

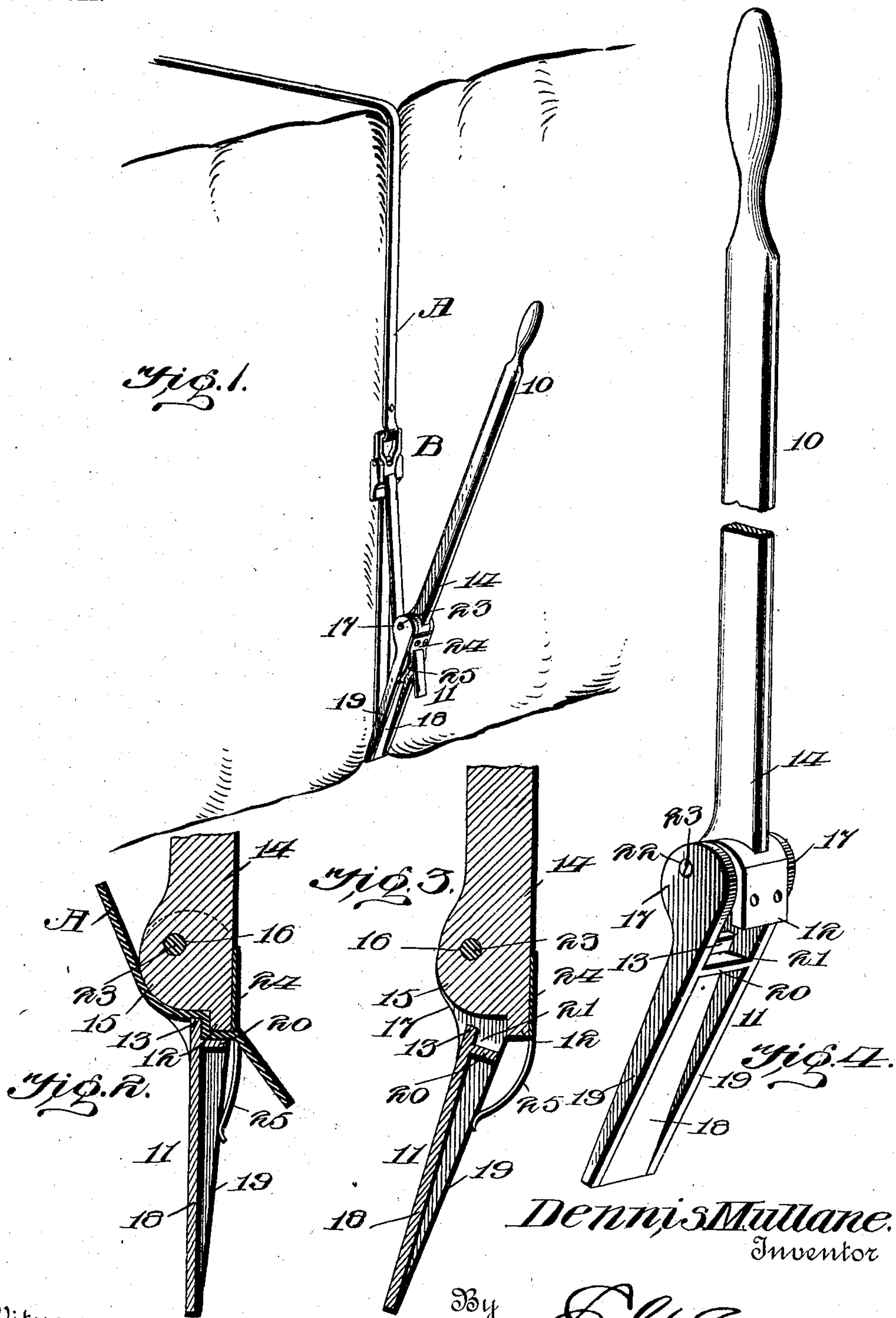
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PATENTED JULY 7, 1903.

D. MULLANE.
BAND TIGHTENER.

APPLICATION FILED NOV. 6, 1900. RENEWED APR. 17, 1903.

NO MODEL.



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DENNIS MULLANE, OF HOUSTON, TEXAS.

BAND-TIGHTENER.

SPECIFICATION forming part of Letters Patent No. 732,773, dated July 7, 1903.

Application filed November 6, 1900. Renewed April 17, 1903. Serial No. 153,142. (No model.)

To all whom it may concern:

Be it known that I, DENNIS MULLANE, a citizen of the United States, residing at Houston, in the county of Harris and State of Texas, have invented a new and useful Band-Tightener, of which the following is a specification.

The present invention relates to band-tighteners, and more especially to levers for tightening the bands of cotton or other bales.

The object of the invention is to provide a simple device of this character which may be readily applied to the end of a band to draw the same through a buckle or tie and that will securely grip the same to prevent its slipping.

A further object is to provide a construction in which the jaws will normally be held in open or inoperative position to permit of the ready insertion of the band between the same.

In order to carry out these and other objects, the following-described construction, which is also illustrated in the accompanying drawings, is provided; but it will be understood that such construction is open to modification within the scope of the appended claims.

In the drawings, Figure 1 is a perspective view of a portion of a bale and band therefor and illustrating the improved tightener in proper position for tightening the band. Fig. 2 is a longitudinal sectional view, on an enlarged scale, of the clamping-jaws in operative position. Fig. 3 is a view similar to Fig. 2, but illustrating the normal position of the jaws when in inoperative position. Fig. 4 is a perspective view of the tightener with the jaws thrown open and the spring removed.

Similar characters of reference designate corresponding parts in the several figures of the drawings.

The tightener is in the form of a lever, which comprises a pair of pivotally-connected sections 10 and 11, having overlapping-jaws 12 and 13, between which the band is adapted to be clamped. For the purpose of distinction these sections are designated, respectively, the "handle" and "fulcrum" sections. The handle-section 10 comprises a shank 14, one end of which forms a hand gripping portion, the other end being provided with an enlarged circular head 15, from the edge of

which projects the jaw 12 in the form of an angular transverse lip. This circular head is provided with a bolt-opening 16, said bolt-opening being preferably nearest the side of the head which is diametrically opposite the jaw 12 and is therefore eccentrically disposed. The section 11 comprises a shank, one end of which forms the fulcrum-bearing for the lever and has at its other end projecting ears 17, between which is arranged the jaw 13, formed by a transverse flange. This section is preferably formed of a flat web 18, having outstanding flanges 19 on its edges which taper toward the fulcrum end of the section. At the end of the section opposite to the fulcrum-bearing these flanges project beyond the end of the web and are enlarged to form the circular ears 17. A cross-rib 20, connecting these flanges close to the end of the web 18, forms a depressed seat 21, the end of the web 18 forming the bottom of said seat and the jaw 13. The said jaw is thus arranged inside the flanges, and when the jaw 12 is forced inward upon the jaw 13, with the band between the same, there is an interlocking connection between the two sections, as well as a crimp formed in the band. The ears 17 have alined openings 22, which are substantially diametrically opposite the seat 21 and are therefore eccentrically disposed.

The head 15 of the handle-section 10 is arranged between the ears 17 of the fulcrum-section, and a pivot-pin 23 is passed through the alined openings of the same. It will thus be seen that the jaw 12 will fit in the seat 21 and coact with the jaw 13 to clamp a band, as A, passing between the same and that the jaw 13 will likewise fit into a similar seat formed by the lower end face of the handle member and the contiguous face of the jaw 12, so that the band when gripped will be retained between three angularly-related pairs of clamping-faces—to wit, the end face of the jaw 12 and the contiguous face of the flange 20, the side face of the jaw 12 and the adjacent side face of the jaw 13, and finally the end face of the jaw 13 and the adjacent face of the handle-section.

In order to hold the jaws in separated position when there is no pressure upon the lever, a spring 24 is attached to the head 15 and bears against the fulcrum-section. This

spring is preferably bifurcated to form a pair of arms 25, that bear upon the side flanges 19.

In operating the tightener the band A is passed around the bale or article to be tightened and is passed through a buckle or tie, as B. The end is then passed between the jaws 12 and 13, which will be in separated position because of the spring 24. The fulcrum end of the lever is then engaged under the edge of the bale in the band-channel and upon the band, as shown in Fig. 1. Upon closing the jaws the band will be crimped around the angular edges of the same. The entire lever is then forced down, drawing the band tightly about the bale. Upon releasing the pressure the jaws will immediately separate to permit the passage of the band either for the purpose of obtaining a new grip or of withdrawing the same.

By the present construction it will be observed that several important advantages are obtained. In the first place by having the coacting jaws of an angular construction and one fitting in the depressed seat a tortuous passage-way is provided, the band is given angular crimps around the edges, and is not liable to slip. Furthermore, by pivoting the two sections eccentrically with relation to the jaws a comparatively slight movement of the handle will permit the jaws to open far enough to permit of the ready insertion of the bale-band and the strain upon the thin ears will be against the wider portions of the same. A still further advantage resides in providing means for holding the jaws in open position when there is no strain on the lever, as it facilitates the application and removal of the tightener, as above described.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. A bale-band tightener, comprising a handle-section and a fulcrum-section having piv-

otal connection at one side of their adjacent ends, each of said sections being provided with an angular jaw and an angular depressed seat located at the side of the member opposite the pivot and opposed to the seat and jaw of the other section, whereby the band will be clamped between three angularly-related pairs of clamping-faces, and will be crimped in a manner to insure its retention against slipping.

2. A tightener of the class described, comprising a hand-lever formed of pivotally-united sections carrying overlapping coacting jaws at their pivotally-united ends, the outer end of one section forming a handle, and the outer end of the other section forming a fulcrum, and a spring carried by one section and engaging the other to hold the jaws in inoperative relation, said spring being located contiguous to the pivotally-united ends.

3. A tightener of the class described, comprising a lever formed of pivotally-united sections carrying overlapping coacting jaws at their pivotally-united ends, and a bifurcated spring carried by one section and having its arms engaging the side edges of the other section to normally hold the jaws in inoperative position and provide a free passage-way through said jaws.

4. A tightener of the class described, comprising a handle and a fulcrum section pivotally connected, the handle-section having an enlarged head at one end which is provided with a transverse projecting jaw, the fulcrum-section having projecting spaced ears embracing said head and pivoted thereto, a transverse jaw projecting from the end of the fulcrum-section between and below the plane of the outer edges of the ears, forming a depressed seat adapted to receive the jaw of the handle-section, a bifurcated spring mounted upon the enlarged head of the handle-section and having its arms bearing against the side edges of the fulcrum-section on opposite sides of the depressed seat.

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

DENNIS MULLANE.

Witnesses:

E. A. LOFGIER,
J. M. CULLEN.