

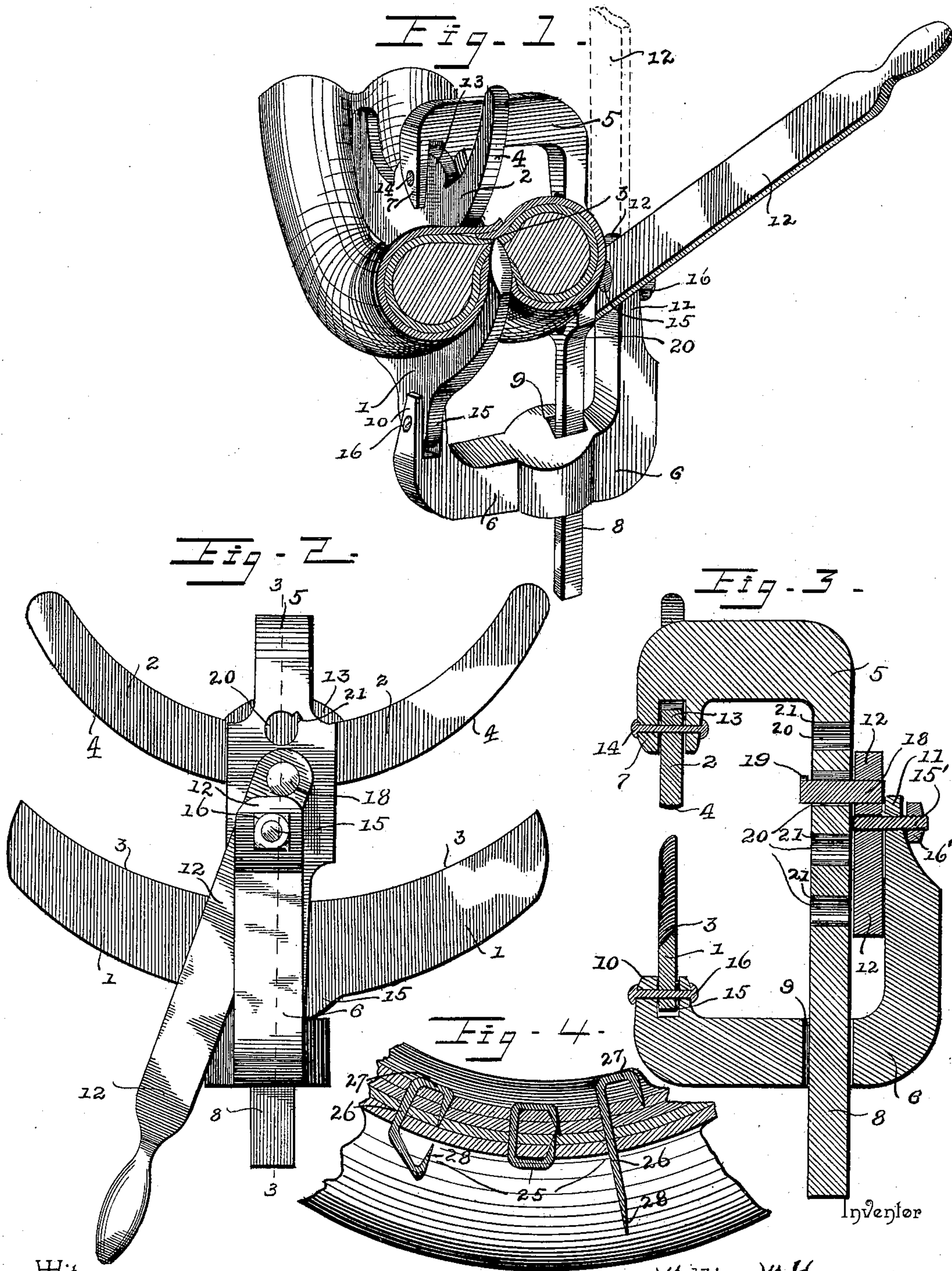
No. 618,552.

Patented Jan. 31, 1899.

W. W. YOUNG.
COLLAR CRIMPER.

(Application filed Aug. 3, 1897.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM W. YOUMANS, OF CALDWELL, KANSAS.

COLLAR-CRIMPER.

SPECIFICATION forming part of Letters Patent No. 618,552, dated January 31, 1899.

Application filed August 3, 1897. Serial No. 646,994. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. YOUMANS, a citizen of the United States, residing at Caldwell, in the county of Sumner and State of Kansas, have invented a new and useful Collar-Crimper, of which the following is a specification.

My invention relates to improvements in machines for crimping horse-collars and to staples employed for fastening protectors to horse-collars, such protectors being of the nature disclosed by prior Letters Patent granted to me April 19, 1887, No. 361,342.

The primary object of this invention is to provide an improved machine for crimping horse-collars in which the operation of crimping the collar or the protector around the collar may be easily and quickly performed.

A further object of the invention is to provide an improved machine which may be readily adapted for use to the best advantage in connection with horse-collars of different sizes for easily and quickly crimping the same.

To the accomplishment of these ends my invention consists in the construction of parts and in the novel combination and arrangement of elements, which will be hereinafter fully described and claimed.

To enable others to understand my invention, I have illustrated the preferred embodiment thereof in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a perspective view illustrating the improved machine in the operation of crimping the leather of a horse-collar. Fig. 2 is an elevation thereof, showing the parts in the positions they occupy when the jaws are opened. Fig. 3 is a sectional elevation on the plane indicated by the dotted line 3 3 of Fig. 2. Fig. 4 is a sectional view through a part of a collar, showing the improved staples for fastening the leather together.

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

The machine embodying my present invention is to be used for crimping the leather of horse-collars between the rolls thereof in the manufacture of new collars; but it is especially designed for crimping leather protec-

tors around the horse-collar in repairing the same. The machine consists of two working jaws, a two-part frame slidably connected together, and a single operating-lever connected to the two members of the frame to move the same and the jaws in opposite directions simultaneously either toward or from each other. The jaws are represented by the numerals 1 and 2. The jaw 1 is arranged to work against the outside of the horse-collar, and it is provided with a convex working edge 3 to conform to the shape of the outer surface of the collar. The other jaw 2 of the machine is constructed to work against the inner side of the collar, and it is formed with a concave working edge 4, the working edges of the two jaws being curved in arcs of circles struck from a common center, so that the working edges of the jaws are concentric to each other to enable the jaws to operate to good advantage on the work.

The frame of the machine is constructed in two parts, one of which is indicated at 5 and the other at 6. The member 5 of the frame is provided at one end with a pair of lugs 7, and at its other end it has an elongated shank or guide-bar 8. The member 6 of the frame has in its upright shank a transverse slot or opening 9, and at one end of this member 6 it is provided with a pair of ears 10, while the other end of the member is provided with an arm 11. Each part of the frame constitutes, preferably, a single casting, and the members of the frame are assembled together in operative relation by fitting the shank or guide-bars 8 of the member 5 in the slot or opening 9 of the member 6 and attaching the operating-lever 12 to the two members of the frame in the manner presently described.

The inner jaw 2 of the machine is provided on its rear or neutral edge with an integral lug 13, which is fitted loosely between the lugs 7 of the frame member 5, so that the lug and jaw can have a limited turning movement between the lugs 7 and on the pin or rivet 14, which serves to pivotally attach the jaw 2 to the frame member 5. The other jaw 1 is likewise provided with an integral ear 15, which projects from the neutral edge of the jaw, and this ear 15 is loosely fitted between the lugs or ears 10 of the frame member 6, to which ears the jaw 1 is loosely attached by

the pin, rivet, or bolt 16, thus giving to the jaw 1 a certain freedom of movement or play on the frame member 6, by which said jaw is carried. The frame members 5 6 are arranged
 5 in such relation to each other as to present the concave edge of one jaw to the convex edge of the other jaw, and these jaws lie in substantially the same plane, whereby the jaws are formed and arranged to operate to
 10 the best advantage in crimping the leather between the roll of the horse-collar.

The shank or guide-bar 8 of the frame member 5 fits and plays loosely in the slot 9 of the frame member 6 to enable the frame
 15 members to be moved toward or from each other to open or close the crimping-jaws. This adjustment of the frame members and the jaws is effected to good advantage by the employment of a single lever 12, which is ar-
 20 ranged to fit in a space between the shank or guide-bar 8 and the arm 11 of the members 5 6, respectively, of the frame. One end of the lever 12 is pivotally attached in a peculiar manner to the guide-bar or shank 8 of the
 25 frame member 5, and said lever is attached at an intermediate point of its length to the arm 11 of the frame member 6 by means of the short bolt or spud 15'. This bolt or spud 15' is fastened rigidly to or made an integral
 30 part of the lever 12, and it passes through an aperture in the end of the arm 11 to enable a nut 16' to be screwed on the threaded extremity of said bolt or spud 15 to confine it to the frame member 6, but enable it to turn
 35 freely thereon. The free end of the operating-lever is attached by a shiftable fulcrum 18 to the shank or guide-bar 8 of the frame member 5. This shiftable fulcrum 18 is a pin rigidly attached to the free end of the
 40 lever 12, and it is provided with a lug or shoulder 19, which extends from one side of the fulcrum-pin at or near the extremity thereof. The shank or guide-bar 8 of the frame member 5 is provided with a series of
 45 spaced apertures 20, each having a lateral offset 21 extending from the opening in a direction diagonally across the bar or shank 8. The openings 20 are of circular form and of a size suitable to accommodate the cylin-
 50 drical fulcrum-pin 18 of the lever 12, and the offsets in these openings enable the lug 19 of the pin 18 to be passed easily therethrough whenever it is desired to remove the fulcrum-pin from one aperture and fit it in another
 55 aperture of the series.

It will be observed that the lever 12 is attached to the two frame members in a manner to move them and the jaws toward or from each other by simply turning the lever on its
 60 fulcrum, and at the same time the distance between the jaws can be varied to accommodate the machine to collars of different sizes by shifting the lever-fulcrum from one opening to another of the series of openings in the
 65 guide-bar of the machine.

In using the machine the lever is adjusted to spread the frame members and open the

jaws. The collar is now placed in position between the jaws to have the jaw 1 bear against the outside, while the jaw 2 bears
 70 against the inside of the collar. The lever is reversed, so as to draw the frame members together, and thus close the jaws upon the leather to crimp the same in the rolls between the collar.
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The machine can be used to good advantage in manufacturing new collars, because the jaws operate with certainty and efficiency to force or crimp the leather between the
 80 rolls; but the machine is especially useful in repairing worn collars by applying a protector or extra leather layer around the collar and crimping the same to conform to shape of the collar.

As one means for uniting the edges of the
 85 leather together along the line where said edges overlap one another I have provided the staples indicated at 25 in the drawings. Each staple consists of a long shank 26, a head 27, and the short barb or prong 28, all made or
 90 bent from a single piece of metal, preferably strong wire. The improved staple is adapted to be passed through the leather along the line of the crease or fold, where the leather is crimped around the rolls of the collar, and
 95 for these purposes the construction of the staple with the long shank is especially advantageous, because said shank enables the staple to penetrate or pass entirely through the collar and to have its end bent back upon
 100 the leather and to penetrate the same, thus giving the staple the appearance of having two heads or barbs bent into the collar. In using the improved staple the long shank is forced through the leather and the collar, along the
 105 line of the crease between the rolls, and the staple is forced through until the short barb or prong 28 penetrates into the collar, the head 27 lying substantially flush with the leather. The long shank emerges through
 110 the opposite or inner surface of the collar, and said shank is then bent or recurved backwardly upon itself and forced home into the collar. The staple thus has the appearance
 115 of two heads or short barbs penetrating the collar at opposite sides and joined by a shank which passes through the collar. Both ends of the staple are pointed or sharpened to enable them to readily penetrate the collar.

It is thought that the operation and advantages of my improvements will be readily understood from the foregoing description taken in connection with the drawings.
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I am aware that changes in the form and proportion of parts and in the details of construction of the devices herein shown and described as the preferred embodiment of my invention can be made by a skilled mechanic without departing from the spirit or sacrificing the advantages of the invention. I there-
 125 fore reserve the right to make such modifications and alterations as fairly fall within the scope of my invention.
 130

One of the important advantages of my

machine is that the parts are locked when the jaws are closed upon the leather to crimp the same around collars of certain sizes. This is advantageous for the reason that the staples can be inserted in the leather, while the collar and protector are clamped in rigid positions between the jaws of the machine. When the machine is used on the collar of a certain size and the lever is turned to bring the jaws firmly upon the collar and the protector, the lever occupies a position nearly parallel with the framework of the machine. This position of the lever throws it off the center, and it serves as a lock to hold the jaws 3 and 4 in fixed relation to each other, thus firmly clamping the protector and collar and enabling the operator to insert the staples to good advantage.

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

1. In a collar-crimping machine, a two-part frame one member of which is provided with an extended shank or guide-bar and the other member of which has a guide slot or opening through which said bar or shank is passed, combined with an operating-lever fulcrumed to one member of the frame and pivotally attached to the other member thereof, and jaws carried by said members of the frame, as and for the purposes described.

2. In a collar-crimping machine, the two-part frame one member having a shank or guide-bar provided with a series of openings with lateral offsets, and the other member hav-

ing a guide-slot through which passes the bar or shank, combined with an operating-lever provided with a fulcrum-pin and a lateral lug thereon to fit in the apertures of the shank or guide-bar and pivotally attach the lever thereto, and crimping-jaws pivoted to the respective members of the frame, as and for the purposes described.

3. A collar-crimper comprising two movable frame members slidably connected together, coacting working jaws pivotally attached to the two parts or members of said frame to be movable therewith and capable of a limited swinging movement thereon, and a lever operatively connected to the two frame members to actuate the same simultaneously in opening or closing the jaws, substantially as described.

4. A collar-crimper comprising a two-part frame, one member of which is provided with a stem slidably fitted to the other member and said stem having a series of apertures each formed with an offset, a lever fulcrumed to one frame member and having a shouldered pivotal pin adapted to be fitted in either of the openings of the stem, and coacting jaws carried by the frame members, 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.

WILLIAM W. YOUMANS.

Witnesses:

S. S. CLARK,
R. D. METCALF.