(No Model.)

R. S. ALLEN.

MACHINE FOR CUTTING LEATHER.

No. 266,004. Patented Oct. 17, 1882.

Fig. 1

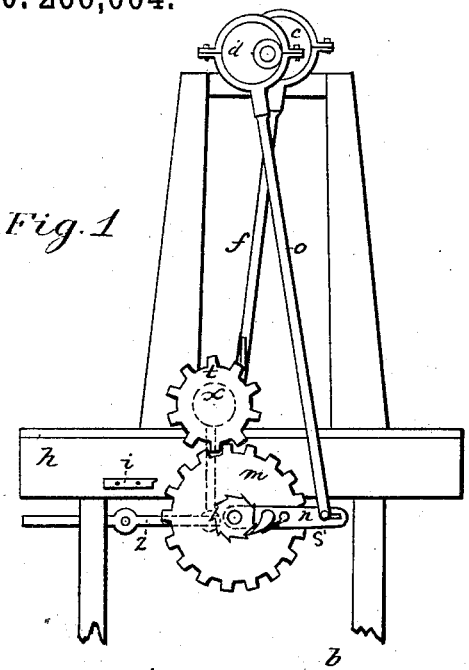
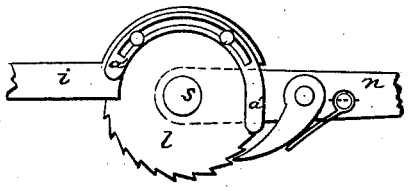


Fig. 3.



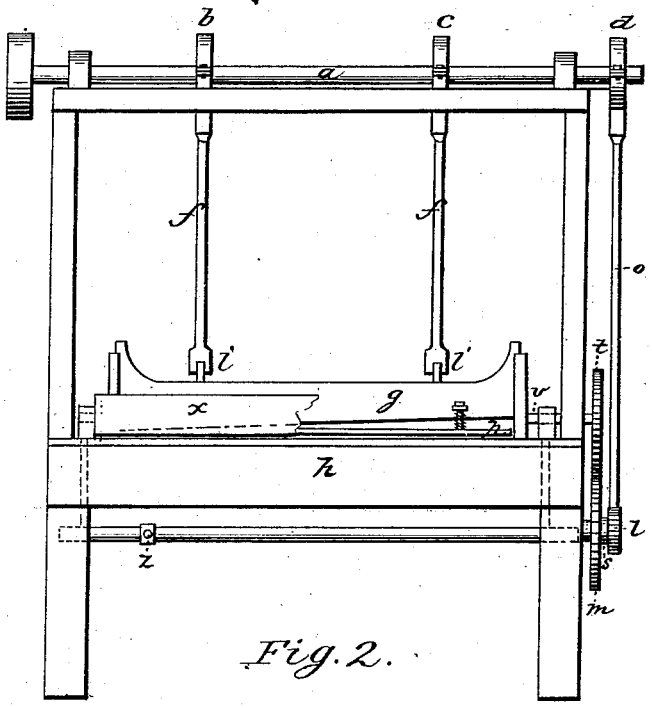


Fig. 2.

Witnesses.

William M. Bradley

W. W. Thomas Jr.

Inventor.

Robert Smith Allen

per Geo. E. Bird

Atty.

UNITED STATES PATENT OFFICE.

ROBERT SMITH ALLEN, OF DEERING, MAINE, ASSIGNOR TO CHARLES E. MORRILL, OF SAME PLACE.

MACHINE FOR CUTTING LEATHER.

SPECIFICATION forming part of Letters Patent No. 266,004, dated October 17, 1882.

Application filed March 7, 1882. (No model.)

To all whom it may concern:

Be it known that I, ROBERT SMITH ALLEN, of Deering, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Machines for Cutting Leather; and I do hereby declare that the following is a full, clear, and exact description of the invention, that will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation; Fig. 2, a front elevation, and Fig. 3 a detail showing the ratchet and pawl.

In preparing shoe-bindings the tanned skins are first cut into strips of double the width of the binding to be made.

My invention has reference to a machine for so cutting the skins, which is described as follows.

Upon the top of the frame of the machine (see Figs. 1 and 2) is placed the horizontal shaft *a*, having three eccentrics, *b*, *c*, and *d*. The eccentrics *b* and *c*, which are similarly situated on the shaft *a*, carry the rods *f f*, of equal length, which are at their lower ends pivoted to the knife or cutter *g* at the same distance from the shaft *a*. The cutting-edge of the knife *g* is not parallel with the shaft *a*, but is at one end slightly lower than at the other. The sides of this knife or cutter run in vertical grooves in or near the sides of the frame of the machine, and just behind the steel plate, which is placed at the rear of the table *h* and parallel with the knife *g*. The front of the knife or cutter plate has at each side an eyelet, *l'*, through each of which passes a pin or stud, *s'*, having a stop at its upper end, and being rigidly attached at the lower end to the bar *p*. Surrounding the pin or stud *s'*, and between the eyelet *l'* and bar *p*, is a coil-spring, *r'*. Connected with the eccentric *d* is the rod *o*, which is pivoted at the lower extremity to the lever *n*, which lever rotates on the shaft *s*.

Rigidly attached to the shaft *s* are the cog-wheel *m* and the ratchet *l*. A pawl matching the ratchet is pivoted to the lever *n*, the pawl being pressed against the ratchet by a spring. On the outer surface of the ratchet is a curved slide, *a'*, having a curved slot concentric with the ratchet, through which, by means of set-screws, the slide is secured to the ratchet and adjusted. The lower end of this slide toward the pawl should be of such shape that as the slide is moved toward the pawl it will come in contact with it.

Matching the gear *m* is a smaller gear, *t*, which is rigidly fixed to a shaft, *v*, carrying a friction-roller, *x*, which runs parallel with the cutter nearly the whole width of the table, with which it is quite or nearly in contact throughout its length.

Connected with each of the journals in which the shaft *v* is hung are rods extending vertically downward and connecting with the lever *z*, by means of which the friction-roller *x* may be raised from the table.

The eccentric *d* should be so adjusted on the shaft *a* that while the rods *f* and *f* are ascending the rod *o* will be descending.

The operation of the device is obvious. The skin to be cut is placed upon the table, and the roller being raised the edge of the skin is passed beneath the roller, which is then released. The rod *o*, descending, presses down the lever *n*, by means of which the gear *m* is given part of a rotation, and the friction-roller thus rotated carries forward beyond the edge of the table the width of skin which it is desired to cut off. As the skin is being carried forward the cutter descends, and when the skin has reached the proper point the bar *h* holds it until the cutter has descended and begun to rise again. As the cutter rises the friction-roller carries forward another width of skin. The width of skin to be cut off is regulated by the number of teeth in the ratchet *l*, and by means of the curved slotted slide *a'*. (See Fig. 3.)

By means of the set-screws the slotted slide *a'* may be moved to the right or left. When moved to the left to the extent admitted by the slot (see Fig. 3.) no part of the slide will be in contact with the pawl, whatever the position of the rod *n*. By carrying the slide *a'* to the right (see Fig. 3) its lower end may be so placed that when the rod *n* is fully raised the pawl cannot come in contact with the

ratchet, and will only connect with the ratchet when the rod *n* has descended a portion of the arc it describes. By thus adjusting the position of the slide *a'* the amount or degree of revolution given the ratchet by the pawl may be adjusted or controlled, and the necessity for changing the ratchet whenever a change in the width of leather to be cut is desired obviated.

What I claim as my invention, and desire to secure by Letters Patent of the United States of America, is—

1. In a machine for cutting leather, the combination of the shaft *a*, eccentrics *b* and *c*, rods *f f*, cutter or knife *g*, and bar *p*, with springs *r'*, for the purposes set forth.

2. The combination of the shaft *a*, eccentrics *b*, *c*, and *d*, rods *f f* and *o*, knife *g*, gears *m* and *t*, rod *n*, ratchet *l*, and pawl, and friction-roller *x*.

3. The combination of the shaft *a*, eccentric *d*, and rod *o*, gears *m* and *t*, ratchet *l*, and pawl, and slotted slide *a'*, for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 17th day of December, 1881.

ROBERT SMITH ALLEN.

Witnesses:
DAVID W. SNOW,
G. E. BIRD.