

(No Model.)

2 Sheets—Sheet 1.

J. H. SHARP.
SPEED REGULATOR.

No. 300,647.

Patented June 17, 1884.

Fig. 1.

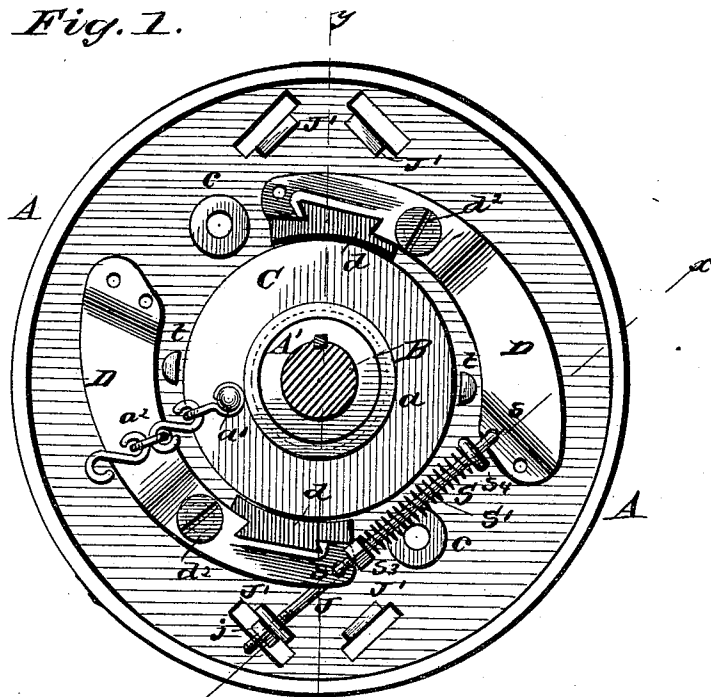
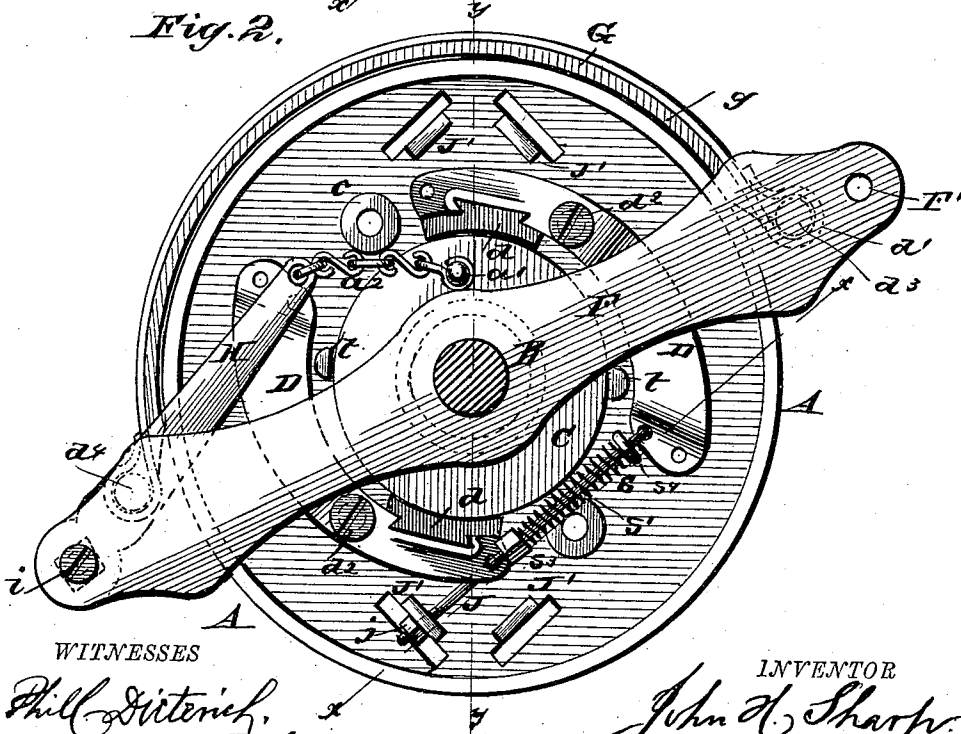


Fig. 2.



WITNESSES

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Fig. 3.

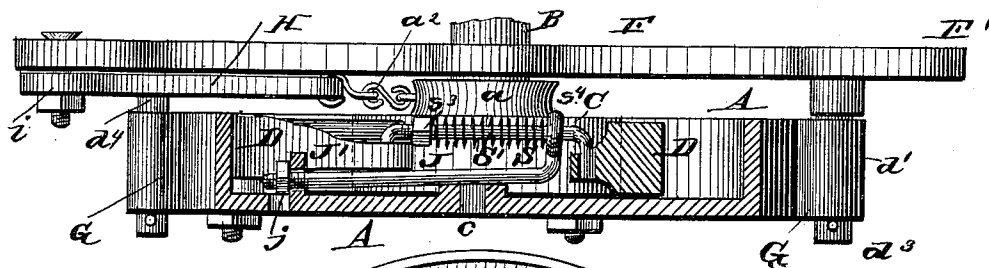


Fig. 4.

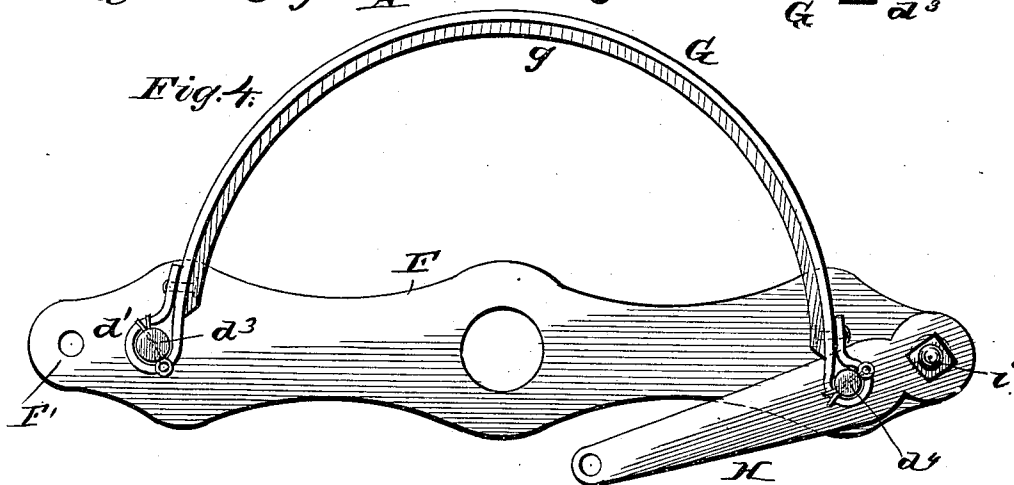
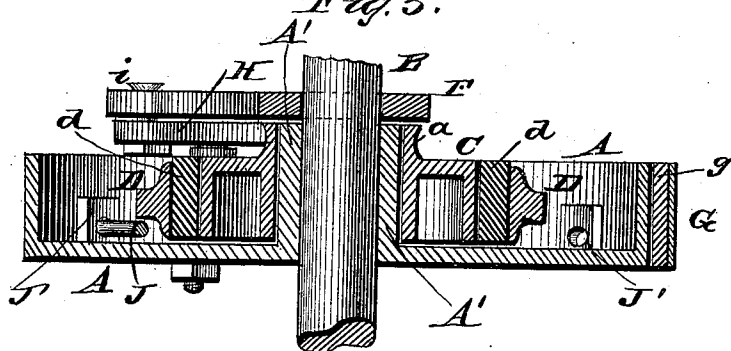


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN H. SHARP, OF DOYLESTOWN, PENNSYLVANIA.

SPEED-REGULATOR.

SPECIFICATION forming part of Letters Patent No. 300,647, dated June 17, 1884.

Application filed April 23, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. SHARP, of Doylestown, in the county of Bucks and State of Pennsylvania, have invented certain new and useful Improvements in Speed-Regulators; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is a face view of the drum, showing the clutch-arms and center hub without the external friction-clutch. Fig. 2 is a similar view showing the clutch on the outside of the drum and the connection of the clutch-arm with the hub of the same. Fig. 3 is a cross-section taken in the vertical plane indicated by dotted line *x x* on Figs. 1 and 2. Fig. 4 is an internal view of the outside anti-friction strap and its attachments without the large wheel or drum. Fig. 5 is a section through line *y y*, Fig. 2.

This invention relates to devices for automatically regulating the speed of machinery; and it consists in a compound friction-clutch which will prevent undue strain, as will be fully understood from the following description, when taken in connection with the annexed drawings.

The letter A designates a flanged drum or wheel, which is constructed with a central tubular sleeve, A', of greater length than the width of the peripheral flange on the drum A. On the inner face of this drum or wheel I cast lugs J', which incline toward each other on opposite sides of the center of the wheel. I also cast stops *t t* on the web of the wheel, for a purpose hereinafter explained, which stops are diametrically opposite each other. Bosses *c*, which are perforated through the web and screw-threaded, are also provided, for a purpose hereinafter explained.

C designates a hollow flanged hub, which is adapted to fit loosely on the sleeve A', and which has an external cylindrical periphery and a circumferentially-grooved collar, *a*, formed on it. This hub C has a chain, *a'*, attached to a stud, *a'*, fixed rigidly to it, which chain is connected to the free end of an arm, H, hereinafter referred to.

D D are two curved gripping-levers, which have their fulcra at *d' d'* on the web of the wheel A. The shortest arms of these levers, which are diametrically opposite each other, have shoes *d d* removably applied to them, which are made of any suitable material, and which are adapted to impinge against the periphery of the hub C when occasion requires, and which are held free from this hub by means of a helical spring, S, applied on a removable hooked rod, S', attached at *s s* to the short and long arms, respectively, of the two gripping-levers D D. One end of this spring S bears against a shoulder, *s'*, on the rod S', and the other end reacts against a loop, *s'*, which is on the end of a tension-rod, J, adjustable by means of a nut, *j*. By adjusting this nut *j* the speed of the machine can be regulated at will.

F designates a lever or stanchion, which is fixed at F', and which has a pivoted arm, H, attached to it at *i*, which arm is attached to the collar of the hub at *a'*.

G designates a clamping friction-bow, which may be lined with wood or other suitable material. (Lettered *g*.) One end of this bow is attached by a sleeve, *d'*, to a post, *d'*, rigidly secured to one arm of the stanchion F, and the other end of the bow G is pivotally connected to a post, *d'*, which is rigidly connected to the arm H.

It will be observed from the above description that the smallest wheel or hub revolves loosely on the hub of the larger wheel, and that the gripping arms or levers D D will be brought into action and clamp the internal hub when the motion exceeds the predetermined point, and cause this hub to revolve, thus winding up the chain *a'* and causing the lever H to contract the hoop G about the periphery of the wheel A. This wheel A is keyed to the driving-shaft B, and the bar F being stationary, it is obvious that the speed of the machine to which my regulator is applied will be even, and that it will be automatically regulated.

It will be seen that by means of the several lugs J', cast on the web of the main wheel A, and the perforated bosses *c*, the gripping arms or levers can be reversed for right or left motion.

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

1. In a speed-regulator, the combination,
5 with the main flanged wheel on the shaft B, of the hub loosely applied thereon, and the spring-actuated clamping or gripping devices, all constructed and adapted to operate substantially in the manner and for the purposes described.
- 10 2. The combination of the main wheel on the shaft B, the hub loosely applied on the collar of said wheel, the spring-actuated clamping-levers, and the adjustable tension device, as described, for these levers, substantially as
15 described.
3. The combination, in a speed-regulator, of a main flanged wheel, an internal hub, spring-actuated clamping devices regulated by the adjustable tension device, a stationary arm
20 or stanchion, a pivoted arm flexibly connected

to said hub, and the external clamp, G, all constructed and adapted to operate substantially in the manner and for the purposes described.

4. A speed-regulator consisting of a main
flanged wheel keyed to the shaft B, a hub hav- 25
ing a pulley on it loosely applied to said hub, clamping jaws or lever actuated by a spring provided with the tension device, a stationary stanchion on a pivoted arm, H, and a flexible
30 connection between this arm and the hub, substantially in the manner and for the purposes described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOHN H. SHARP.

Witnesses:

W. VAN SURANEE,
JACOB H. SHARP.