

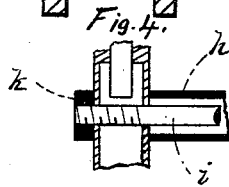
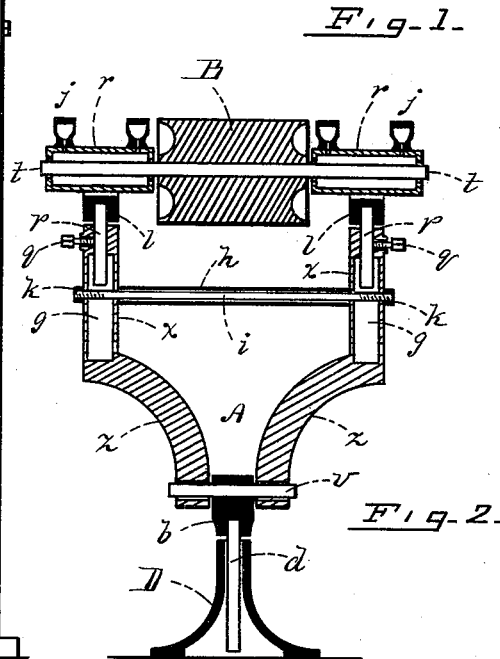
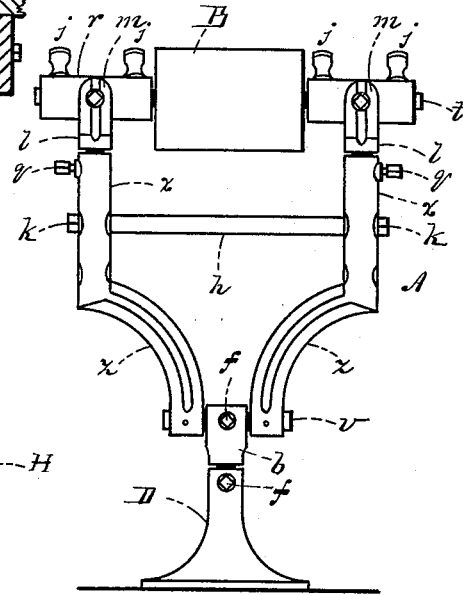
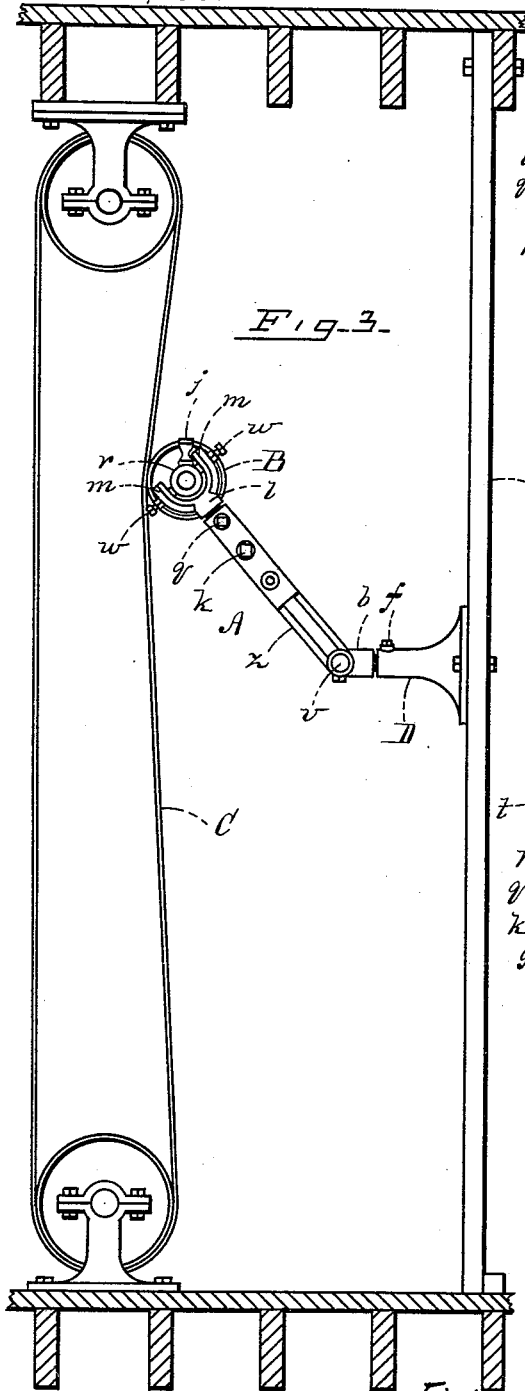
(No Model.)

S. G. HUNTER.

BELT TIGHTENER.

No. 386,130.

Patented July 17, 1888.



WITNESSES:
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UNITED STATES PATENT OFFICE.

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BELT-TIGHTENER.

SPECIFICATION forming part of Letters Patent No. 386,130, dated July 17, 1888.

Application filed March 22, 1888. Serial No. 268,128. (No model.)

To all whom it may concern:

Be it known that I, SETH G. HUNTER, of Watertown, in the county of Jefferson, State of New York, have invented a certain new and useful Improvement in Belt-Tighteners, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view of my improved belt-tightener; Fig. 2, a longitudinal section of the same, and Fig. 3 a side elevation representing the tightener in position for use. Fig. 4 is a detail.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to that class of belt-tighteners which exert a gravitative pressure on the belt; and it consists in the certain novel features hereinafter fully set forth and claimed, the object being to produce a simpler, cheaper, and more effective device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the body of the tightener, B the roll, and C the belt.

The body A consists of two parallel arms, α , having their lower portions, z , curved inwardly and journaled at their lower ends on a rod or pintle, v . The pintle is secured horizontally in the head b of a rod, d , which is in turn adjustably secured in a cone-shaped bracket, D, by a set-screw, f .

The parallel portions of the arms α are hollow, as shown at g in Fig. 2, and are connected by a rod, i , which is screw-threaded at each end and provided with nuts k , a sleeve or tube, h , being disposed on said rod between said arms, so that when the nuts are turned in the sleeve will serve as a brace to keep the arms properly separated, the rod, nuts, and sleeve holding them rigidly connected. A hanger, l , having two upwardly-projecting outwardly-curved arms, m , (see Fig. 3,) is disposed on the

outer end of each arm α , said hangers being respectively provided with rods p , which are inserted in holes in said arms and rendered adjustable therein by screws q .

The roll B is preferably composed of metal, and in length should be about the width of the belt C. It is journaled in bearings r by means of a shaft, t , said bearings being pivoted between the arms m of the hangers l on bolts w , and provided with oil-cups j for lubricating said shaft.

In the use of my improvement the bracket D is secured to the wall or post H, conveniently near the belt C, so that the roll B will stand at right angles to the vertical face of the belt. The bracket is also so disposed that when said roll engages the belt, as shown in Fig. 3, the body A of the tightener will preferably stand at an angle of about twenty-five degrees thereto. As the belt stretches in use, the body A will fall and gradually approach a horizontal position, thus exerting a constant strain or pressure on the belt and keeping it tight, in a manner that will be readily understood by all conversant with such matters without a more explicit description.

It is found that by adjusting the body of the tightener at an angle of about twenty-five degrees the best results are attained; but this may be varied according to circumstances. To approximately preserve this angle as the belt stretches and prevent the tightener from falling too far, the screw f is loosened and the bar d withdrawn from the bracket D the required distance and secured by said screw, thus obviating the necessity of "taking up" the belt. When tighteners as sometimes constructed are used, much time and labor are frequently required in arranging the roll at the proper angle with respect to the belt—an objection which is obviated in my improvement, the roll being readily adjusted to stand at right angles to the face of the belt by means of the screws q , rods p , and pivoted bearings r , thus enabling it to be used as readily with a "quarter-turn" or "reel" belt as when the belt is upright.

Having thus explained my invention, what I claim is—

1. In a belt-tightener, the combination of the following instrumentalities, to wit: a bracket, a

rod adjustably secured in said bracket and provided with a pintle, a body journaled on said pintle, hangers adjustably secured to said body, bearings pivoted in said hangers, and a roll journaled in said pivoted bearings, all being arranged to operate substantially as set forth.

2. In a belt-tightener, the body A, having the hollow arms *x*, in combination with the rod *d*, having the head *b*, provided with the pintle *v*, the bracket D, provided with the adjusting-screw *f*, and the roll B, journaled in bearings secured in said arms in such a manner that said roll may be adjusted longitudinally with respect to the belt, substantially as described.

3. In a belt-tightener, the body A, having the hollow arms *x*, in combination with the bearings *r*, pivoted in adjustable hangers on said arms, and the roll B, journaled in said bearings, said body being adjustably secured in a bracket fastened to a post or wall, substantially as set forth.

4. In a belt-tightener, arms *x*, each having an inwardly-curved portion, *z*, the straight portions being provided with longitudinal

holes in their outer ends, the sleeve *h*, rod *i*, and nuts *k*, for connecting and bracing said arms, a hanger, *l*, adjustably secured on each of said arms, said hangers being respectively provided with arms *m* and rods *p*, boxes or bearings *r*, pivoted in the arms, a roll, B, journaled on the rod *t* in said pivoted boxes or bearings, a bracket, D, and a rod, *d*, adjustably secured in said bracket and having the head *b*, provided with the pintle *v*, the curved portions *z* of the arms *x* being pivoted on said pintle, substantially as described.

5. In a belt-tightener, a bracket, a rod adjustably secured in said bracket, a body jointed to said rod and provided with arms having holes in their outer ends, hangers adjustably secured on said arms, boxes or bearings pivoted in said hangers, and a roll journaled in said pivoted bearings, all combined and arranged to operate substantially as set forth.

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Witnesses:

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