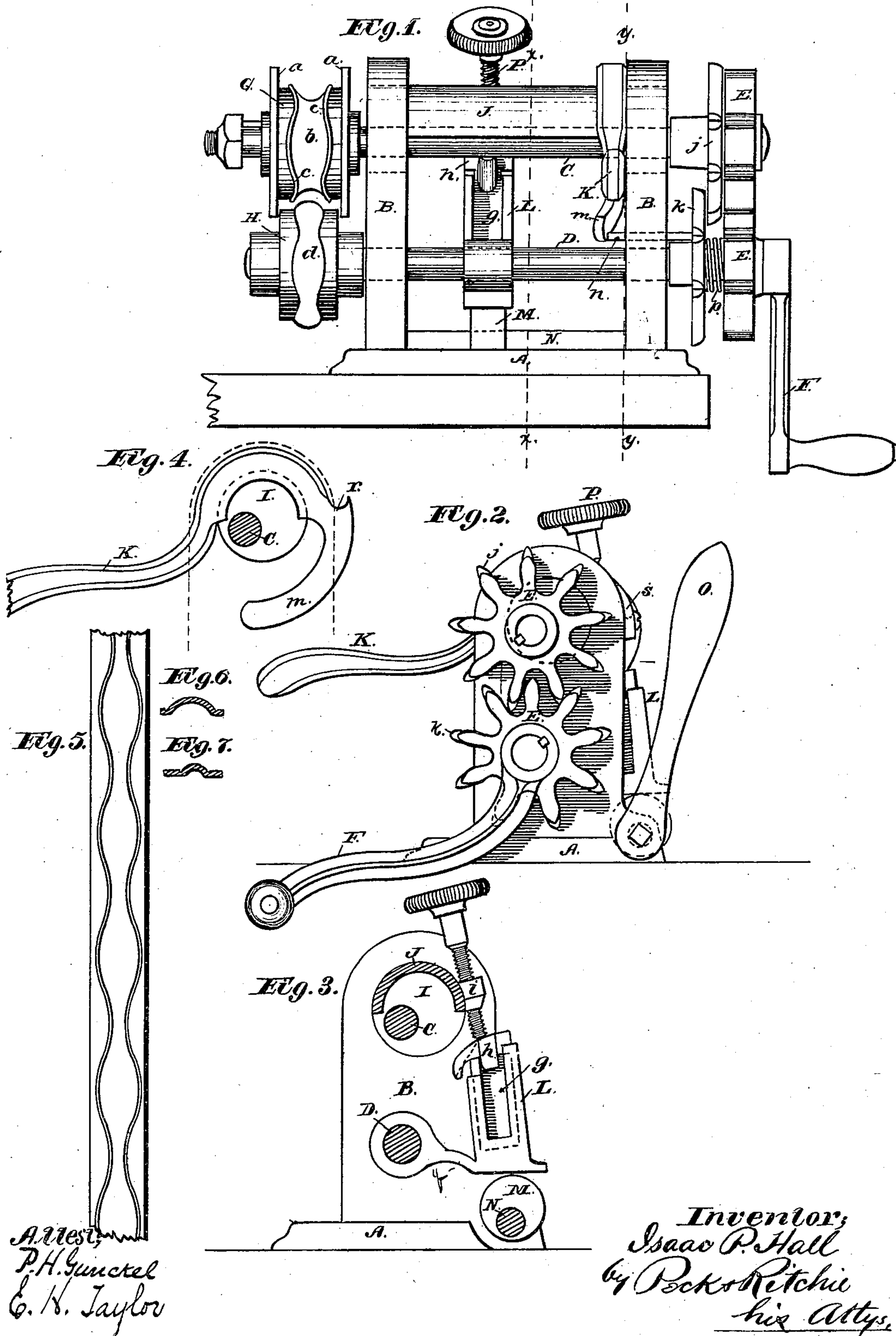


(No Model.)

I. P. HALL.
Leather Scalloping Machine.
No. 241,135. Patented May 10, 1881.



UNITED STATES PATENT OFFICE.

ISAAC P. HALL, OF MIAMISBURG, OHIO.

LEATHER-SCALLOPING MACHINE.

SPECIFICATION forming part of Letters Patent No. 241,135, dated May 10, 1881.

Application filed September 27, 1880. (No model.)

To all whom it may concern:

Be it known that I, ISAAC P. HALL, of Miamisburg, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Leather-Scalloping Machines; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to an improvement in machines for scalloping and crimping leather straps for harness.

The machine consists, essentially, of two shafts properly supported in a frame, connected by gearing and carrying the scalloping and crimping rolls, between which the leather is passed and by which it is pressed to the required formation.

The novelty consists in the construction of the rolls and the various parts forming the machine, as will be herewith set forth and specifically claimed.

In the accompanying drawings, Figure 1 is a front elevation of my improved machine. Fig. 2 is an end elevation of the same. Fig. 3 is a sectional view, in end elevation, through the line *xx* of Fig. 1. Fig. 4 is an end elevation of the disengaging-lever through the line *yy* of Fig. 1. Fig. 5 is a plan view of a section of scalloped and crimped leather as it comes from the machine. Figs. 6 and 7 are sectional views of Fig. 5 at the points of their respective locations.

The machine is constructed as follows: A suitable base-plate, A, carries at each side vertical parallel standards B, in which are journaled the roller-carrying shafts C D. These shafts project beyond the outer sides of the standards and at one end carry pinions E, which mesh together, as seen in Fig. 2. The lower shaft, D, is provided with a crank, F, for operating the rollers, though in a power-machine a pulley might be substituted for the crank. Upon the opposite ends of the shafts are keyed the scalloping and crimping rolls G and H, of which the former has flanges *a*, which inclose the top of the lower roll, H, as seen. In the roll G is a circumferential zigzag gutter, *b*, with rounded bottom, as represented, and encompassing the edges of this gutter are zigzag ribs or flanges *c*. The lower roll, H, has upon its periphery a zigzag boss, *d*, which corresponds in dimensions with the gutter *b*. The shafts

are so geared and the rolls so keyed that as they revolve the boss on the lower roll meshes exactly with the gutter in the upper roll. While the lower shaft, D, is journaled stationary in the standards B the journals of the upper shaft are simultaneously adjustable, so as to cause the upper rolls to approach or recede from the lower. This adjustment I effect by circular disks I, which are recessed in the standards directly opposite each other and with their faces substantially flush with the sides of the standards. These disks are free to turn in their recesses, and the upper shaft, C, is journaled eccentrically through them, as seen in Figs. 3 and 4. A semicircular hood, J, by suitable attachments, connects both disks and covers the shaft C. Now, by moving this hood the disks carrying the upper shaft are partially rotated in their recesses and the shaft C is uniformly raised or lowered, and the adjustment of the rolls effected thereby. To cause this movement of the hood I employ the lever K, which is securely fastened to the hood and projects at the front side of the machine, as represented. In addition to this lever I employ the bearing-socket L, Fig. 3, which is pivoted by means of an integral arm, *f*, upon the shaft D. This socket rests upon a cam, M, attached to a shaft, N, journaled in rear projections of the standards B, and provided with an operating-handle, O; and it carries a rubber block, *g*, over the top of which is fitted a metal cap-piece, *h*. A thumb-screw, P, inserted through a nut, *i*, integral with the hood J, bears upon the cap *h*, as represented.

Now, it will be observed that by screwing down the screw P the hood is turned forward and the upper roll brought nearer to the lower, for the purpose of exerting greater pressure upon the leather being operated on. The rubber in the socket forms a spring, which enables the upper roll to yield slightly to inequalities in the leather.

When it is desired to take the leather out of the rolls without crimping it its entire length the cam M comes into play, for by turning down the handle O the socket is permitted to drop and the operator, by means of the lever K, can oscillate the hood and raise the roll G sufficiently above the roll H to remove the leather sidewise from between the rolls.

In order to prevent the gears E from getting out of proper mesh while the shaft C is raised, I employ the supplemental pinions *j* and *k*, of larger diameter than the pinion E, and of which the one, *j*, is stationary upon the shaft C, while the other, *k*, slides on a feather upon the shaft D. While the pinions *j k* are out of line, as seen in Fig. 1, and when the hood is oscillated, a spiral segment, *m*, forming an extension of the lever K, as it turns during the oscillation of the hood, presses upon and forces in a pin, *n*, attached to the pinion *k*, thus causing the pinion to slide laterally into engagement with the pinion *j*, and thus holding the pinions E and rolls in their proper relative positions. Upon reversing the hood a spiral spring, *p*, between the pinions *k* and E, forces the former out of engagement with the pinion *j* as the pinions E come into mesh again. A hook or detent, *r*, formed in the lever K, engages with an adjustable stop, *s*, Fig. 2, upon the standard B, to limit the downward movement of said lever and the consequent depression of the roller G.

The leather, properly moistened, is passed between the revolving rolls and comes out scalloped and crimped in the manner shown in Figs. 5, 6, and 7.

The rolls G and H may be of metal or vulcanized rubber or vulcanized fiber. While metal would, perhaps, be the most durable, yet the rolls could be much more easily made of vulcanized rubber or fiber.

Having thus fully described my invention, I claim—

1. In a leather crimping and scalloping machine, the rolls G and H, the former of which is provided with a zigzag gutter bounded on each side by a rib or flange, *c*, and the latter of which has a projecting zigzag boss, *d*, so geared to their sustaining-shafts as to preserve their relative adjustment at all times, substantially as specified.

2. In a leather crimping and scalloping machine, the upper roller-shaft journaled eccentrically in recessed circular disks connected by a hood, J, upon turning which the shaft is raised or lowered, as specified.

3. The combination, with the hood J, provided with an operating-lever and a thumb-screw, P, of the pivoted socket L, containing a rubber spring, *g*, and bearing-cap *h*, and the cam M, mounted upon the oscillating shaft N, substantially as specified.

4. The spiral segment *m*, attached to the hood J, in combination with the pin *n*, pinions *j k*, and spiral spring *p*, substantially as and for the purpose specified.

In testimony whereof I have hereunto set my hand.

ISAAC P. HALL.

Witnesses:

M. CHAS. NOLAN,
CHAS. M. PECK.