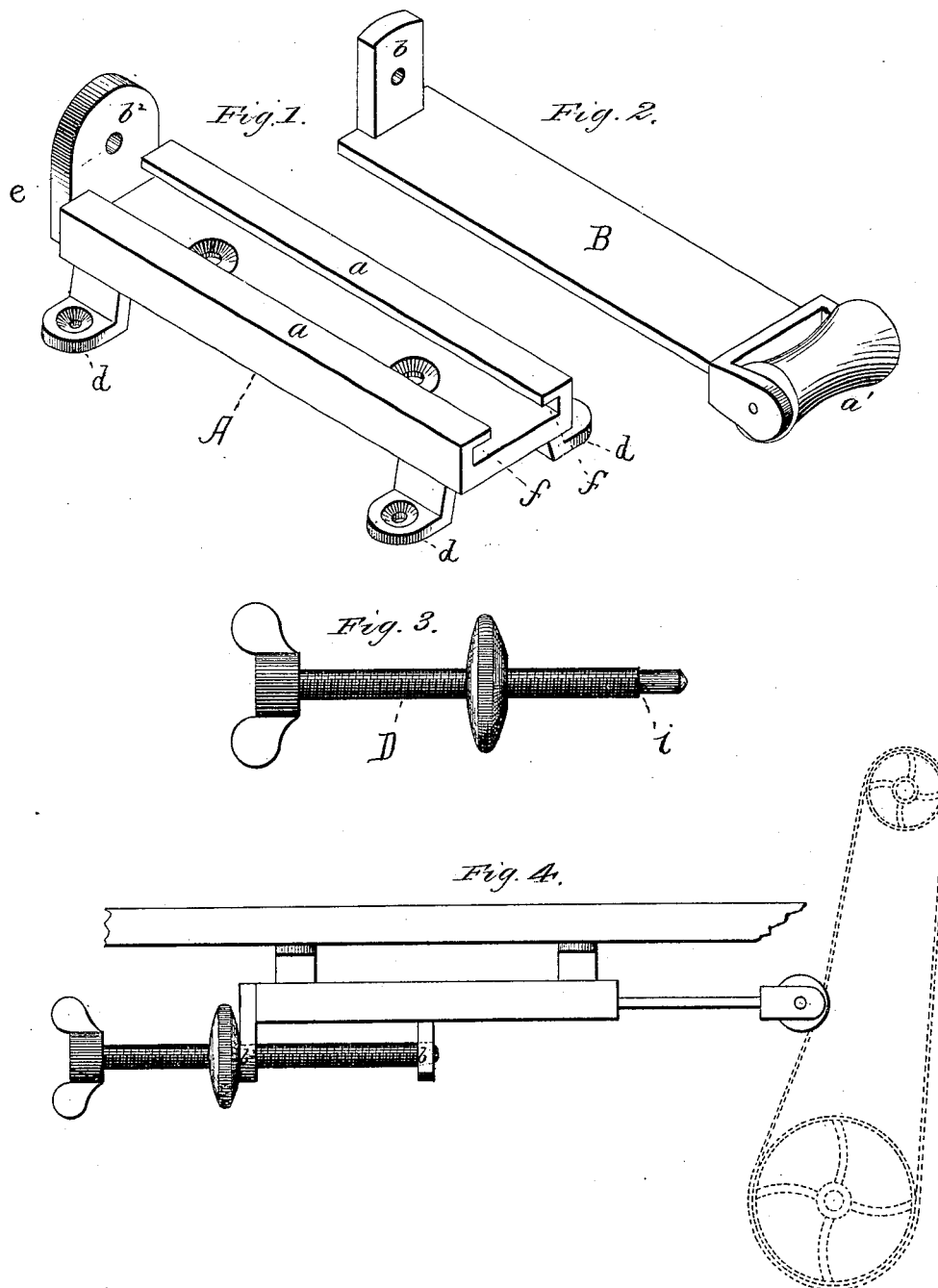


(No Model.)

W. L. GARDNER.
ADJUSTABLE BELT TIGHTENER.

No. 263,399.

Patented Aug. 29, 1882.



Witnesses
George F. Sailer
John Clark

Inventor
William L. Gardner

UNITED STATES PATENT OFFICE.

WILLIAM L. GARDNER, OF NEW YORK, N. Y.

ADJUSTABLE BELT-TIGHTENER.

SPECIFICATION forming part of Letters Patent No. 263,399, dated August 29, 1882.

Application filed June 9, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM L. GARDNER, a citizen of the United States, and a resident of New York, in the county and State of New York, 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 construction and operation of same, reference being had to the accompanying drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 on the drawings is a representation of a perspective of the base-plate of my device. Fig. 2 is a perspective view of the slide and friction-roller. Fig. 3 is a view of the thumb-screw and jam-nut; and Fig. 4 is a side elevation of my invention, showing the same applied to a part of a sewing-machine.

The object of my invention is to provide a simple means whereby belts and the like, used in machinery, may be readily tightened or loosened, as desired, while the machine is in operation, and to construct the same in a cheap and substantial manner.

The nature of my invention relates to adjustable belt-tighteners; and the novelty consists in the peculiar construction and arrangement of parts, as will be hereinafter more fully set forth and claimed.

I shall at present describe my device as applied to a sewing-machine, but desire to state that it may be applied to all machines in which a driving belt or cord is used.

The letter A represents the base-plate, which is provided with laterally-extending arms *d*, perforated to receive screws or other suitable device by which the same may be secured to the under face of a sewing-machine, as shown in Fig. 4. This plate A is also provided with vertical walls at right angles to the base, and parallel flanges *a a*. At the closed or forward end of the said plate is a lug or projection extending at right angles to the said plate and provided with a perforation, *e*, through which passes the thumb-screw.

B represents a slide carrying at one end a stud or lug, *b*, arranged upon the base of the said slide in such a manner as to allow the same

to be free from obstructions when the edges of the slide are placed within the grooves of the base-plate. This stud is also provided with a perforation to receive the forward end of the thumb-screw. The opposite end of this slide is bifurcated or provided with forwardly-extending arms, which are perforated, as shown, to receive the ends of the axial bolt of the friction-roller *a'*. This roller *a'* is concaved peripherically to prevent lateral displacement of the belt or cord when the device is in operation.

The thumb-screw D is of the ordinary construction and provided with a shoulder, *i*, near its forward end. A jam-nut may be placed upon this screw when desired.

The operation is as follows: The base-plate A is first secured to any convenient part of a machine, as before described, and the slide B inserted in its grooves, when the perforation of the stud *b* will correspond with that of the stud *b*². The thumb-screw may be inserted through the perforation *b*² and its shouldered end secured in the perforation *b*.

By this arrangement it will be seen that the friction-pulley may be screwed upon or drawn away from the driving-belt of a machine.

The entire device, with the exception of the pulley, is preferably made of cast metal, but may be made of wood or other suitable material.

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

1. In a belt-tightener, the base-plate constructed as described, and adapted to operate in combination with the slide, friction-roller, and thumb-screw, substantially as and for the purposes specified.

2. The belt-tightener herein described, consisting of the plate A, provided with securing-arms, grooves *f f*, and stud *b*², slide B, provided with stud *b*, and bifurcated arms, the friction-roller, thumb-screw, and jam-nut, all constructed and adapted to operate substantially as specified.

WILLIAM L. GARDNER.

Witnesses:

JOHN CLARK,
GEORGE F. LAIB.