(No Model.)

H. R. LEICHSENRING.

APPARATUS FOR PUTTING DRIVING BELTS ON PULLEYS.

No. 382,046. Patented May 1, 1888.

Fig. 1.

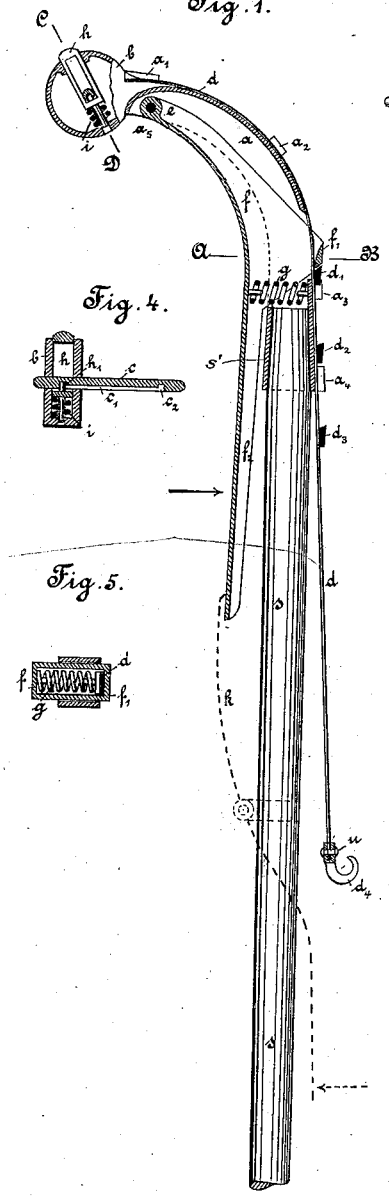

Fig. 2.

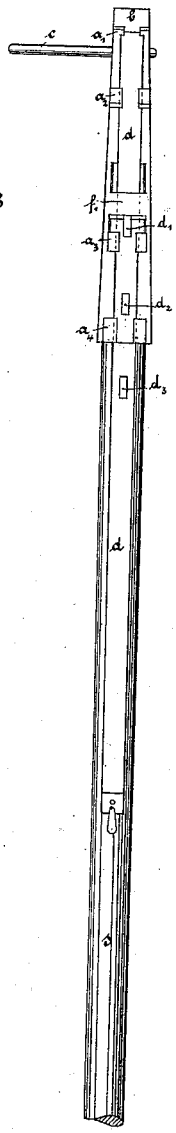

Fig. 3.

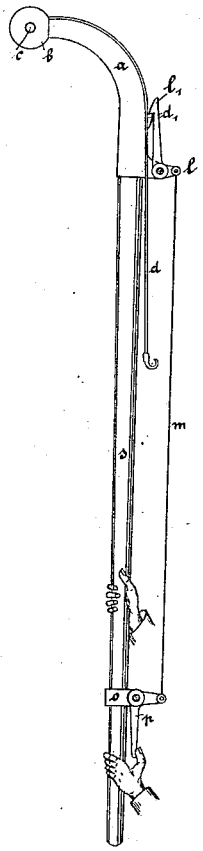

Fig. 4.

Fig. 5.

Witnesses:

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HERMANN ROBERT LEICHSENRING, OF SCHÖNEBECK, PRUSSIA, GERMANY.

APPARATUS FOR PUTTING DRIVING-BELTS ON PULLEYS.

SPECIFICATION forming part of Letters Patent No. 382,046, dated May 1, 1888.

Application filed July 1, 1887. Serial No. 243,072. (No model.)

To all whom it may concern:

Be it known that I, HERMANN ROBERT LEICHSENRING, a subject of the Emperor of Germany, residing at the town of Schönebeck, in the Kingdom of Prussia and Empire of Germany, have invented a new and useful Improvement in Apparatus for Putting Driving-Belts on Pulleys, of which the following is a specification.

Where it has been the custom for operators of machinery to put belts on pulleys with their hands alone, such act was attended with great danger, and many serious casualties have occurred on account of the awkwardness or mismanagement of the operator. It is to obviate this danger and difficulty that my invention has been devised, which consists in the details of construction substantially as illustrated in the drawings hereinafter described, and subsequently pointed out in the claims.

Figure 1 illustrates a longitudinal section of my invention. Fig. 2 illustrates a front view of the same. Fig. 3 illustrates a side view of a modification of the same. Figs. 4 and 5 illustrate detail views on lines C and D and A and B, Fig. 1, respectively, of parts of my invention, hereinafter more fully described.

The rigid curve-shaped metal piece *a* is attached by means of a socket, *s'*, to the staff *s*. Upon the top or back of this rigid metallic piece *a*, and reaching down on the staff *s*, is an elastic band or strip of sheet metal, *d*, which is movable endwise between the guides a' a^2 a^3 a^4. To one end of this elastic band or strip of sheet metal *d* is attached the separable head *b*, which carries the lifting-pin *c*. To the other end of this elastic band or strip is attached the hook-handle d^4 by a pin, *u*, passing through the larger end of the hook and through the end of the elastic band or strip. This elastic band or strip is further provided with the lugs d' d^2 d^3, which are riveted to it, and, passing between the guides a' a^2 a^3 a^4, serve as stops to rest upon the ends of the fork f' of the lever *f*. This lever *f* is pivoted to the rigid piece *a* at *e* and retained in its position by the helical spring *g*, which is interposed between it and the rigid piece *a*, near the upper end of the staff *s*, and pressing it outwardly from the staff *s* causes the fork f' to rest steadily upon the elastic band or strip *d* and become a stop for the lugs d' d^2 d^3. By pulling on cord *k* said lever may be moved toward staff *s*, and thereby disconnect its fork from either of the lugs aforesaid. The head *b*, which is only attached, as aforesaid, to the elastic strip or band *d*, carries the lifting-pin *c*. This lifting-pin *c* passes through the head *b*. It is grooved at *c'*. At either end of this groove is a recess, c^2. In the slide *h* is placed the pin *h'*, which, by means of the spring *i*, is pressed up against the lifting-pin *c*, and as soon as the said lifting-pin has been moved to its full extent in either direction glides into the recess c^2 and holds the lifting-pin *c* in position, as illustrated in Fig. 4. This arrangement is provided in order that the lifting-pin may be placed so as to project from either side of the head *b*, as the work to be done may require.

Instead of the lever f f^2, the lugs d' d^2 d^3 of the elastic strip or band *d* may be used in connection with the device illustrated in Fig. 3, in which *l* and *p* are two bell-cranks connected by the rod *m*. At *l'* is a hook which catches upon the lug *d'*, and may be raised from *d'* by pressing upon the longer end of the crank *p*, or held in position by means of a spring of any suitable or well-known form.

To use my invention, the operator grasps the staff *s*, so that he can lift the belt to be adjusted with the lifting-pin *c*, and at the same time reach the hook-handle d^4 and the lever f f^2. Then reaching up to the belt and lifting it to the proper place he puts it on the pulley. As the belt begins to bind on the pulley, the operator, pressing the end of the lever f f^2 toward the staff *s*, releases the band or strip *d* from the resistance produced by the connection of the lug *d'* and the fork *f'*, and the band or strip *d* thereupon slipping between the guides a' a^2 a^3 a^4 allows the lifting-pin *c* to follow the motion of the pulley, and thereby facilitates the adjustment of the belt on the pulley. As soon as the belt is fully adjusted the operator, grasping the hook-handle d^4, draws back the elastic band or strip *d* and the head *b* and the lifting-pin *c* away from the belt to their original position. The pin *u*, which secures the hook-handle d^4 to the strip or band *d*, may be made of some soft easily-broken metal, so that if the lifting-pin should become so entangled between the belt and the pulley as to render it impossible to withdraw it the pin *u* will break, and the head *b* and band or

strip d being released will be carried away by the pulley, and the operator sustains no injury.

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

1. The combination of the rigid metallic curved piece a, having guides $a' a^2 a^3 a^4$, the staff s, the elastic strip d, having lugs $d' d^2 d^3$, handle d^4, and pin u, the head b, having the pins c h' and spring i, the lever $f f^2$, pivoted at e, and provided with fork f', and the spring g, substantially as and for the purpose set forth.

2. The combination of head b with the slide h, provided with spring i and pin h', and the pin c, having groove c' and recesses c^2, substantially as and for the purpose set forth.

3. The combination of the rigid staff, curved rigid top piece, sliding elastic band, movable head having the lifting-pin, and the forked lever, all constructed and operated substantially as described.

In witness whereof I hereunto set my hand in presence of two witnesses.

HERMANN ROBERT LEICHSENRING.

Witnesses:

RUDOLF SCHMIDT,

PAUL DRUCKMÜLLER.