

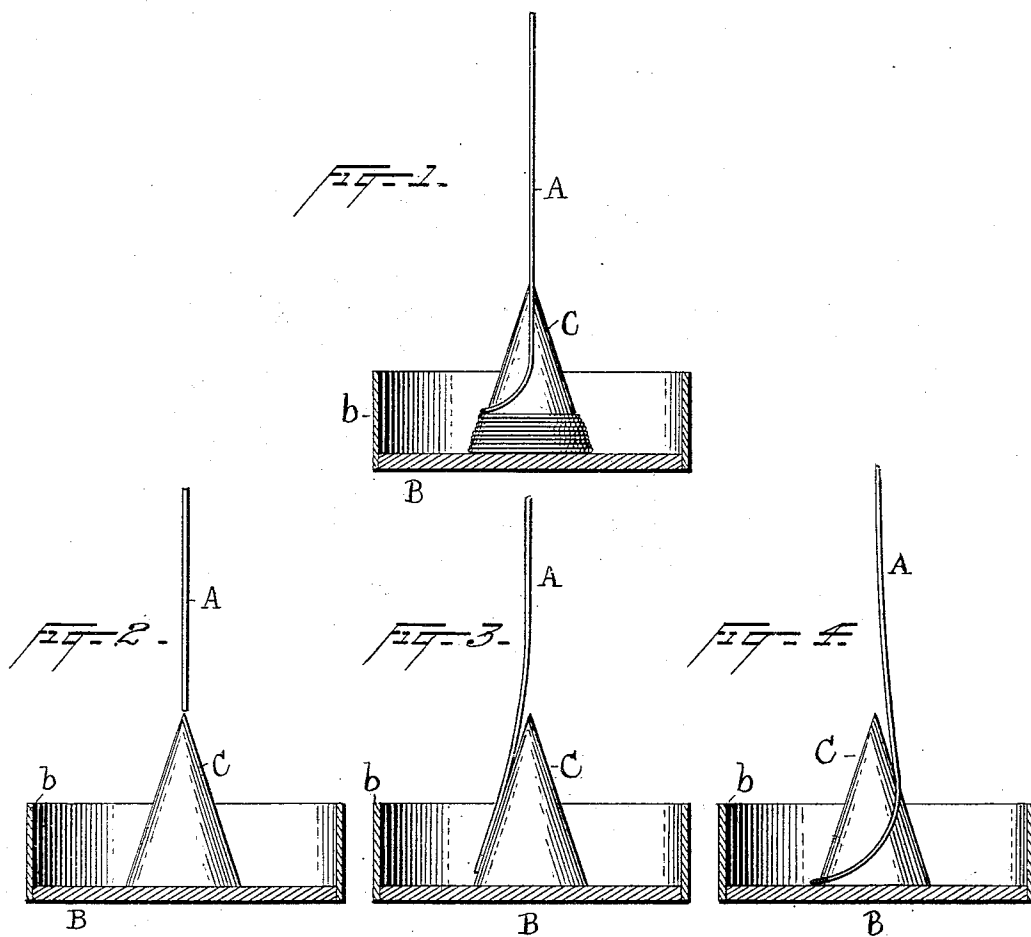
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Patented Jan. 1, 1901.

R. ROBERTSON.
DEVICE FOR COILING PLASTIC MATERIAL.

(Application filed July 20, 1900.)

(No Model.)



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UNITED STATES PATENT OFFICE.

ROBERT ROBERTSON, OF SANTA CRUZ, CALIFORNIA.

DEVICE FOR COILING PLASTIC MATERIAL.

SPECIFICATION forming part of Letters Patent No. 664,896, dated January 1, 1901.

Application filed July 20, 1900. Serial No. 24,330. (No model.)

To all whom it may concern:

Be it known that I, ROBERT ROBERTSON, a citizen of the United States, residing at Santa Cruz, in the county of Santa Cruz and State of California, have invented certain new and useful Improvements in Devices for Coiling Plastic Material; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to devices for coiling flexible threads, cord, rods, or tubes of plastic material; and it consists of the apparatus hereinafter described, and particularly pointed out in the claims.

In the drawings, Figure 1 is a sectional elevation of an apparatus embodying my invention. Figs. 2, 3, and 4 show the operation of the device.

The nature of the plastic material to be operated upon is immaterial and the mechanism by which it is formed into a thread or fine tube or the like is not a part of my invention. Said mechanism may consist of dies or rolls or any other suitable means for reducing the plastic material to a thread-like form and feeding it to my coiling apparatus.

The thread, tube, or the like A is fed in a vertical direction from a fixed point in the thread-forming mechanism, being allowed to fall at whatever rate of speed it comes from said mechanism. The coiling apparatus consists of a surface B, arranged transverse to the line of feed and provided with a conical standard C, rising therefrom, with its axis preferably in the line of feed. The cross-section of the standard may be circular or angular, as desired, though preferably circular. The surface of the cone is preferably smooth and polished to facilitate the slipping of the thread down over it. The surface B is surrounded, preferably, by an upright wall or flange b to confine the coiled material.

The operation of my invention is as follows: The coiling apparatus being arranged

with the apex of the standard substantially in line with the feed, the thread-forming mechanism is started, and when the depending end of the thread comes down into contact with the upper end of the standard it will slide down along the surface of the standard until it strikes upon the transverse surface B. The end of the thread being thus arrested in its movement and the feed continuing, the thread inclines to one side or the other and proceeds to wrap itself around the standard, coiling itself up thereon as the feed continues irrespective of the speed of the feed, whether it be fast or slow or variable. This is an important feature in handling small threads of plastic material, which cannot be successfully reeled owing to their liability to break under any failure of the reel to run exactly in synchronism with the feed.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. Means for coiling a thread of plastic material, consisting of a surface arranged transverse to the line of feed of said thread, and a stationary standard rising from said surface with its axis substantially in line with the line of feed of the thread.

2. Means for coiling a thread of plastic material depending freely from a fixed point in thread-forming mechanism, consisting of a surface to arrest the end of the thread, and a standard about which the thread can coil itself as the feed continues, the axis of said standard being in line with the fixed point from which said thread depends.

3. Means for coiling a thread of plastic material depending freely from a fixed point in thread-forming mechanism, consisting of a stationary surface transverse to the line of feed of the thread, and a conical standard rising from said surface with its axis substantially in line with the line of feed.

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

ROBERT ROBERTSON.

Witnesses:

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CHAS. E. RIORDEN.