

C. S. Stearns Splitting Leather.

N^o 43,159.

Patented June 14, 1864.

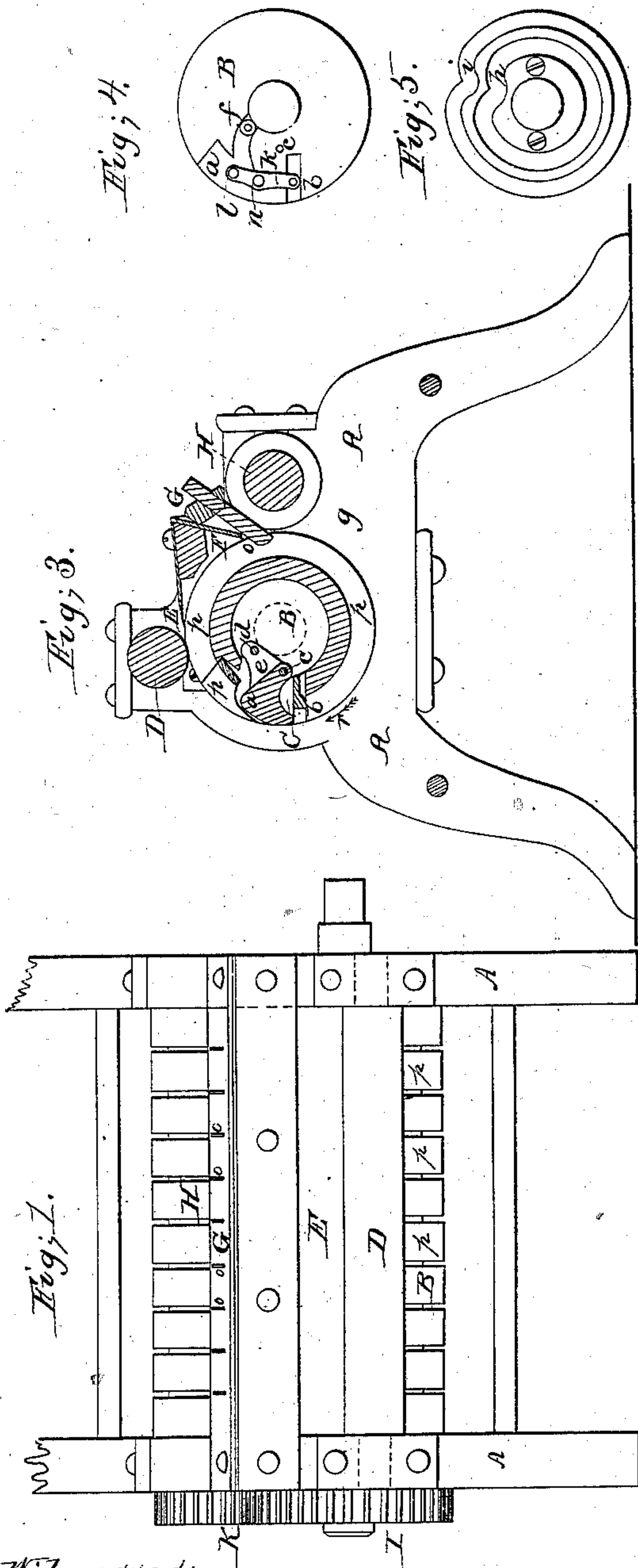


Fig. 4.

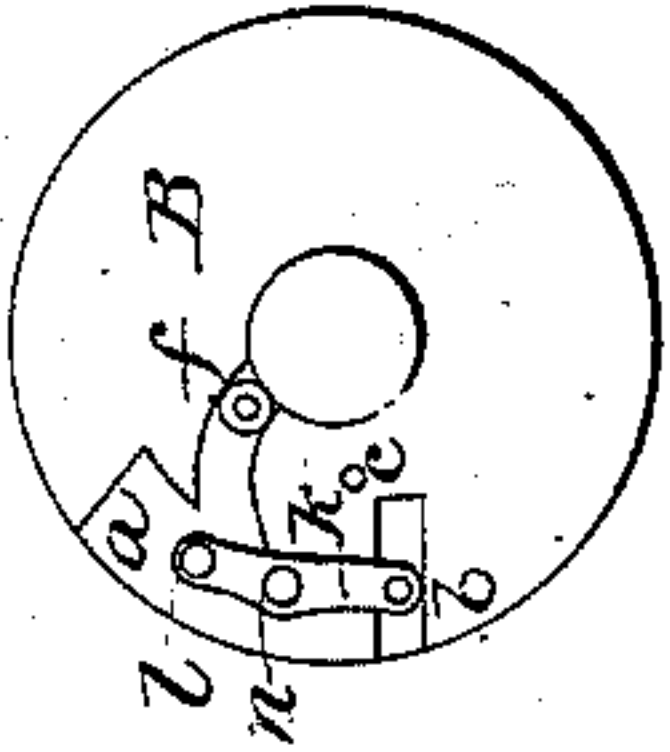


Fig. 5.

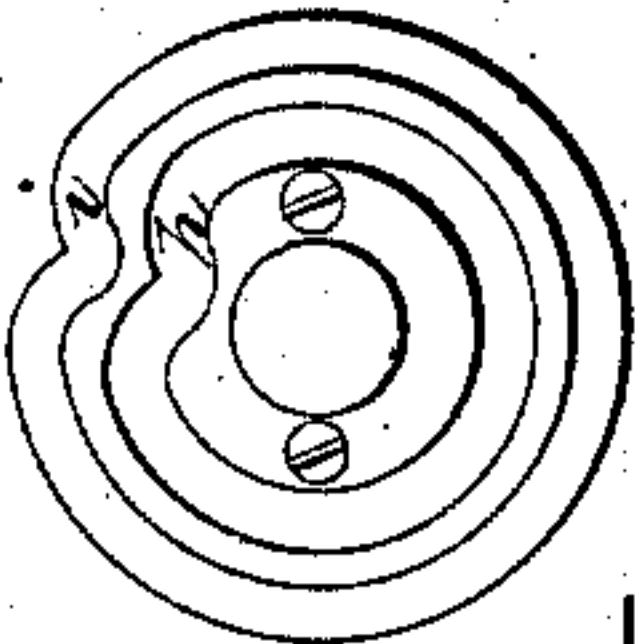


Fig. 6.

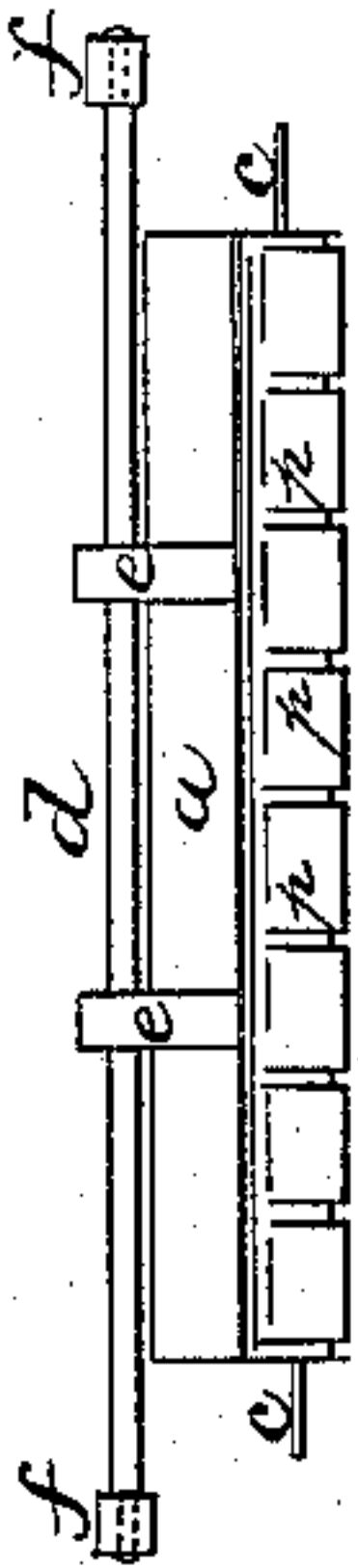


Fig. 7.

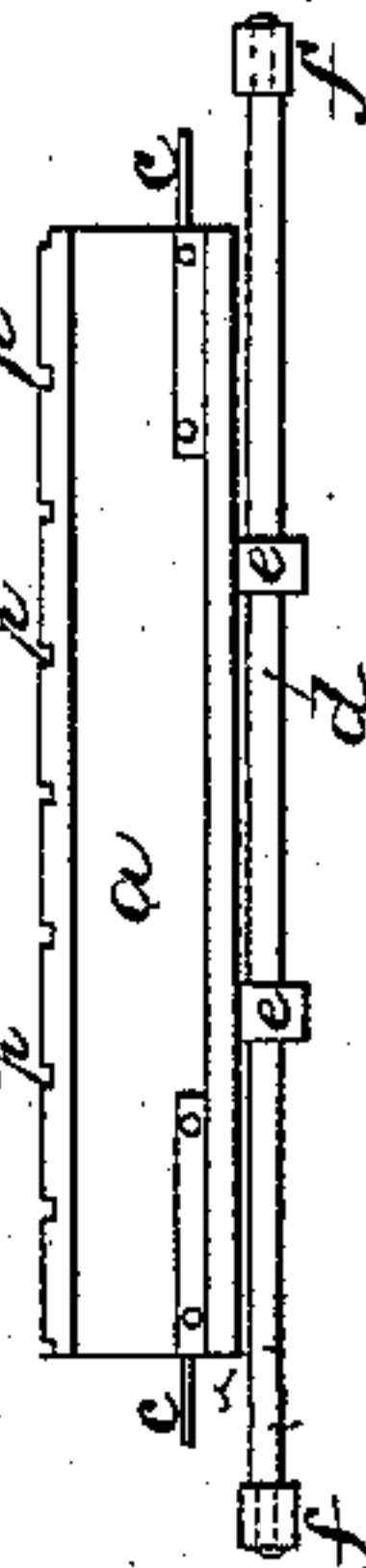


Fig. 8.



Witnesses;
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UNITED STATES PATENT OFFICE.

CALEB S. STEARNS, OF MARLBOROUGH, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND THOMAS COREY, OF SAME PLACE.

IMPROVEMENT IN SPLITTING LEATHER.

Specification forming part of Letters Patent No. 43,159, dated June 14, 1864.

To all whom it may concern:

Be it known that I, CALEB S. STEARNS, a resident of Marlborough, in the county of Middlesex and State of Massachusetts, have invented a new and useful Machine for Splitting Leather and Reducing the Same to Strips, Welts, or Bands; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a front elevation, and Fig. 3 a vertical and transverse section of it. Fig. 4 is an end view of its carrying-drum. Fig. 5 is an innerside view of one of the two sets of cam-grooves for operating the movable jaw and the device or mechanism for discharging the leather from the jaws of the carrying-drum.

My present invention or machine is much simpler than and differs materially from that on which Letters Patent No. 41,583 were granted to me on the 9th day of February, A. D. 1864, for in my present machine the carrying-drum or main roller, instead of being combined with two grooved rollers and having a plain curved surface and serving only to carry forward the skin and effect the splitting of it against a knife or its reduction to an even thickness, the grooved rollers operating to seize the skin and force it into contact with the knives for reducing it to strips or welts, is grooved transversely, and not only acts to carry forward the skin and force it against the splitting-knife, but also forces it against the series of stripping-knives, which are so arranged as to enter its grooves. Furthermore, the carrying drum not only is provided with grasping-jaws, but has a mechanism for discharging the leather from between such jaws after such leather may have been reduced to an even thickness and cut into strips.

In the drawings, A denotes the frame of the machine, within which there is placed and supported by metallic journals a hollow carrying-drum, B, which is cylindrical, except in being recessed or formed for the reception of the movable jaw-bar *a* of the grasping mechanism, the fixed or stationary jaw of which is shown at *b* as composing part of the boundary of the recess of the drum. The movable jaw-bar (a top view of which is shown in Fig. 6

and a front view in Fig. 7) has two journals or centers, *c c*, which project from its ends and enter holes in the ends of the cylinder. Furthermore, the said movable jaw-bar or jaw has a shaft or rod, *d*, running in rear of and parallel to it and supported by two arms, *e e*, projected from the jaw. Each end of the said rod carries a small friction roller, *f*, so applied as to be capable of turning freely on the said rod. The rod *d* projects through openings in the heads of the drum, and its friction-rollers enter stationary cam-grooves made in the two adjacent end parts, *g g*, of the frame A, one of such grooves being shown at *h* in Fig. 5. Besides the cam-groove *h*, there is another cam-groove, *i*, formed in each of the ends *g* of the frame and for the purpose of receiving a stud from one of two levers applied at opposite ends of the carrying-drum and having their fulcrum projecting therefrom. In Fig. 4 one of these levers is represented at *k*, its stud being shown at *l* and its fulcrum at *n*. These levers are jointed at opposite ends of a bar, C, which is placed between the jaws *a b*, and at a proper time is moved between the jaws so as to discharge the leather from them.

The cam grooves *h h* are for the purpose of moving the movable jaw *a* toward and away from the stationary or fixed jaw *b*. The cam-grooves *i i* operate the discharger or bar C. Over the carrying-drum B there is a roller, D, and a splitting-knife, E, which are arranged as shown in the drawings. In advance of the said knife there is an inclined guide or metallic plate, F, it being extended across the drum B, parallel to the axis thereof, and having its lower edge situated at a short distance from the periphery of the drum. A bar, G, carrying a series of splitting-knives, *o o o*, (the said bar and its knives being shown in top view in Fig. 8,) is arranged in advance of the guide-plate F, and its knives respectively enter grooves *p p p*, made transversely in the periphery of the carrying-drum B, as well as through the external surfaces of the movable jaw *a* thereof. Furthermore, there is a roller, H, arranged with respect to the knives *o o o* and the carrying-drum in manner as shown in Figs. 1 and 3. This roller may be grooved transversely to receive the knives and aid in supporting them. A gear, I, on the shaft of the carrying-drum engages with a pinion, K,

fixed on the shaft of the roller H, the said pinion and gear being so proportioned in size (or in their diameters) as to cause the periphery of the drum or roller H to travel at the same rate of speed as that of the carrying-drum B.

In operating this machine the drum B is to be put in revolution in the direction denoted in Fig. 3 by the arrow *r*. While the drum may be so revolving an attendant is to insert between the jaws *a b* the edge of the skin to be split. The jaw *a* will next be closed upon the skin so as to confine it to the drum A, which, continuing to revolve, will draw the skin underneath the roller D and against the splitting knife E, and also against the series of stripping knives. Finally, as the jaws may closely approach the position for reception of another skin, the movable jaw will be moved in a direction away from the stationary jaw, and the discharger C will be forced forward against the skin and so as to expel it from the jaw. The plate F serves to smooth the skin and hold it down closely against the carrying-drum, and just in rear of the knives *o o o*, while it may be in the act of being stripped by

the said knives. The roller H also operates to perform such functions in front of the said knives.

In the said improved machine I claim as my invention—

1. The combination and arrangement of the grooved carrying-roller B, the roller D, or its equivalent, the splitting-knife E, the bar or plate F, or its equivalent, and the series of stripping-knives *o o o*.

2. The combination and arrangement of the grooved carrying-roller B, the roller D, or its equivalent, the splitting-knife E, the bar or plate F, or its equivalent, the series of stripping-knives *o o o*, and the roller or drum H.

3. The combination of the discharger C with the jaws *a b*, the cylinder B, the roller D, or its equivalent, or the same and the mechanism for stripping the leather or skin in manner as specified.

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Witnesses:

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