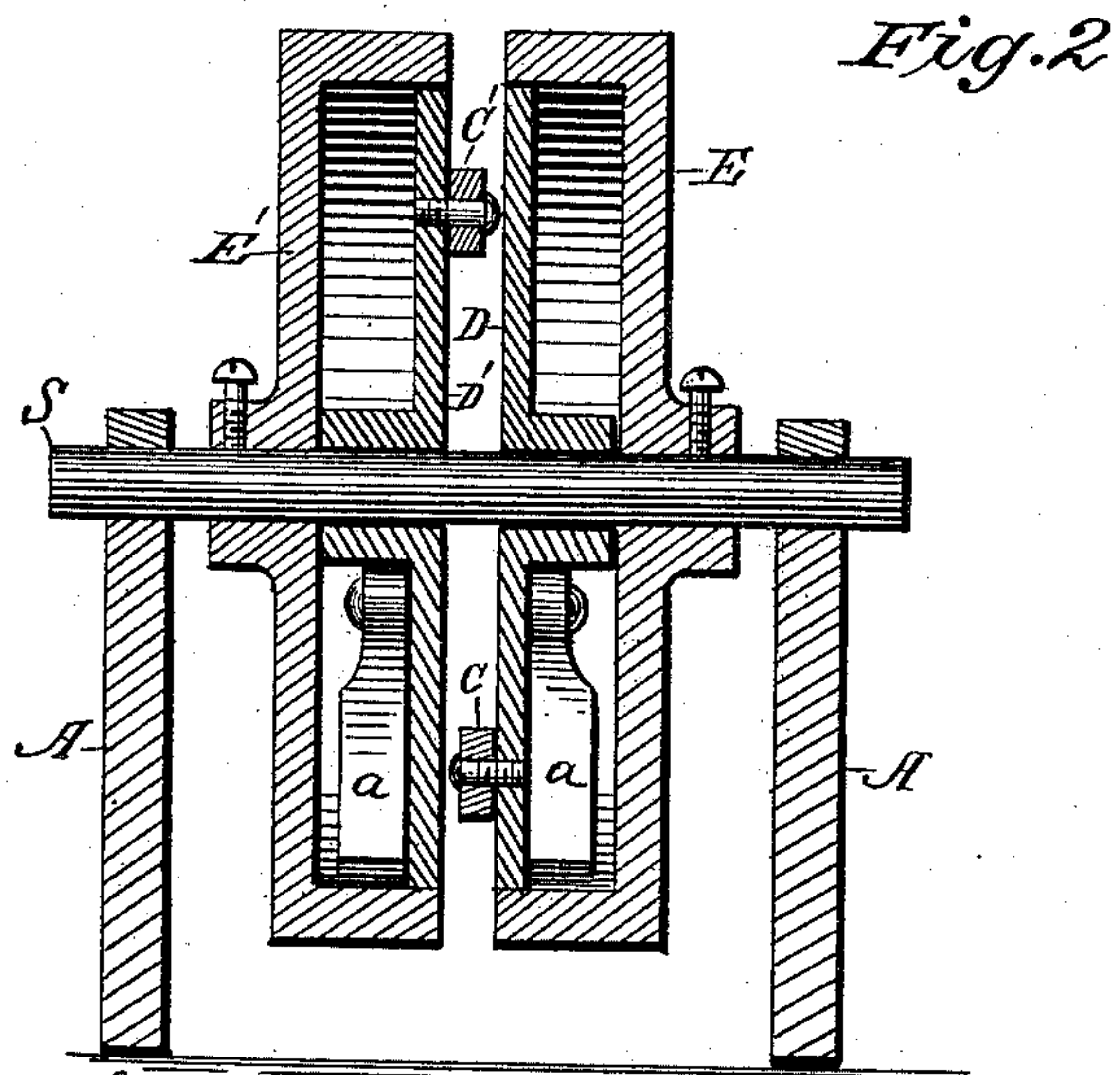
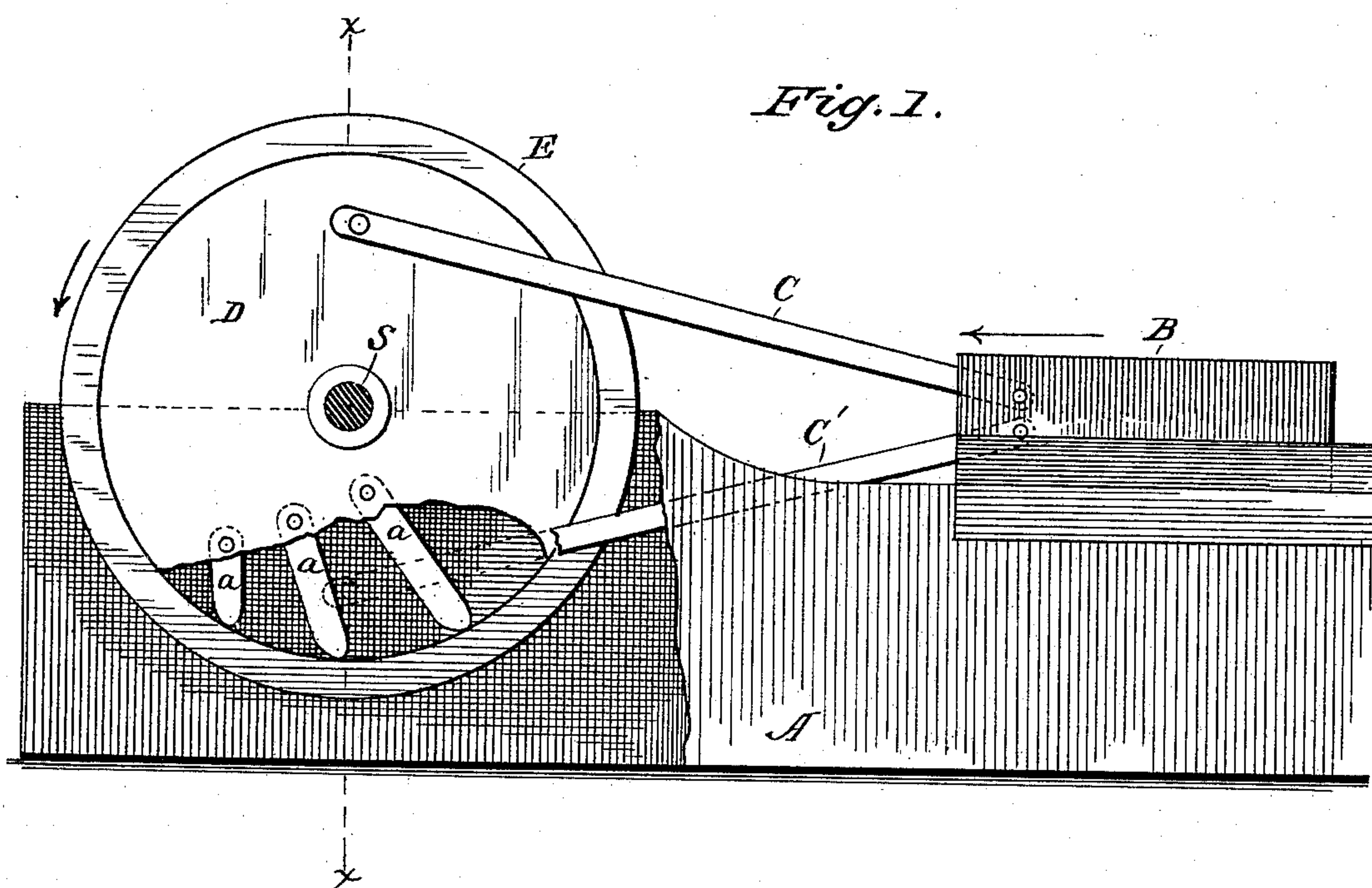
(No Model.)

M. S. REXFORD.

INTERMITTENT GRIPPING DEVICE.

No. 383,371.

Patented May 22, 1888.



WITNESSES:

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UNITED STATES PATENT OFFICE.

MORTIMER S. REXFORD, OF NORMAN, DAKOTA TERRITORY.

INTERMITTENT GRIPPING DEVICE.

SPECIFICATION forming part of Letters Patent No. 383,371, dated May 22, 1888.

Application filed August 23, 1887. Serial No. 247,695. (No model.)

To all whom it may concern:

Be it known that I, MORTIMER S. REXFORD, of Norman, in the county of Cass, Dakota Territory, have invented a new and useful Improvement in Intermittent Gripping Devices, of which the following is a specification.

The object of my invention is to provide a simple durable mechanical movement for converting reciprocating into a continuous rotary motion; and to this end it consists in the peculiar construction and combination of parts, which I will now proceed to describe with reference to the drawings, in which—

Figure 1 is a central vertical longitudinal section, partly broken away, and Fig. 2 a vertical cross section through line *x x*.

In the drawings, A represents the bed-frame. At one end of the same, in suitable journal-boxes, is carried the rotary shaft S, and at the other end are arranged guides, in which slides a cross-head, B, to which a reciprocating motion is applied. To this cross-head are jointed, one above the other, two pitmen or connecting-rods, C C', which are respectively connected by wrist-pins to two oscillating plates, D D', one of which lies on one side of the pitmen and the other upon the other side. Both these plates turn loosely on the shaft S.

E E' are disks, which are rigidly connected to the rotary shaft, and occupy a position just outside the loose plates. These outer disks have at the periphery an inwardly-projecting flange that extends over the edges of the loose plates. To each of the loose plates are pivoted or loosely pivoted one or more pawls, *a*, which occupy a position between the loose plate and the rigid disk, and with their ends resting against the inner periphery of the flange of the rigid disk. These pawls are disposed at an angle to the radial line, which permits them,

when the loose plate is moved backward, to move freely with the loose plate; but as soon as the loose plate moves in the opposite direction these pawls engage with the flange of the rigid disk, and by a bracing action connect the loose plate and the rigid disk firmly together, so as to transmit the rotary motion to the shaft. This action of the pawls against the flange of the rigid disk is very quick and positive and without lost motion, thus involving little or no wear and tear on the parts.

In order to make the rotary motion of the shaft S continuous, two sets of disks and plates with pawls are used, as shown in Fig. 2, and the plate with one set of pawls is going backward while the one with the other set is going forward. This reversed motion of the two loose plates is given from the same cross-head by connecting the pitmen to the plates on opposite sides of the shaft S.

For reversing the rotary motion imparted by my device, it is only necessary to reverse the position of the pawls.

Having thus described my invention, what I claim as new is—

The combination of a rotary shaft, two flanged disks rigidly attached thereto, two plates adapted to loosely oscillate hung upon the shaft between the disks, and having pawls engaging with the inner periphery of the flanges of the disks, a reciprocating cross-head, and two pitmen connected at one end to the cross-head and at the other to the two loose plates upon opposite sides of the shaft, substantially as and for the purpose described.

MORTIMER S. REXFORD.

Witnesses:

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