

(No Model.)

2 Sheets—Sheet 1.

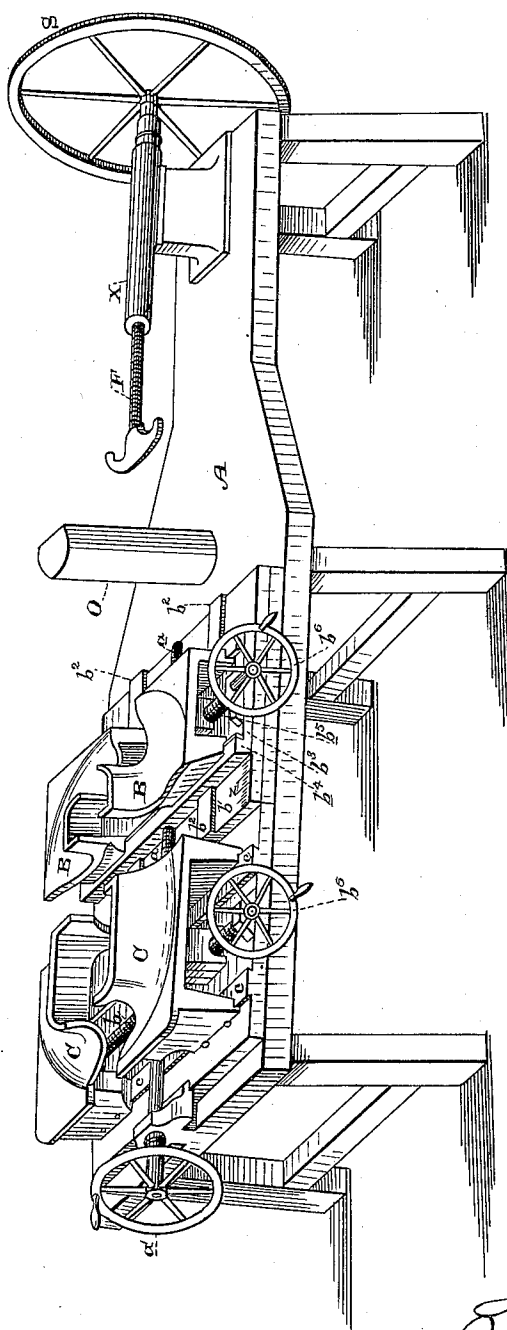
T. HARRIS.

APPARATUS FOR FORMING HORSE COLLARS.

No. 324,023.

Patented Aug. 11, 1885.

FIG. 1.



Witnesses,
Geo. H. Strong,
J. H. Hooke.

Inventor,
Thos. Harris
By
Dewey & Co.
Attorneys

(No Model.)

2 Sheets—Sheet 2.

T. HARRIS.

APPARATUS FOR FORMING HORSE COLLARS.

No. 324,023.

Patented Aug. 11, 1885.

FIG. 2.

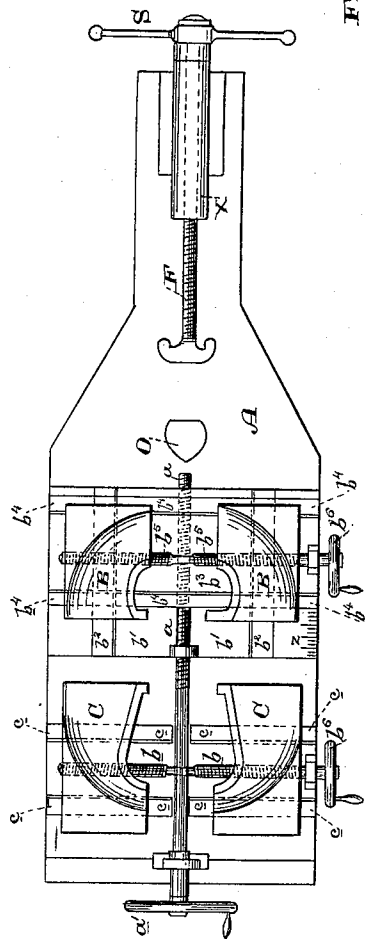


FIG. 4.

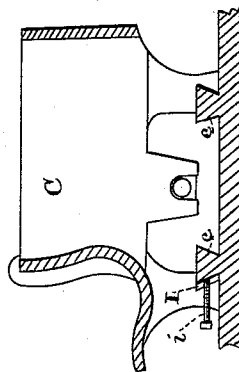
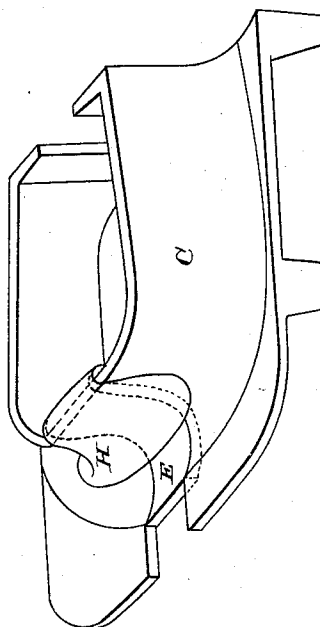


FIG. 3.



Witnesses,
Geo. H. Strong.
J. H. Morse.

Inventor,
Thos. Harris.
By
Dewey & Co.
Attorneys

UNITED STATES PATENT OFFICE.

THOMAS HARRIS, OF SACRAMENTO, CALIFORNIA, ASSIGNOR TO A. A. VAN VOORHIES & CO., OF SAME PLACE.

APPARATUS FOR FORMING HORSE-COLLARS.

SPECIFICATION forming part of Letters Patent No. 324,023, dated August 11, 1885.

Application filed May 11, 1885. (No model.)

To all whom it may concern:

Be it known that I, THOMAS HARRIS, of the city and county of Sacramento, and State of California, have invented an Improvement in Apparatus for Forming Horse-Collars; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to that class of apparatus for forming horse-collars in which expanding and separable blocks or jaws receive and form the collar and hold it for the roping operation. This class is exemplified in Letters Patent of the United States No. 313,420, granted March 3, 1885, to A. A. Van Voorhies, upon my application and assignment, and my present invention is based upon the invention claimed in said patent.

My invention consists of a two-part expanding block or jaw for the top or neck of the collar, saddle-plates adapted to fit over the filling-in plates between the parts of the expanding blocks or jaws both at the top and bottom of the collar, said saddle-plates being curved to continue the curvature of the periphery of blocks, adjustable washer-plates fitted in the sides of the dovetailed slides or tracks, by which the blocks are steadied and the wear taken up, and a scale to denote the sizes of the collars.

The object of my invention will appear hereinafter.

Referring to the accompanying drawings, Figure 1 is a perspective view of my apparatus. Fig. 2 is a plan of same. Fig. 3 is a perspective view of one of the blocks, showing the saddle-plate. Fig. 4 is a vertical section of same, also showing the washer I.

A is the bench or frame. C is one of the jaws or blocks, and B is the other. The jaw or block C is a two-part one, the parts of which separate to expand by moving on dovetailed guides *c* secured on the bench, this movement being effected by means of the screw *b*, which is right and left hand threaded in opposite directions from its center. In the former patent the jaw or block B was a single piece adapted to be adjusted to or from the jaw or block C, but having no power of expansion. I now make it a two-part one, similar to the one C, and give it an expansive adjustment, as well as the adjustment to or from the jaw

or block C. This change necessarily requires a change in the manner of mounting the block. Upon the bench is secured a plate, *b'*, provided with dovetail tracks *b²*, extending lengthwise of the machine. Upon these is fitted a carriage-plate, *b³*, provided with dovetail tracks *b⁴*, extending at right angles to tracks *b²*. Upon these tracks *b⁴* are fitted the parts of the jaw or block B. Connected with the carriage-plate is the screw *a*, having a crank-wheel, *a'*, on its outer end. This screw effects the adjustment of the jaw or block B to or from the jaw or block C.

Passing through the two parts of the jaw or block B is the screw *b⁵*, threaded right and left from the center, and effecting the expansion of block B in the same manner as the screw *b* effects the expansion of the block C. Both screws are operated by means of crank-wheels *b⁶*. The object of making the jaw or block B in this manner is to tighten or expand the top or neck of the collar, as well as its throat or bottom, and thus to provide for the perfect formation of all sizes of collars.

Upon the plate *b'* is laid off a scale, *z*, by which the different sizes of collars may be determined more conveniently.

In the spaces between the parts of the blocks are fitted one or more filling-in plates, *E*, and over these are fitted saddle-plates *H*, which are properly curved to fill in the block when expanded. The plates are fitted in both blocks.

I, in Fig. 4, is a small washer-plate, which is laid against the side of the dovetail track, and is adjusted by a screw, *i*. This has the object of counteracting the wear and tear, and keeping the block as tight as required.

O is the rope-divider; F, the rope-tightening screw; X, its bearing, and S the drive-wheel.

The operation of these parts having been fully described in the former patent, needs but brief notice here, which I will give in connection with a general description of the operation of the entire apparatus. The collar, after having been cut, sewed, properly stuffed, and partially shaped by hand, is strapped and put on the block. The rope is applied between the rim and body, and its ends are secured to the hooks or flukes of the screw F. Then by separating the blocks

B and C by means of screw *a*, and by expanding the parts of both blocks by means of the screws *b* and *b'*, the collar is forced into proper shape, not only at the bottom, but at the top as well. The screw *F* is operated to tighten the rope and form the space for the hames. The saddle-plates *H* provide for a continuous curvature of the blocks when expanded.

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

1. In a horse-collar machine, the combination of a two-part block or jaw, *C*, each part of which is disconnected from the other, and moves in an opposite direction, and a two-part block or jaw, *B*, whereby both the top or neck of the collar and the throat or bottom are expanded laterally, substantially as herein described.

2. In a horse-collar-forming apparatus, the laterally-expanding two-part block or jaw for the top of the collar, adapted to have a longitudinal and transverse movement upon suitable guide-tracks, substantially as described.

3. In a horse-collar-forming apparatus, the combination of the two-part adjustable blocks or jaws, the three adjusting-screws, whereby the block may be adjusted to various-sized collars, and the longitudinal and transverse

guide-rails upon which the blocks *B* and *C* move, substantially as described.

4. In a horse-collar-forming apparatus, the guide-plate *b'* on the bench, having tracks *b''*, the carriage-plate *b''* on said tracks, itself having tracks *b'*, and the two-part block or jaw *B* on tracks *b'*, in combination with a screw adapted to actuate the carriage-plate longitudinally, and a screw adapted to expand the block or jaw laterally, substantially as herein described.

5. In a horse-collar-forming apparatus, having laterally-expanding two-part blocks or jaws to receive the collar, the filling-in plates *E* in the spaces between the parts, and the curved saddle-plates *H*, fitted on the plates *E*, substantially as herein described.

6. In a horse-collar-forming apparatus, the combination of the adjustable blocks, the dovetail tracks on which they move, the washer-plate *I*, fitted against said tracks, and the adjusting-screw *i*, substantially as herein described.

In witness whereof I have hereunto set my hand.

THOMAS HARRIS.

Witnesses:

R. C. IRVINE,
JAS. N. PORTER.