(No Model.)

F. MORIN.

TOP ROLL MECHANISM.

No. 506,641. Patented Oct. 10, 1893.

Fig: 1.

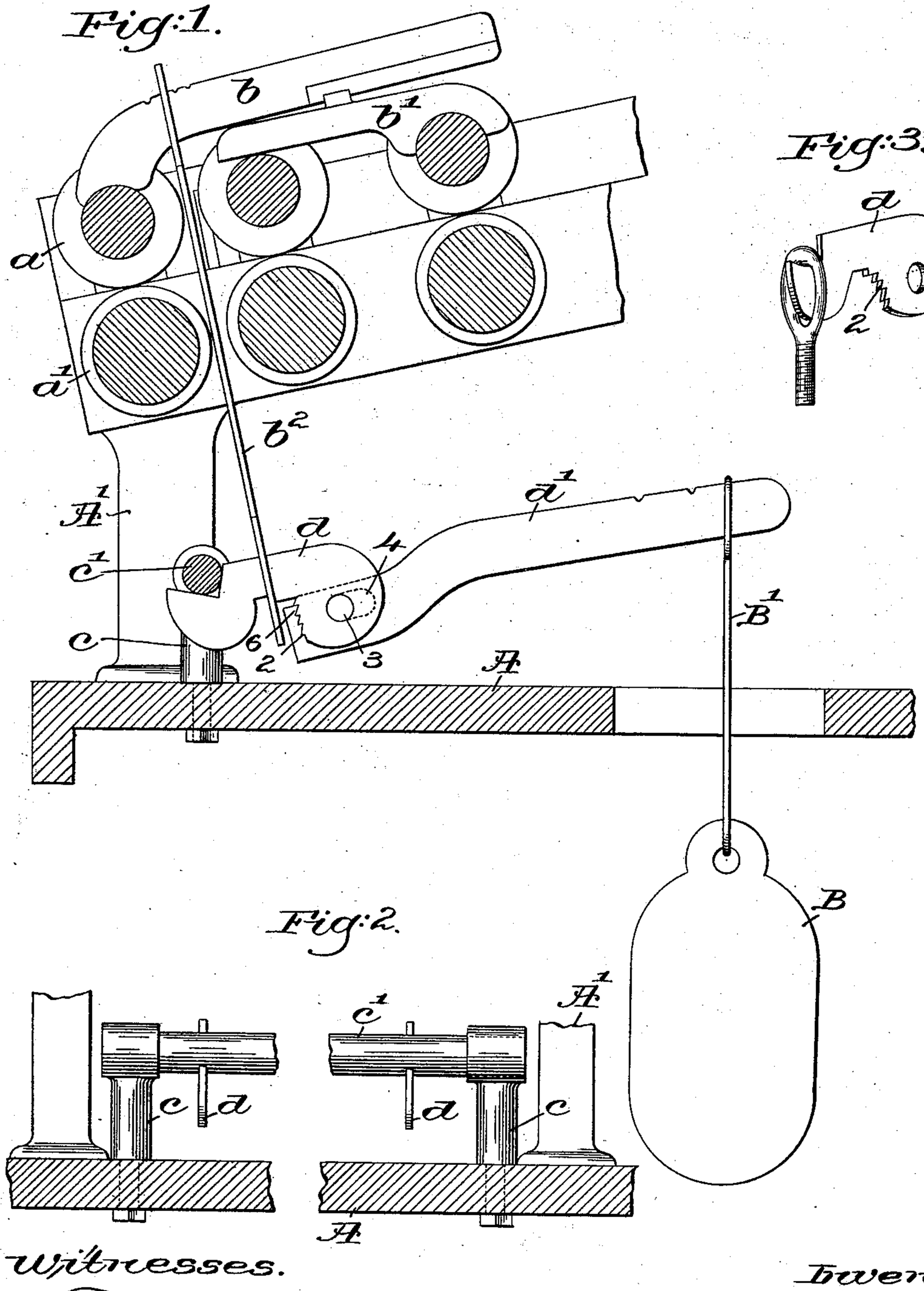

Fig: 3.

Fig: 2.

Witnesses.

Fred S. Grundy.

Louis N. Gowell

Inventor:

Frank Morin,

by Crosby & Gregory—

Attys.

UNITED STATES PATENT OFFICE.

FRANK MORIN, OF FALL RIVER, ASSIGNOR TO GEORGE DRAPER & SONS, OF HOPEDALE, MASSACHUSETTS.

TOP-ROLL MECHANISM.

SPECIFICATION forming part of Letters Patent No. 506,641, dated October 10, 1893.

Application filed June 2, 1893. Serial No. 476,342. (No model.)

To all whom it may concern:

Be it known that I, FRANK MORIN, of Fall River, county of Bristol, State of Massachusetts, have invented an Improvement in Top-Roll Mechanism, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

In the treatment of cotton, wool and other fibers for the production of yarn, the fiber has to be passed between sets of rolls, the upper rolls being kept down through weights applied to saddles resting on the journals of the rolls. Usually a hooked leg attached to the saddle is acted upon by a lever on which is hung a weight. These levers are arranged in the narrow space between the bottom rolls and the roller beam, and once put at the proper level by adjusting the fulcrum of the lever to the proper height, said lever has but a very limited space in which to move. Now the leather covered top rolls wear by use, and they also vary in diameter according to atmospheric conditions, and then the lever has to be removed and the fulcrum adjusted so that the lever may be brought into the proper position.

In accordance with my invention I have made the weight lever in two parts, one pivoted on the other so that the weight bearing end may be readily raised or lowered as required to thus prevent it from striking the roller beam.

Figure 1, in section, shows a sufficient portion of a set of rolls with my improvements added to enable my invention to be understood. Fig. 2 is a detail looking at Fig. 1 from the left, and Fig. 3 is a modification.

The roller beam A, the roller stand A′ erected thereon, the top rolls *a*, the bottom rolls *a′*, the saddles *b*, *b′*, to bear on the journals of the top rolls, the legs b^2 hanging on the saddle *b*, the weight B, and the wire or loop B′, are and may be all as usual.

The roller beam in Figs. 1 and 2, has erected on it stands *c*, *c*, which support a fulcrum rod *c′*, under which hook the inner arms or portions *d*, of the two-part weight levers *d*, *d′*, one arm *d*, being shown as engaged by the leg b^2, and as provided with a series of notches at 2, and with a stud or boss 3. The outer part *d′* of the lever on which hangs the loop B′ is shown as slotted at 4, see dotted lines Fig. 1, and as having a toe 6, which may engage any one of the notches 2, said teeth and toe forming a locking device to keep the two parts of the weighted lever in their adjusted position. The toe may be removed from a tooth by moving the part *d′* of the lever longitudinally on the stud 3, and then the part *d′* may be turned to raise or lower its outer or free end, as may be desired, and the toe be then engaged with another tooth. In this way the position of the lever carrying the weight, between the bottom rolls and the roller beam, may be quickly adjusted, if necessity demands, without disturbing the stand *c*.

In this my invention the weight lever is made in two parts, or of an inner and an outer end, the inner end bearing against a fulcrum about which the entire lever may turn, the outer end being journaled to the inner end so as to turn on the inner end to place the outer end more or less out of line with the inner end, there being a suitable locking device or fastening between the inner and outer ends to make of the two pieces one rigid lever on which the usual weight may hang.

I do not claim one lever connected by a link with a saddle, the said lever being in turn connected by a link with an independent lever having an entirely separate fulcrum.

Believing myself to be the first to produce a weighted lever composed of two pieces, as described, for use with the saddles of top rolls for the purposes stated, this invention is not limited to the shape of the inner and outer ends of the said weighted lever, nor to the exact number of its parts, nor to the exact construction shown for the locking devices, nor which of the two parts of the lever carries the teeth, or which the toe, and it will be obvious that the shape of the locking means or devices whereby the outer end *d′* of the lever may be changed in position on the inner end *d* so as to be put more or less out of line with the other part, may be variously modified without departing from my invention.

In Fig. 3 I have shown a modification

wherein the part *d* of the lever is shown as engaging a fulcrum loop, each lever in such modification having its own loop, rather than as in Figs. 1 and 2, when several lever parts *d* may engage one common bar *c'*.

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

1. The combination with a set of top and bottom rolls, and a saddle to bear on the top rolls, of a lever provided with a weight, and a connection between the saddle and lever, the said lever being composed of two parts, the piece forming the inner end of the lever co-operating with a fulcrum on and with relation to which the entire lever may turn, the outer end of the said lever or the part on which the weight hangs being adjustably mounted on the inner end of the lever, whereby the longitudinal center of the outer end of the lever may be put more or less out of line with relation to the longitudinal center of the inner end of said lever, substantially as described.

2. The combination with a set of top and bottom rolls, and a saddle to bear on the top rolls, of a lever provided with a weight, and a connection between the saddle and lever, the said lever being composed of two parts, the piece forming the inner end of the lever co-operating with a fulcrum on and with relation to which the entire lever may turn, the outer end of said lever or the part on which the weight hangs being pivotally mounted on the inner end of the lever, whereby the longitudinal center of the lever may be put more or less out of line with relation to the longitudinal center of the inner end of said lever, and devices to lock the two parts of said lever in the positions into which they may have been placed one on the other for the purposes set forth.

3. The bottom and top rolls, the saddles on the top rolls, and the leg b^2 and lever fulcrum, combined with the lever composed of two pieces *d*, *d'* connected by a stud on one entering a slot of the other, and with a locking device, to operate, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANK MORIN.

Witnesses:

GEORGE E. BAMFORD,

HENRY H. EARL.