

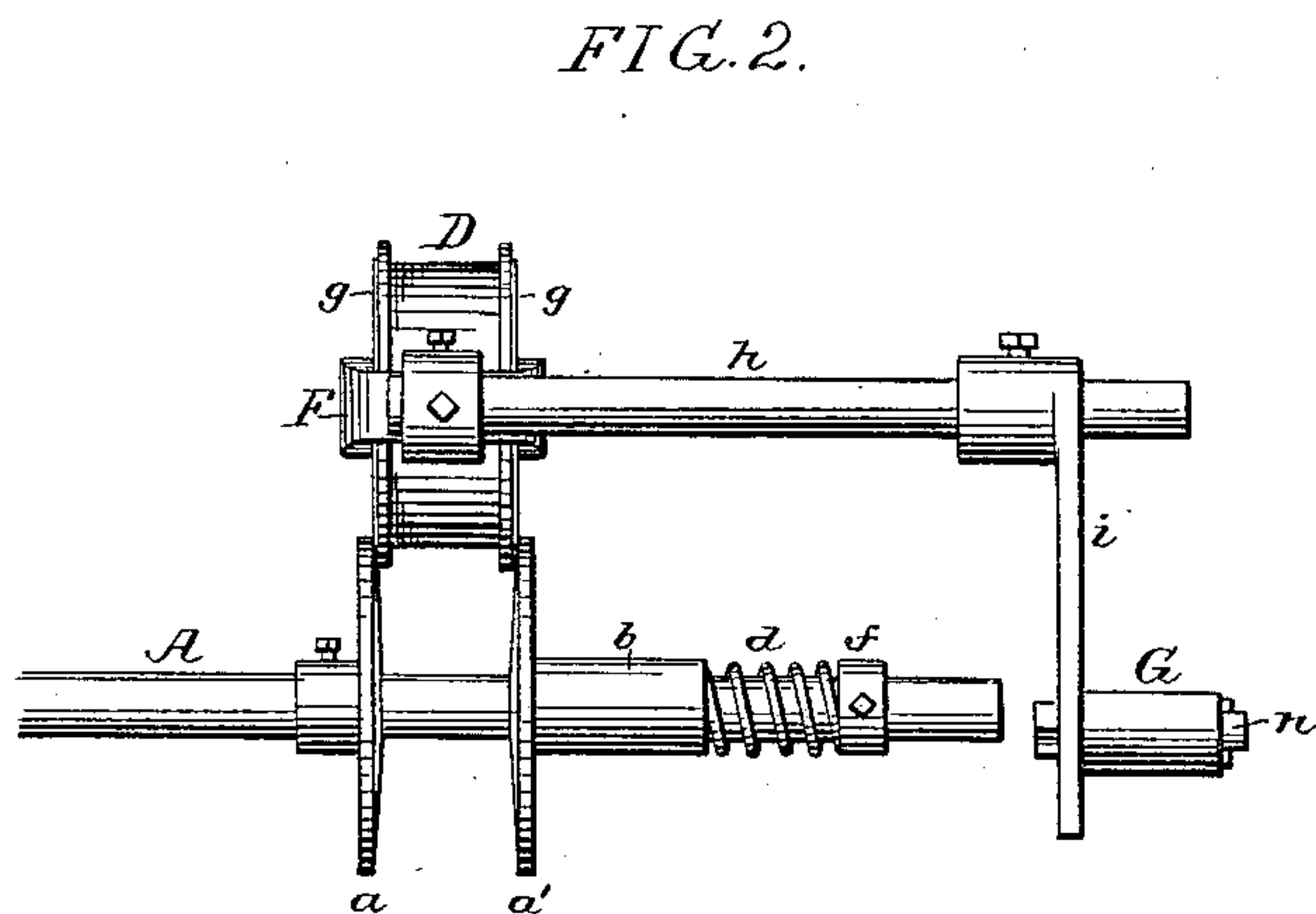
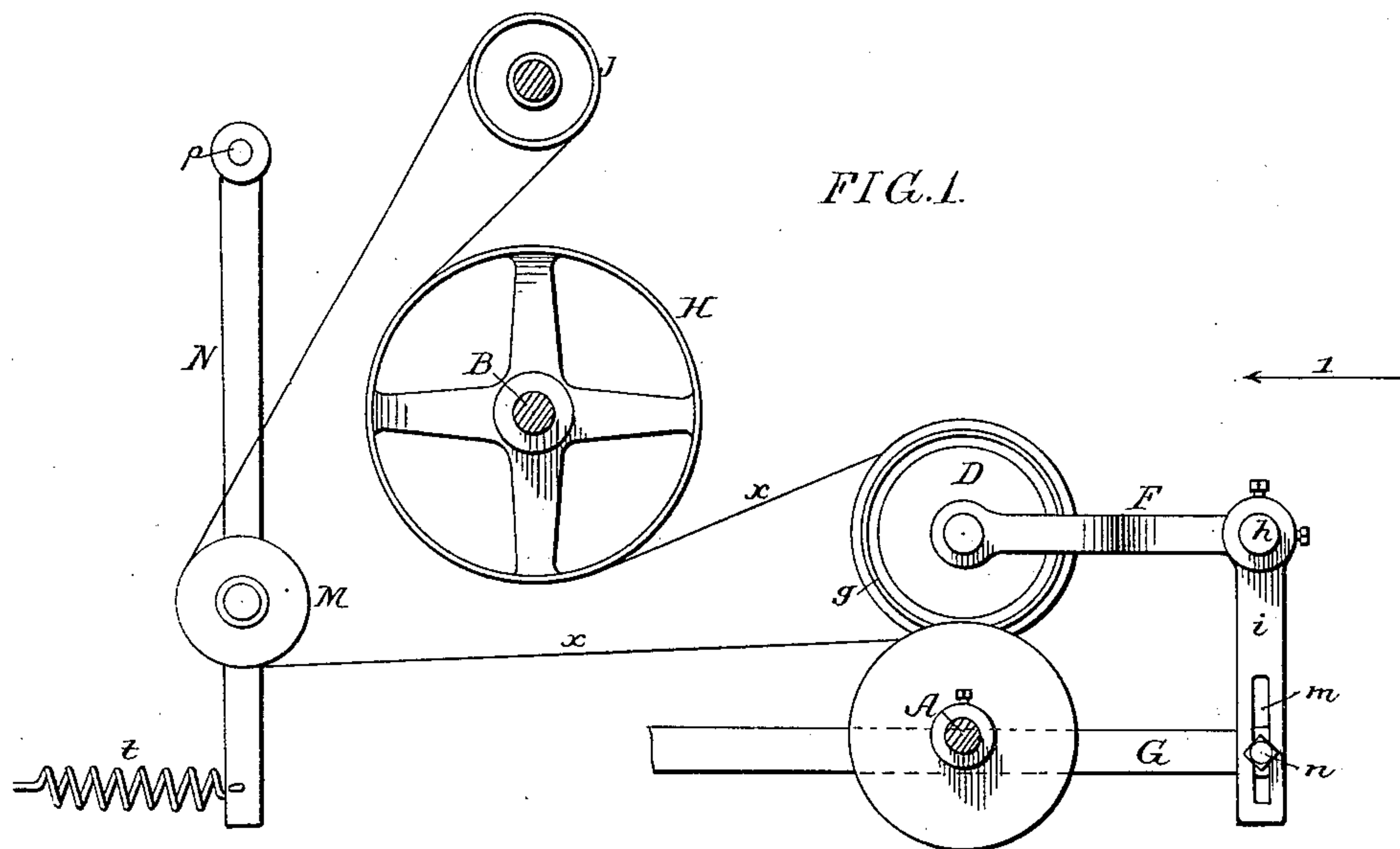
(No Model.)

W. G. GASS.

DEVICE FOR TRANSMITTING POWER.

No. 336,404.

Patented Feb. 16, 1886.



Witnesses:

David S. Williams
William F. Davis

Inventor:

William G. Gass

by his Attorneys:

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UNITED STATES PATENT OFFICE.

WILLIAM GEO. GASS, OF PHILADELPHIA, PENNSYLVANIA.

DEVICE FOR TRANSMITTING POWER.

SPECIFICATION forming part of Letters Patent No. 336,404, dated February 16, 1886.

Application filed December 2, 1885. Serial No. 181,377. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM G. GASS, a subject of the Queen of Great Britain and Ireland, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Devices for Transmitting Power, of which the following is a specification.

My invention consists of mechanism, described hereinafter, whereby power may be transmitted from one shaft to another, the driving-shaft rotating at a uniform speed, and the speed of the driving-shaft being varied as circumstances may suggest.

In the accompanying drawings, Figure 1 is a side view of mechanism embodying my invention; and Fig. 2 is an end view of part of the same, looking in the direction of the arrow 1, Fig. 1.

A is a driving-shaft which receives a continuous rotating movement from any adjacent source of power, and B is the driven shaft, the speed of which is to be varied. Secured to the shaft A is a disk, *a*, and free to slide on said shaft is a sleeve, *b*, carrying a similar disk, *a'*, a spring, *d*, being interposed between the end of said sleeve and a collar on the shaft, the tendency of which spring is to force the said disk *a'* toward the disk *a*. Clamped between the disks *a a'* is a drum, D, the opposite faces of which are provided with projecting annular rings *g*, preferably of leather, these rings serving as contact-surfaces for the two disks *a a'*, the adjacent faces of which are slightly beveled, as shown in Fig. 2. The spindle of the drum D is carried by a forked arm, F, which is secured to a rock-shaft, *h*, the latter having another arm, *i*, to a slot, *m*, in which is adapted a pin or bolt, *n*, on a rod, G, so that on imparting a reciprocating movement to said rod the shaft *h* will be caused to rock and the contact-surfaces of the drum D caused to approach and recede from the shaft A, thereby causing a gradual decrease and increase in the speed of said drum, the movement being capable of variation without varying the throw of the rod G, by adjusting the bolt *n* of the latter nearer to or farther from the axis of the rock-shaft *h*. The drum D receives a belt, *x*, which passes partly around a pulley, H, on the driven shaft B, thence around an idler-pulley, J, and thence around a pulley, M, on an arm, N, pivoted to a pin

or stud, *p*, and acted upon by a spring, *t*, the tendency of which is to keep the belt *x* tight under all changes of position of the drum D. By a proper operation of the rod G, the speed of the shaft B may be increased or diminished as slowly or as rapidly as may be desired, the change of speed being effected without shock or strain, and by making the drum D in the form of a belt-drum the device is rendered more compact than if a belt-pulley separate from said drum was used.

Some of the features of my present invention are shown in my Patent No. 326,861, dated September 22, 1885; but the subject of said patent is a different invention—namely, a duplex driving-gear—the illustration of my present invention in said patent being merely incidental to the proper setting forth of the independent invention therein described and claimed.

I claim as my invention—

1. The combination of a drum, D, a shaft, A, having friction-disks for clamping the sides of said drum, a shaft, B, having a pulley, H, and a belt adapted to said pulley and to the drum D, whereby said single drum serves as the medium for transmitting power of the shaft A to the shaft B, all substantially as specified.

2. The combination of the shaft A and its clamping-disks, the drum D, confined between said disks, but adjustable from and toward the shaft, the shaft B, having a pulley, H, and a belt adapted to said pulley and to the drum D, whereby said single drum serves as a medium for transmitting the power of the shaft A to the shaft B, all substantially as specified.

3. The combination of the shaft A and its friction-disks *a a'*, the drum D, the shaft B and its pulley H, the belt *x*, adapted to said pulley and to the drum, the rock-shaft *h*, and the arm F, carrying the drum, the slotted arm *i*, and the rod G, having a pin adjustable in the slot of said arm, all substantially as specified.

4. The combination of the shaft A and its friction-disks *a a'*, the drum D, confined between said disks and adjustable from and toward the shaft, the shaft B, having a pulley, H, the idler-pulley J, the tightening-pulley M, the arm N and its spring *t*, and the belt *x*, adapted to said pulleys and to the drum D, all substantially as specified.

5. The combination of the drum D, having on each side a narrow projecting ring of leather or like frictional material, with the shaft A, having clamping-disks bearing upon said narrow projecting friction-rings, one of said disks being under the influence of a spring, all substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WM. GEO. GASS.

Witnesses:

WILLIAM F. DAVIS,
HARRY SMITH.