(No Model.)

E. R. MENZEL.

STRAP CLAMP.

No. 292,934. Patented Feb. 5, 1884.

Fig: 1

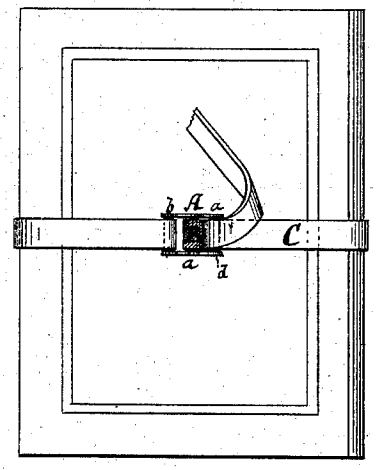


Fig: 2

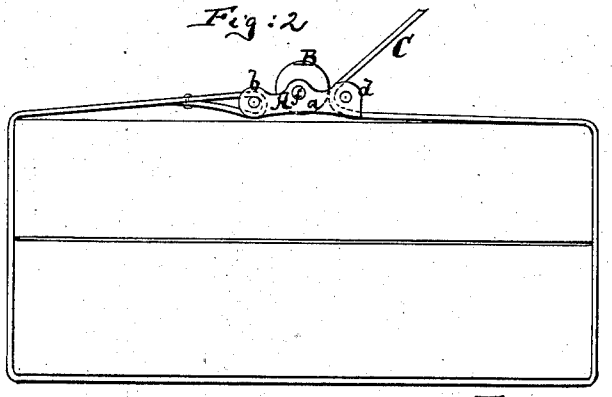


Fig: 3

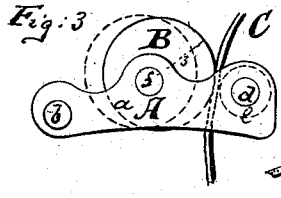


Fig: 4

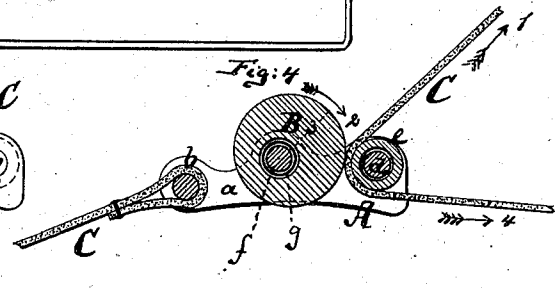
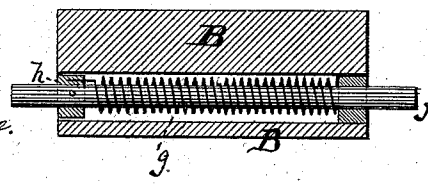


Fig: 5



Witnesses:
John C. Tumbridge.
John M. Speer.

Inventor:
Edmund R. Menzel
by his attorneys
Briesen & Steele

UNITED STATES PATENT OFFICE.

EDMUND R. MENZEL, OF JERSEY CITY, NEW JERSEY.

STRAP-CLAMP.

SPECIFICATION forming part of Letters Patent No. 292,984, dated February 5, 1884.

Application filed May 10, 1883. (No model.)

To all whom it may concern:

Be it known that I, EDMUND R. MENZEL, of Jersey City, in the county of Hudson and State of New Jersey, have invented an Improved Strap-Clamp, of which the following is a specification.

Figure 1 is a top view of a package of which the strap is held by my improved clamp. Fig. 2 is a side view of the same. Fig. 3 is an enlarged side view of the strap-clamp; Fig. 4, a vertical cross-section of the same, and Fig. 5 a vertical longitudinal section through the eccentric roller thereof.

This invention relates to a self-acting clamp for straps, cords, and the like; and it consists, principally, in combining an eccentrically-hung roller with the framing in which it is hung, and with a rod or frictional roller, over which the strap passes, so that when the said strap is drawn in one direction the eccentric roller will tend to bite it, while when the strap is pulled in the other direction it will be free to move without impediment.

The invention also consists in combining the eccentrically-hung roller with an internal spring, by which it is thrown toward the rod or frictional roller, and in other details of improvement, that are hereinafter more fully specified.

In the drawings, the letter A represents the frame of my clamp. This frame consists of two side pieces or cheeks, *a a*, which are joined together at one end by a cross-bar, *b*, and at the other end by a cross-bar or rod, *d*. Around the rod *d* is, by preference, placed a frictional roller, *e*, as is more clearly shown in Fig. 4. In this frame A is hung, parallel with the rods *b d* and between them, a roller, B, which is hung on a rod or pin, *f*, that passes eccentrically through the roller B, as clearly shown in Fig. 4, and that is fastened to the cheeks *a a*. The distance between the larger part of the eccentrically-hung roller B and the frictional roller *e* is such that the strap, C, to be clamped can pass freely between the two when the eccentrically-hung roller is not in such a position that its longest radius is in the line drawn from the center of *f* to the center of *d*. The strap C has one end fastened to the rod *b*, as shown. Its other end is drawn between the eccentric roller B and the frictional roller *e*. As long as the strap C is moved in the direction of the arrow 1 (shown in Fig. 4) the roller B will not interfere with that motion; but if the strap is drawn in the opposite direction it will have the tendency to carry the eccentrically-hung roller B with it and swing it in the direction of the arrow 2, Fig. 4, thereby bringing its longer radius, which is marked 3 in Fig. 4, nearer to the roller *e*, until finally the roller B will bite the strap, so as to prevent any further movement in that direction.

In order to hold the eccentrically-hung roller B normally in such position that it will act automatically, as stated, I interpose a coiled spring, *g*, between its inner circumference and the pivot or pin *f*, and fasten one end of this spring to the pin or pivot *f*, or to a collar, *h*, thereon, and the other end to the roller B. The tendency of this coiled spring *g* is to normally throw the longer radius 3 of the eccentrically-pivoted roller as near to the frictional roller *e* as practicable—that is, hold it in the position indicated in Fig. 3, allowing the roller to be turned away from that position, but carrying it back as soon as the force that took it away is removed. The result will be that the eccentrically-hung roller B will by the spring be always held in contact with the strap C, so as to tend to bite it the moment the strap C is pulled in the direction of the arrow 4 in Fig. 4. Thus, when this strap C is placed around a package, as in Figs. 1 and 2, and pulled so as to tighten it around the package, the clamp will offer no obstruction to this tightening pull; but when, having been drawn tight, the strap is strained by the package which it surrounds, the clamp will resist any endeavor of the strap to become loose on the package.

The frictional roller *e* is not essential to the action of the clamp, as good results will be obtained if the roller *e* were affixed to or omitted from the pin *d*.

The spring *g*, though an improvement of importance, is still not absolutely necessary to the clamp, because the clamp will work even without said spring, though not so well.

The surface of the eccentrically-hung roller B should, by preference, be somewhat roughened.

I claim—

1. In a clamp having eccentrically-journaled roller B, the combination thereof with the spring *g* and with the rod *e*, substantially as specified.

2. The combination of the frame A, having rods *b d* and cheeks *a a*, with the eccentrically-journaled roller B and strap C, substantially as herein shown and described.

EDMUND R. MENZEL.

Witnesses:

WILLY G. E. SCHULTZ,

HARRY SMITH.