

(No Model.)

2 Sheets—Sheet 1.

C. W. H. DAY.

MACHINE FOR COILING WIRE.

No. 300,960.

Patented June 24, 1884.

Fig. 1.

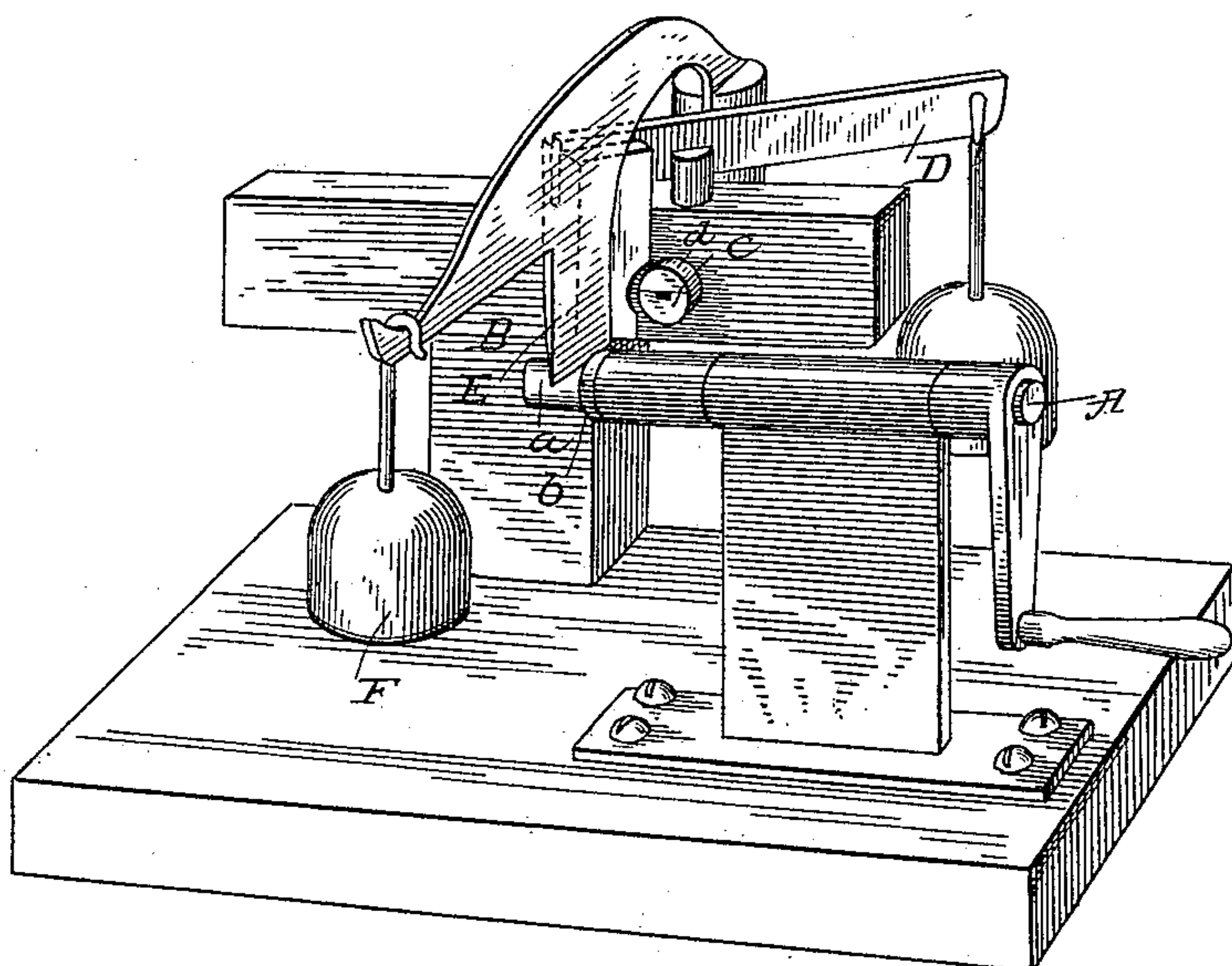
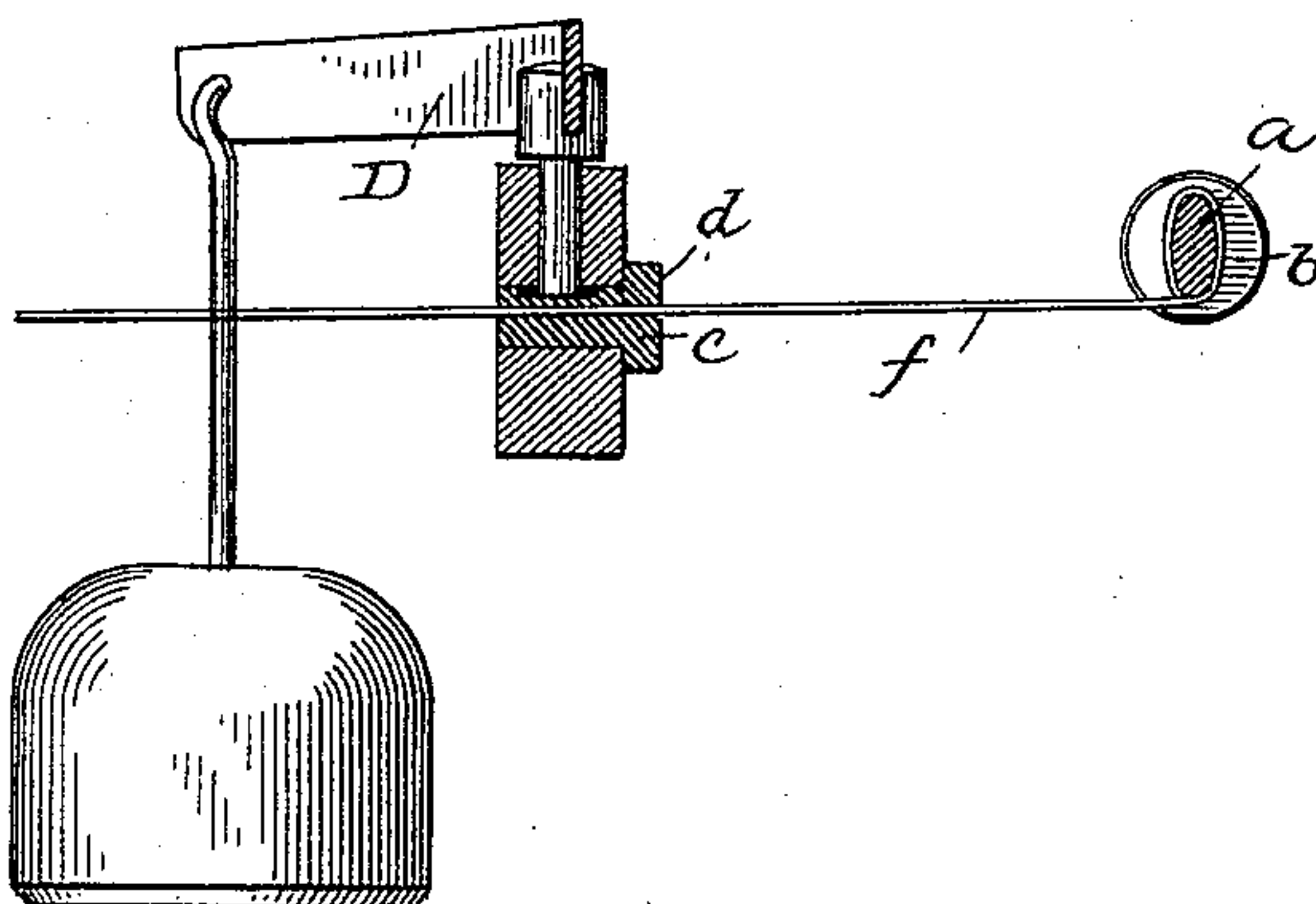


Fig. 2.



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Fig. 3.

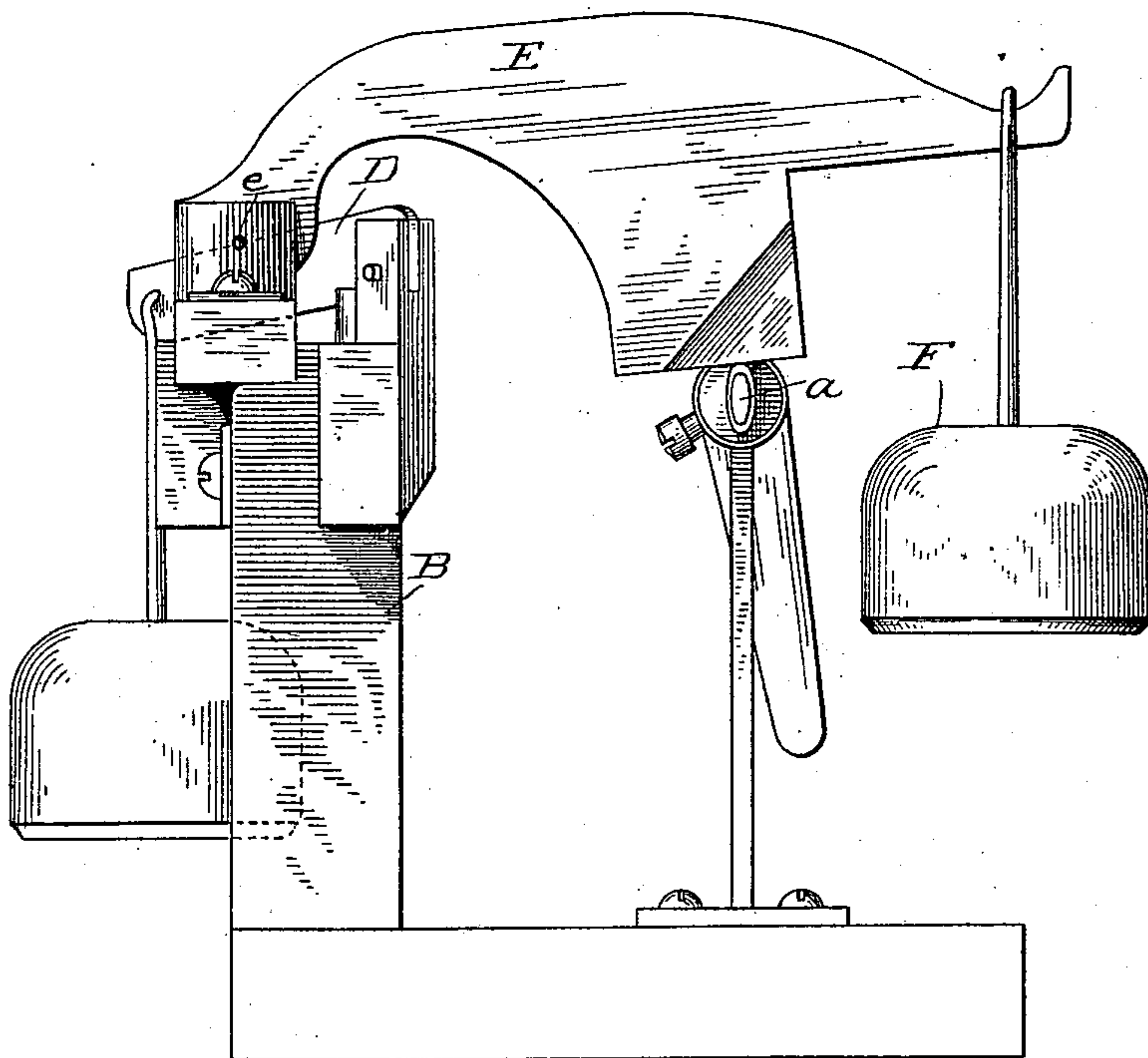


Fig. 5.

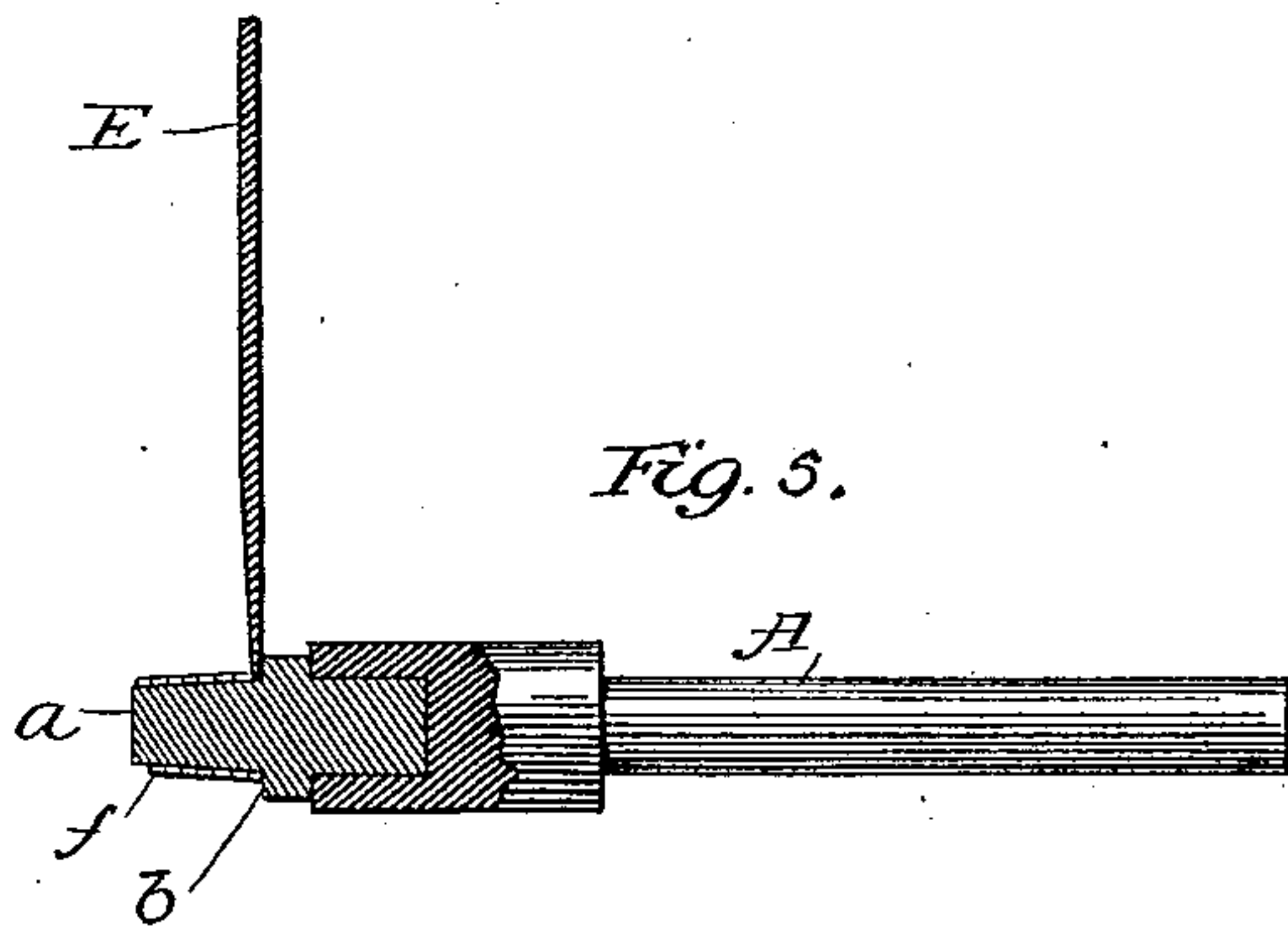


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHARLES W. H. DAY, OF ATTLEBOROUGH, MASSACHUSETTS.

MACHINE FOR COILING WIRE.

SPECIFICATION forming part of Letters Patent No. 300,960, dated June 24, 1884.

Application filed October 25, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. H. DAY, of Attleborough, in the county of Bristol and Commonwealth of Massachusetts, have invented a new and useful Improvement in the Manufacture of Coils for Links; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to the winding of flat or "odd-shaped" wire, for the purpose of making links for chains and other articles. Heretofore the coils for such links have been wound upon a long arbor, and the coil drawn from the arbor after the coil had been completed. This is a laborious process, and the coils so produced are in such condition that many of the links cut therefrom are imperfect.

The object of my invention is to wind the coils more rapidly and in better condition, and without the use of the long mandrel.

My invention consists of an improved and simplified machine for thus forming continuous coils of wire of any length, which machine is shown in the accompanying drawings.

Of these drawings, Figure 1 represents a perspective view of the machine. Fig. 2 is a section across the arbor on line of the wire. Fig. 3 shows an end elevation. Fig. 4 shows the face of the clearer. Fig. 5 shows the arbor in section longitudinally with the coil in place upon it, and with cross-section of the clearer.

The arbor *a* is fixed upon the end of any revolving shaft, *A*, and is in line with its axis. It has a shoulder, *b*, the face of which is in a plane at right angles to the axis of the shaft. The arbor is in cross-section, of any shape required for the links, and is preferably slightly tapering from the shoulder to the end. Opposite the arbor, upon a suitable standard, as *B*, is a friction-clamp, to give the wire proper tension. The device shown consists of a box, *c*, grooved to receive the wire and guide it exactly with a block, *d*, bearing on the wire above. The block *d* is pressed down by a plunger, on which rests a weighted lever, *D*. The pressure on the wire is such as to give it proper tension only, but allows it to move forward as drawn by the arbor.

The wire is represented at *f*. It is drawn through the tension device *c* and under or over the arbor, and is wound thereon by the revolution of the shaft. The clearer *E* is formed with an edge and a face, which bears upon the arbor and against the shoulder. The opposite face of this clearer is beveled or tapered, as shown in Fig. 5. The shaft turns over toward the tension device, and the taper of the beveled face is in the opposite direction, or toward the front. The wire passes from the tension device under the arbor, and is then brought up alongside of the beveled face of the clearer. As one side of the clearer bears against the shoulder of the arbor and the other against the wire, it cannot move laterally, and as the wire passing under and over the arbor comes first in contact with the outer beveled edge of the clearer, (this being the thinnest portion,) which gradually increases in thickness toward the tension device, the tendency is to push the wire or coil off from the face as the said coil comes in contact in the continued revolution of the arbor with the increased thickness of the clearer, and in this way the coil is pushed off as fast as it is formed.

The clearer is pivoted at *e*, and is pressed down by a weight, *F*. The shoulder on the arbor is not essential, as the clearer cannot move laterally, and will push aside by its wedge form the forming-coil, which, it will be understood, is laid on underneath.

It will be apparent that the clearer may be held in the hand or supported in any convenient way, and the same is true of the tension device.

The arbor may be inserted in the chuck of an ordinary lathe.

I claim—

The combination of the arbor *a* and means for revolving the same, the clearer *E*, and a tension device, all substantially as shown.

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

CHAS. W. H. DAY.

Witnesses:

J. E. POND, Jr.

L. F. MENDELL.