(No Model.)

J. PORTER.

BELT TIGHTENER.

No. 252,969. Patented Jan. 31, 1882.

Fig. 1

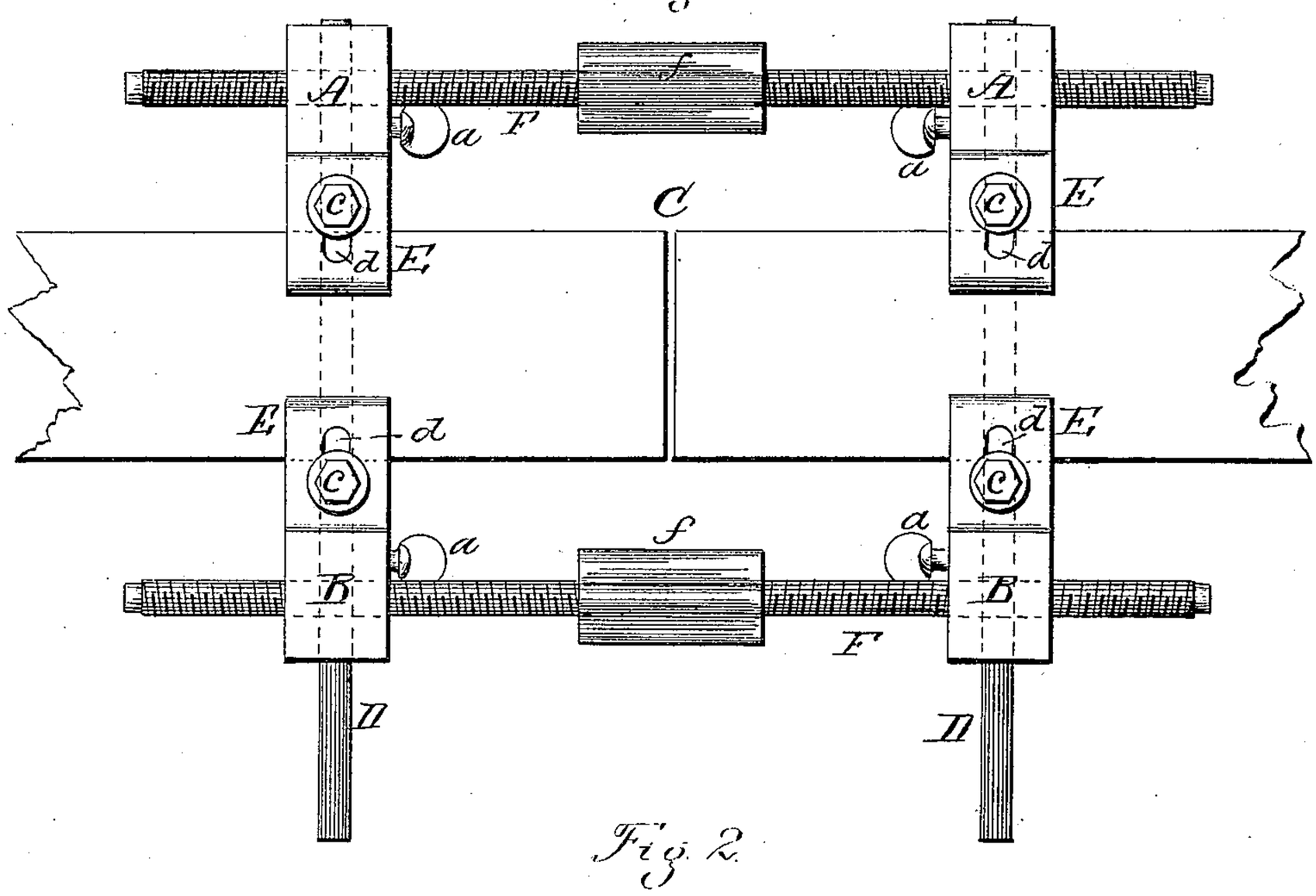


Fig. 2

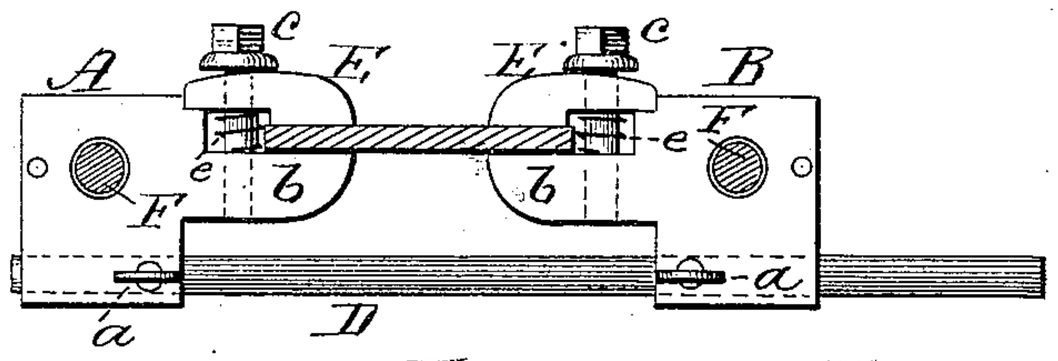


Fig. 3

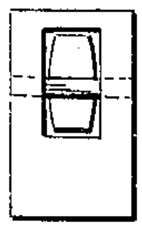


Fig. 4

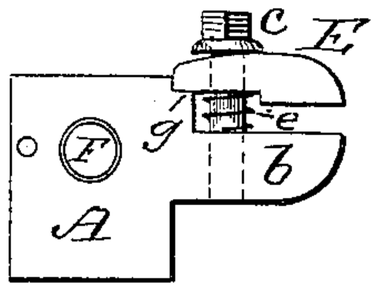
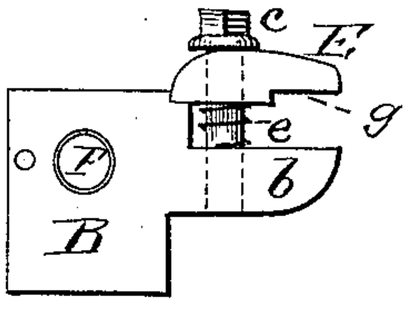


Fig. 5



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UNITED STATES PATENT OFFICE.

JOSEPH PORTER, OF NEW HAVEN, CONNECTICUT.

BELT-TIGHTENER.

SPECIFICATION forming part of Letters Patent No. 252,969, dated January 31, 1882.

Application filed December 19, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH PORTER, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Belt-Tighteners; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a plan view of my invention, showing it applied to the ends of a belt; Fig. 2, an end view thereof with the belt in section. Fig. 3 is an end view of one of the blocks. Figs. 4 and 5 are side elevations, showing the reversible clamping-jaws in different positions.

The present invention has relation to certain new and useful improvements in that class of devices for tightening machine-belts in which the ends thereof are held between clamping-bars, by which, by a suitable screw rod or rods, one clamping-bar carrying the belt is made to approach the other, whereby the belt is stretched or tightened.

The object of the invention is to improve the construction of the belt-tighteners heretofore in use, whereby a more positive and direct strain is simultaneously produced upon both ends of the belt, and the efficiency of the clamping mechanism between which the belt is held is materially increased and more readily adjusted to its varying thickness. This object I attain by the construction substantially as shown in the drawings and hereinafter described.

In the accompanying drawings, A B represent blocks, four in number, connected together in pairs by rods D, which pass lengthwise through holes in said blocks to admit of the latter being adjusted thereon, to adapt them to the varying widths of belts to be tightened or stretched, said blocks being held in position upon the rods by set-screws *a*, or any other means found most convenient. The blocks are each formed with a jaw, *b*, to which are connected movable clamping-jaws E by a headed bolt, *c*, its lower end being screw-threaded to engage with a screw-threaded hole in the lower jaw, *b*, the bolt passing through an elongated slot, *d*, in the jaw E, for the purpose as will be hereinafter described. A coiled spring, *e*, passes around the bolt *c*, between the two jaws, and against which the ends bear. The under side or face of the jaw E has an offset, *g*, to adapt the jaw to belts of different thicknesses, and by the slot *d* formed in the jaw it will admit of its being moved lengthwise far enough from contact with the block, so that it can be swung around to bring either end over the end of the lower stationary jaw in position for use. By unscrewing the bolt *c* to extend its length with relation to the jaw *b*, the pressure of the coiled spring *g* will keep the upper jaw, E, pressed against the under side of the bolt-head, and thus increasing the space between the jaws in proportion to the extent to which the bolt is unscrewed, thereby enabling the upper jaw to be better controlled and more readily adjusted when inserting or placing the belt C between them.

Each one of the blocks A is connected to its fellow block B by a right-and-left-screw-threaded rod, F, the ends of which pass through screw-threaded holes passing transversely through the blocks, the rod having near its middle a suitable nut, *f*, or other convenient means for turning the rod, to which a wrench or suitable tool may be connected.

It will be seen that by the employment of the right-and-left-screw-threaded rod F, when turned in the proper direction, both blocks A B upon each side of the belt C are brought in a direction toward each other, and thereby simultaneously stretching the belt at both ends in an effective and expeditious manner, and without danger of in any manner injuring the belt.

The rods D, which connect the blocks together, prevent the jaws from twisting and causing strain on the screw-threaded rods F, and it is preferable that the upper sides of the movable jaws E should be slightly rounded or convex, so that when bearing against the under side of the bolt-heads it will have sufficient motion on the arc of a circle to adapt the under face of the jaw to varying inequalities of the belt.

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

1. In a belt-tightener, the combination, with

the blocks A B, carrying stationary and movable jaws *b* E, of the rods D and right-and-left-handed screw-rods F, said rods passing through the blocks at right angles to each other, and constructed to operate substantially as and for the purpose set forth.

2. In a belt-tightener, the combination, with the right-and-left-screw-threaded rods F and rods D, of the blocks A B, formed with jaws *b*, and carrying the adjustable and reversible jaws E, having offset *g*, substantially as and for the purpose specified.

3. In a belt-tightener, the combination, with the lower jaw, *b*, of the upper jaw, E, constructed substantially as shown and described, and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOSEPH PORTER.

Witnesses:
GEORGE TERRY,
ALFRED S. HENN.