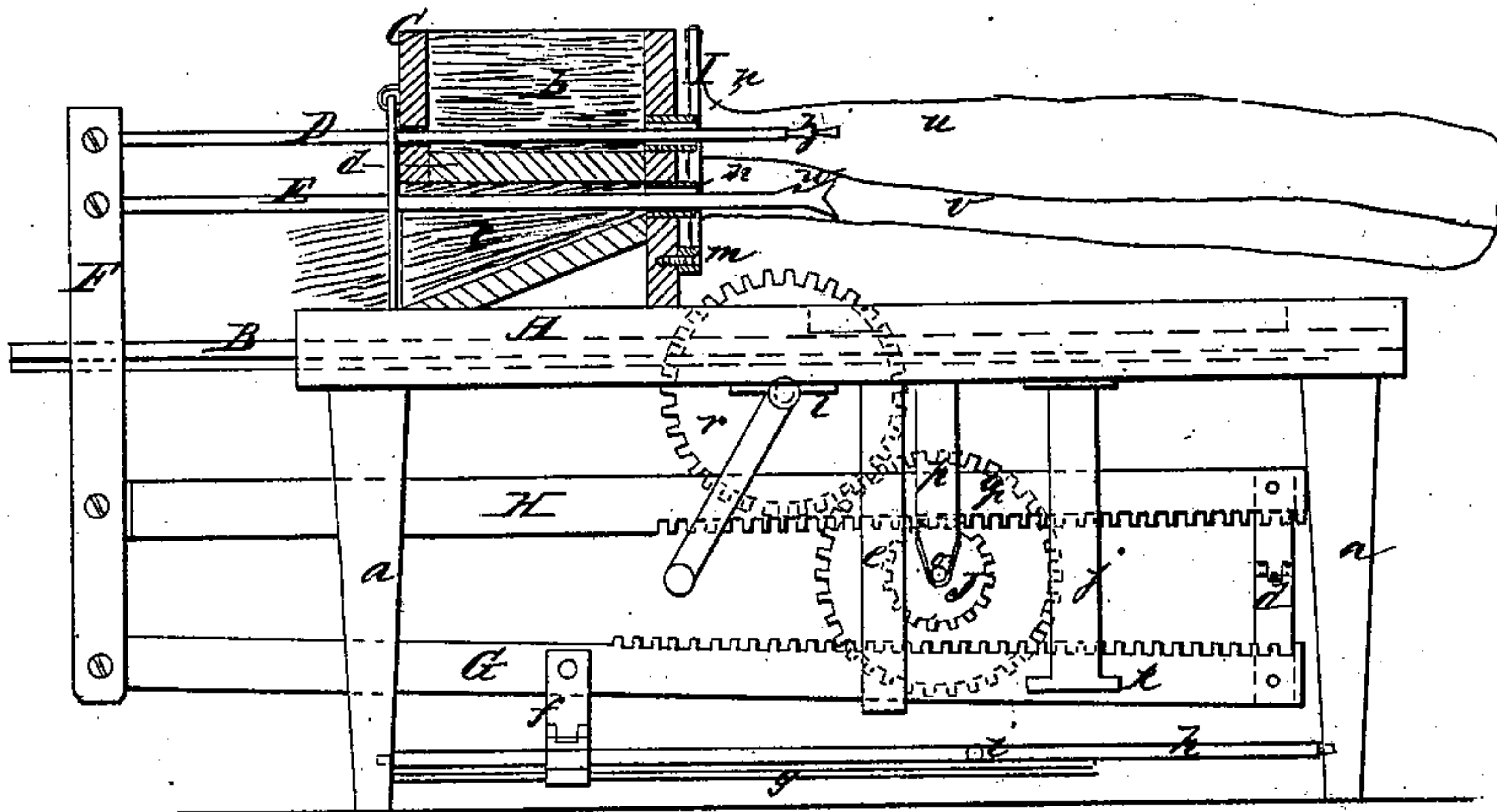


*J.C. Tobias,*  
*Horse Collar Machine.*

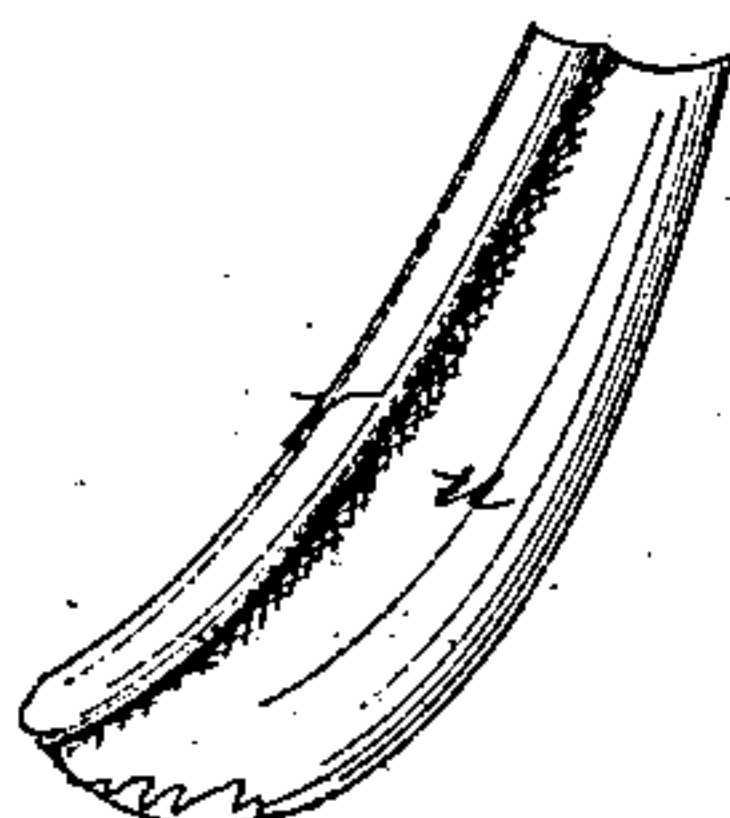
*N<sup>o</sup> 17,902.*

*Patented July 28, 1857.*

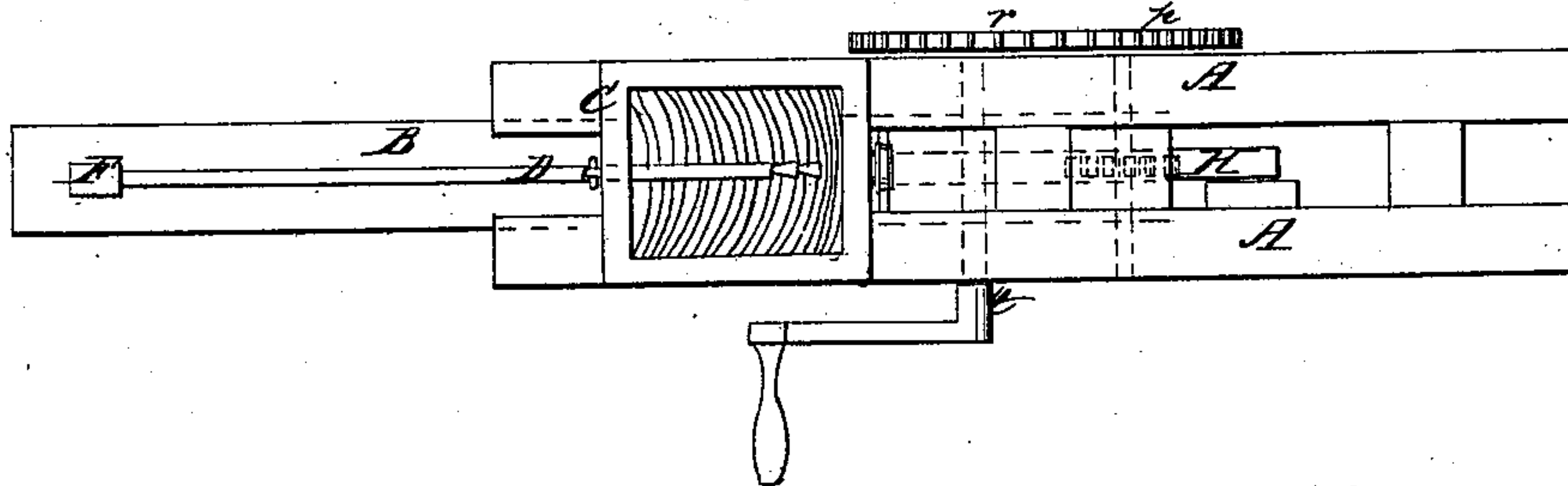
*Fig. 1.*



*Fig. 3.*



*Fig. 2.*





# UNITED STATES PATENT OFFICE.

J. C. TOBIAS, OF LINCOLN, ILLINOIS.

## MACHINE FOR STUFFING HORSE-COLLARS.

Specification of Letters Patent No. 17,902, dated July 28, 1857.

*To all whom it may concern:*

Be it known that I, J. C. TOBIAS, of Lincoln, in the county of Logan and State of Illinois, have invented a new and Improved  
5 Machine for Stuffing 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 annexed drawings, making a part of this specification, in  
10 which—

Figure 1, is a longitudinal vertical and central section of my improvement. Fig. 2, is a plan or top view of ditto. Fig. 3, is a section of a horse collar.

15 Similar letters of reference indicate corresponding parts in the several figures.

My invention consists in the peculiar arrangements of means employed for operating two plunger rods for the purpose of  
20 cutting off their stroke at any desirable point and accommodating the reciprocations of the rods or plungers to the gradual filling up or stuffing of the bulge and rim of the collar as will be hereinafter described.

25 To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A, A, represent two horizontal and parallel bars which are grooved on their inner sides,  
30 and have a slide B, fitted therein; the slide being allowed to move freely back and forth therein. The bars A, A, are supported at a suitable height by pedestals (a), and to the upper surfaces of the bars A, A, and at one  
35 end, a box C is attached. This box C is of rectangular form, and it is divided into two compartments (b), (c), by a horizontal partition (d). The bottom of the lower compartment (c), is of inclined form, as shown  
40 clearly in Fig. 1.

Through each compartment of the box a rod passes; the rod D passing through the upper, and the rod E through the lower compartment. The outer ends of these rods are  
45 connected to a vertical bar F, which passes through the slide B. The lower end of the bar F has two rack bars G, H, pivoted to it. The outer ends of the two bars G, H, are connected by a link (d), and both bars work  
50 through a loop or guide (e). The lower rack bar G has a pendent bar (f) attached to it; and the lower end of the bar (f) works on a guide rod (g), which is attached to a rod or bar (h), the ends of which are fitted loosely  
55 in the lower parts of two of the pedestals which support one of the bars A. To the

bar or rod (h), a treadle (i) is attached. A pendent spring bar (j), is attached to one of the bars A. The lower end of bar (j), has a  
hook (k) formed on it. 60

To the outer side of the box C, a clamp I is attached. This clamp is formed of two bars connected by a joint (m). The clamp serves to attach the collar to tubes (n), fixed in the side of the box and through  
65 which the rods D, E pass.

Between the two rack bars G, H, a pulley J is placed. This pulley is fitted on a shaft (o), which has its bearing attached to pendants (p). On one end of the shaft (o), a  
70 toothed wheel (q), is placed; and a wheel (r), gears into wheel (q); the wheel (r), being on the driving shaft (t).

The operation is as follows: The upper compartment (b), of the box C, is filled with  
75 short straw, and long straw is placed within the lower compartment (c), of the box. The "bulge" (u), of the collar is filled with the short straw, and the "bulge" is secured to the tube (n), of the upper compartment (b).  
80 The straw is forced into the "bulge" by turning the shaft (t), from left to right; the lower rack bar (G), being thrown in gear with the pinion J, by depressing the treadle (i), with the foot. The rack bar G is held  
85 in gear with pinion J by means of the hook (k) on bar (j) catching underneath said bar. The rod D forces the short straw into the "bulge" (u), the return motion being given  
90 said rod by withdrawing the hook (k) from underneath the bar G. The bar H then falls by its own gravity in gear with pinion J and gives the return or backward movement to the rod.

The rim (v) of the collar is stuffed by  
95 clamping the rim to the tube (u), of the lower compartment (c). The rod E is actuated by the same means as the rod D. By this improvement it will be seen that the length of the stroke of the rods or plungers is  
100 placed entirely at the will of the operator, by means of the adjustable or swinging rack bars, G, H, and as the bar F is attached to slide B, which is fitted between the bars A, A, the reciprocations of the rods or plungers will be accommodated to the gradual  
105 filling up of the bulge and rim of the collar.

I do not claim separately or in itself considered, the device formed of the two racks G, H, gearing alternately into the pinion J  
110 for the purpose of communicating a rectilinearly reciprocating motion to the rods or

plungers from the continuously rotating driving shaft, for such device or its equivalent has been previously used for similar or analogous purposes; but,

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

10 Attaching the rods D, E, to a vertical bar F, which is attached to the slide B, and to the racks G, H, into which the pinion J, by the means shown or its equivalent is made

to gear alternately, whereby the stroke of the rods or plungers D, E, may be cut off at any desirable point and their reciprocations accommodated to the gradual filling up or 15 stuffing of the bulge or rim of the collar as set forth.

J. C. TOBIAS. [L. s.]

Witnesses:

ELI L. AUSTIN. [L. s.]

ROBT. ORENDORFF. [L. s.]