M. Wells,

Belt Shifter,

No. 19,272, Patented Feb. 2, 1858.

Fig. 1.

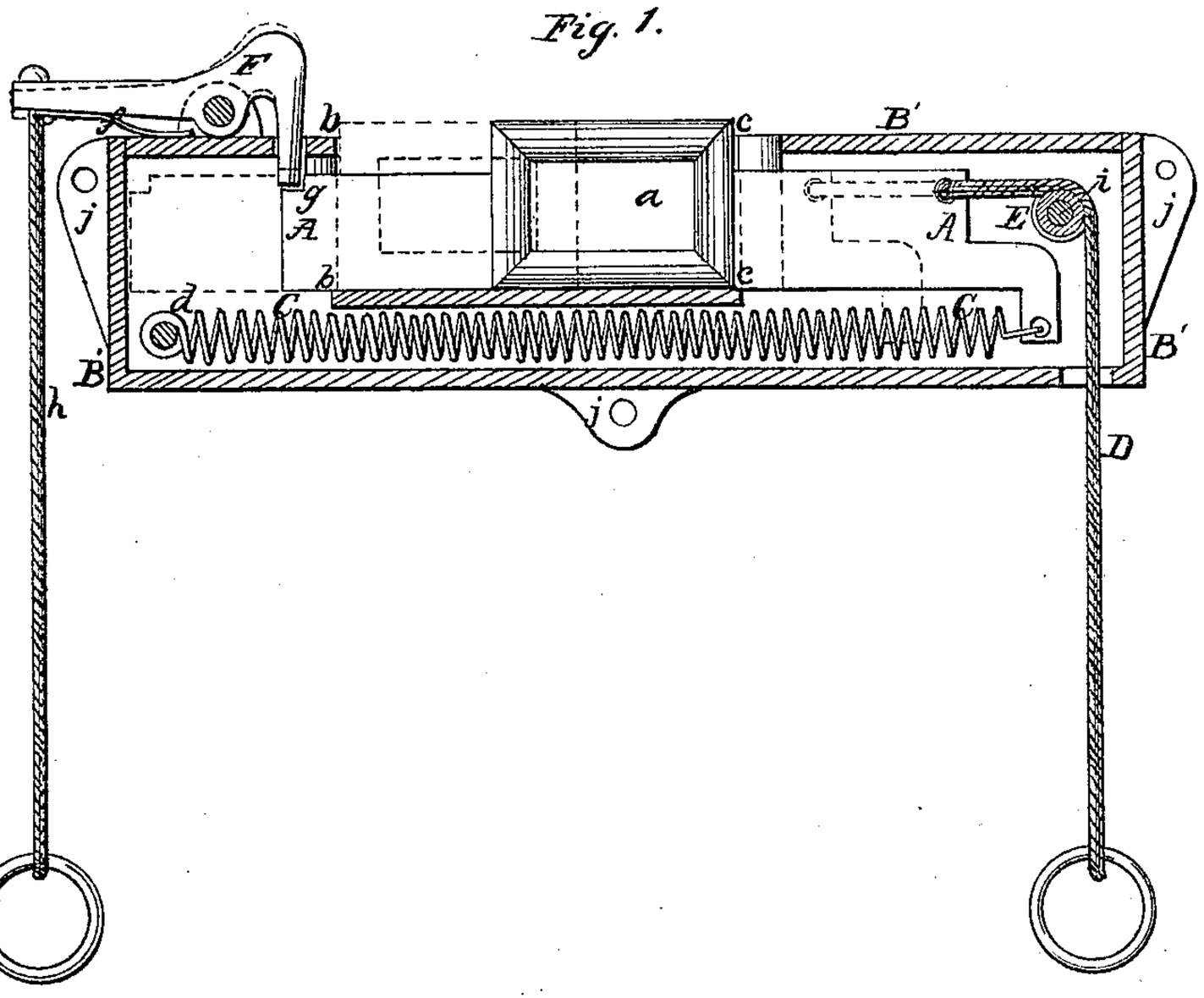
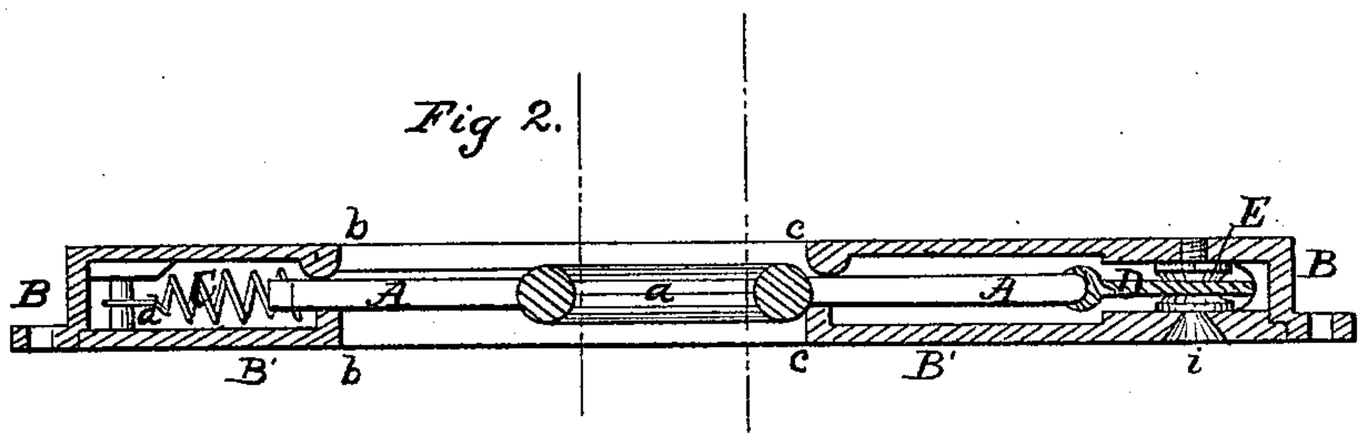


Fig 2.



UNITED STATES PATENT OFFICE.

MORRIS WELLS, OF BROOKLYN, NEW YORK.

SHIFTING BELTS.

Specification of Letters Patent No. 19,272, dated February 2, 1858.

To all whom it may concern:

Be it known that I, MORRIS WELLS, of the city of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Shifter for Shifting the Driving-Belts of Machinery; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, is a front view of the shifter with the box in section. Fig. 2, is a horizontal section.

Similar letters of reference indicate corresponding parts in both figures.

This invention consists in a novel arrangement within a box of the shifting bar with a spring for shifting the same in one direction and a cord and pulley for drawing it in the opposite direction and a bolt for locking and unlocking the same, which brings the entire shifter within a very small compass and in such convenient form that it can be attached to a beam, post, or any required support in a few moments and is immediately ready for use.

To enable others to make and use my invention I will proceed to describe its construction and operation.

A, is the shifting bar fitted to slide longitudinally within a box B, B′, of cast iron, which incloses it with the exception of the eye *a*, and a portion adjacent thereto, which are exposed in a recess *b b*, *c c*, the length of which is sufficient to afford room for the eye *a*, which receives the belt, to play the required distance to shift the belt.

C, is a spiral spring arranged under the shifting bar A, and attached by one end to the said bar, and by the opposite end to a screw *d*, passing through the box. This spring exerts a tendency to draw the shifting bar to the position shown in red outline in Fig. 1, that is to say to draw the eye *a*, up the left hand side of the recess.

D, is a cord attached to the shifting bar A, and passing over a pulley E, within the box, and down through a hole in the bottom of the box. By pulling this cord this shifting bar is drawn in the opposite direction to that in which it is drawn by the spring C.

F, is a bolt for locking the shifting bar when drawn by the cord D, to the position shown in black outline in Fig. 1, viz. with the eye *a*, close to the right hand side of the recess *c c*, *d d*. This bolt which enters a notch *g*, in the left hand end of the bolt, is in the form of a lever working on a fulcrum *e*, outside of the box, and having a spring *f*, applied in such a manner as to force its point down into the notch *g*, and having a cord *h*, attached for the purpose of drawing the bolt F, out of the notch, which is done by simply pulling down the said cord.

The box is made in two parts B and B′, of nearly similar form which are united by three screws *d*, *i*, and *c*, the former of which serves to attach the spring C, to the box, the second as the axle of the pulley E, and the third which passes through two lugs on the exterior of the box as the fulcrum of the bolt F. The part B, of the box is furnished with three lugs *j*, *j*, *j*, through which to pass screws to attach it to a beam, post, or other support.

To shift the belt to one pulley all that is necessary is to pull the cord D, and draw the bar to the right, as far as possible when it will be immediately locked by the spring bolt F, and to shift it back again it is only necessary to pull the cord *h*, to draw the bolt out of the notch *g*, when the shifting bar will be instantly thrown to the left hand by the spiral spring. When the bolt is not in operation it rides on the top of the shifting bar.

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

The arrangement of the shifting bar A, spiral spring C, pulley E, bolt F, and cords D, *h*, within and relatively to the box B, B′, in the manner substantially as described whereby the whole of the shifter is brought within a very small compass and in such convenient form that it can be very readily attached in any convenient place.

MORRIS WELLS.

Witnesses:

WM. TUSCH,

W. HAUFF.