L. CREVELING.

Compensating Attachments for Flour-Packing Machines.

No. 146,384. Patented Jan. 13, 1874.

Fig: 1.

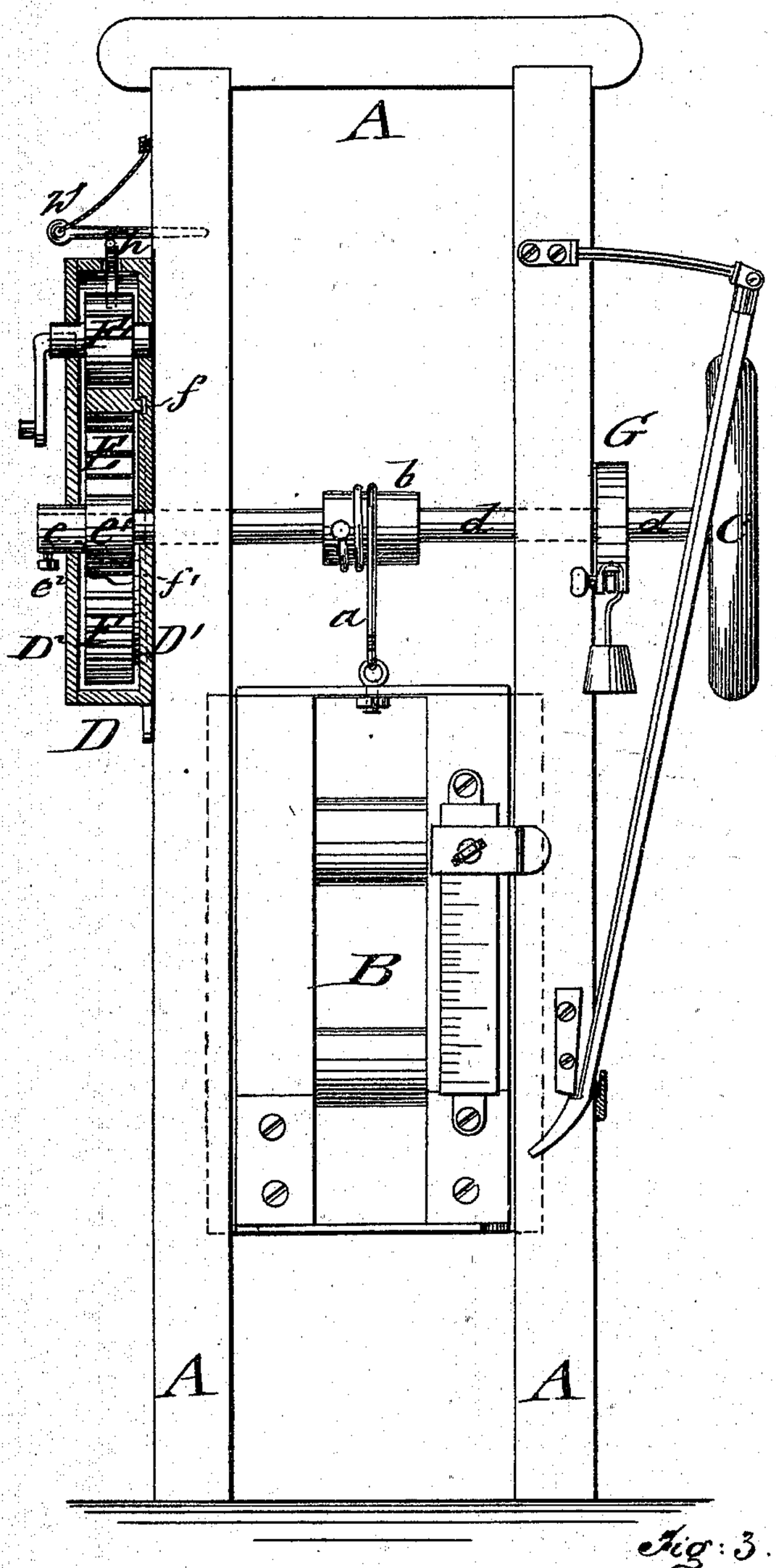


Fig: 2.

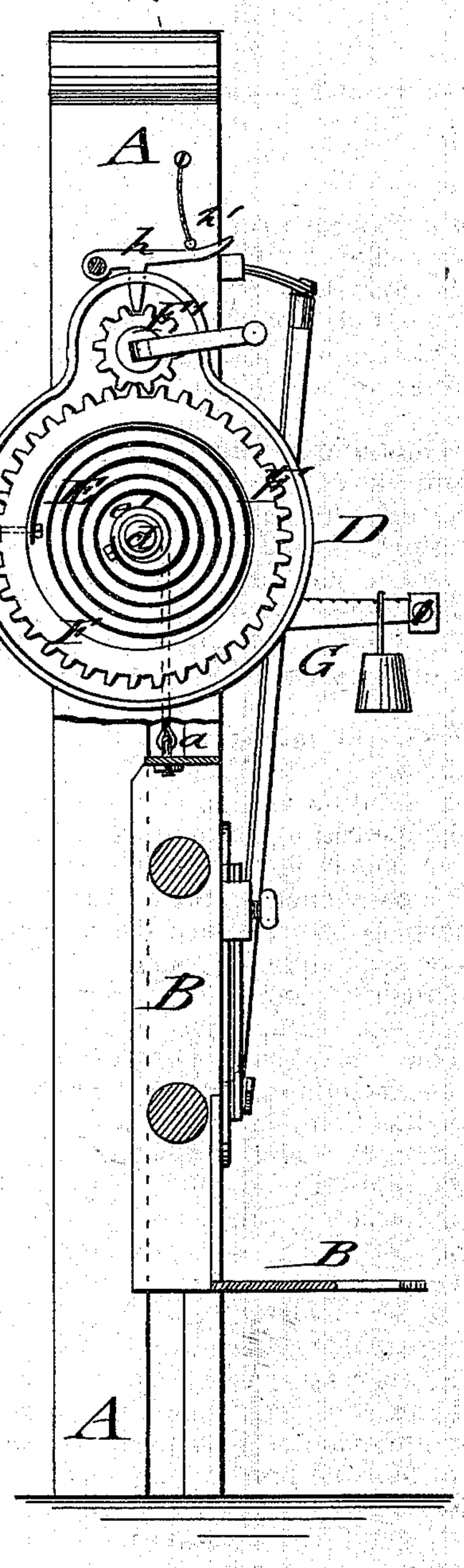
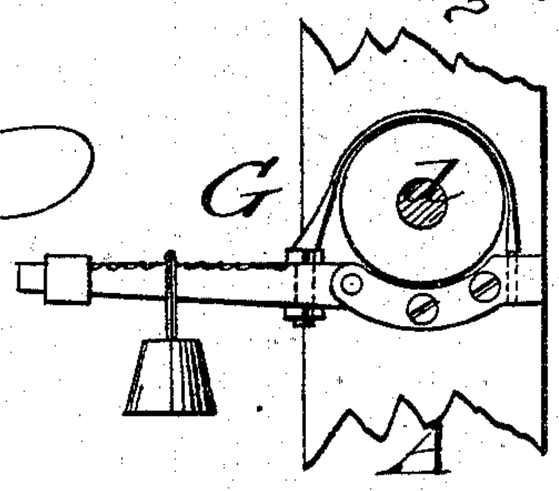


Fig: 3.



WITNESSES:

Chas. Nida.
A. Seigwick

INVENTOR:

L. Creveling

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

LEWIS CREVELING, OF AKRON, OHIO.

IMPROVEMENT IN COMPENSATING ATTACHMENTS FOR FLOUR-PACKING MACHINES.

Specification forming part of Letters Patent No. **146,384**, dated January 13, 1874; application filed December 1, 1873.

To all whom it may concern:

Be it known that I, LEWIS CREVELING, of Akron, in the county of Summit and State of Ohio, have invented a new and Improved Compensating Attachment to Flour-Packing and other Machines, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a front elevation of a flour-packer with my compensating attachment applied thereto, partly in section. Fig. 2 is a sectional elevation of the packer, showing front view of compensating attachment with top of case taken off; and Fig. 3 a detail side view of the spring-brake for regulating the elevation of the platform.

Similar letters of reference indicate corresponding parts.

The object of my invention is to provide an improved compensating attachment for the flour-packing machines by which the cumbrous and inconvenient spiral pulley and weight hitherto in use may be dispensed with, the barrels or sacks quicker packed, and the machine be readily changed to pack barrels or sacks, and vice versa, doing more uniform work and being more completely within the control of the attendant. My invention consists in the connection of a strong spiral spring with the shaft from which the barrel-platform is suspended, and with a hollow cog-wheel, which is guided by a projecting rim in the base-plate of the casing, and adjusted to any degree of tension of the spring by means of a pinion with check pawl and crank, as required for the different purposes for which the packer is used. The increasing weight of the barrel or sack to be packed will be compensated by the increased tension of the spiral spring on the shaft, so that the process of packing continues uniformly from beginning to end, the platform returning then easily into elevated position for filling the next barrel.

A in the drawing represents the upright guide-frame of the packer, constructed in the customary manner. B is the platform, which is guided in frame A, and supports on its horizontal part the barrels, sacks, or other packages. The platform B is suspended by a chain or wire-rope, *a*, from a fixed roller, *b*, of horizontal shaft *d*, which turns in suitable bearings of frame A. The chain *a* winds or unwinds on roller *b* according as the platform B is raised or lowered. A hand-wheel, C, is applied to one end of shaft *d*, for turning the shaft, as required. The opposite end of shaft *d* passes through a casing, D, of metal or other suitable material, which is firmly applied, with its base-plate D^1, to the outer side of frame A. A sleeve or pulley, *e*, with a raised part, e^1, is keyed, by a set-screw, e^2, rigidly to shaft *d* in such a manner that the raised or shoulder part e^1 is held between the top and base plate of casing D, and defines thereby the exact position of the shaft *d*. A strong spiral spring, E, is firmly applied to sleeve e^1, coiled around the same, and connected with its outer end to the inside of a hollow cog-wheel, F, which turns, by a projecting rim, *f*, in a corresponding groove, *f'*, of base-plate D^1, while the top plate D^2 retains spring and cog-wheel in position in the casing. A pinion, F', gears into cog-wheel F, and produces any required tension of spring E by turning a crank, *g*, applied to the shaft of the same. A weighted pawl, *h*, locks into the teeth of pinion F', and prevents the return motion of cog-wheel F, which pawl may be furthermore secured in position after the required tension has been obtained by a stop-pin, *h'*, as indicated in the drawing. In place of pawl *h*, a common spring check-pawl, which may be set from the outside of casing D, may be used. The casing D extends, also, around pinion F, top plate D^2 being connected, by suitable screw-bolts, to the base-plate D^1, covering thereby entirely the interior parts, and preventing dust and flour particles from settling therein. By turning the crank the strength or tension of the spiral spring may be adjusted accurately and without loss of time, so that sacks or barrels may be alternately packed on the platform by the simple winding or unwinding of the same. The changing from sacks to barrels, and vice versa, which was hitherto connected with considerable inconvenience, is with my attachment quickly obtained, which admits thereby of faster packing. The compensating power is more perfect on account of the spring closing or winding tighter the more the barrel or sack recedes with the platform from the knives in the tube of the packer, causing thereby the gradual increase of the tension

and producing a compensation for the increased weight of the barrel or sack, and producing an equal packing of the flour in the package from one end to the other. The more compact spring attachment saves the space taken up by the box for the weights and the spiral wheel, and allows also the putting up of the packer at any part of the building without requiring digging for the weights or descending into the story below. The weighted spring-brake G, which is applied to the shaft *d* in the usual manner, is correspondingly adjusted to the different weights of the packages on the platform, so that the elevating of the same is accomplished in a noiseless and quick manner by the expansive force of the spring on the shaft.

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

1. As an improvement in flour-packing machines, the spring compensating and elevating attachments D E F F′, provided with a check device, in combination with shaft *d*, sleeve *e e*^{1}, frame A, and platform B, substantially as and for the purpose described.

2. The spring compensating attachment to flour-packing machines, consisting of casing D, shaft sleeve or shoulder *e e*^{1}, spiral spring E, cog-wheel F, pinion F′, check-pawl *h*, and crank, for adjusting the tension of the compensating spring, as set forth.

3. The hollow cog-wheel F, having projecting rim *f*, in combination with circular groove *f*′ of casing D, for turning therein, as described.

LEWIS CREVELING.

Witnesses:
A. H. COMMENS,
ALBERT ALLEN.