2 Sheets—Sheet 1

J. PROSSER.

Machine for Coiling Wire, &c

No. 206,197. Patented July 23, 1878.

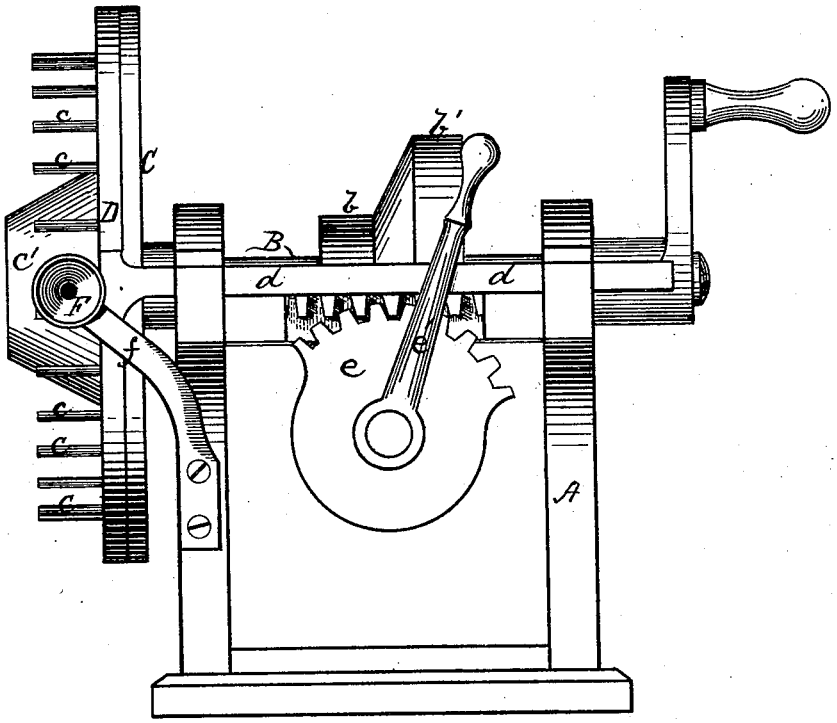

Fig. 1.

Witnesses

R. F. Whittlesey

J. W. Smith

Inventor

John Prosser

by Bakewell & Kerr

Attys

2 Sheets—Sheet 2.

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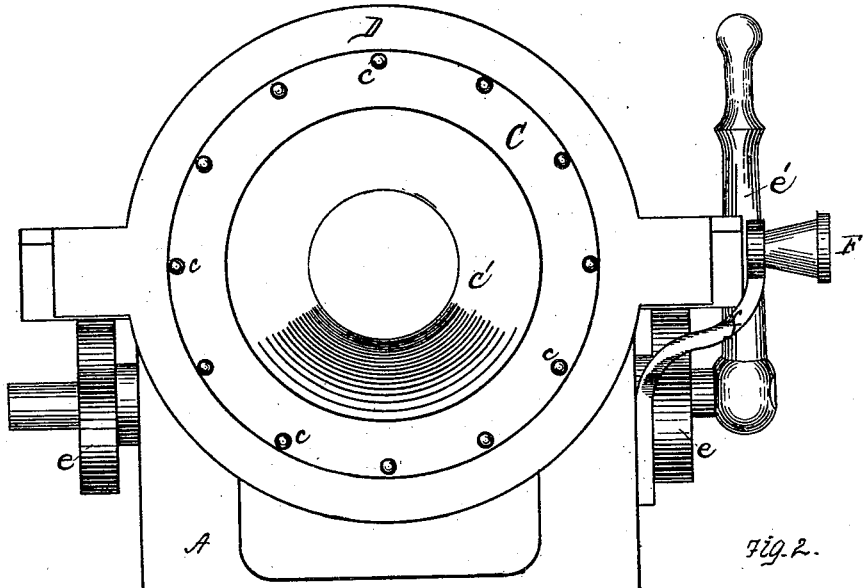

Fig. 2.

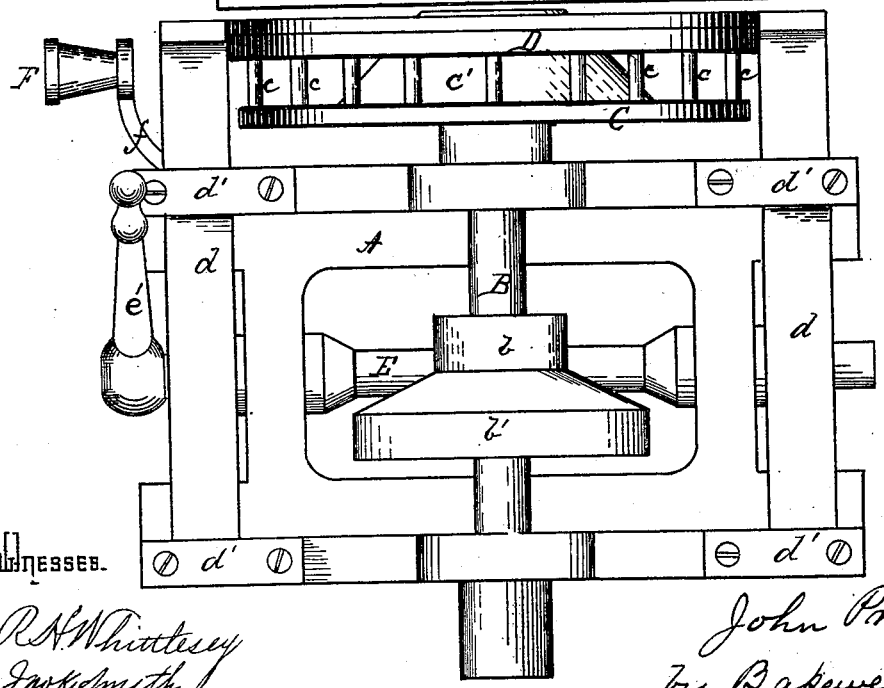

Fig. 3.

Witnesses.

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UNITED STATES PATENT OFFICE.

JOHN PROSSER, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND LEWIS, OLIVER & PHILLIPS.

IMPROVEMENT IN MACHINES FOR COILING WIRE, &c.

Specification forming part of Letters Patent No. **206,197**, dated July 23, 1878; application filed March 27, 1878.

To all whom it may concern:

Be it known that I, JOHN PROSSER, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Machinery for Coiling Rods, Wire, &c.; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is an end elevation of a machine embodying my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a plan view, showing the operation of the discharge devices.

Like letters refer to like parts wherever they occur.

My invention relates to the construction and operation of machinery for coiling rods, wire, and like articles; and consists, first, in combining, with the reel or drum on which the article is to be wound, a stripper adapted to remove the coil without arresting the motion of the reel; secondly, in combining, with the reel or drum on which the coil is to be formed, a deflector adapted to prevent the coil from engaging with or arresting the motion of the drum when the coil is being discharged or removed therefrom; and, finally, in details of construction, hereinafter more specifically set forth.

The devices heretofore employed for coiling wire, &c., have, in general, consisted of a face plate or disk mounted on the end of a shaft, and provided with projecting pins, to form a reel. The reel-shaft has been provided with a crank, and manual power has been used to revolve the reel as well as to remove the coil. The objections to such devices are, first, their lack of power and capacity; secondly, their intermittent action, the machine having to be stopped to remove each coil; and, thirdly, the number of hands required to operate the machines.

The object of the present invention is to furnish a machine whose capacity is equal to the demand, which will coil uniformly and rapidly, and can be operated by a single attendant.

I will now proceed to describe my invention, so that others skilled in the art to which it appertains may apply the same.

In the drawing, A represents a suitable frame, in which is journaled a shaft, B, having one or more drive-pulleys, *b b'*, of different diameters, and adapted to revolve the shaft B at any desired speed. On one end of shaft B is secured a face plate or disk, C, having a series of projecting pins, *c*, arranged in a circle thereon, to form a reel for coiling the wire; and secured to the face-place centrally is the frustum of a cone, *c'*, which projects beyond the reel-pins *c* sufficiently far to present an inclined surface to the falling coil of wire as it leaves the reel, thus deflecting it and preventing it from engaging again with the pins *c*.

D is a ring adapted to inclose the reel formed by pins *c*, and to rest against or close to the face-plate C, out of the way when not in use, so as not to interfere with the coiling of the wire or like article on the reel. This ring or stripper is carried by two or more rack-bars, *d*, which move in ways or guides *d'* on the frame A. E is a shaft or rod journaled in the frame A, and provided with segmental gear *e*, which engages with the rack, said bar being rocked or oscillated by means of a crank or lever, *e'* F indicates a bell-mouth guide, secured in a bracket, *f*, on the frame A, and so situated as to guide the wire onto the reel.

The operation of my devices is as follows: Power is applied by a belt or suitable gearing, and the shaft B, carrying the face-plate and pins or reel, is caused to revolve more or less rapidly, as desired. One end of the rod, wire, or like article to be coiled is passed through the guide F until it comes in contact with the reel, which seizes the same, drawing the wire or like article through the guide, and rapidly winding it up. As soon as the coil is complete the attendant operates lever *e'*, causing the advance of the rack, and with it the annular stripper D, which forces the coil from the reel, the revolution of the reel assisting in this operation. The coil thus disengaged from pins *c* will, in its fall, strike the inclined projecting deflector *c'*, which will direct it away from the reel and insure against its becoming entangled with pins *c*, so as to interfere with the operation of the machine. As soon as the coil is disengaged from the reel the operator reverses the lever *e'*, which retracts the rack,

bringing the stripper up to the face-plate again, after which the end of a second wire or rod can be introduced through guide F, and the operations specified repeated.

It is evident that a skilled mechanic may modify the construction in many respects without departing from the spirit of my invention—as, for instance, the stripper might be fixed, and the shaft with reel, &c., be made to reciprocate, in order to discharge the coil; a perforated plate through which the pins forming the reel project might be substituted for the annular stripper shown; and cog-gearing might be substituted for pulleys and belting, as driving mechanism. But I have shown what I deem the best and simplest form for the purposes specified.

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

1. In a machine for coiling rods, wire, &c., the combination of a reel, a stripper adapted to remove the coil from the reel without arresting the motion thereof, and mechanism for actuating the stripper, substantially as specified.

2. The coiling-reel provided with a deflector, for insuring the disengagement of the coil during its discharge, substantially as specified.

3. The combination, in a machine for coiling wire, &c., of the coiling-reel provided with a deflector, the stripper, and mechanism for operating the stripper, substantially as and for the purpose specified.

In testimony whereof I, the said JOHN PROSSER, have hereunto set my hand.

JOHN PROSSER.

Witnesses:

R. H. WHITLESEY,

F. W. RITTER, Jr.