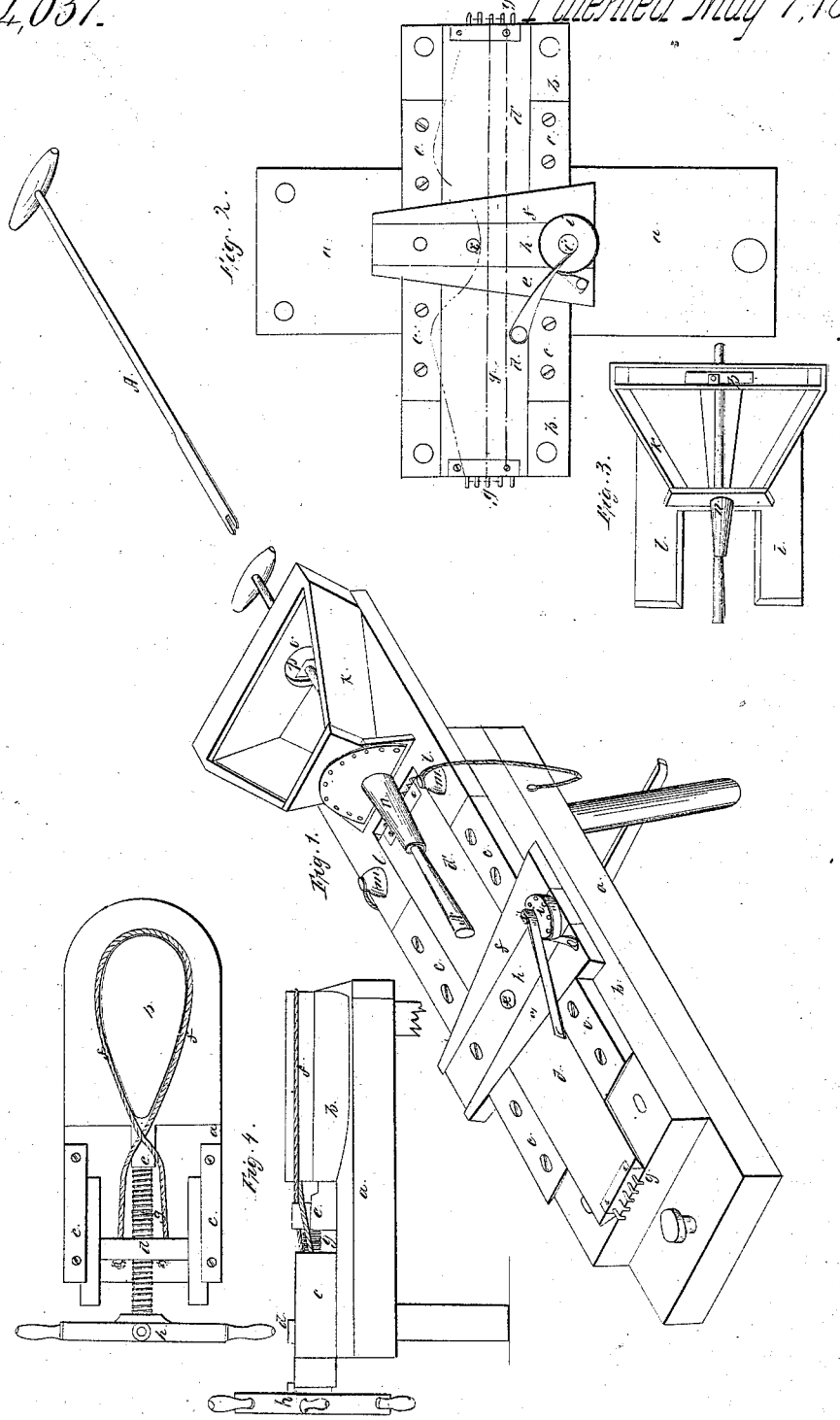
W. Haworth

Horse-Collar Machine,

No. 4,037. Patented May 7, 1845.



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UNITED STATES PATENT OFFICE.

WADE HAWORTH, OF DAYTON, OHIO.

IMPROVEMENT IN STUFFING AND STRETCHING HORSE-COLLARS.

Specification forming part of Letters Patent No. **4,037**, dated May 7, 1845.

To all whom it may concern:

Be it known that I, WADE HAWORTH, of Dayton, in the county of Montgomery and State of Ohio, have invented a new and useful Improvement in Making Horse-Collars; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, which form a part thereof, in which—

Figure 1 is an isometrical view. Fig. 2 is a top view, with the stretcher turned partly round. Fig. 3 is the hopper, detached. Fig. 4 is a top plan and side elevation of the form on which the collar is stretched.

The nature of my invention consists in a frame on which the leather is stretched to be stuffed after it has been made into a collar, and in forming said collar when stuffed.

The construction is as follows: A stout plank A is elevated at one end to an angle of about fifteen degrees by legs. On this is placed a similar piece *b*, but not quite so long. This piece is fastened to the other by a bolt *x* through both at the center, on which it can revolve, as shown in Fig. 2. To each side of this last-named piece are screwed ways or guides *c*, consisting of four straight pieces, in which slides *d* work. Between each pair of these guides *c* are situated two wedges *e* and *f*, with a straight piece *h* between them, which are for the purpose of forcing out the slides *d*, as hereinafter described. The outer ends of these slides are armed with hooks or pins *g*, on which the collar is to be hooked, as shown in Fig. 2, and one of the slides *d* is connected with its wedge *e* in the following manner: On the permanent piece *h*, between the wedges, two stud-pulleys are affixed together, one of which is much larger than the other. Around the largest pulley *i* a band passes, that is connected with the wedge *e*, and around the small pulley *i'* another band winds in an opposite direction, and its end is affixed to the slide *d* in contact with wedge *e*. By this arrangement it will be seen that as the slide *d* is forced down it carries forward the wedge so as to keep it tight. A hopper *k* is made, with its bottom extended out in front into two prongs *l*. These slip onto either slide that may be uppermost, and a long bolt or pin *m* is made to pass down through each and also through the piece *b* into the foundation *a*, thereby holding both steady. From between the prongs *l*, and a little above their level, there is a short tube *n*, that projects from said hopper, for a purpose hereinafter explained; and on the side of the hopper opposite to it there is a large hole *o*, covered by a slide *p*, that can move in any direction. The center of this slide is perforated with a small hole, so as to admit a rod used in stuffing and allow it, by means of the movement of the slide, to be raised or lowered or turned from side to side without spilling any of the cut straw or other material contained in the hopper.

The operation with this machine is as follows: After the collar is made, holes are punched in each end, which are hooked over the pins on the slides. The slide *d'* is then forced outward as far as it can be, to stretch the collar by means of the wedge *f*. It is then placed in the position shown at Fig. 1, but without the hopper. A handful of straw is then taken up and forced into the rim *y*, Fig. 2, by the stuffing-rod, which is of ordinary construction, and represented at A. This is repeated till that part is stuffed. The hopper is then put on, filled with cut straw or other material, and a rod A' is introduced through the slide *p* and tube *n*, which latter is put into the end of the belly part of the collar. By drawing the end of the rod A back into the hopper and pushing it forward into the collar, the stuffing is effected. In forcing down the stuffing the collar stretches and the slide *d* moves down and draws in the wedge *e*, by means of the pulleys above named. When one end is stuffed, the plank *b* can be swiveled round and the hopper placed on the other end for completing the operation.

The apparatus for stretching the collar is clearly shown in Fig. 4. *a* is a bench supported on legs, one end of which projects up into a form *b* for the collar, the lower part thereof assuming the form of a horse's shoulders, for the purpose of fitting the collar. On the opposite end of the bench there are guides *c*, in which a nut *d* slides, and directly before the small or upper end of the collar-form a stout post *e* rises, of triangular form. The two ends of a rope *f* are attached to the nut *d*, which rope crosses between the post *e* and the form *b*, the loop passing entirely around said form. A screw *g* works into the nut *d*, and the end of it turns in a socket formed in

the post *e*. The outer end of said screw has a wheel *h* affixed to it, from which a number of handles project radially, to turn it by.

To operate this machine, a collar is placed on the form after being stuffed, the cord is then put around it in place of the hames, and by turning the screw the whole is tightened and brought into place.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The machine for stuffing collars as herein described—that is to say, the combination of the slides and wedges for stretching the collar, and in combination therewith the revolving table *b* and hopper *k*, constructed, arranged, and combined substantially in the manner and for the purpose above described.

2. In combination with the form *b*, the post *e* and nut *d*, sliding in guides for stretching the collar, as before made known.

WADE HAWORTH.

Witnesses:

J. J. GREENOUGH,

J. A. GODDARD.