

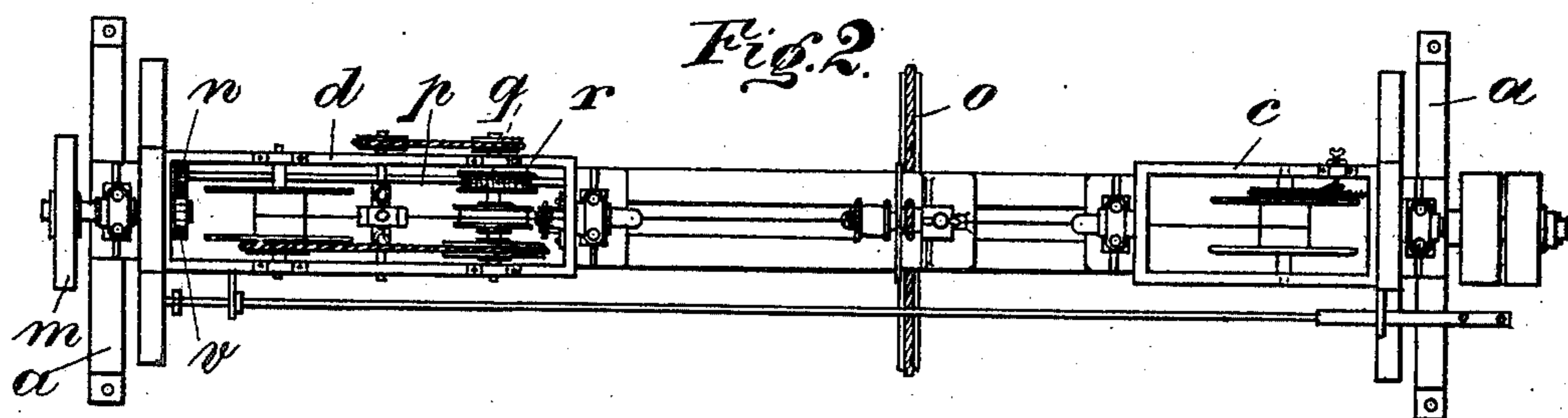
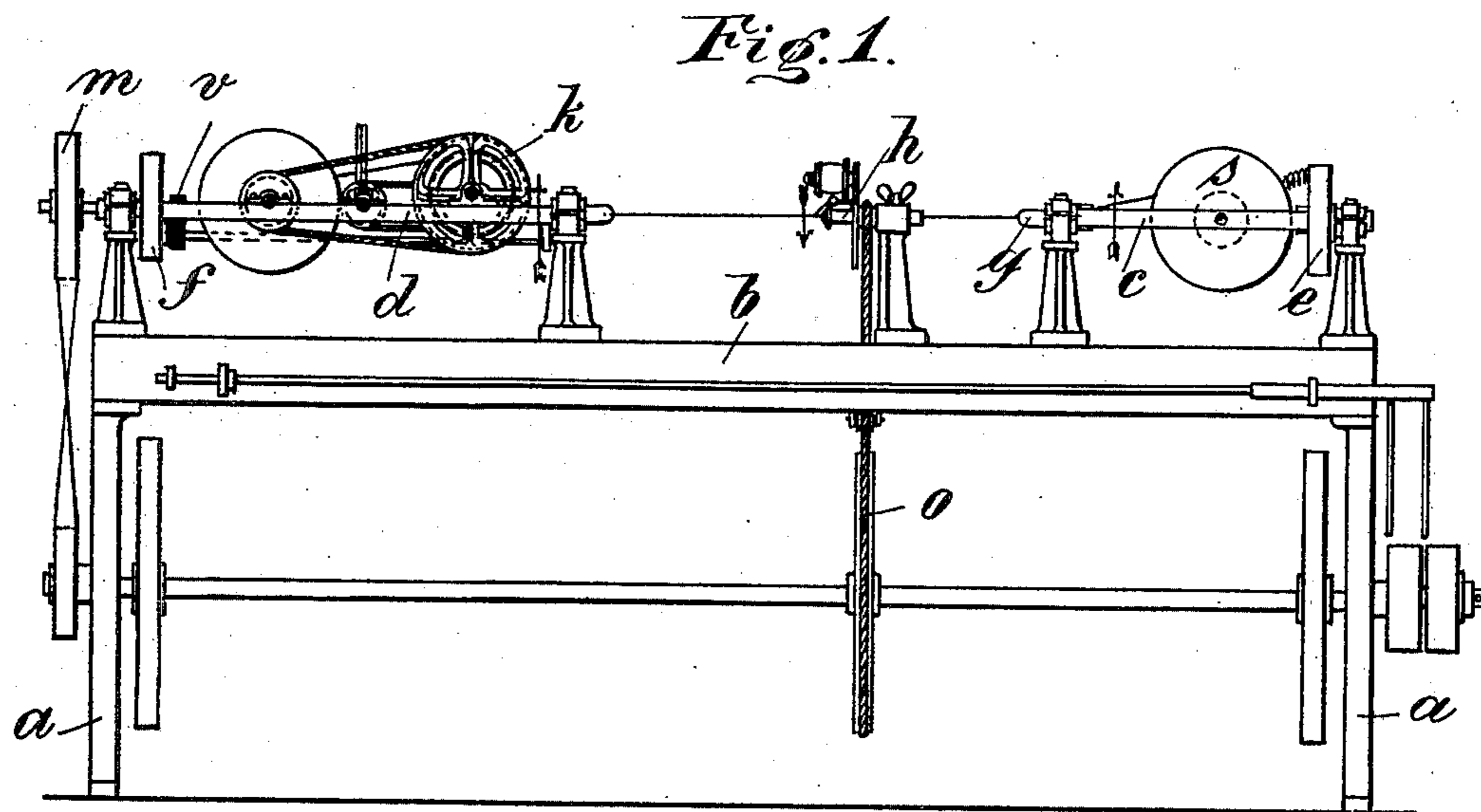
No. 704,550.

Patented July 15, 1902.

A. KREIDLER.
WIRE COVERING MACHINE.

(Application filed Jan. 9, 1900.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

ANTON KREIDLER, OF STUTTGART, GERMANY.

WIRE-COVERING MACHINE.

SPECIFICATION forming part of Letters Patent No. 704,550, dated July 15, 1902.

Application filed January 9, 1900. Serial No. 888. (No model.)

To all whom it may concern:

Be it known that I, ANTON KREIDLER, manufacturer, residing at 52 Böblingerstrasse, Stuttgart, in the Kingdom of Würtemberg, German Empire, have invented new and useful Improvements in Wire-Covering Machines, (for which I have applied for Letters Patent in Germany, K.18,366^v/25, of July 19, 1899,) of which the following is a specification.

In the operation of covering wire by winding thereon threads of textile material, india-rubber, paper, or other material it has heretofore been the practice either to cause the wire to advance with a simple longitudinal motion while causing the winding-reel carrying the covering-threads to run around the wire or to cause the wire to simultaneously advance and rotate while the covering-threads were drawn from a bobbin supported upon a stationary axis. In order to obtain a really good result, it is of the greatest importance that the winding should be performed at a high speed, since otherwise when several threads are simultaneously wound upon the wire these threads are apt to become entangled and not to be laid evenly close to one another. In both the above-mentioned kinds of winding-machines, however, a limit of speed is soon reached, such limit being determined by the impossibility of accelerating indefinitely the movements of the rotating bobbins, for in the former case not only does the manner of winding the covering tend to obstruct the movement of the filaments, but with increased speed the parts of the machine are subjected to injurious strains, which it becomes impossible to meet, and it will be apparent that the difficulties thus caused will be increased if instead of the bobbin which carries the covering-threads the bobbins which respectively feed and take up the wire are caused while the feeding proceeds to rotate about an axis concentric with that of the wire. This will be at once obvious when it is considered that one revolution around their own axes of the bobbins, which respectively feed and take up the wire, corresponds to a very great number of revolutions around the axis of the wire of the frames carrying those bobbins.

My present invention consists, essentially,

in a combination of the two arrangements above mentioned.

In my improved machine the bobbin from which the wire to be covered is drawn and that upon which the wire when covered is wound are both mounted in revolving frames whose axes are in alinement with one another and which revolve at the same rate of speed, so that no twist is imparted to the wire, the axes of the bobbins being perpendicular to those of the frames and the wire being led from the one frame to the other through apertures formed in their respective shafts. Between the two frames a bobbin carrying the covering material is mounted to rotate around the wire in a direction opposite to that in which the wire itself revolves, the combined effect of the two rotations in opposite directions being to virtually increase the speed of the winding operation, so that in this manner I am enabled to obtain a highly-efficient machine.

In the accompanying drawings, illustrating the construction of my improved machine, Figure 1 is a front elevation, and Fig. 2 a plan view, of the machine.

The machine comprises a framework consisting of standards *a a* and a table *b*, supporting bearings in which two frames *c* and *d* are mounted to rotate, their rotation in the same direction and at equal speed being effected by the belt-pulleys *e* and *f*. On the frame *c* is mounted the feed-bobbin *s*, carrying the wire to be covered, and also a brake adapted to insure a uniform speed of rotation of the feed-bobbin. The wire is led from the bobbin *s* through the tubular guide *g*, which constitutes a pivot of the frame *c*, and thence through the hollow shaft of the spinning-runner *h*, the said shaft being in alinement or substantial alinement with the axes of revolution of the frames *c* and *d* and being caused by means of cord-pulley *o* to rotate in the direction opposite to that in which the frames *c* and *d* revolve. By this arrangement the covering of the untwisted wire with the winding material is effected at this point. The wire thus covered is thence drawn in the usual manner through the tubular pivot of the second frame *d* and is wound on the taking-up bobbin by the aid of a draft-roller *k* and a thread-guide, as usual.

The velocity of the draft-roller *k* is determined by means of differential gearing consisting of an interchangeable belt-pulley *m* and spur-wheel *v* on the shaft of the frame *d*,
5 a spur-wheel *n* on shaft *p*, rotating with and parallel to the shaft of the frame, worm *q* on said shaft, and worm-wheel *r* on the draft-roller shaft *p*.

Now what I claim, and desire to secure by
10 Letters Patent, is the following:

In a machine for covering wire or the like, the combination of a feed device for the wire to be covered, a rotatable frame in which said feed device is mounted to turn, the axis of
15 the feed device being transverse to that of the frame, another frame mounted to turn about an axis located in the continuation of the axis of the first-named frame, a take-up device mounted to turn in the second-named
20 frame about an axis transverse to the axis of said frame, mechanism for rotating the two

frames in the same direction and at the same rate of speed, guides located between the two frames and arranged to hold the wire in alignment with the axis about which said two
25 frames rotate, means for covering the wire, said means being located between the two frames, and mechanism for rotating said means around the wire in the opposite direction to that in which the wire itself is rotated
30 by the movement of said frames, whereby the wire will be fed longitudinally and at the same time rotated in one direction without being twisted, while the covering means will be rotated in the opposite direction. 35

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ANTON KREIDLER.

Witnesses:

WM. HAHN,
F. KIEDAISCH.