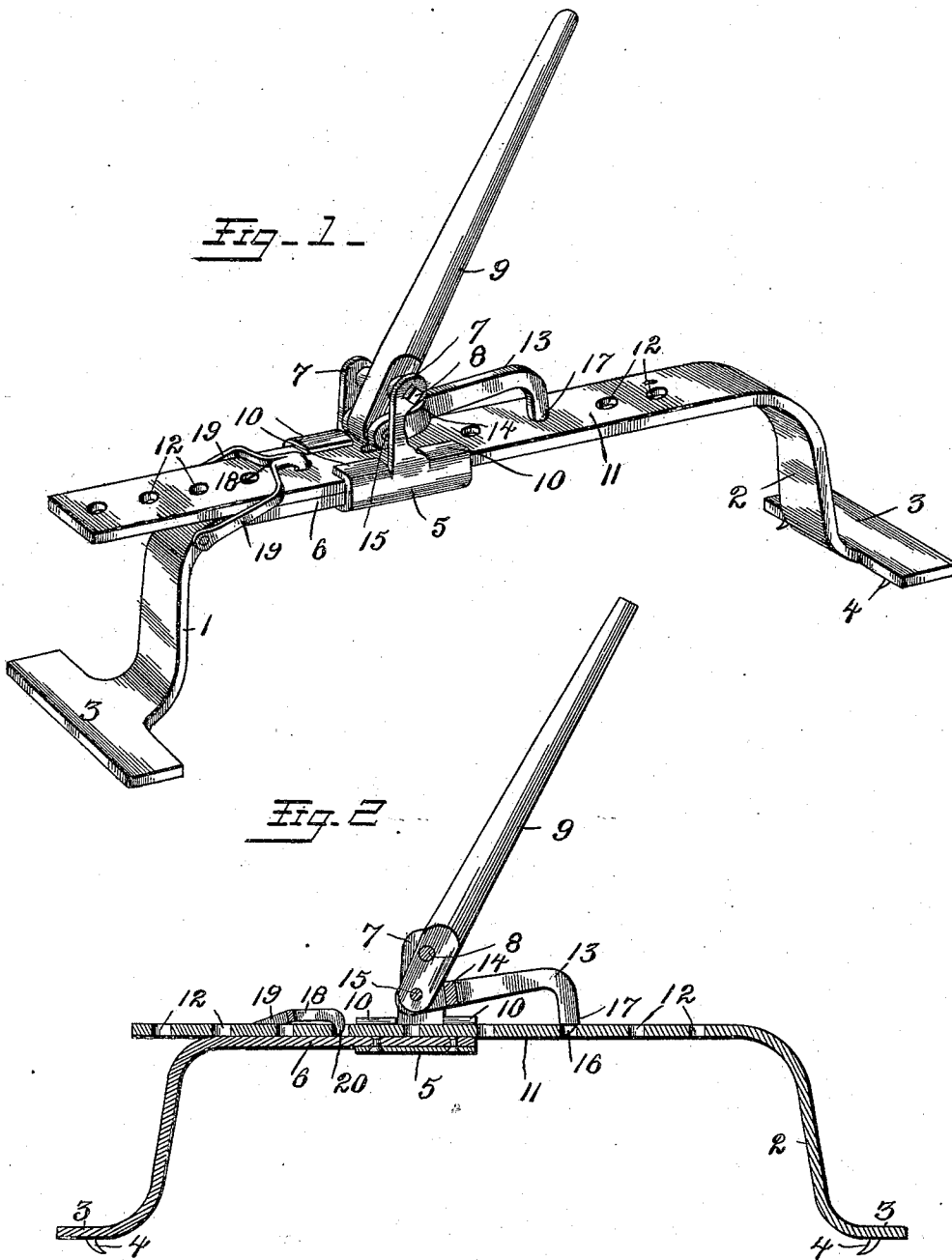


(No Model.)

J. MENARY.
TIGHTENING AND STRETCHING DEVICE.

No. 553,172.

Patented Jan. 14, 1896.



Inventor

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Witnesses

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UNITED STATES PATENT OFFICE.

JOHN MENARY, OF HEBER, UTAH.

TIGHTENING AND STRETCHING DEVICE.

SPECIFICATION forming part of Letters Patent No. 553,172, dated January 14, 1896.

Application filed June 26, 1895. Serial No. 554,134. (No model.)

To all whom it may concern:

Be it known that I, JOHN MENARY, a citizen of the United States, residing at Heber, in the county of Wasatch and State of Utah, have invented a new and useful Tightening and Stretching Device, of which the following is a specification.

This invention relates to an improvement in tightening and stretching devices.

10 The object of the present invention is to provide a simple and efficient device for drawing the adjacent ends of belts together and holding the same while the lacing or other form of fastening device is applied to said ends.

15 While said tightener is particularly adapted for use in drawing together the ends of elevator-belts, which carry grain-conveying cups or pockets, it may also be used for stretching carpets, &c., preparatory to tacking the same.

20 Other objects and advantages of the device will appear in the subjoined description.

The invention consists in certain novel features and details of construction and arrangement of parts, as hereinafter fully described, 25 illustrated in the drawings, and finally embodied in the claims.

In the accompanying drawings, Figure 1 is a perspective view of the device complete and constructed in accordance with this invention. 30 Fig. 2 is a longitudinal section through the same.

Similar numerals of reference designate corresponding parts in both figures of the drawings.

35 Referring to the accompanying drawings, 1 and 2 designate a pair of sliding arms or members. Each member is provided at one end with a transversely-elongated foot or cross-head 3, from the lower face of which project pointed inclined barbs 4, which when said 40 sliding members are assembled in operative relation incline toward each other, as best illustrated in Fig. 2. From these barbed cross-heads 3 the arms of the sliding members extend upwardly a sufficient distance to bring 45 the upper horizontal portions thereof at a sufficient elevation to clear one or more of the grain-conveying buckets on an ordinary elevator-belt.

50 5 designates a metallic clip riveted or otherwise secured to the end of the upper horizontal portion 6 of the member 1. This clip is

preferably formed from a single piece of metal and extends around three sides of the horizontal portion of the member 1, the central 55 portion of said clip at either side being extended upwardly to form parallel lugs or ears 7 for the reception of a pin or bolt 8, upon which the operating-lever 9 is mounted. The end portions of the clip are bent inwardly to 60 form retaining-lips 10, which are four in number and overlie the upper face of the horizontal portion 11 of the sliding member 2. The clip thus formed constitutes a loop which is adapted to receive and permit the horizontal 65 portion of the sliding member 2 to be moved lengthwise.

The horizontal portion of the sliding member 2 may be made of any desired length and is provided with a series of perforations 12, 70 which are adapted to be engaged by the pend-ent end or point of a gravity pawl or dog 13. The pawl 13 is bifurcated at one end, as indicated at 14, to receive the short end of the operating-lever 9, to which it is connected 75 pivotally by means of a pin 15, and the opposite end of said pawl is pointed and provided with an inclined nose 16, and also with a shoulder 17. The inclined pointed end of the pawl is adapted to engage with one of the 80 perforations in the horizontal arm of the sliding member 2, while the shoulder 17 rests upon the upper surface of said arm and prevents the pointed end of said pawl from entering the perforations too far. By means of this construction as the operating-lever is vibrated 85 the pawl engages one of the perforations in the sliding member 2 and moves the same toward the member 1 by sliding the upper horizontal arm thereof through the clip or loop carried 90 by the member 1. Upon reversing the operating-lever the pawl by reason of its inclined nose and the correspondingly-inclined inner wall of each perforation rides out of said perforation and slides along the upper face of 95 said arm until it drops into and engages the next perforation. In this manner the barbed cross-heads 3 may be caused to approach each other sufficiently to bring the meeting ends of the belt together, the latter being grasped by 100 the pointed barbs in a manner that will be readily understood. In order to prevent retrograde movement of the sliding members when the operating-lever is vibrated for ob-

taining a new hold, a supplemental gravity-pawl 18, formed with parallel arms 19, spaced apart sufficiently to embrace the horizontal arm of the member 2, is pivotally connected 5 with the member 1 at or near one end of the horizontal portion thereof, as shown. As the horizontal arm of the member 2 is moved relatively to the member 1 the pointed end of said pawl drops into and engages one of the perforations of the member 2, thus holding the 10 same while the operating-lever is moved to take a fresh hold. The point of the pawl 18 is also formed with an inclined nose 20, which will adapt it to automatically disengage itself 15 with the perforations in the member 2 when the horizontal arm thereof is moved in the direction for tightening the belt.

It will be apparent that while the device herein described is particularly designed for 20 use as a belt-tightener it may also be employed as a carpet-stretcher and for analogous purposes.

Changes in the form, proportion and minor details of construction may be resorted to 25 without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

30 1. A tightening and stretching device, the same comprising a pair of relatively sliding members each provided with a right-angularly disposed barbed foot or cross head, a clip secured fixedly to one end of said members 35 and constructed to form a guiding loop for the

other member, upwardly extending parallel ears formed integrally with said clip, and carrying a fixed fulcrum, an operating lever mounted on said fixed fulcrum, a reciprocating catch pawl pivotally mounted on the short 40 arm of said lever and adapted to engage with perforations in one of the sliding members, and a supplemental pawl carried by the other member, all arranged for joint operation substantially as specified. 45

2. In a tightening and stretching device, a pair of sliding members each provided with a right angularly disposed barbed foot or cross head and having the horizontal arms thereof in a plane considerably removed from the 50 plane in which said feet or cross heads travel, in combination with a loop or clip secured fixedly to the horizontal arm of one of said members and embracing the corresponding sliding arm of the other member, an operating lever 55 mounted on a fixed fulcrum carried by said clip or loop, a gravity pawl carried by said operating lever and adapted to engage perforations in the horizontal arm of one of said members, and a gravity pawl connected with the 60 other member and adapted to engage with said perforations, substantially as and for the purpose specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in 65 the presence of two witnesses.

JOHN MENARY.

Witnesses:

A. C. HATCH,
MARY A. DUKE.