

(No Model.)

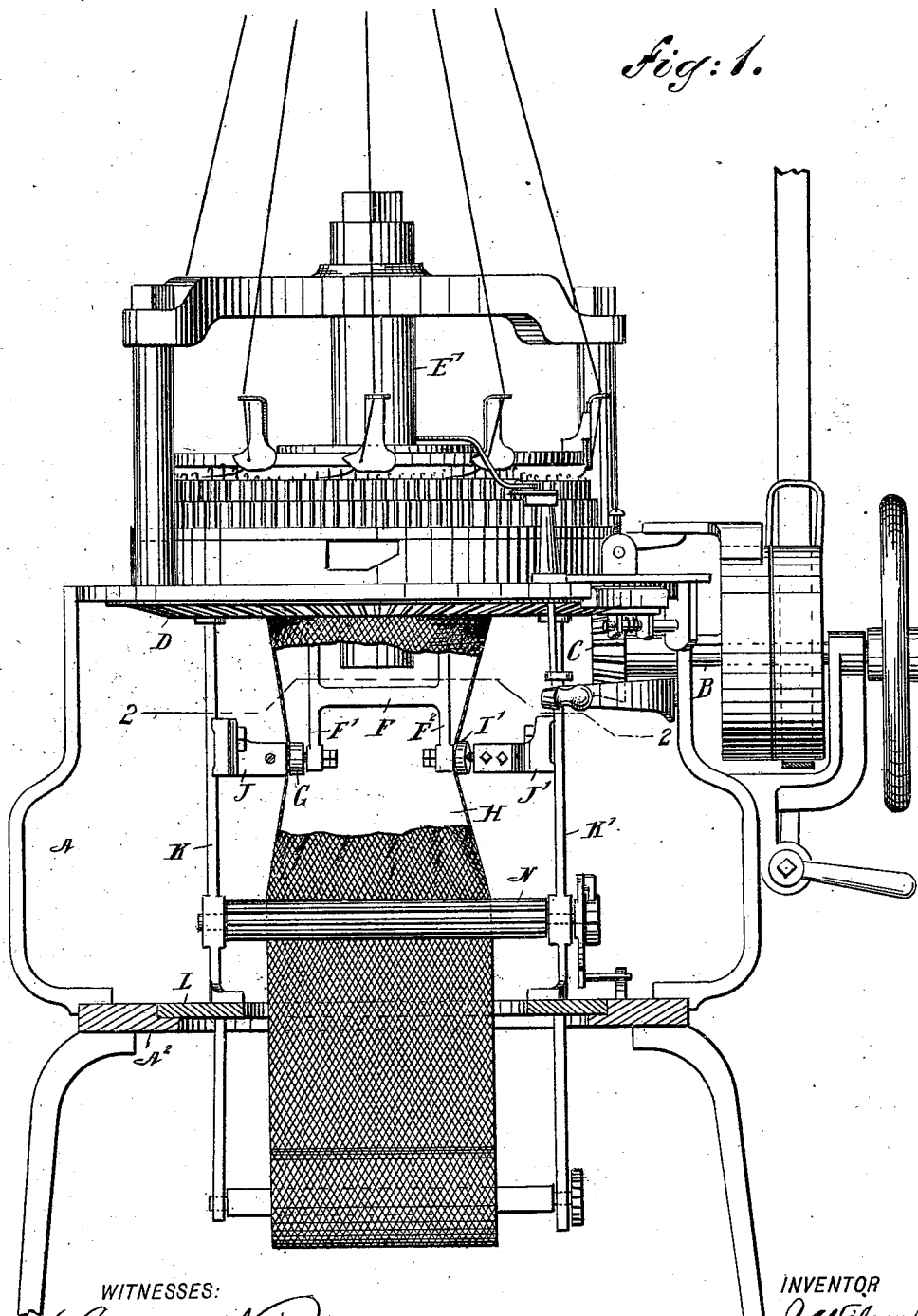
2 Sheets—Sheet 1.

J. WILSON.
CIRCULAR KNITTING MACHINE.

No. 551,804.

Patented Dec. 24, 1895.

Fig. 1.



WITNESSES:

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INVENTOR

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ATTORNEYS.

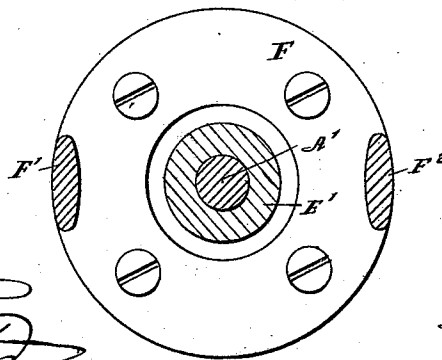
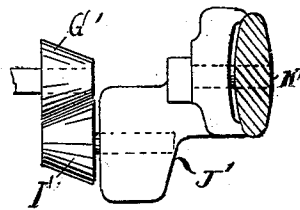
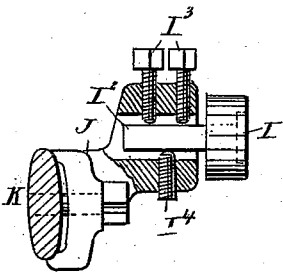
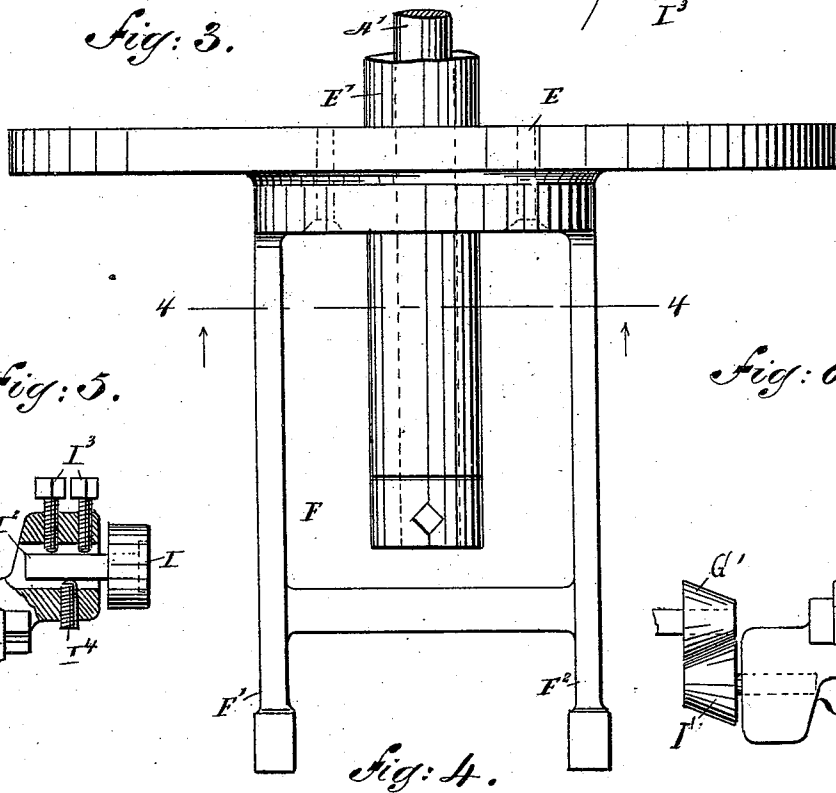
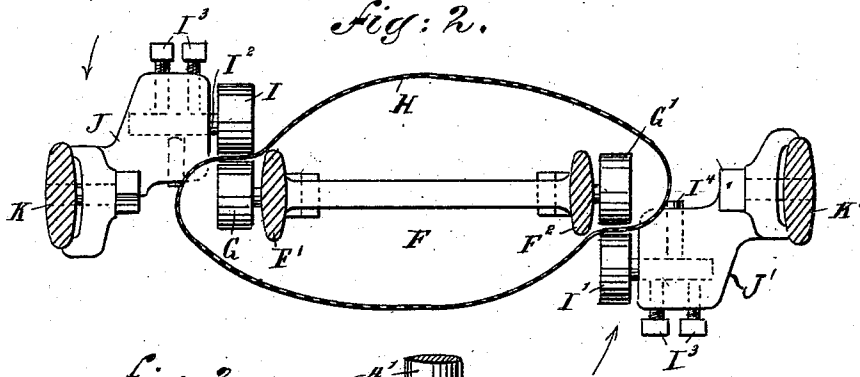
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Henry H. Foster

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UNITED STATES PATENT OFFICE.

JAMES WILSON, OF COPLAY, PENNSYLVANIA, ASSIGNOR OF THREE-FOURTHS
TO HARRY Y. HORN AND ANNA L. WEAVER, OF SAME PLACE, AND
CHARLES R. HORN, OF CATASAUQUA, PENNSYLVANIA.

CIRCULAR-KNITTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 551,804, dated December 24, 1895.

Application filed August 17, 1894. Serial No. 520,611. (No model.)

To all whom it may concern:

Be it known that I, JAMES WILSON, of Coplay, in the county of Lehigh and State of Pennsylvania, have invented new and useful Improvements in Circular-Knitting Machines, of which the following is a full, clear, and exact description.

The object of the invention is to provide certain new and useful improvements in circular-knitting machines, whereby the dial is driven in such a manner as to produce a perfect fabric having no creases or other imperfections.

The invention consists in certain parts and details, and combinations of the same, as will be hereinafter fully described and then pointed out in the claim.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of a knitting-machine provided with the improvement, parts being broken out and parts being in section. Fig. 2 is an enlarged sectional plan view of the same on the line 2 2 of Fig. 1. Fig. 3 is an enlarged side elevation of the dial. Fig. 4 is an inverted sectional plan view of the bracket on the dial. Fig. 5 is a sectional plan view of the bearing for one of the friction-pulleys, and Fig. 6 is a plan view of a modified form of driving-pulley.

The improved knitting-machine is provided with a suitably-constructed frame A, in which is journaled the driving-shaft B, carrying at its inner end a bevel-pinion C, in mesh with the usual bevel gear-wheel D, held on the under side of the cylinder to rotate the same in the usual manner.

The dial E, of the usual construction, has its hub E' journaled on a suitable shaft A' carried in the upper portion of the frame, as indicated in Fig. 1. From the under side of this dial E extends downward a bracket F, formed with two arms F' and F², in which are journaled the friction rollers or pulleys G and G', respectively, adapted to engage the fabric H on the inside, the said fabric being also engaged at the outside directly opposite the said rollers or pulleys G and G' by similar rollers

or pulleys I and I' respectively, journaled on studs I² in bearings J and J', respectively, secured on arms K and K' of a frame attached to the under side of the bevel gear-wheel D.

It will be seen that by the arrangement described the fabric H passes between the sets of rollers or pulleys G I and G' I' in such a manner that the fabric can readily pass downward as it is formed, and at the same time the rollers or pulleys I I' on the revolving of the frame and gear-wheel D cause the revolving of the bracket F, and consequently a revolving of the dial E.

The arms K K' of the frame are attached to a ring L mounted to turn in a suitable bearing A², forming part of the frame A. In the arms K and K' are also journaled the feed-wheels N for the fabric to move the latter downward as it is produced in the usual manner by the needles of the machine.

The rollers or pulleys G G' and I I' may be either made cylindrical, as shown in Figs. 2 and 5, or they may be made conical, as indicated in Fig. 6, it being understood, however, that the corresponding rollers or pulleys are arranged in sets, and between a pair passes the fabric, as indicated in Fig. 2. The rollers or pulleys I and I' are held adjustable in their bearings J and J', respectively, by set-screws I² I⁴, engaging the stud I² for the roller or pulley, as indicated in Fig. 5. By this arrangement the rollers or pulleys I I' can be set closer to or farther from the corresponding pulleys G G', according to the thickness of the fabric passing between the sets of rollers or pulleys.

It is understood that when the machine is set in motion, the gear-wheel D is rotated and causes the revolving of the frame carrying the feed-wheels N and the bearings J J', so that their rollers I and I' act on the rollers G and G', whereby the bracket F is carried around by the frame, and consequently a rotary motion is given to the dial E. By this arrangement the dial is positively driven from the driving mechanism of the machine, and consequently no slips whatever are possible, and a perfect fabric is obtained having no creases or other imperfections.

Having thus described my invention, I

claim as new and desire to secure by Letters
Patent—

5 In a circular knitting machine, the combination with a dial, a cylinder, and frames depending from said parts, of rollers connected with said frames, and set screws on each side of the axles of one set of rollers for adjusting

said rollers laterally as well as pivotally, substantially as set forth.

JAMES WILSON.

Witnesses:

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AUSTIN A. GLICK.