

(No Model.)

H. D. GOODWIN.
GOVERNOR FOR PHONOGRAPHS.

No. 452,976.

Patented May 26, 1891.

Fig. 1.

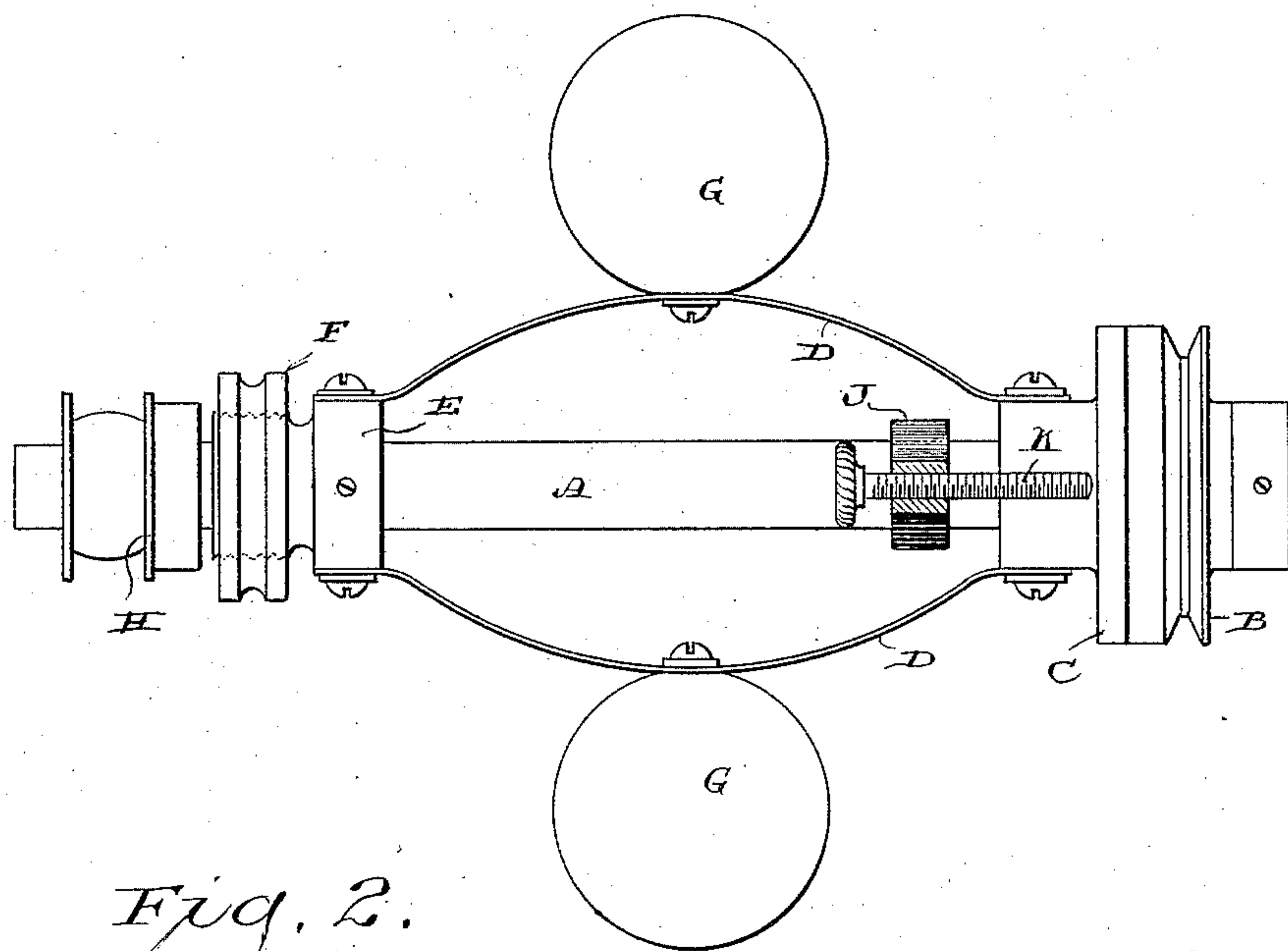
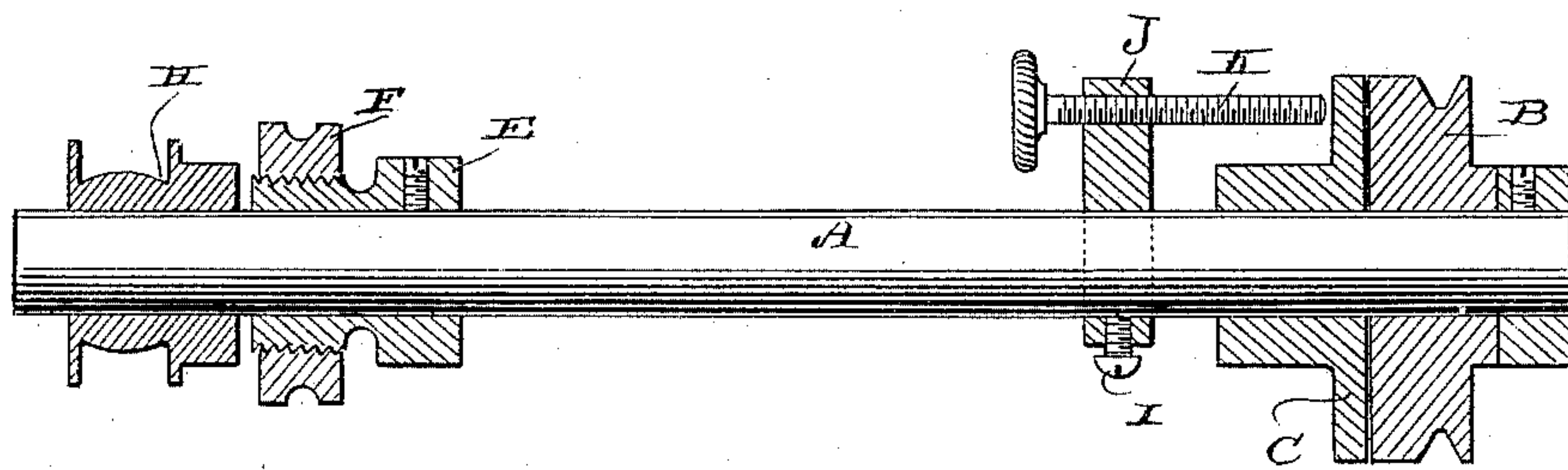


Fig. 2.



Witnesses
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GOVERNOR FOR PHONOGRAPHS.

SPECIFICATION forming part of Letters Patent No. 452,976, dated May 26, 1891.

Application filed April 3, 1890. Renewed April 30, 1891. Serial No. 391,029. (No model.)

To all whom it may concern:

Be it known that I, HENRY D. GOODWIN, of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented
5 certain new and useful Improvements in Governors for Phonographs; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to phonographs; and
10 it consists in certain peculiarities of construction and combination of parts to be hereinafter described with reference to the accompanying drawings and subsequently claimed.

15 In the drawings, Figure 1 represents an elevation of a phonograph drive and speed governor mechanism provided with my improvement, and Fig. 2 a sectional view of the same.

20 Referring by letter to the drawings, A represents the drive-shaft of a phonograph; B, the loose pulley for belt connection with the motor-power; C, the friction-disk opposed to said pulley, and D the semi-elliptic springs
25 that connect said friction-disk with the set-collar E, the latter being provided with a screw-threaded extension for engagement with the adjusting-nut F. Secured to the springs D are the governor-balls G, and fast
30 on the shaft A is the cone-pulley H for belt connection with the cylinder-shaft (not shown) of the machine.

All the parts above specified being common in the art, a more detailed description
35 of their construction and relative arrangement is not considered necessary in this specification.

In the operation of the parts thus far described the drive-shaft A can only attain a
40 limited speed, because the friction-disk C comes out of contact with the loose pulley B whenever the centrifugal action of the governor-balls G causes the springs D to contract. While the result just described is of
45 advantage when the machine is employed as a recorder and reproducer, it is of disadvantage when the machine is used to plane the record-cylinders, because of the limitation as to speed; and the object of my invention

is to provide a means for locking the friction-disk against the loose pulley, as well as to limit the backward movement of said friction-disk on the drive-shaft, as will be hereinafter more fully described.

Secured to the drive-shaft A by a set-screw
55 I or other suitable means is a bracket J, provided with a bearing for a stop-screw K, the latter being opposed to the friction-disk C, as is well illustrated in both figures of the drawings. Now, if the machine is being employed as a recorder and reproducer, the stop-screw is set so as to permit of the friction-disk C having just enough movement on the drive-shaft A as will permit it (the friction-disk) to just clear the loose pulley B when
60 the governor-springs D contract, and thus there is no liability of said friction-disk binding on said drive-shaft, as is a more or less frequent occurrence in machines not provided with an attachment such as I have
70 described. When the machine is employed to plane record-cylinders, the stop-screw K is run up to bind the friction-disk tight against the loose pulley, and consequently a very considerable speed may be imparted to the cylinder-shaft of said machine, the governor
75 mechanism being converted into a balance to steady the motion.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The drive-shaft of a phonograph, a friction-disk loose on the shaft, semi-elliptic springs connected to said shaft and friction-disk, and governor-balls secured to the
80 springs, in combination with a stop adjustably arranged in rear of said friction-disk, substantially as set forth.

2. The drive-shaft of a phonograph, a friction-disk loose on the shaft, semi-elliptic
90 springs connected to said shaft and friction-disk, and governor-balls secured to the springs, in combination with a bracket fast on the aforesaid shaft in rear of said friction-disk, and a stop for the latter adjustable in the bracket, substantially as set forth.

3. The combination of a drive-shaft, a loose belt-pulley arranged thereon, an elliptic-

spring governor arranged on said shaft and having its friction-disk opposed to said pulley, and a stop arranged to limit the movement of said friction-disk in a direction away
5 from the aforesaid pulley, substantially as set forth.

In testimony that I claim the foregoing I

have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

HENRY D. GOODWIN.

Witnesses:

N. E. OLIPHANT,
WM. KLUG.