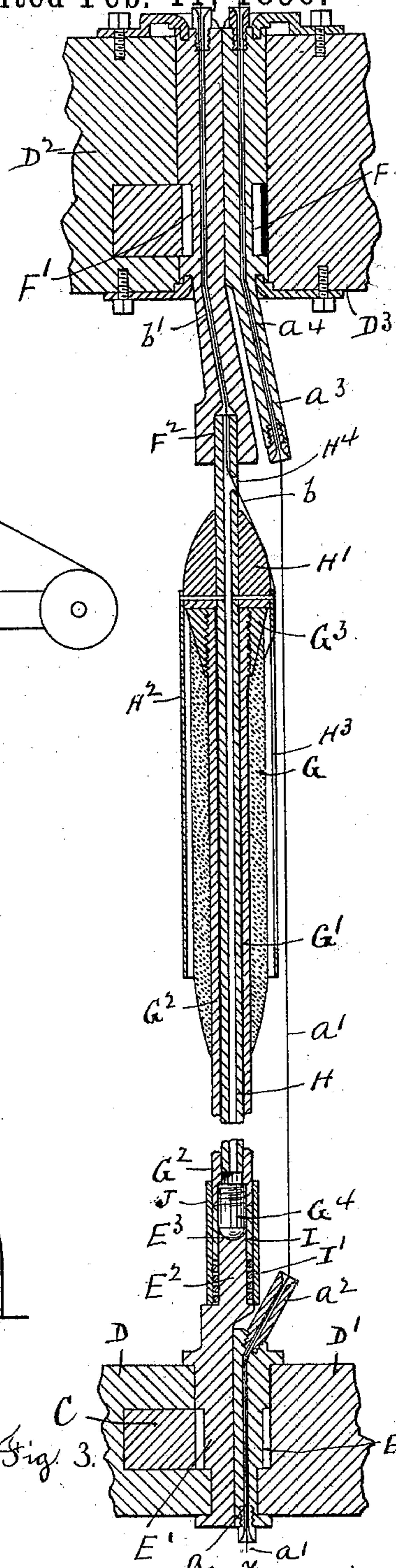
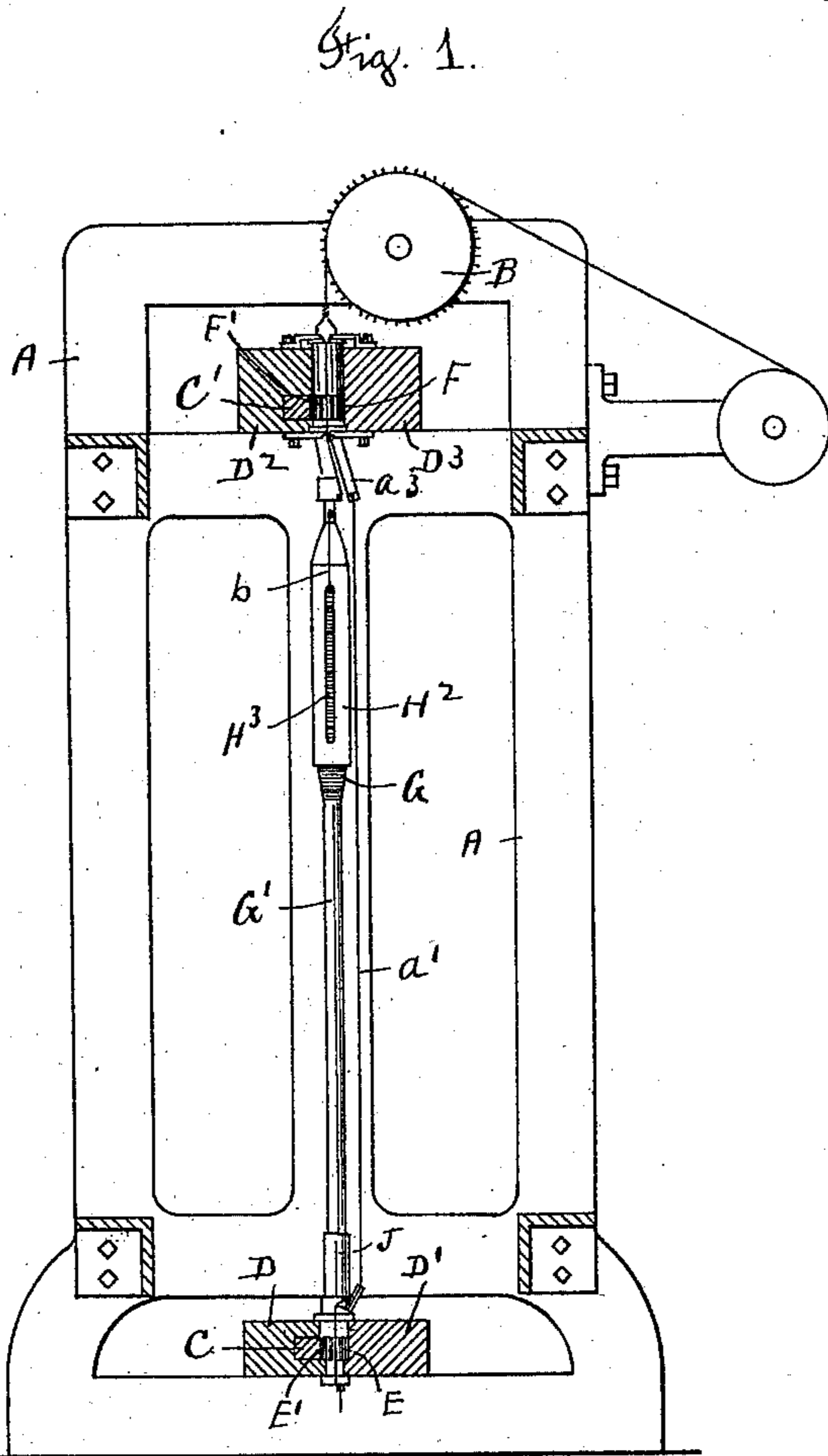
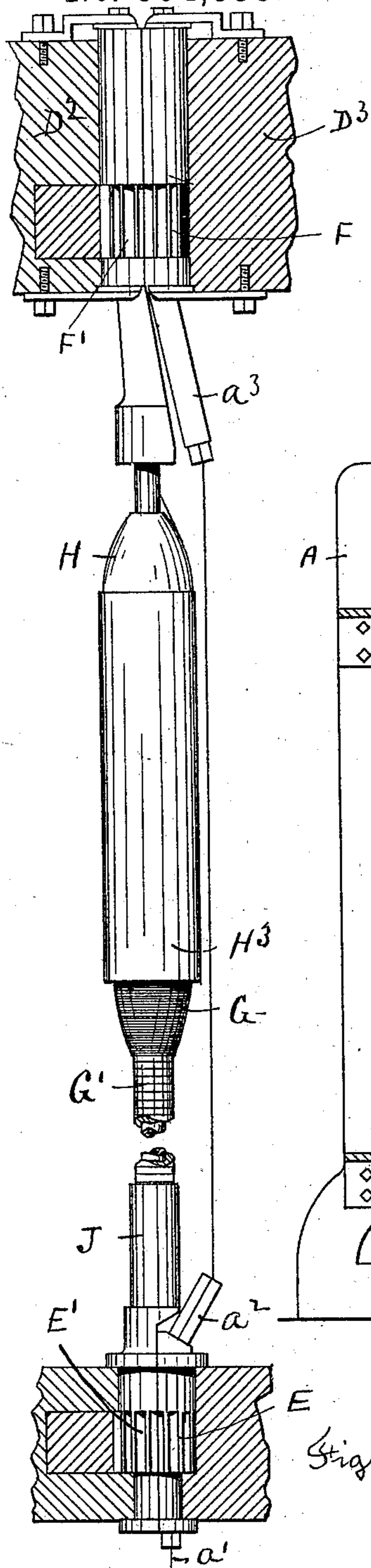


(No Model.)

A. E. BARLOW.
COP HOLDER FOR WIRE NETTING MACHINES.

No. 554,358.

Patented Feb. 11, 1896.



Witnesses
A. Whiting
H. Fowler

By his Attorney Rufus S. Fowler
Arthur E. Barlow

UNITED STATES PATENT OFFICE.

ARTHUR E. BARLOW, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO THE
WRIGHT & COLTON WIRE CLOTH COMPANY, OF SAME PLACE.

COP-HOLDER FOR WIRE-NETTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 554,358, dated February 11, 1896.

Application filed July 7, 1894. Serial No. 516,804. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR E. BARLOW, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in a Cop-Holder for Wire-Netting Machines, of which the following is a specification, accompanied by drawings forming a part of the same and representing so much of a netting-machine as is necessary to illustrate the nature of my present invention and its method of operation.

My invention relates to certain improvements in a cop-holder designed to be used in a wire-netting machine provided with twisting-gears made in halves and actuated by reciprocating racks in the usual and well-known manner common in machines of this class, and in the accompanying drawings I have not deemed it necessary to show in detail the construction and operation of the parts of a wire-netting machine not directly concerned in my present invention, as they will be well understood by all persons familiar with wire-netting machinery.

Figure 1 represents an end view of the framework of a wire-netting machine shown in section on the plane of one of the bobbin-holders, the twisting-gears, reciprocating racks, and take-up roll being the only portions of the operating parts of the machine represented in the drawings, the bobbin-holder embodying my improvement being shown in central sectional view. Fig. 2 represents a detached view of the bobbin-holder and twisting-gears, and Fig. 3 represents a central vertical sectional view of the parts shown in Fig. 2.

Similar letters refer to similar parts in the several figures.

Referring to the drawings, A denotes the framework, B the take-up roll, and C C' the reciprocating racks by which the twisting-gears are rotated.

D D' and D² D³ are bars supported by the framework in which the twisting-gears are journaled, the twisting-gears being made in halves and the bars D D² being stationary, and the bars D' D³ capable of a sliding motion by which the one-half of each twisting-gear is shifted in the usual and well-known

manner, all the above-described portions of the machine being constructed and operating like the similar portions in the wire-netting machines now in common use.

The lower twisting-gears, journaled in the bars D D', are formed of two half-sections E and E', the section E having a hole *a* extending through it to allow a wire *a'* to pass, the upper end of the section E having a horn *a*² standing obliquely to the axis of the gear through which the hole *a* is continued in order to carry the wire *a'* away from the cop-holder. The section E' of the lower twisting-gear extends above the bars D D' in the form of a spindle E², having its upper end hollowed or recessed to form a step-bearing E³ upon which the cop-holder is supported.

The upper twisting-gears journaled in the bars D² D³ consist of the half-sections F and F', the section F being provided at its lower end with an oblique horn *a*³, through which and the gear-section F is a hole *a*⁴ to receive the bobbin-wire *a'*. The half-section F' extends below the bars D² D³, and is recessed to form a journal-bearing F² for the upper end of the cop-holder, and from the bearing F² a hole extends through the half-section F' to receive the wire *b* taken from the cop G.

The cop-holder which embodies my present invention is supported at its lower end upon the step E³ and at its upper end by the journal-bearing F², and it comprises two separate pieces, namely: a bobbin G', upon which the cop of wire G is wound and consisting of a piece of pipe G² provided with a conical head G³, the outer surface of the hollow pipe G² and head G³ being preferably slightly corrugated to prevent the slipping of the wire wound thereon. The lower end of the pipe G² is provided with a steel block G⁴, which rests in the step-bearing E³. Within the pipe G² is placed a spindle H, upon which the bobbin G' is capable of turning freely, the spindle H forming a support for the upper end of the bobbin. The spindle H passes through and is attached to a head H', the upper end of the spindle being inclosed and capable of rotating freely within the journal-bearing F². Attached to the head H' is a cylindrical hood H² provided with a slot H³. The upper end of the spindle H is hollow and is provided with

a hole H^4 communicating with the interior of the spindle. For convenience of construction I usually make the spindle H from a piece of gas or steam pipe and bore the hole H^4 communicating with the interior of the pipe. From the journal-bearing F^2 a hole b' extends through the gear-section F' in alignment with the axis of the spindle H. The hood H^2 extends from the head H' downward over the cop G, and the cop-wire b is taken from the cop G through the slot H^3 in the hood, through the hole H^4 to the interior of the spindle H, and then upward through the hole b' , the cop-wire b being delivered at the upper end of the gear-section F' contiguous to and parallel with the bobbin-wire a , so they will be twisted together by the rotation of the twisting-gears in the usual and well-known manner.

The twisted fabric is carried over the take-up roll B, which is intermittently rotated at the end of each twisting operation to draw the wires a b upward in order to form a succeeding series of twists. As the cop-wire b is drawn up it will be unwound from the cop G, either by the independent rotation of the bobbin G' due to the draft of the wire on the bobbin or by the independent rotation of the head H' due to the draft of the wire against the edge of the slot H^3 , the bobbin G' and hood H^2 being capable of rotating independently of each other.

The lower end of the bobbin G' and the upper end of the spindle E^2 are inclosed by a sliding sleeve I, which is supported upon the end of a spiral spring I' , having its lower end resting upon the upper end of the gear-section E' , the sliding sleeve I serving to break the joint between the spindle E^2 and the lower end of the bobbin and hold the end of the bobbin upon the step-bearing. When it is desired to remove the end of the bobbin from the step-bearing, the sleeve I can be moved downward, compressing the spiral spring I' .

The sliding sleeve I and spiral spring I' are inclosed by an outer sliding sleeve J, which rests upon the upper end of the gear-section

E' and is capable of being raised over the bobbin G' in order to allow access to the sleeve I.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a wire-netting machine, the combination with upper and lower twisting-gears, of a cop-holder comprising a bobbin supported at its lower end in a step-bearing on the lower of said twisting-gears and having its upper end journaled on a spindle, a spindle entering said bobbin and capable of turning therein and having its upper end journaled in the upper of said twisting-gears, and a hood carried by said spindle and provided with a slot, substantially as described.

2. In a wire-netting machine, the combination of the gear-sections E and E' , said section E' having a step-bearing, a bobbin G' supported by said step-bearing, gear-sections F and F' , said section F' having a journaled bearing F^2 , a hollow spindle H having its upper end journaled in said bearing and its lower end journaled in said bobbin, and a hood H^2 carried by said spindle and having a slot H^3 , substantially as described.

3. The combination of gear-section E' having a spindle E^2 and a step-bearing E^3 , a bobbin G' supported by said step-bearing, a sliding sleeve I extending over the end of said spindle E^2 and said bobbin, and a spring I' supporting said sleeve, substantially as described.

4. In a wire-netting machine, the combination of a gear-section E' having a spindle E^2 and a step-bearing E^3 , a bobbin G' supported by said step-bearing, a sliding sleeve I, a spring I' supporting said sleeve, and an outer sleeve J inclosing said sleeve I and spring I' , substantially as described.

Dated this 4th day of July, 1894.

ARTHUR E. BARLOW.

Witnesses:

RUFUS B. FOWLER,
EMMA KESTER.