

S. B. RANDALL.
Leather-Creasing Rollers.

No. 145,240.

Patented Dec. 2, 1873.

FIG. 1.

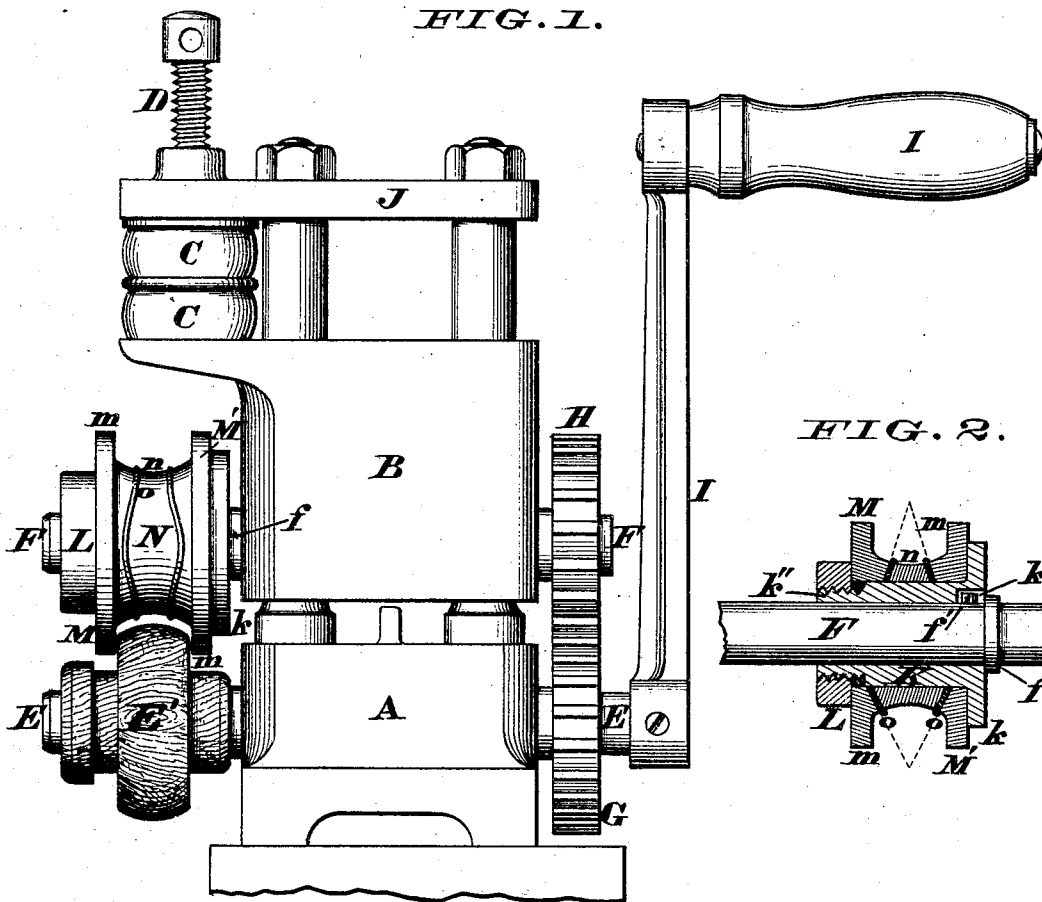


FIG. 2.

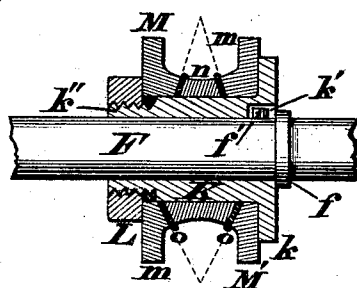


FIG. 3.

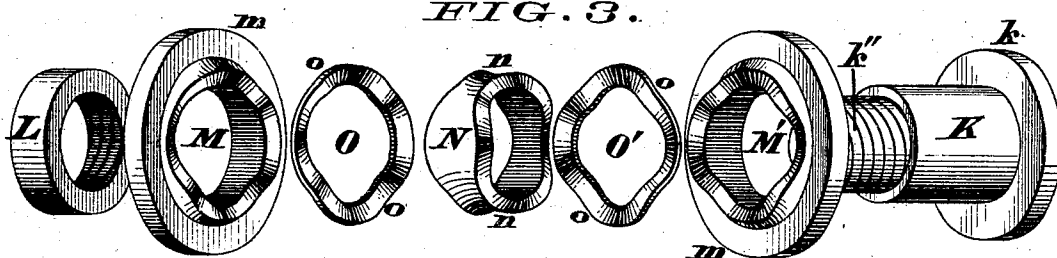
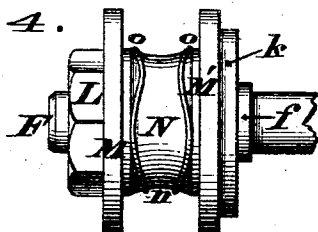


FIG. 4.



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By Knight Bros.
Attys.

Attest.
 Jas. H. Layman.
 John K. Little

UNITED STATES PATENT OFFICE.

SILAS B. RANDALL, OF CINCINNATI, OHIO.

IMPROVEMENT IN LEATHER-CREASING ROLLERS.

Specification forming part of Letters Patent No. 145,240, dated December 2, 1873; application filed September 20, 1873.

To all whom it may concern:

Be it known that I, SILAS B. RANDALL, of Cincinnati, Hamilton county, Ohio, have invented an Improvement in Rollers for Creasing Leather Straps, of which the following is a specification:

The subject-matter of my present invention is a pair of creasing-rollers, which may be used in an ordinary strap-creasing machine, and of which one is a supporting-roller, and simply conformed to the creasing-roller proper. The latter is a compound roller, made of rigid material—metal—and having perpendicular ridges formed on a concave periphery by thin annular disks interposed between its principal parts or dies, as hereinafter more fully set forth.

Owing to this construction the creases are formed in a strap perpendicular to its finished side; and the roller operates in a positive and unchanging manner, and is adapted to be readily and cheaply renewed.

Figure 1 is a side elevation of a creasing-machine provided with my improved rollers. Fig. 2 is an axial section through the creasing-roller proper. Fig. 3 shows the parts of said roller detached. Fig. 4 is a side elevation of a modification of said roller.

The lower shaft-bearing, A, (stationary,) upper shaft-bearing, B, (yielding,) springs C, temper-screw D, shafts EF, driving mechanism G H I, and supporting-roller J, need not differ materially from such parts of leather-creasing machines now in use.

The supporting-roller E may be of wood, and in dimensions and shape is simply made to match the creasing-roller proper.

My creasing-roller proper, in its preferred form, is constructed as follows: K is a sleeve, having a flange, *k*, at one end, which flange abuts against the collar *f* on shaft F, and is notched, *k'*, to receive a pin or projection, *f'*, which compels its rotation with said shaft. The other extremity of the sleeve is screw-threaded, *k''*, to take a nut, L.

The parts just described serve to clamp and hold the operative members of my creasing-roller, said members being as follows: M M' N O O' constitute five annular pieces, having the represented or any desired waved surfaces of junction, and which, when in place,

unite to form a roller, terminated by flanges *m*, and having its effective periphery *n* concave in the plane of its axis, and armed with waved creasing-ridges *o*, which project, at every part, rectangularly from that portion of said concave periphery that is nearest to them. The bevel of the waved surfaces is, for this purpose, such as, at every part, to form a right angle with the concave periphery at that part.

Owing to this construction the creases are formed in a strap perpendicular to its face; and, owing to the rigid character of the roller, it operates positively, and is adapted to maintain its effective shape, while it may be readily and cheaply renewed by replacing the thin disks O O' which form the creasing-ridges.

The members M M' are flanged, *m*, to prevent lateral displacement of the strap in passing through the rolls.

The shafts EF may, if desired, be prolonged, as in Fig. 2, to take any desired number of pairs of rollers for the same or different patterns, sizes, &c.

The effective periphery of the roller may be wholly or partially cylindrical, as at Fig. 4.

The crank I may be dispensed with, and the apparatus be impelled by belt and pulley or other connection with any suitable motor.

The operation is as follows: The machine having been set in motion, one end of the strap to be creased is introduced between the rollers with its face side up, and emerges marked with well-defined and symmetrical wavy creases, much superior to those usually made by an experienced saddler provided only with the common creasing-tool, and in a very small fraction of the time.

I have described, specifically, the creasing-roller as actually used by me; but reserve the right to vary the pattern of the dies and ridges, or to increase or diminish their number, at will.

It is well known that a wave creasing-roller has been patented in which wave-disks are supported by elastic main sections, and not in such a manner as to form perpendicular creases. The creasing-roller herein described is held to differ essentially from this elastic compound roller, the conflicting features of which are hereby disclaimed.

The following is claimed as new:

1. A compound metallic roller having a concave periphery, *n*, and perpendicular creasing-ridges *o*, formed by sections or disks M M' N, with beveled opposing surfaces, and interposed bent annular plates O O', substantially as herein described, for the purpose specified.

2. The compound metallic roller, consisting of the clamping sleeve and nut K L, rigid annular sections or dies M M' N, and interposed thin rings O O', forming an effective periphery,

n, with parallel end flanges *m*, and perpendicular waved creasing-ridges *o*, substantially as set forth.

In testimony of which invention I hereunto set my hand.

SILAS B. RANDALL.

Attest:

GEO. H. KNIGHT,
S. B. SPEAR.