

(No Model.)

S. H. RANDALL.
LEATHER SPLITTING MACHINE.

No. 479,461.

Patented July 26, 1892.

FIG. 1.

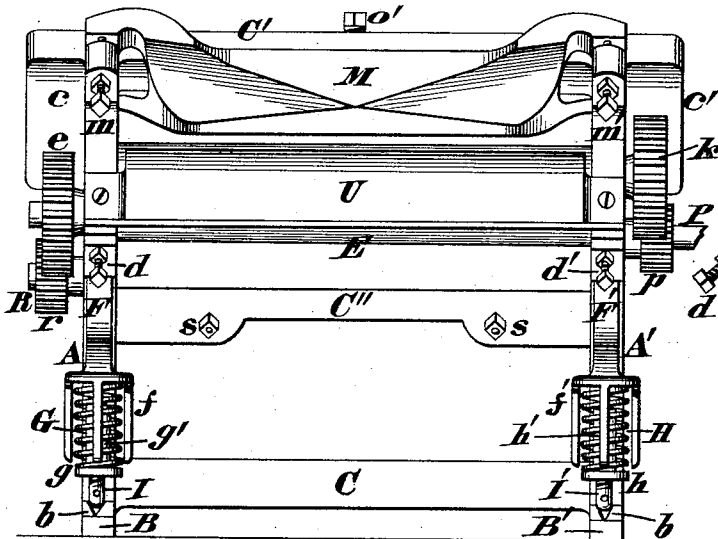


FIG. 4.

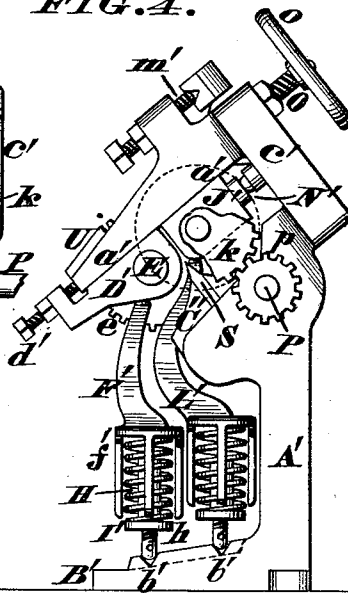


FIG. 2.

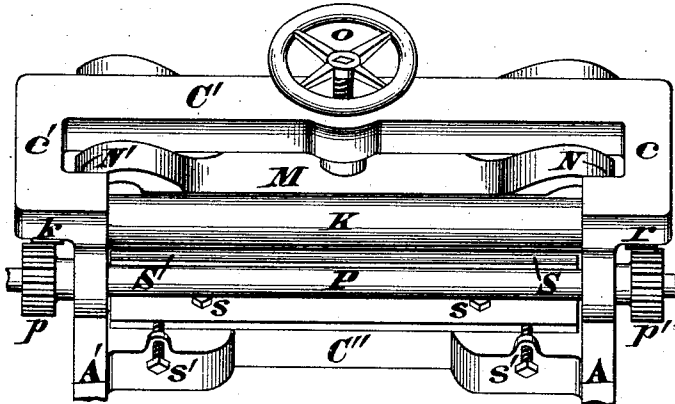


FIG. 5.

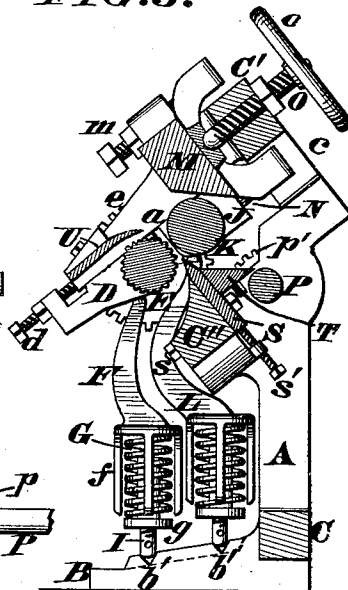


FIG. 3.

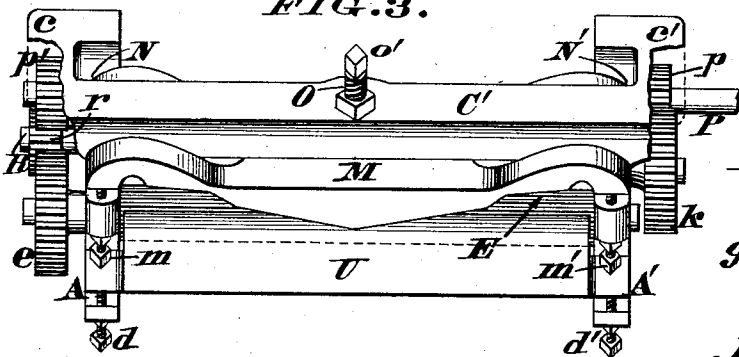
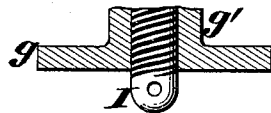


FIG. 6.



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LEATHER-SPLITTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 479,461, dated July 26, 1892.

Application filed April 9, 1892. Serial No. 428,457. (No model.)

To all whom it may concern:

Be it known that I, SILAS H. RANDALL, a citizen of the United States, residing at Wyoming, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Leather-Splitting Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the annexed drawings, which form part of this specification.

This invention relates to those machines which are employed for splitting or "skiving" leather, so as to reduce it to a uniform thickness, and my improvements comprise a novel construction of the main frame, a peculiar arrangement of devices for leveling the upper roll and adjusting it with reference to the knife, and obliquely-acting yielding supports for the upper and lower roll-carriers, the details of these features being hereinafter more fully described, and then pointed out in the claims.

In the annexed drawings, Figure 1 is a front elevation of my improved leather-splitting machine. Fig. 2 is a rear elevation of the upper portion of the machine. Fig. 3 is a plan of the same, the ends of the main frame being broken away to expose the gearing. Fig. 4 is an end elevation of the machine, a part of the gear-wheel of the upper or gage roll being broken away. Fig. 5 is a vertical section of the machine, taken in the plane of the tension-screw for said gage-roll. Fig. 6 is a detail view.

The main frame of the machine is a single integral casting, including a pair of end pieces or standards A A', having, respectively, feet B B', a rear bar C, uniting said standards near their base, and a front bar C', connecting the tops of said standards. Furthermore, this portion C' of the frame is bent outwardly at c c', where it joins the standards A A', and these standards are so cast as to afford inclined bearings a a' for the roll-carriers to abut against and to have a limited travel thereon. Of these roll-carriers four are employed, two for each roll D D' being the carriers for the lower or feed roll E, the periphery of which is fluted or roughened to afford a secure hold on the leather.

By referring to Figs. 4 and 5 it will be noticed that the carriers D D' are so shaped as to rest against the inclined bearings a a'.

d d' are set-screws tapped in the carriers and adapted to bear against the standards in such a manner as to limit the upward sliding of roll E.

Carriers D D' are forced upwardly and along the inclined bearings a a' by push-stems F F', projecting from cages f f', open at the bottom but closed at the top and fitting loosely around coiled springs G H, resting upon bearers g h, which latter have central spindles g' h'. These spindles are threaded to admit screws I I', the proper turning of which will impart more or less tension to the springs G H, and thereby increase or diminish the pushing action of stems F F'.

J J' are the carriers for the upper or gage-roll K, which carriers have two places of contact with the inclined bearings a a' and are held against the latter by push-stems L L', arranged and adapted to operate in precisely the same manner as the other stems F F'. Located under the front bar C' is a lever M of the third class, its fulcrum being a pair of screws m m', tapped in lugs projecting from the standards A A', and its bearings being rounded knobs N N', that rest upon the carriers J J' or else upon washers applied to said carriers. Power is applied to this lever by a screw O, tapped in bar C' and being somewhat in front of the center between the bearings and fulcrums of said lever, as seen in Fig. 5. Screw O may have a hand-wheel o applied to it, as seen in Figs. 2, 4, and 5, or the upper end of said screw may have a square arbor to receive a socket-wrench, as represented at o' in Figs. 1 and 3. By properly turning this screw, lever M will be raised or lowered, so as to cause the roll K to recede from the knife or to approach it, according to the desired thickness of strap, said roll being brought to a parallel position with reference to the knife S by adjusting the screws m m'. Roll K has at one end a gear-wheel k engaged with a pinion p on the main shaft P, which latter may be turned either by hand or power, another pinion p' on said shaft being engaged with an idler r. This idler runs on a stud-shaft R, projecting from the standard A, and

drives a gear-wheel *e* of roll *E*. In addition to the bars *C C'*, the standards are united by another bar *C''*, whose upper surface slopes at such an angle as to present the knife *S* in the most effective position, screws *s s* being employed for holding said knife in place, while its adjustment is effected by other screws *s' s'*, as seen in Fig. 2.

T is a stripping-bar resting upon this knife and serving to guide the reduced strap over the shaft *P*.

U is a guard, that houses in the upper part of feed-roll *E*.

b b are V-shaped grooves running longitudinally of the feet *B B'* and intersected by transverse grooves *b' b'*, the rounded ends of the adjusting-screws *I I'* being seated in the pits formed where said grooves cross each other.

From the above description it is evident the push-stems *F F'* and *L L'* have a constant tendency to force the roll-carriers *D D'* and *J J'* upward against and along the inclined bearings *a a'* of the standards *A A'*, which upward movement is controlled by regulating the screws *d d'* *O*, the screw *O* being retracted when a thick strap is to be split and being advanced if the strap is thinner. The retraction of said screw takes the pressure off the carriers *J J'* and permits the roll *K* to recede from the knife *S* on account of the lever *M*. After the proper adjustments have been made the strap is passed in over the guard *U*, and as the material advances it is cut or split by the knife, the reduced strap escaping over the stripper *T* and shaft *P*, while the shaving or "skive" falls down in front of the bar *C''*.

I claim as my invention—

1. The combination, in a leather-splitting machine, of a frame to which is secured a knife, which frame is provided with bearings *a a'*, against which slide roll-carriers *J J'*, in which is journaled a gage-roll *K*, and against which bearings *a a'* also slide, roll-carriers *D D'*, in which is journaled a feed-roll *E*, pressure devices, which obliquely press roll-carriers *D D' J J'* against and along bearings *a a'*, stops which limit the motion of roll-carriers *D D'*, and a device which adjusts the roll-carriers *J J'* along said bearings *a a'*, the only parts of the frame which these roll-carriers *D D' J J'* touch being said bearings *a a'*, as herein described.

2. The combination, in a leather-splitting machine, of a frame *A A'*, having bearings *a a'*, the roll *E*, journaled in carriers *D D'*, each of which is in contact with said bearings, push-stems *F F'*, working obliquely against said bearings and provided with cages *f f'* for springs, and adjustable springs *G H*, housed within said cages.

3. The combination, in a leather-splitting machine, of the push-stems *F F'*, working against roll-carriers, as described, cages *f f'* belonging to said stems, springs *G H* within said cages, bearers *g h* for said springs to rest upon, spindles *g' h'*, projecting within said springs and from said bearers, and adjusting-screws *I I'*, engaged with said spindles.

In testimony whereof I affix my signature in presence of two witnesses.

SILAS H. RANDALL.

Witnesses:

JAMES H. LAYMAN,
ALFRED M. DAVIES.