

(No Model.)

S. H. RANDALL.
LEATHER FOLDER.

2 Sheets—Sheet 2.

No. 506,939.

Patented Oct. 17, 1893.

FIG. 3.

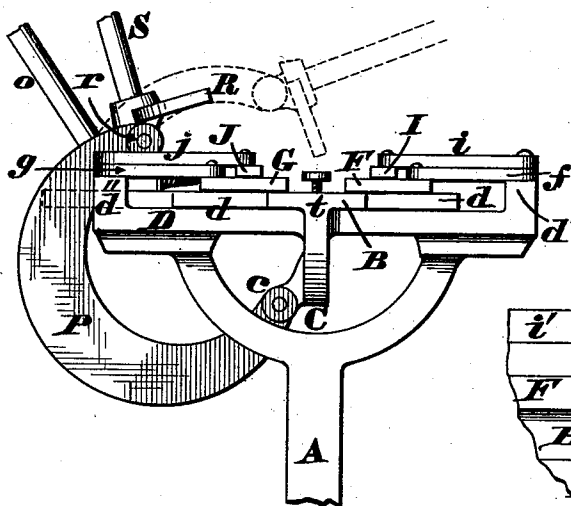


FIG. 5.

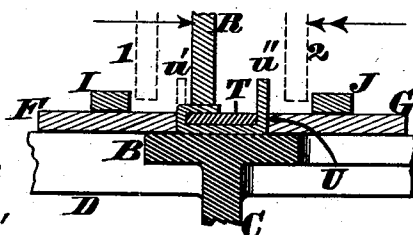


FIG. 6.

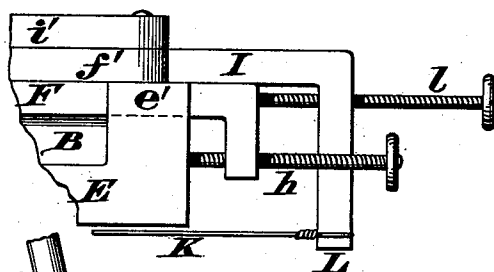


FIG. 4.

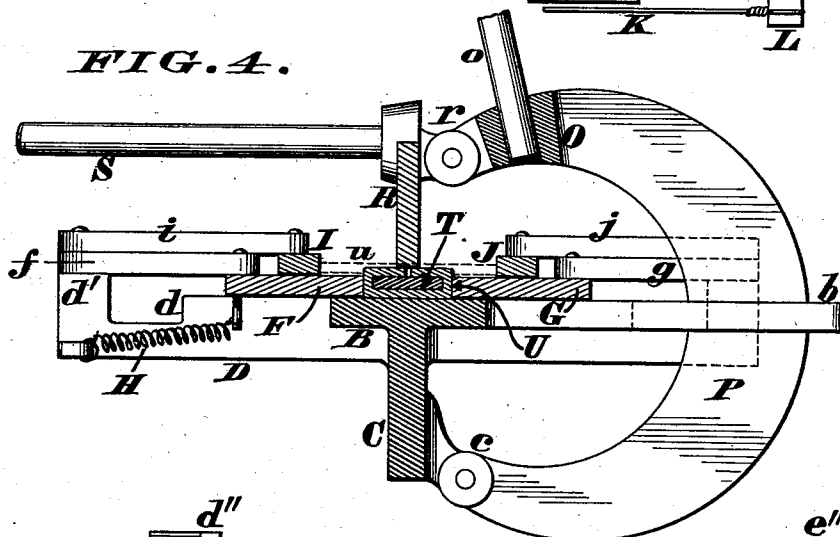
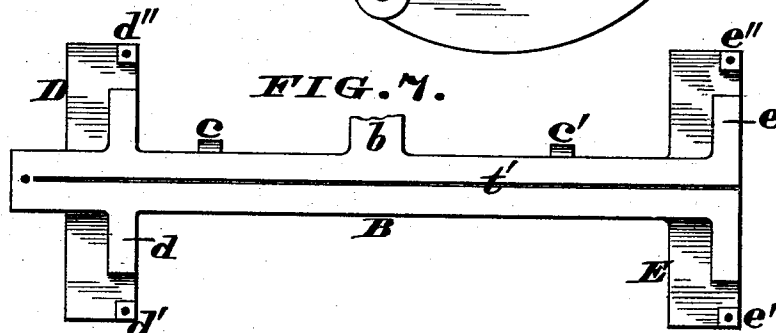


FIG. 7.



Attest.
Arthur Moore
John W. Lagman.

Inventor.
Silas H. Randall,
by James H. Lagman.
Att'y.

UNITED STATES PATENT OFFICE.

SILAS H. RANDALL, OF WYOMING, OHIO, ASSIGNOR OF ONE-HALF TO JAMES D. RANDALL, OF SAME PLACE.

LEATHER-FOLDER.

SPECIFICATION forming part of Letters Patent No. 506,939, dated October 17, 1893.

Application filed June 26, 1893. Serial No. 478,928. (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-Folders; 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.

My invention comprises a machine where-with the edges of a leather strap can be folded in a very uniform and expeditious manner, the peculiar construction of said machine, and the method of using it being hereinafter more fully described, and then pointed out in the claims.

In the annexed drawings,—Figure 1 is a plan of my leather-folder in position for receiving a strap. Fig. 2 is a front elevation of the same, the lower portion of the legs being omitted. Fig. 3 is an end elevation of the operative parts of the folder. Fig. 4 is an enlarged transverse section showing the machine in the act of compressing the opposite folded-edges of a strap. Fig. 5 is a diagram showing the machine in the act of folding one edge of the strap. Figs. 6 and 7 are detail views.

A, A', are the upper portions of legs capable of raising a table B to a convenient height to be worked on, the table being composed of a long, narrow casting of the shape indicated by dotted lines in Fig. 1. The upper, or effective surface of this table is flat, while its lower side has a longitudinal strengthening-rib C projecting from it, and this rib is furnished, on its rear side, with a pair of ears *c, c'*, whose duty will presently appear. Furthermore, the table is provided, near its ends, with lateral projections D, E, having bearings *d, e*, and stumps *d', d'', e', e''*, which bearings *d, e*, in conjunction with said table, support a pair of primary guides F, G, the latter being composed of thin, metallic strips, preferably of somewhat greater length than the table.

f, f', are links that couple the front guide F, to pivot screws tapped in the stumps *d', e'*, and *g, g'*, are similar links that couple the rear guide G, to pivot screws engaged with the other stumps *d'', e''*, the arrangement of these links being such as to keep the oppos-

ing or inner edges of said guides, parallel with each other.

H is a pulling spring, one end of which is fastened to the guide F, while its other end is so attached to the table or frame as to draw said guide forward, which act is resisted by a screw *h* tapped in the end of said guide and having its point in contact with the bearing *e*, as more clearly seen in Fig. 6.

I and J are secondary guides, of less width than the primary ones, and usually resting thereon, although they may be located somewhat above them, the front guide I being coupled to pivot screws of stumps *d', e'*, by links *i, i'*. *j, j'* are other similar links that couple the rear guide J to the pivot screws of stumps *d'', e''*.

K is a pulling spring, one end of which is attached to a pin L projecting from the under side of guide I, while its other end is so fastened to the table or frame as to draw said guide forward. This act, however, is resisted by a screw *l* tapped in the pin L, and bearing against the end of guide F.

M and N are pulling strings that draw the rear guides G, J, toward the back of the machine, and *m, n*, are screws that regulate the action of said guides in the same manner as the devices *h, l*, above referred to.

O is a longitudinal bar uniting the upper portions of two practically C-shaped castings P, P', the lower ends of the latter being coupled to the ears *c, c'*, of rib C. This bar O, together with the end pieces P, P', will hereinafter be referred to as the "swinging frame," which frame, when in its normal position, is arrested by said bar O, coming in contact with a stop *b*, projecting rearwardly from the table B. Furthermore, said swinging frame is operated by a detachable lever inserted within a hole or socket of the bar O, and has pivoted to it at *r, r'*, a folding plate R, operated by a removable lever S.

t is a screw or bolt or other stop near one end of table B, to arrest and hold in place the former T, seen in Figs. 4 and 5, said former being a sheet metal strip around which the leather strap U is to be folded.

My improved folding-machine is adjusted and operated in the following manner. In the normal position of all the operative parts, the swinging frame O P P', is thrown back until its bar O rests upon the lug *b*, and fold-

ing plate R is thrown rearward, and supported by said bar, thereby affording convenient access to the guides, and so disposing the levers *o*, *S*, as to be readily grasped by the workman. The guides are then adjusted according to the width of the strap, or other piece of work, and also according to the width of the folds desired, the primary guides *F*, *G*, being shifted toward each other by so turning the screws, *h*, *n*, as to cause said guides to be equi-distant from a central, longitudinal groove *h'*, in the top of table *B*. The other or secondary guides *I*, *J*, are then adjusted by properly turning their screws *l*, *m*, and the strap is laid directly upon the guides *F*, *G*, as indicated by the dotted lines *u*, in Fig. 4, the edges of said strap being in contact with said secondary guides *I*, *J*. The former *T*, is now placed upon the strap, one end of this strip, being engaged under the head of the stop-screw *t*, to prevent slipping, after which act, the lever *o* is grasped and the frame *O*, *P*, *P'*, is swung up and forward until the folder *R* is brought to a proper position to perform its duty, as indicated by dotted lines in Fig. 3. When this position is reached, the lever *S* is grasped and folder *R* brought to bear upon the upper surface of the former *T*, the result being to force this former, and the central portion of strap *U* down between the primary guides *F*, *G*. Consequently the edges of the strap are now presented upwardly, as indicated by the dotted lines *u'*, and unbroken lines *u''*, in Fig. 5. Folder *R* is now thrown up, and frame *O*, *P*, *P'*, swung still farther forward until said folder can be turned down to the position indicated by the dotted lines 1, in said illustration. Therefore, the folder is in front of the upturned edge *u'*, of the strap, and some considerable pressure is exerted upon lever *S*, while, at the same time, the other lever *o* is raised sufficiently to swing the frame *O*, *P*, *P'*, back a limited distance, and thereby cause said folder to recede in the direction of the single-headed arrow, and thus press down said edge of the strap very snugly against the face of the former *T*. The folder is again thrown up, the frame *O*, *P*, *P'*, swung still farther to the rear until said folder can be turned down to the position indicated by the dotted lines 2. When this position is reached, the frame is again swung forward, so as to advance the folder in the direction of the double-headed arrow, and thereby bend down the rear edge *u''* of the strap. After bending this rear edge, the frame is advanced a slight distance to bring the folder directly over the meeting edges of the strap, and then some considerable pressure is exerted upon the lever *S*, for the purpose of giving a final impression to the work. When the work is done, the folder is raised, the frame swung back, the strap removed from the machine, and the former *T* pulled out of the strap.

The above is a description of the manner of setting the machine when the edges *u'*, *u''*,

are to be turned down an equal distance, but it is evident that by properly adjusting the secondary guides *I*, *J*, one of said edges can be folded over farther than the other edge, if desired. It is also evident that by causing the guides *E*, *F*, to converge toward either end, the machine will operate on tapering straps of any kind, in which event the former *T* must be shaped accordingly. Finally, in Fig. 2, the levers *O*, *S*, are shown in different planes, for the purpose of rendering them more distinct, but in actual practice said levers are in one and the same vertical plane.

I claim as my invention—

1. The combination, in a leather folder, of a table, a guide thereon, a swinging-frame hinged to said table, and a folding-plate hinged to the free portion of said frame, for the purpose described.

2. The combination, in a leather folder, of a table, a swinging-frame hinged thereto, a folding-plate hinged to the free portion of said frame, a pair of laterally-adjustable primary guides applied to said table, and a pair of laterally-adjustable secondary-guides applied to said primaries, for the purpose described.

3. The combination, in a leather folder, of a table, a pair of laterally-adjustable guides *F*, *G*, coupled thereto by links *f*, *f'*, *g*, *g'*, a swinging frame *O*, *P*, *P'*, hinged to the machine, and a folding-plate *R*, jointed to said frame, for the purpose described.

4. The combination, in a leather folder, of a table, two pairs of laterally-adjustable guides *F*, *G*, *I*, *J*, coupled thereto by links *f*, *f'*, *g*, *g'*, *i*, *i'*, *j*, *j'*, a swinging frame *O*, *P*, *P'*, hinged to the machine, and a folding plate *R*, jointed to said frame, for the purpose described.

5. The combination, in a leather folder, of a table, a primary guide *F*, provided with links *f*, *f'*, and stop-screw *h*, another primary-guide *G*, provided with links *g*, *g'*, and stop screw *m*, a secondary-guide *I*, located over the guide *F*, and furnished with links *i*, *i'*, and stop screw *l*, and another secondary-guide *J*, located over the guide *G*, and furnished with links *j*, *j'*, and stop-screw *n*, all as herein described.

6. The combination, in a leather folder, of a table, a primary-guide *F*, provided with links *f*, *f'*, pulling spring *H*, and stop screw *h*, another primary guide *G* provided with links *g*, *g'*, pulling spring *M* and stop screw *m*, a secondary guide *I*, located over the guide *F*, and furnished with links *i*, *i'*, pulling spring *K*, and stop screw *l*, and another secondary guide *J* located over the guide *G*, and furnished with links *j*, *j'*, pulling spring *N* and stop-screw *n*, all as herein described, and for the purpose stated.

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

SILAS H. RANDALL.

Witnesses:

JAMES H. LAYMAN,
ARTHUR MOORE.