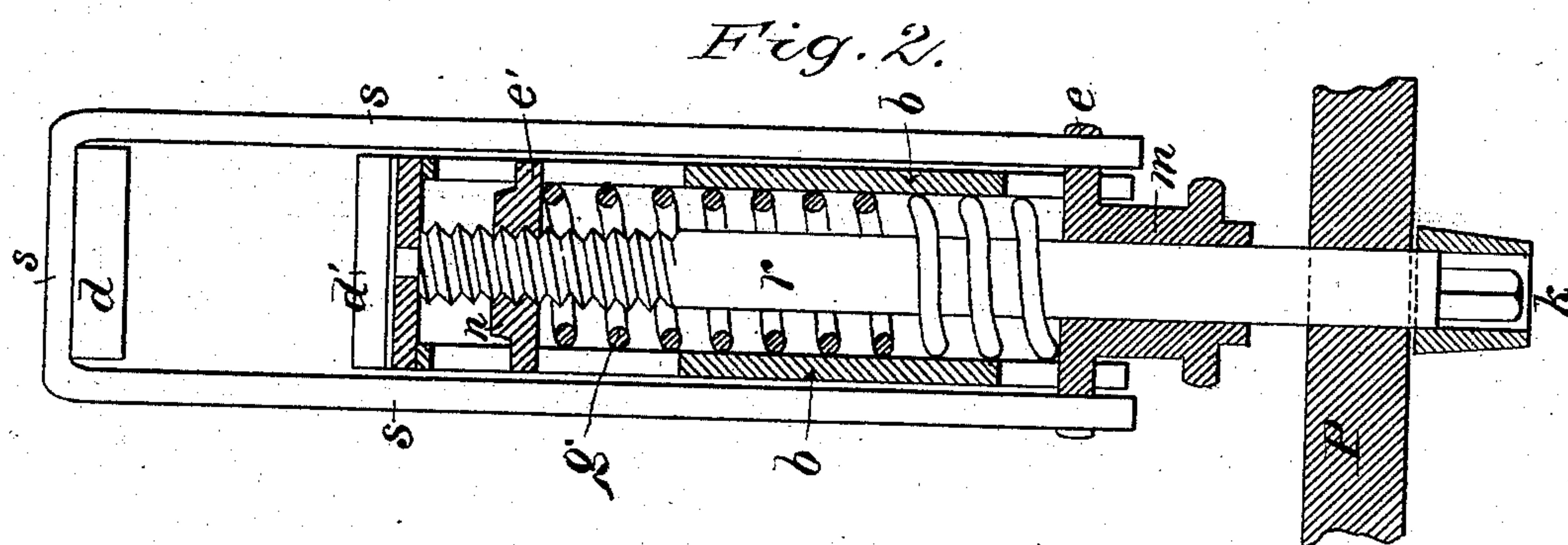
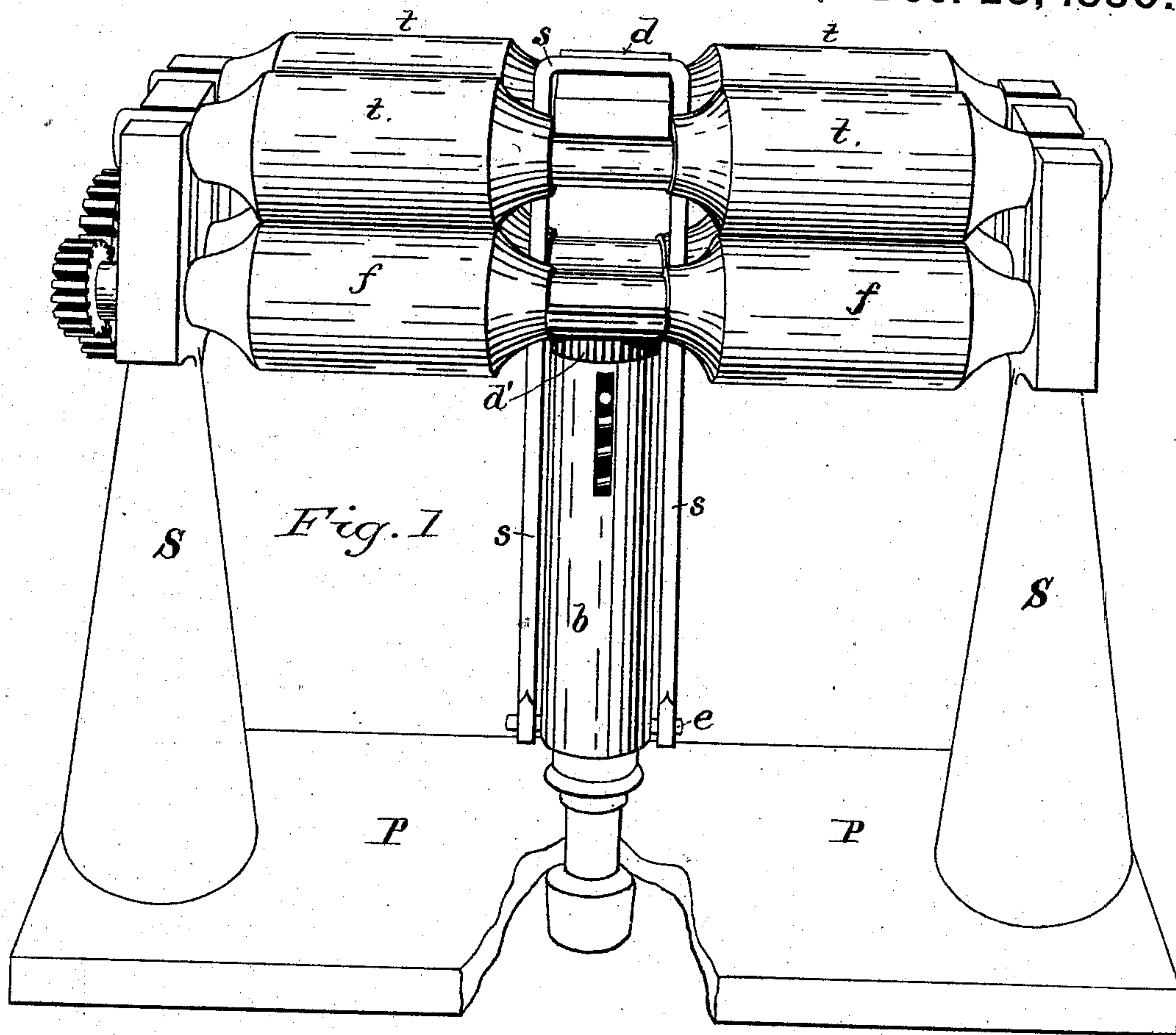


P. C. DAWSON.
 Mechanism for Compressing Drawing Rolls
 of Spinning Frames, &c.
 No. 235,936. Patented Dec. 28, 1880.



Witnesses.

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PATRICK C. DAWSON, OF PROVIDENCE, RHODE ISLAND.

MECHANISM FOR COMPRESSING DRAWING-ROLLS OF SPINNING-FRAMES, &c.

SPECIFICATION forming part of Letters Patent No. 235,936, dated December 28, 1880.

Application filed November 28, 1879.

To all whom it may concern:

Be it known that I, PATRICK C. DAWSON, of the city and county of Providence and State of Rhode Island, have invented certain new and Improved Mechanism for Compressing Drawing-Rolls of Spinning-Frames, &c., of which the following is a specification.

In the drawing and doubling of cotton and similar fibrous materials the rolls are arranged as top and bottom rolls, the latter being the drivers of the others, and from the fact of these being fluted are commonly called "fluted rolls." The top rolls are driven by mere force of contact or friction with the fluted rolls. To secure the proper amount of friction it has in practice been found necessary to place considerable weights upon the top roll. The effect of this weight is transmitted to the bearings and journals of the fluted roll, causing friction and wear to these parts. The weighting is ordinarily accomplished by a saddle resting on the top roll, from which a stirrup extends down through the table, having a lever and weight attached to it.

My invention dispenses with the lever and weight, and consists of a spring pressing mechanism constructed and arranged between the fluted roll and table, as hereinafter described, acting to exert its expansive force in one direction against the under side of the fluted roll and in the other against a stirrup, which embraces a saddle resting on the top roll, thus gripping or compressing the top and fluted rolls together, instead of weighting the one down upon the other, and thereby relieving the bearings and journals of the fluted rolls from the extreme amount of friction due to said weights and levers, which in railway-heads and drawing-frames frequently exceeds fifty pounds.

In the accompanying drawings, Figure 1 is a view of my invention applied to drawing-rolls. Fig. 2 is a longitudinal central section of my invention.

P is the plate or table of a drawing-frame. S S are roller-stands, which contain the bearings of the fluted rollers *f*. The top rolls, *t t*, rest by their own weight on the fluted rolls. *g* is a spring inclosed in a shell or barrel, *b*, where it is confined between the nut *n* and the stirrup-foot *m*. Pins or ears *e* extend from the stirrup-foot through slots on opposite sides of the barrel, and connect with the stirrup *s*, which reaches over the saddle *d*, resting across the two top rolls, *t t*. The nut

n is also provided with ears *e'*, which extend through slots in opposite sides of the barrel. The rod *r* passes up through the plate *P*, through the stirrup-foot *m*, and inside the coil-spring, and rests against a second saddle, *d'*, the saddle *d'* being connected with the barrel *b*, and embracing the under side of the fluted rolls. By turning this rod *r*, which is screw-threaded for a portion of its length, from the top downward, the nut *n* may be drawn down, producing any desired compression of the spring. The expansive power of the spring is exerted, by means of the stirrup-foot *m* and stirrup *s*, to draw the saddle *d* down, while at the same time it acts against the nut *n* with equal force to press the rod *r* upward against the saddle *d'*, and the force with which the two rolls are thus drawn together depends on the strength of the spring and the degree of compression within the barrel.

By varying the position of the nut *n* the amount of compression applied to the rolls can be adjusted at will. This is accomplished by applying a key to the end of the rod beneath the table at *k*.

The illustration of my invention which I have here given embraces two pairs of rolls. It is obvious that the same invention may be equally well applied to one pair.

What I claim, and desire to secure by Letters Patent, is—

1. In combination with the top and bottom drawing-rolls, the mechanism for pressing the same together consisting of the spring, its inclosing-barrel, the two saddles, the stirrup, the nut *n*, the stirrup-foot *m*, and the screw-threaded rod *r*, the same being constructed and arranged for joint operation substantially as hereinbefore set forth.

2. In combination with the drawing-rolls, the stirrup, and the saddles, the compressing spring mechanism and spring-inclosing barrel arranged between the fluted or drawing roll or rolls above and the table below, the end of the screw spring-compressing rod extending through and to the under side of the table, as set forth.

3. In combination with the rolls and stirrup, the spring, spring-inclosing barrel, and adjusting-rod mounted in and between the arms of the stirrup, as herein shown and set forth.

Witnesses:

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