

No. 621,474.

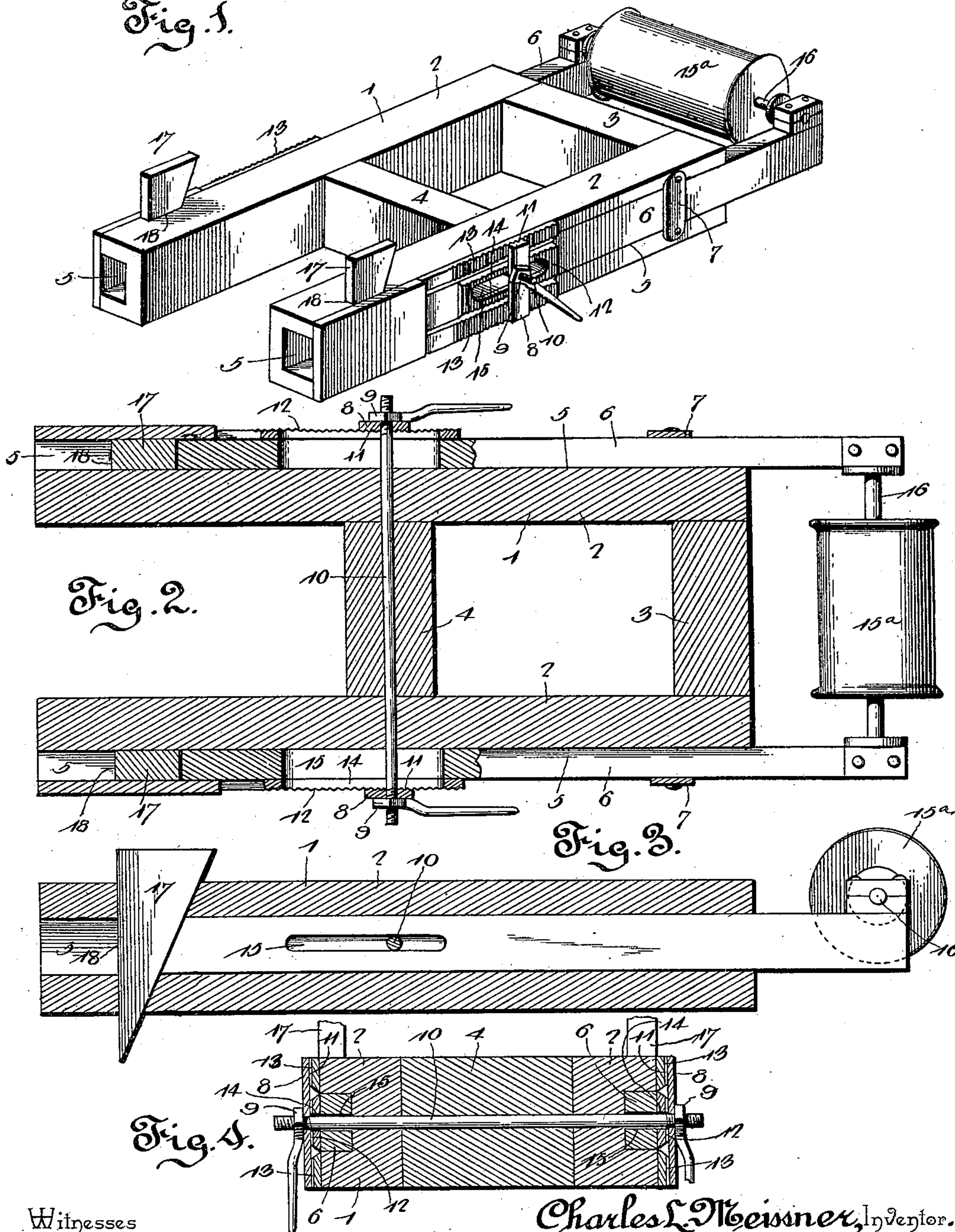
Patented Mar. 21, 1899.

C. L. MEISSNER.
BELT TIGHTENER.

(Application filed Nov. 8, 1898.)

(No Model.)

Fig. 1.



Witnesses

J. H. Culverwell.

By his

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UNITED STATES PATENT OFFICE.

CHARLES L. MEISSNER, OF BARTLETT, TEXAS.

BELT-TIGHTENER.

SPECIFICATION forming part of Letters Patent No. 621,474, dated March 21, 1899.

Application filed November 8, 1898. Serial No. 695,856. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. MEISSNER, a citizen of the United States, residing at Bartlett, in the county of Williamson and State of Texas, have invented a new and useful Belt-Tightener, of which the following is a specification.

The invention relates to improvements in belt-tighteners.

The object of the present invention is to improve the construction of belt-tighteners and to provide a simple, inexpensive, and efficient device capable of being readily operated and adapted to enable a belt to be readily tightened without stopping the same.

The invention consists in the construction and novel combination and arrangement of parts, as hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a belt-tightener constructed in accordance with this invention. Fig. 2 is a horizontal sectional view. Fig. 3 is a longitudinal sectional view. Fig. 4 is a transverse sectional view.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates an oblong frame composed of side bars 2 and connecting cross-pieces 3 and 4, arranged at one end and at the center of the frame, as clearly illustrated in Figs. 1 and 2 of the accompanying drawings; but the frame may be connected and braced in any other suitable manner, if desired. The frame, which may be readily arranged in any position adjacent to a belt, is stationary, and its sides are provided with longitudinal ways 5, consisting, preferably, of grooves and receiving the sides 6 of a slidable frame. The slidable side bars or slides 6 have their outer faces flush with the outer faces of the sides 2 of the stationary frame and are retained in the grooves by straps 7 and clamping devices for securing the slides or side bars 6 at the desired adjustment. The straps 7, which extend across the grooves of the stationary frame, are located near the outer end of the same, and the clamps which engage the sliding frame consist of clamping-plates 8 and nuts 9, which are arranged on the threaded

ends of a transverse rod 10; but separate screws may be provided for each clamping device, if desired.

The clamping-plate 8 has an inner corrugated engaging face 11, and it is adapted to interlock with grooved or corrugated plates 12 and 13, mounted, respectively, on the sliding and stationary frames. The plate 12, which is carried by the sliding frame, is provided with a longitudinal slot 14, registering with a corresponding slot 15 of the adjacent side or slide 6 and receiving the transverse rod, and the plates 13, which are secured to the stationary frame, are located above and below the plate 12. By tightening the nuts, which are provided with suitable arms or handles, the sliding frame is clamped at any desired adjustment.

The sliding frame carries a pulley 15^a, mounted on a shaft 16, which is journaled in suitable bearings at the outer ends of the slides or sides 6, and the inner ends of the latter are engaged by wedges 17, whereby the pulley is forced outward into engagement with the belt, which may be tightened without stopping the same. The wedges 17, which engage the inner ends of the slides or sides 6, are mounted in openings 18, which intersect the ways 5 of the stationary frame. By forcing the wedges inward the slidable frame is moved outward, and by withdrawing the wedges the pressure of a belt on the pulley will force the sliding frame inward.

The invention has the following advantages: The belt-tightener, which is simple and inexpensive in construction, is easily operated and is adapted to tighten a belt while the same is in motion. The wedges will force the slidable frame outward and the clamping-plates by interlocking with the plates of the slidable and stationary frames will prevent the sliding frame from slipping inward after it is once adjusted.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is—

1. A belt-tightener comprising a stationary frame provided at opposite sides with longitudinal grooves and having openings intersecting the grooves, a slidable frame having

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sides arranged in said grooves, wedges passing through the openings of the stationary frame and engaging the ends of the slidable frame, and means for clamping such sides in the said grooves, substantially as described.

2. A belt-tightener comprising a stationary frame provided at opposite sides with grooves, a slidable frame mounted in the grooves and provided at opposite sides with slots, a pulley mounted on the slidable frame and adapted to engage a belt, slotted plates mounted on the slidable frame, a rod extending through the stationary frame and arranged in the slots of the slidable frame, and having threaded ends, clamping-plates engaging the said slotted plates and the stationary frame, and nuts mounted on the threaded ends of the rod and engaging the clamping-plates, substantially as described.

3. A belt-tightener comprising a stationary frame provided at opposite sides with grooves, a slidable frame mounted therein and provided with a pulley for engaging a belt, corrugated plates mounted on the stationary and slidable frames, and clamping-plates provided with corresponding corrugations, and inter-

locked with the said plates; substantially as described.

4. A belt-tightener comprising a stationary frame having ways, a slotted slidable frame mounted therein, a pulley carried by the slidable frame and adapted to engage a belt, a slotted corrugated plate mounted on the slidable frame and registering with the slot thereof, corrugated plates mounted on the stationary frame and located above and below the slotted plate, a threaded stem carried by the stationary frame and extending through the slots of the slidable frame and the slotted plate, a clamping-plate having corrugations to interlock with the said plates, and a nut mounted on the threaded stem and engaging the clamping-plate, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHARLES L. MEISSNER.

Witnesses:

A. BISHOFF,
ALEX H. SMITH.