

C. H. DEMPSEY.  
 RELEASABLE CONNECTION.  
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912,087.

Patented Feb. 9, 1909.

Fig. 1

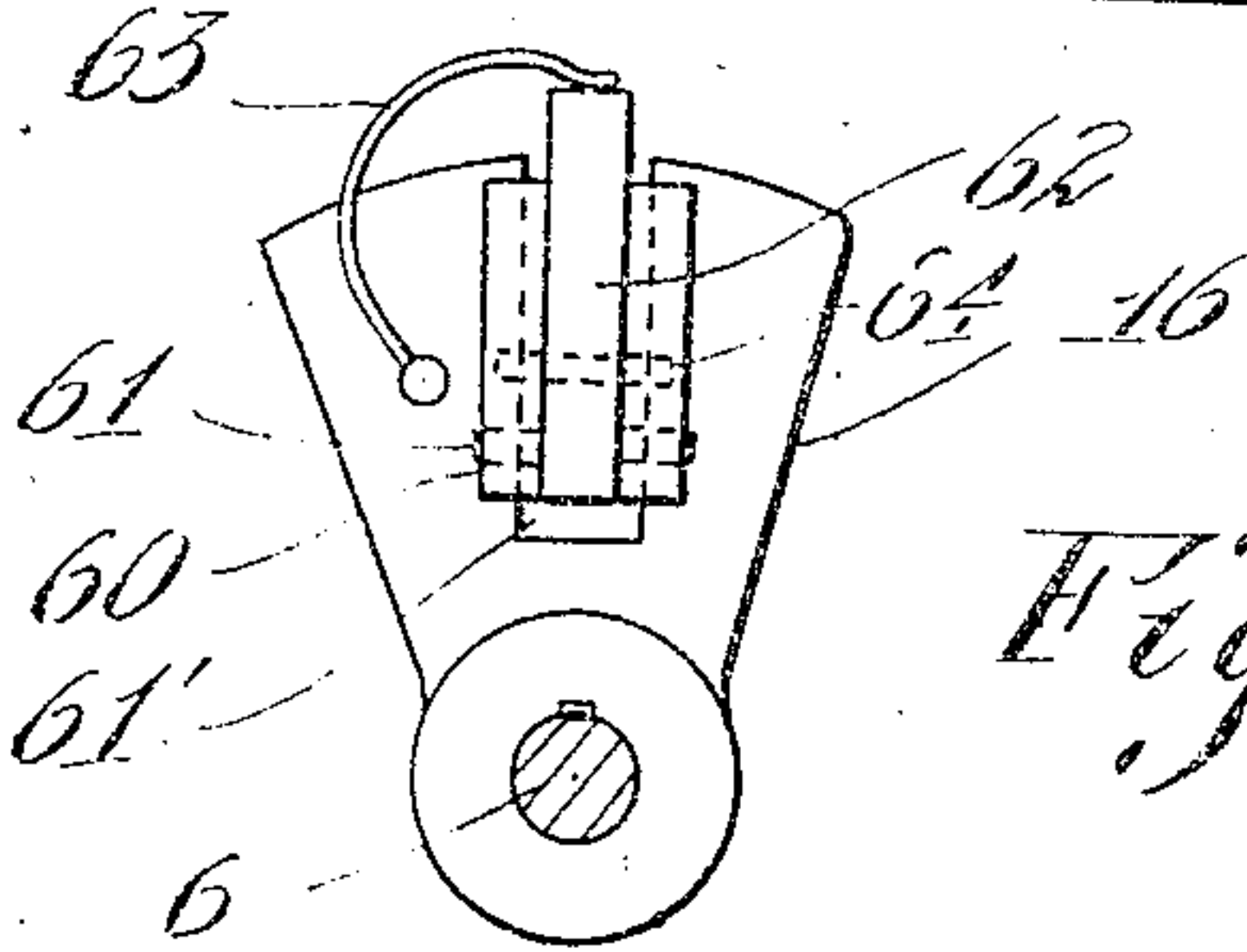
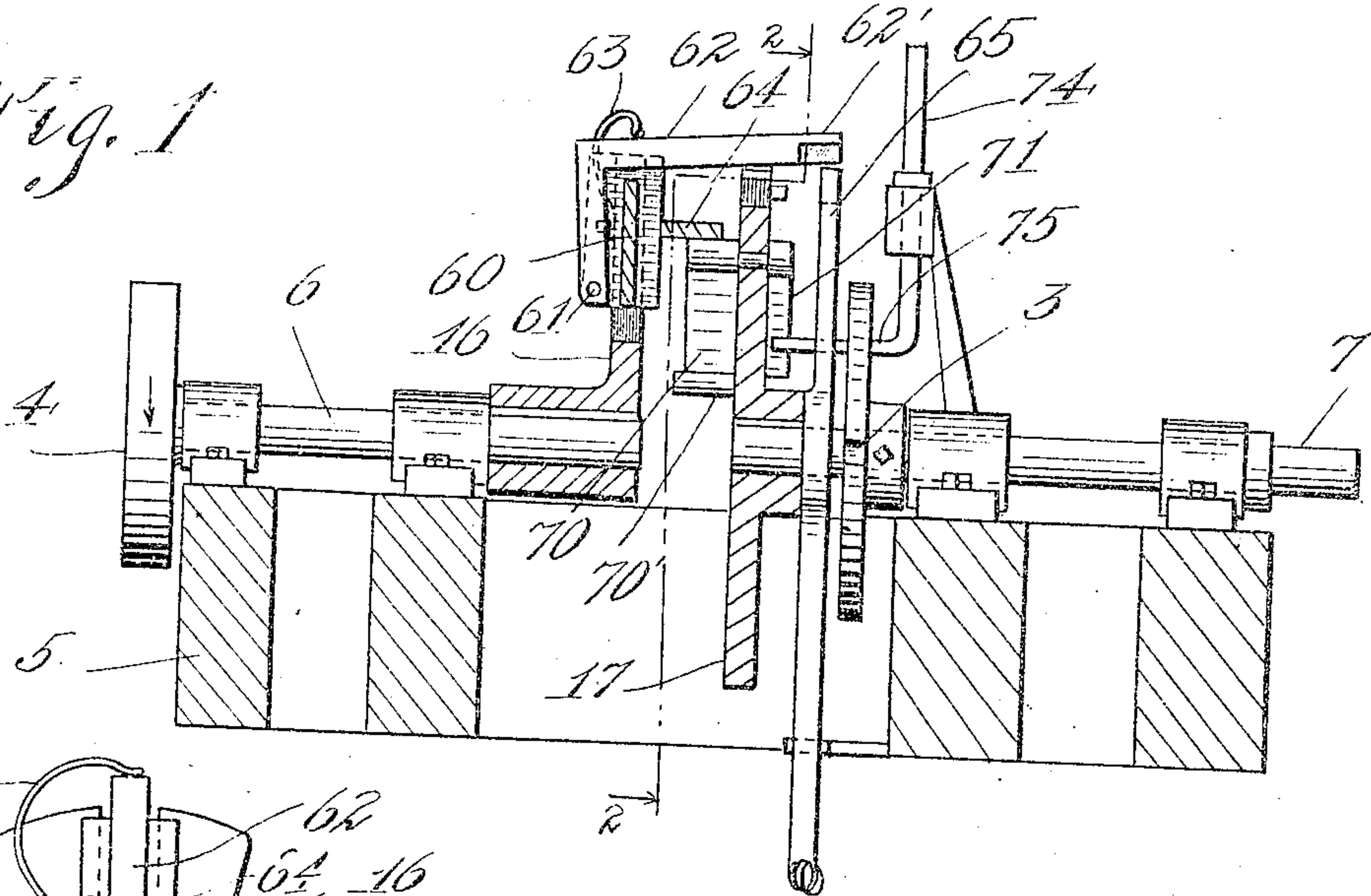


Fig. 2

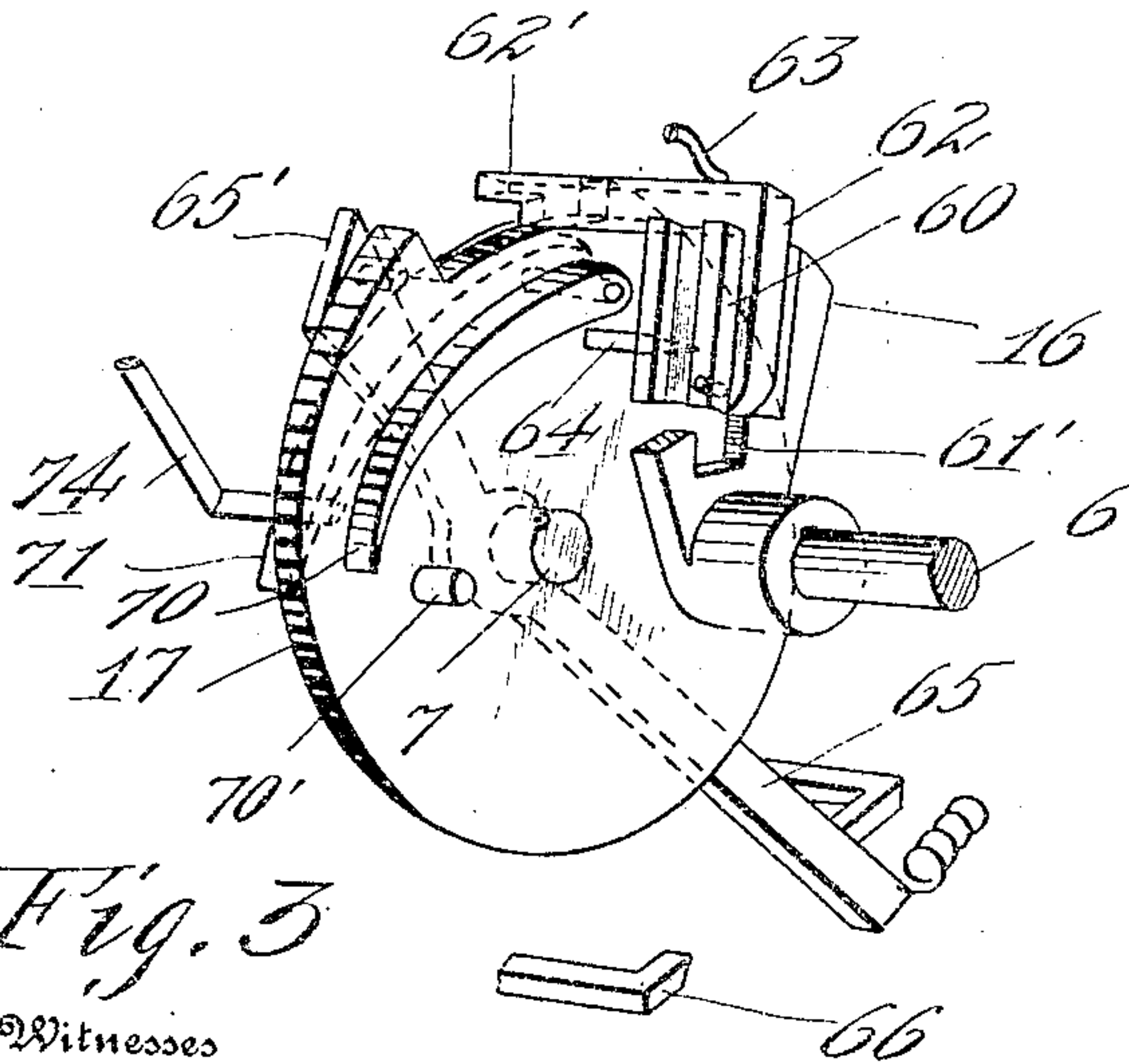


Fig. 3

Witnesses

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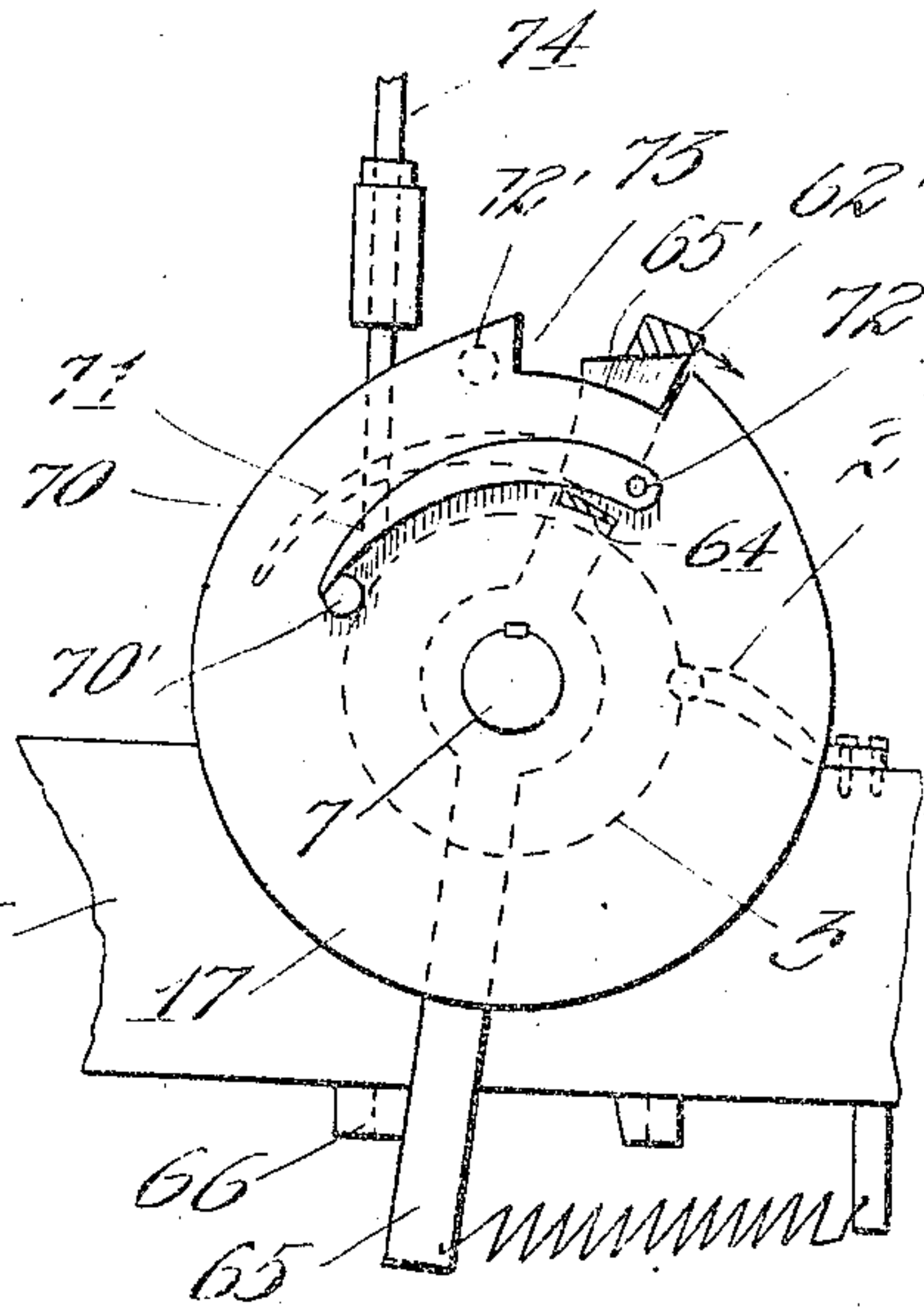


Fig. 4

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# UNITED STATES PATENT OFFICE.

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## RELEASABLE CONNECTION.

No. 912,087.

Specification of Letters Patent.

Patented Feb. 9, 1909.

Application filed June 25, 1908. Serial No. 440,409.

*To all whom it may concern:*

Be it known that I, CHARLES H. DEMPSEY, a citizen of the United States of America, and a resident of the city of Riverside, in the county of Riverside and State of California, have invented certain new and useful Improvements in Releasable Connections, of which the following is a specification.

My invention has particular reference to automatically releasable connections for rotary drives.

The primary object of the present invention is the provision of a simple and improved form of connection of the above type whereby intermittent movement of a predetermined degree may be imparted to the driven mechanism from a continuously operating driving mechanism.

In my application for patent on improvement in weighing machines executed on even date herewith and bearing Serial No. 440,410 I have disclosed the present invention embodied therewith. It is however capable of application in connection with other machines and in mechanism of various types as will be readily understood.

In the accompanying drawing I have illustrated the invention in such form as now preferred by me.

With reference to the drawings wherein similar reference numerals designate corresponding parts throughout: Figure 1 is a view in partial longitudinal section of a drive mechanism embodying my invention, Fig. 2 is a transverse sectional view taken on line 2—2 of Fig. 1, illustrating the relative positions of said parts in effecting a releasing operation. Fig. 3 is a fragmentary perspective view illustrating the device with the connecting parts in position for active operation, and Fig. 4 is a view of one of the carriers removed.

In the present embodiment I have illustrated my invention in connection with shaft sections 6 and 7 suitably journaled on frame 5 for independent rotary movement. Secured to section 6 is a pulley 4 to which power is applied for continuous operation of said section, and related to section 7 is a catch contrivance comprising a disk 3 secured thereto and a relatively fixed catch 2 in the form of a spring bar normally engaging in a peripheral notch of the disk to yieldingly hold the same from movement.

Rotatable with sections 6 and 7 respectively are companion carriers as an arm 16

and a disk 17, the latter of which is provided with curved arms 70 and 71 arranged at opposite side faces thereof and secured at their rear ends to a common pivot 72 journaled in carrier 17 adjacent the rear end of a peripheral notch 73 thereof. Provided on carrier 17 is a lug 72' which serves to limit the outward movement of arms 70 and 71.

Mounted on carrier 16 in slidable engagement with the edge walls of a radially disposed slot 61' thereof is a head 60 having pivotal engagement as at 61 with one end of an L-shaped catch 62 which projects across the edge of carrier 17 and normally rides thereupon. Engaging with catch 62 is a spring 63 arranged to press inwardly upon the same forwardly of pivot 61 directly over head 60.

64 designates a suitable shoe secured to head 60 and adapted during inactive operation of the device to ride upon arm 70 and carry catch 60 clear of notch 73—the said arm normally resting by gravity with its free end lying within the sweep of said shoe upon a lug 70' of carrier 17.

Related to catch 62 is a spring-retracted trip 65 swingably supported on shaft section 7 and normally lying with its upper beveled end portion 65' in the path of a beveled end portion 62' of catch 62 when the latter is engaged in notch 73, as indicated in Fig. 2. Thus the catch will engage and move said trip during active operation of the device. The movement of trip 65 with catch 62 is however limited by a relatively fixed stop 66 which serves to retain the trip so that the beveled end portion of the catch will ride up the inclined face of the trip and thereby force the catch outwardly to disengage it from notch 73 at the end of a complete revolution of carrier 17 as indicated in Fig. 3.

While other provision may be made for setting the device for active operation I have shown a shipper means in the form of a rod 74 slidably mounted on frame 5 and provided with a laterally projecting termination 75 underlying arm 71.

In operation catch 62 normally rides on carrier 17 and shoe 64 on arm 70 to carry the catch clear of notch 73. When desired to effect operation of shaft 7, shipper 74 is operated to swing arm 71 and thereby move arm 70 clear of the path of shoe 64, thereby permitting spring 63 to act upon the catch and force the same into notch 73, as indicated in Fig. 3 and thus effect movement of



carrier 17 with carrier 16. As the carriers are completing the revolution the end portion 62' of catch 62 engages the beveled end surface of trip 65 and moves the latter into engagement with stop 66 thereby effecting release of the catch from carrier 17 as heretofore described, as catch 2 engages its seat in disk 3 and arms 70, 71 return to their normal positions by gravity.

10 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States of America, is:

1. In combination with drive and driven shafts, a releasable connection comprising a yieldingly pressed catch on one of said shafts, and a member on the other formed with means for engagement by said catch for connecting said shafts for simultaneous movement, a movable track on said member, means for engagement with said track for holding said catch from engagement with the engaging means of said member, and means for moving said track out of the path of said first means.

2. A releasable connection comprising two carriers supported for independent rotation, a catch on one of said carriers, the other carrier being provided with means to be engaged by said catch for connecting said carriers for simultaneous movement, a movable means on said last named carrier normally holding said catch from engagement with the engaging means of said other carrier, means for operating said first means to release said catch so that it can connect said carriers, and means for moving said catch to disconnect said carriers by and during movement thereof.

3. A releasable connection comprising two carriers supported for independent rotation, one of said carriers being provided with a notch, a member slidably supported on the other carrier for movement in an outward direction, a catch pivoted to said member for engagement in the notch of said first named carrier, a movable track on said first named carrier, a shoe on said member adapted to ride on said track to prevent said catch engaging in said notch, and means to move said track out of the path of said shoe.

4. A releasable connection comprising two carriers supported for independent rotation, one of said carriers being provided with a notch, a member slidably supported on the other carrier for movement in an outward direction, a catch pivoted to said member for engagement in the notch of said first named carrier, a movable track on said

first named carrier, a shoe on said member adapted to ride on said track to prevent said catch engaging in said notch, and means to lift said catch out of said notch by and during movement of said carriers.

5. A releasable connection comprising two carriers supported for independent rotation, a head supported on one of said carriers for sliding in an outward direction, a yieldingly held catch pivoted to said head, said other carrier being formed with a notch for reception of said catch, a movable track on said last named carrier, a shoe on said head arranged to engage said track whereby said head will be moved outwardly so that said catch will not engage in said notch, means to move said track out of the path of said shoe, and means having a cam portion arranged to be engaged by said catch for releasing the same from engagement in said notch.

6. A releasable connection, comprising two carriers supported for independent rotation, a catch on one carrier, the other of said carriers being formed with a notch for reception of said catch, means tending to yieldingly press said catch into the notch of said carrier, a movably supported means normally holding said catch from engagement in said notch, means to move said movably supported means to release said catch, a yieldingly held swing arm formed with a cam portion arranged to be engaged by said catch to force the same out of said notch, and stops for limiting the movement of said swing arm.

7. A releasable connection, comprising two carriers supported for independent rotation, a head supported on one of said carriers for sliding in an outward direction, a catch pivoted to said head, said other carrier being formed with a notch for reception of said catch, means yieldingly holding said catch and head from outward movement, a track pivoted to said last named carrier, a shoe on said head adapted to engage said track to slide said head outwardly, a second track fixed to said first named track, and shifter provided with a bearing part arranged to engage said second track and swing the same to move said first track out of the path of said shoe.

Signed at Seattle, Washington this 1st day of June 1908.

CHARLES H. DEMPSEY.

Witnesses:

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CHARLES E. SHEPARD.