2 Sheets—Sheet 1.

J. ZUCKERMAN.

Friction Brake for Power Sewing Machines.

No. 44,909. Patented Nov. 1, 1864.

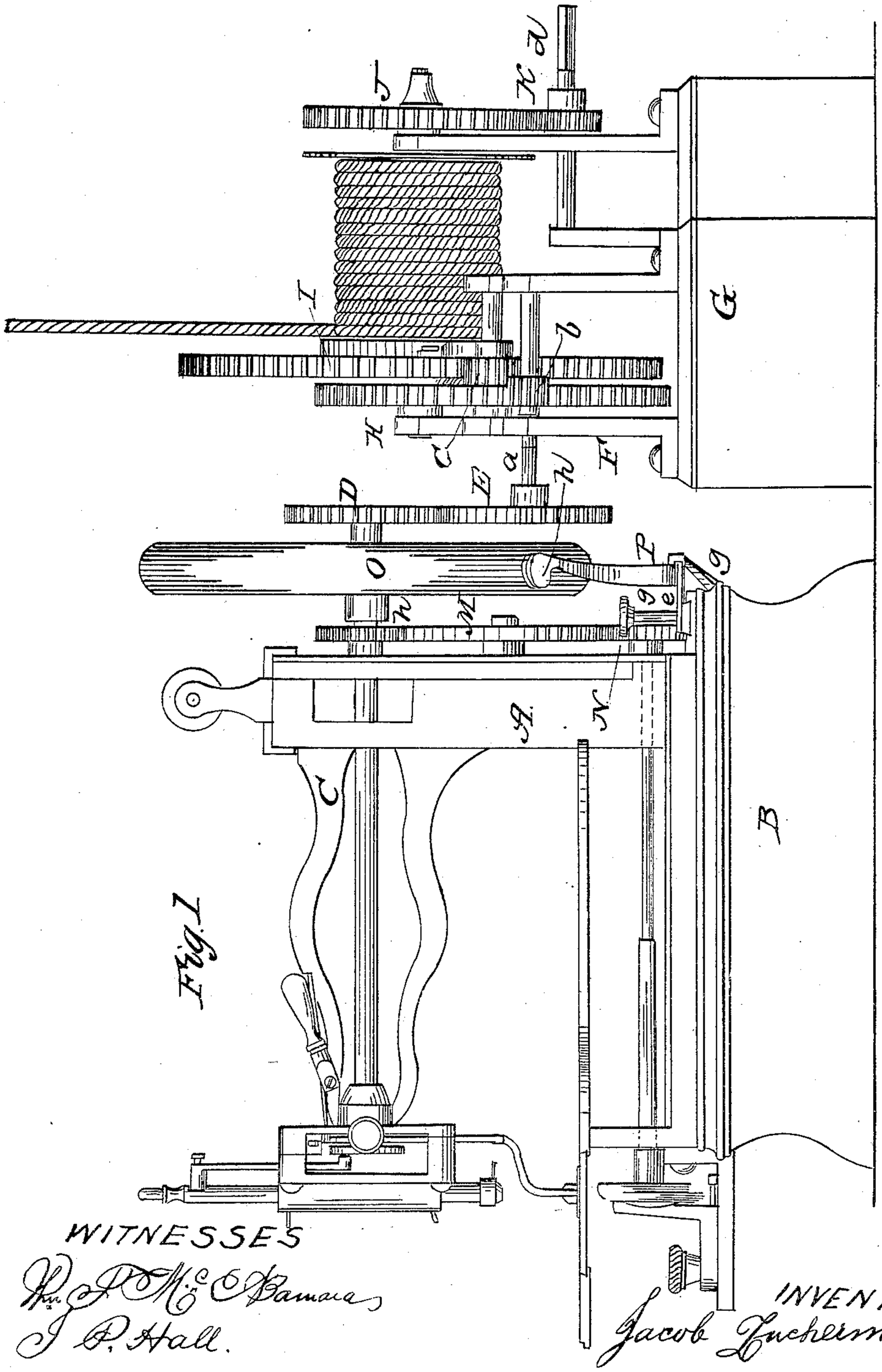

Fig. 1

WITNESSES

Wm. D. McCoy Barnard

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INVENTOR

Jacob Zuckerman

2 Sheets—Sheet 2.

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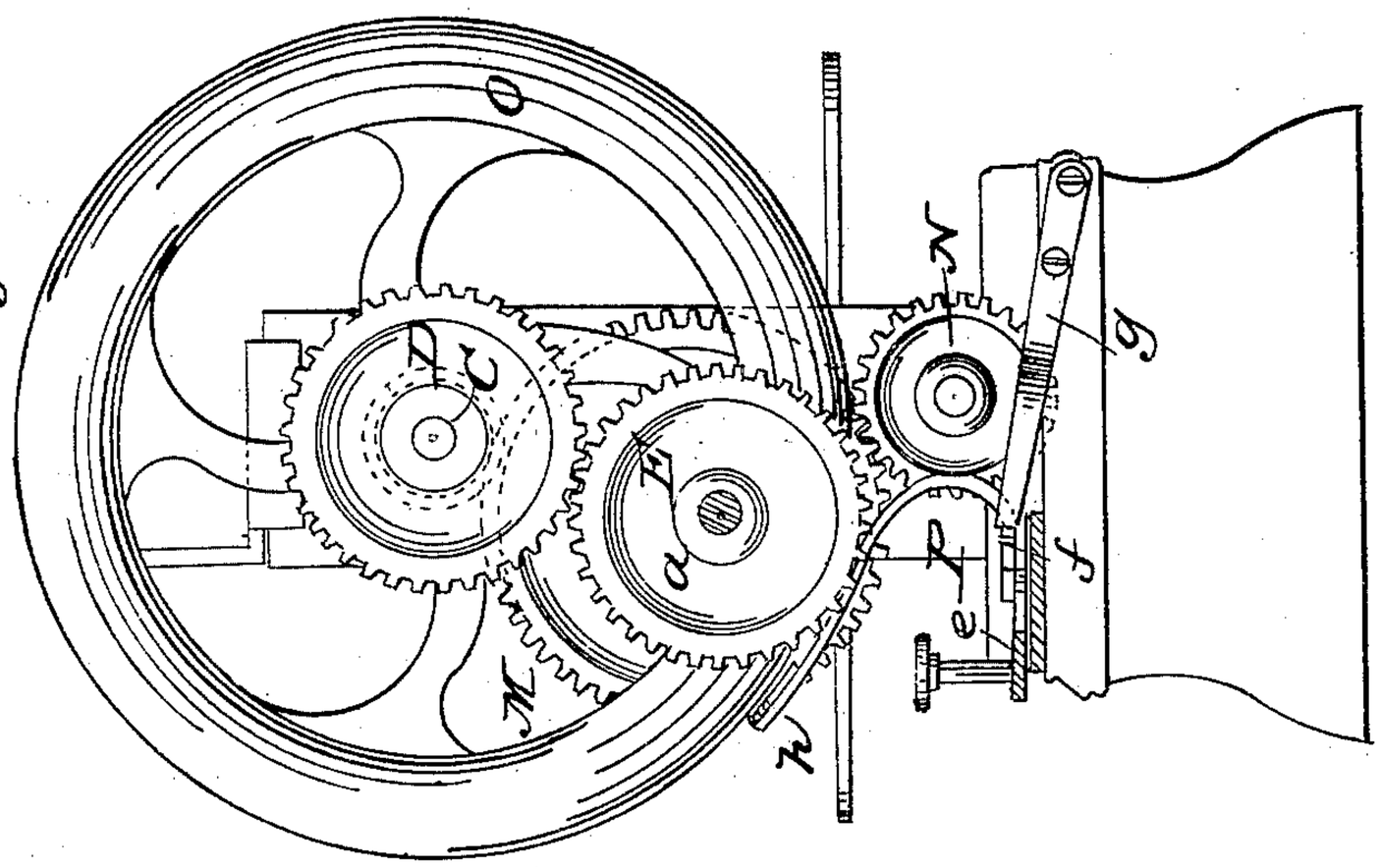
Fig. 2



WITNESSES

Wm. J. McCamant

J. D. Hall.

INVENTOR

Jacob Zuckerman

UNITED STATES PATENT OFFICE.

JACOB ZUCKERMAN, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN FRICTION-BRAKES FOR POWER SEWING-MACHINES.

Specification forming part of Letters Patent No. **44,909**, dated November 1, 1864.

To all whom it may concern:

Be it known that I, J. ZUCKERMAN, of San Francisco, in the county of San Francisco and State of California, have invented a new and Improved Power for Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a side elevation of this invention. Fig. 2 is a transverse vertical section of the same.

Similar letters of reference indicate corresponding parts.

The manifold attempts heretofore made to drive sewing-machines by spring or weight power have all been failures, principally for the want of a suitable device to regulate the speed of the machine. If a spring or weight is applied powerful enough to overcome the inertia of all the working parts and to start the machine, it (the machine) soon begins to race and to assume a speed quite incompatible with the successful operation of sewing, and if the spring or weight has not sufficient power to start the machine the whole device is useless. These difficulties are overcome by the power which forms the subject-matter of this invention. It consists in the application of an adjustable friction device or regulator acting upon the fly-wheel of the sewing-machine and used in combination with a series of gear-wheels, to which motion is imparted by a spring or weight, and from which motion is transmitted to the main driving-shaft of the sewing-machine and through it to all the working parts of the same in such a manner that the motion or speed of the sewing-machine can be regulated independent of the power of the weight or spring, and a weight or spring can be employed of sufficient power to work the machine for a long time without winding up.

A represents a sewing-machine of any of the well-known constructions. This machine is firmly secured to the base B, and on the end of its main driving-shaft C is mounted the cog-wheel D, which gears in a similar cog-wheel, E, on an arbor, *a*. This arbor has its bearings in a frame, F, secured to a base or bed-plate, G, and it bears a pinion, *b*, to which a rotary motion is imparted by a train of gear-wheels, H I, and pinion *c*, and by a weight or spring applied to the arbor of the last gear-wheel, I. This wheel is arranged with an ordinary winding-up device, so that the weight or spring can be wound up whenever it may be desirable; and in order to facilitate this operation a cog-wheel, J, is mounted on the end of said arbor, and this cog-wheel gears in a pinion, K, on the arbor *d*, the end of which is square to receive the barrel of the key or wrench used for the purpose of winding up the power. The motion imparted by the weight or spring to the train of wheels is transmitted to the main shaft of the sewing-machine by the wheels D E, and a suitable train of wheels, L M N, transmits the motion to the various working parts of the sewing-machine in the ordinary manner.

O is the fly-wheel, which is mounted on the driving-shaft C, and a friction-regulator, P, is secured down upon the edge of the base B of the sewing-machine. This regulator consists of a slide, *e*, which is adjustable toward or from the circumference of the fly-wheel O by a series of nicks, *f*, and spring-pawl *g*, (see Fig. 2,) and by the motion of the slide the friction-pad *h* can be pressed with more or less power against the circumference of the fly-wheel, or it can be relieved from the same and brought in the position shown in Fig. 2. By this friction-regulator the motion of the sewing-machine can be readily stopped or the speed regulated, as may be desirable, and the spring or weight power can be used with perfect success.

I claim as new and desire to secure by Letters Patent—

The combination and arrangement of the bent arm P and pad *h* with the slide *e*, notches *f*, and spring-pawl *g*, operating substantially in the manner and for the purpose described.

JACOB ZUCKERMAN.

Witnesses:

WM. F. MCNAMARA,

THEO. TUSCH.