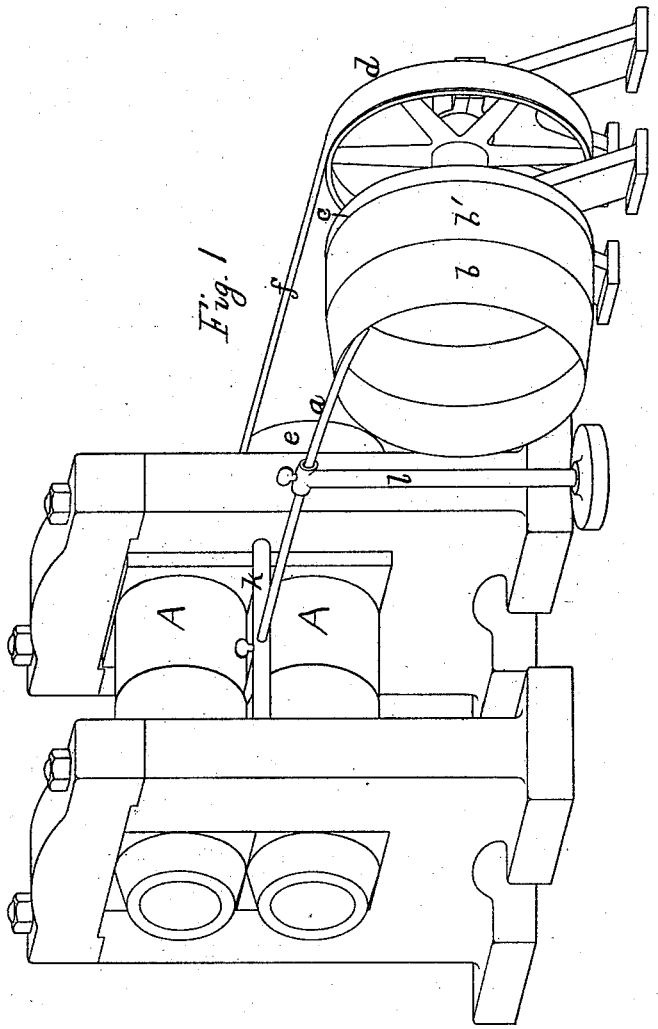
(No Model.) 4 Sheets—Sheet 1.

W. A. SWEET.

MACHINE FOR COILING METAL RODS.

No. 302,362. Patented July 22, 1884.



Witnesses;

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(No Model.) 4 Sheets—Sheet 2.

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Fig. 2.

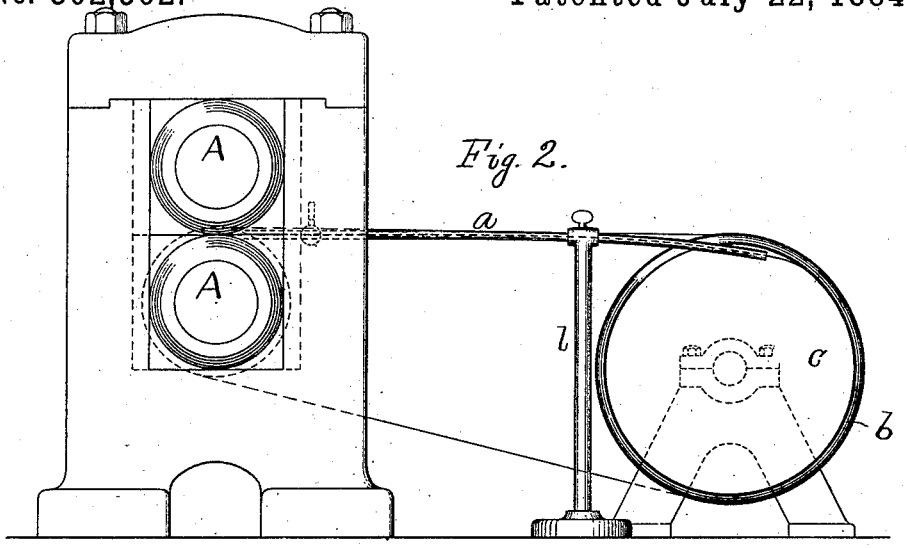
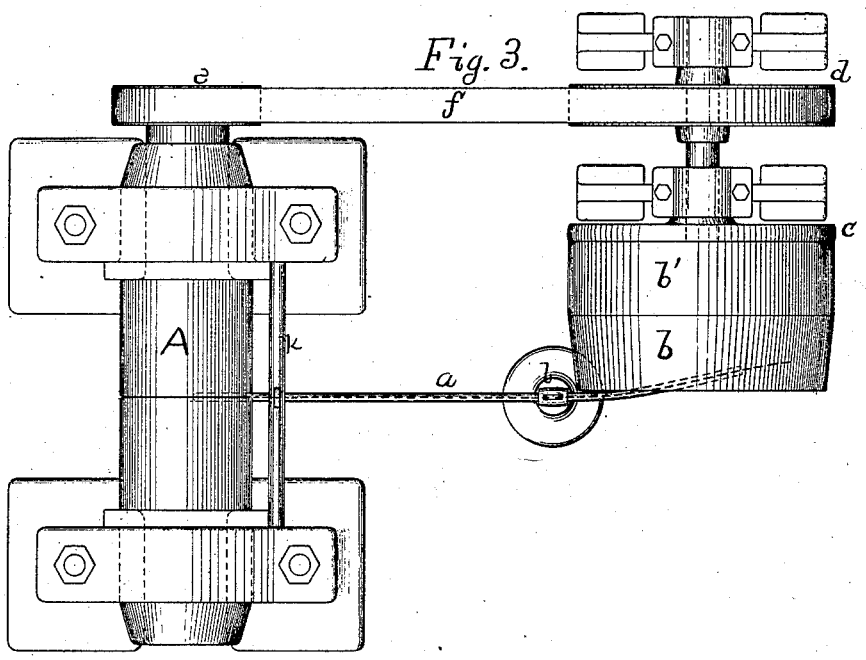


Fig. 3.



Witnesses;

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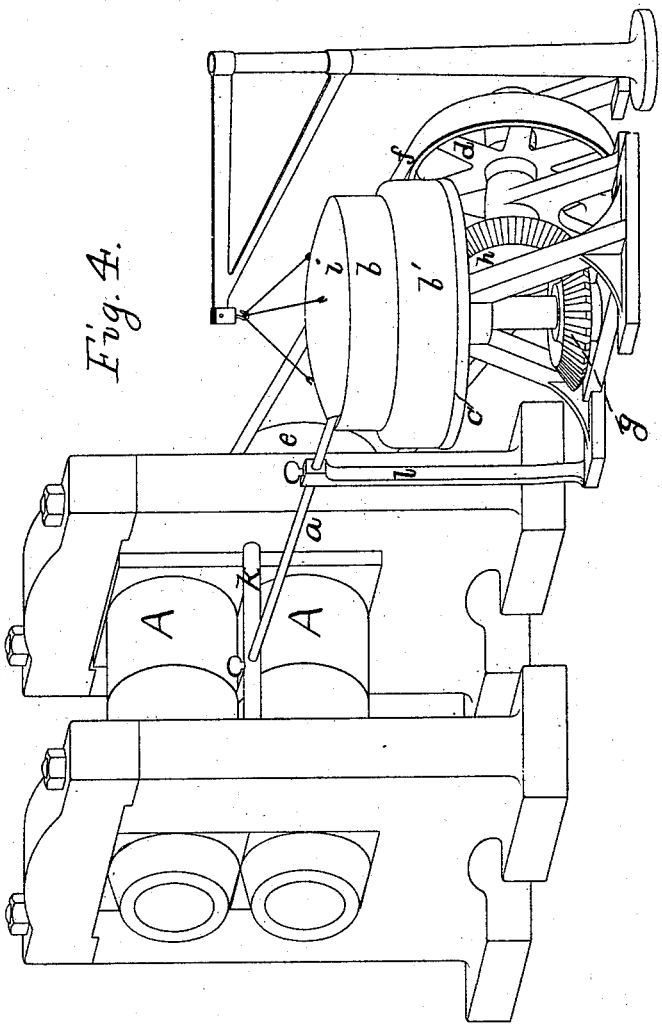
(No Model.) 4 Sheets—Sheet 3.

W. A. SWEET.

MACHINE FOR COILING METAL RODS.

No. 302,362. Patented July 22, 1884.

Fig. 4.



Witnesses;

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(No Model.) 4 Sheets—Sheet 4.

W. A. SWEET.

MACHINE FOR COILING METAL RODS.

No. 302,362. Patented July 22, 1884.

Fig. 5.

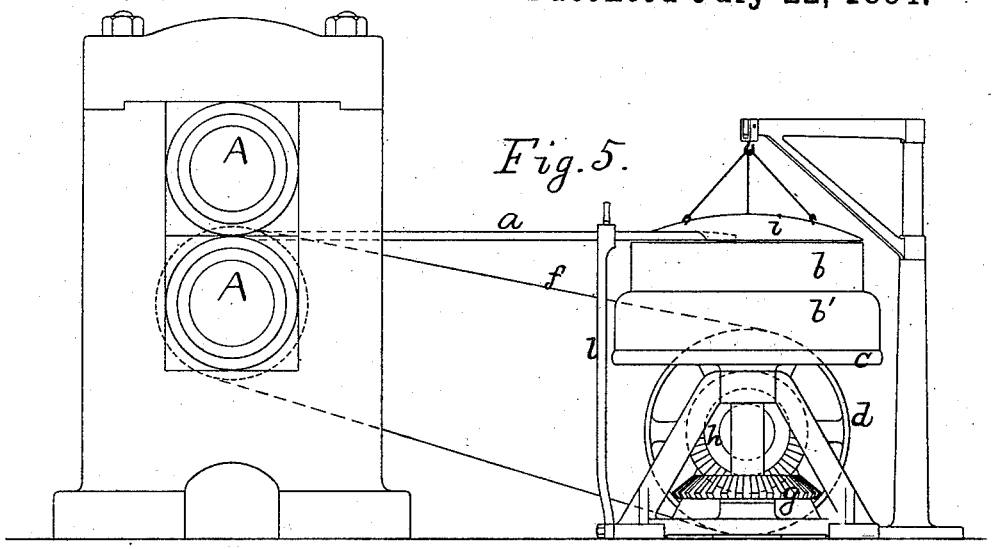
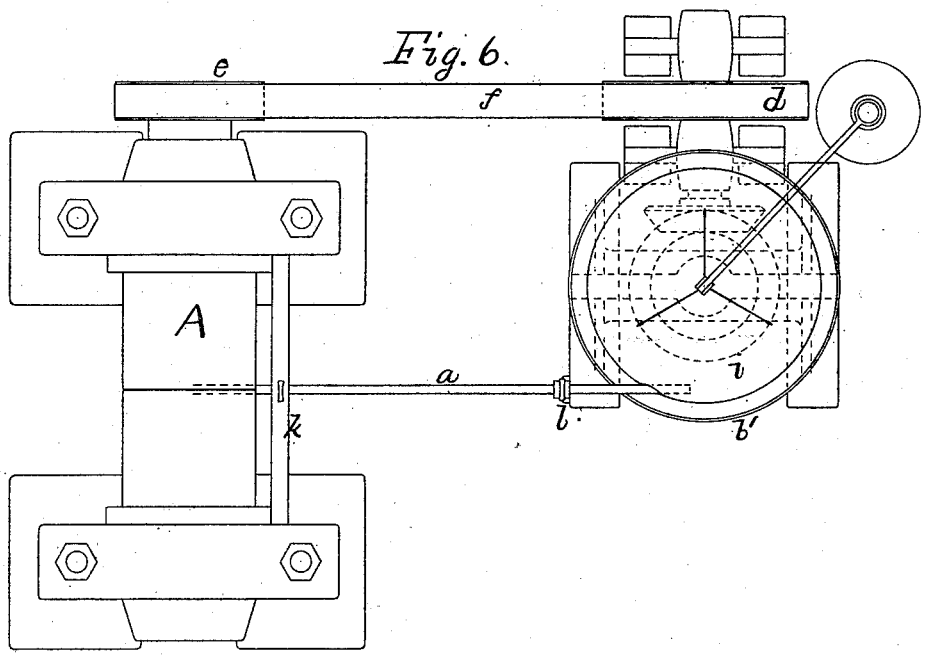


Fig. 6.



Witnesses;

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UNITED STATES PATENT OFFICE.

WILLIAM A. SWEET, OF SYRACUSE, NEW YORK.

MACHINE FOR COILING METAL RODS.

SPECIFICATION forming part of Letters Patent No. 302,362, dated July 22, 1884.

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

To all whom it may concern:

Be it known that I, WILLIAM A. SWEET, of the city of Syracuse, Onondaga county, in the State of New York, have invented a new and useful Apparatus for Reeling Wire from the Rolls, of which the following is a description.

The high velocity at which wire, &c., is delivered from the rolls renders it very difficult and dangerous to handle and reel into coils. My improvement for this purpose is intended to obviate former difficulties and insure the proper reeling automatically from the rolls compactly and safely at the highest velocity at which it can be delivered from the rolls. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the last pair of rolls and a reel running vertically attached thereto; Fig. 2, a side elevation of Fig. 1; Fig. 3, a plan of the same; Fig. 4, a perspective view with the reel horizontal; Fig. 5, a side elevation of Fig. 4; Fig. 6, a plan of the same.

As the drawn wire is running off from the last pair of rolls A A, it passes through a guiding spout or tube, *a*, properly held to receive it and guide it into the reel. This reel consists of a hollow rim of thin metal, *b b'*, fastened to a face-plate, *c*, firmly affixed to a horizontal shaft running in proper supports, and having a driving-pulley, *d*, on it, that receives its motion from pulley *e* on the journal of roller by means of a belt, *f*, or otherwise. The part *b* of the rim forming the hollow reel may be conical, as seen in the drawings, joining at its base a cylindrical part, *b'*; and this rim thus formed receives and throws the end of the wire in a curve against the face-plate *c*, where it winds into a compact coil within the rim *b'*, which can be readily detached from the face-plate *c* to discharge the coil of wire. The attachment of the rim *b b'* to the face-plate may be made in any convenient way, such as a bayonet-fastening or other well-known device. By this construction and arrangement it will be noticed that the wire, when it leaves the guide *a*, strikes the revolving rim *b*, and is turned inward toward the face-plate *c* in a curve, and is packed against it and rim *b'* in a coil as it winds up. The part *b*, against which the wire from the guide *a* first strikes, is kept free from the coiling wire as it is laid within the rim *b'*.

In Figs. 4, 5, 6, the reel is shown in a horizontal position, the construction of the essential features and parts being the same as in the vertical reel just described; but the face-plate *c* is on a vertical instead of a horizontal shaft, on the lower end of which, above the bearing or step, there is a bevel-gear, *g*, coupling with a similar one, *h*, on the horizontal shaft that bears the driving-pulley *d*. Above the part *b* of the rim, which is here shown cylindrical, there is a cover, *i*, suspended so as to fit closely without touching the revolving rim. The action of coiling in this case is similar to the other, except that it coils horizontally, the wire being guided to the rim through the guide-spout *a*, that enters its interior under the cover. When the coil is formed, the rim *b* is raised, leaving the coil of wire upon the face-plate *c*, from which it is removed in any convenient way.

The inner end of the guide-tube *a*, as shown in the drawings, is fitted to a cross-bar, *k*, running from one housing to the other in front of the rollers A A, where it is held by a set-screw. The other end is supported by a standard, *l*, to which it is similarly attached.

Having thus described my improvements in reeling wire, &c., what I claim therein as new, and desire to secure by Letters Patent of the United States, is—

1. A hollow revolving reel for coiling wire from the rollers onto its interior surface, consisting of a cylindrical rim united at its base with a face-plate revolved by a central spindle affixed thereto, and receiving the wire from the rolls as it is formed, and coiling it against its interior revolving surface, as specified.

2. The hollow revolving rim of the reel, one portion of which is in form the frustum of a cone, the other portion cylindrical, for receiving the wire from the rollers upon the interior conical surface and winding it into the cylindrical part, as specified.

3. The hollow revolving reel, constructed with an open end for receiving the wire to be coiled within it, combined with a face-plate, so that it can be detached therefrom to discharge the coil of wire wound upon its interior, as described.

W. A. SWEET.

Witnesses:
M. D. CORNWALL,
F. G. TALLMAN.