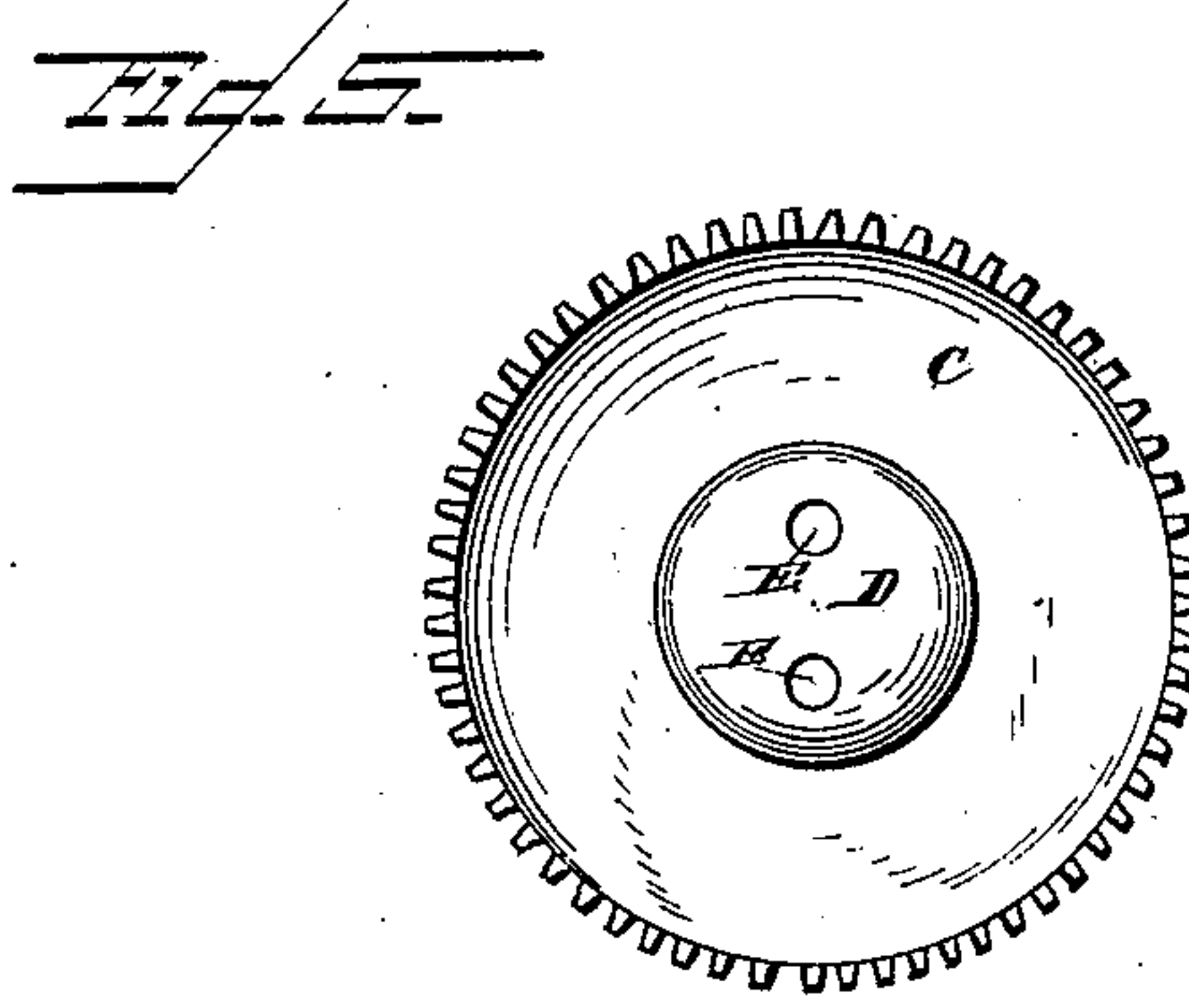
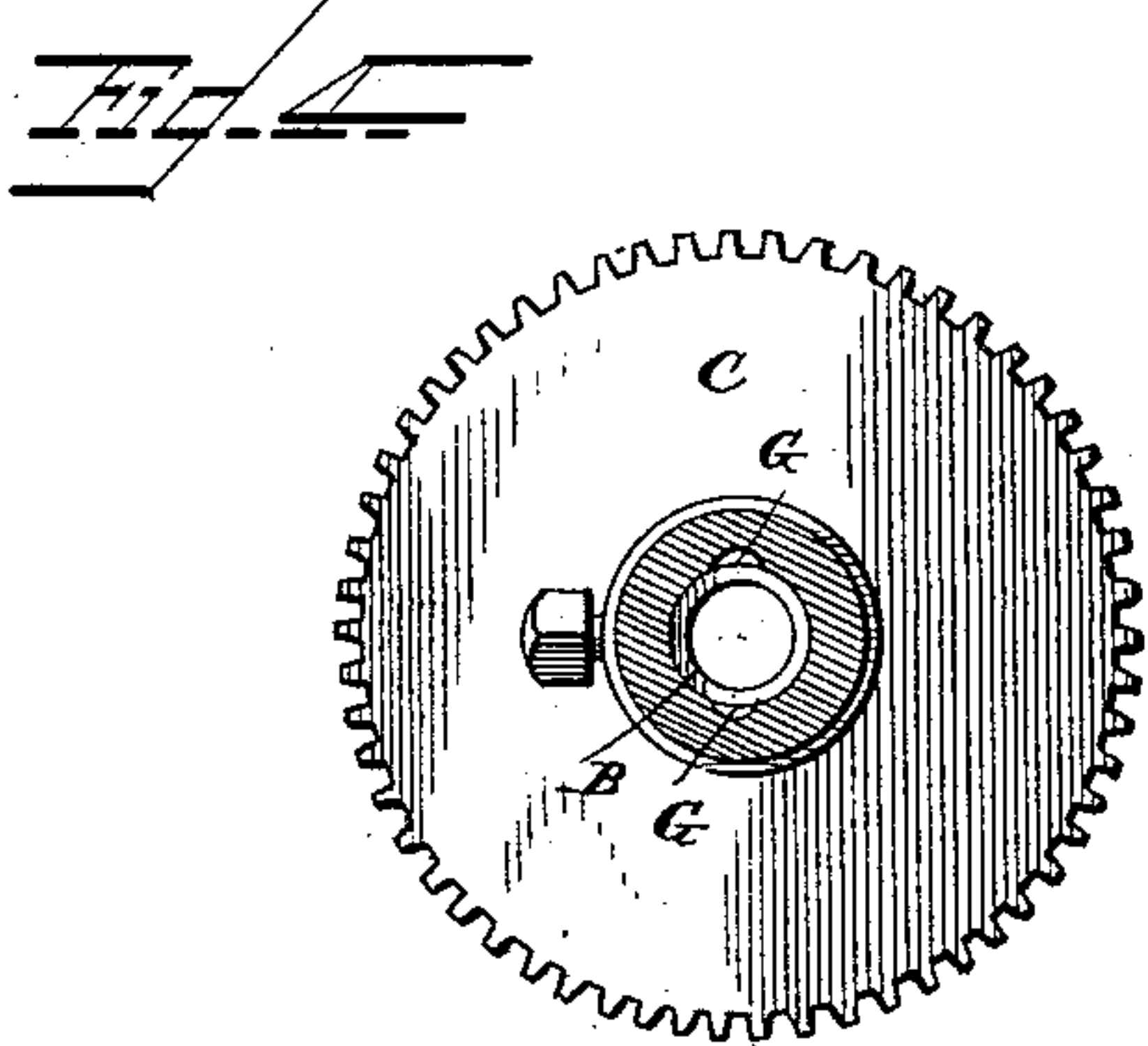
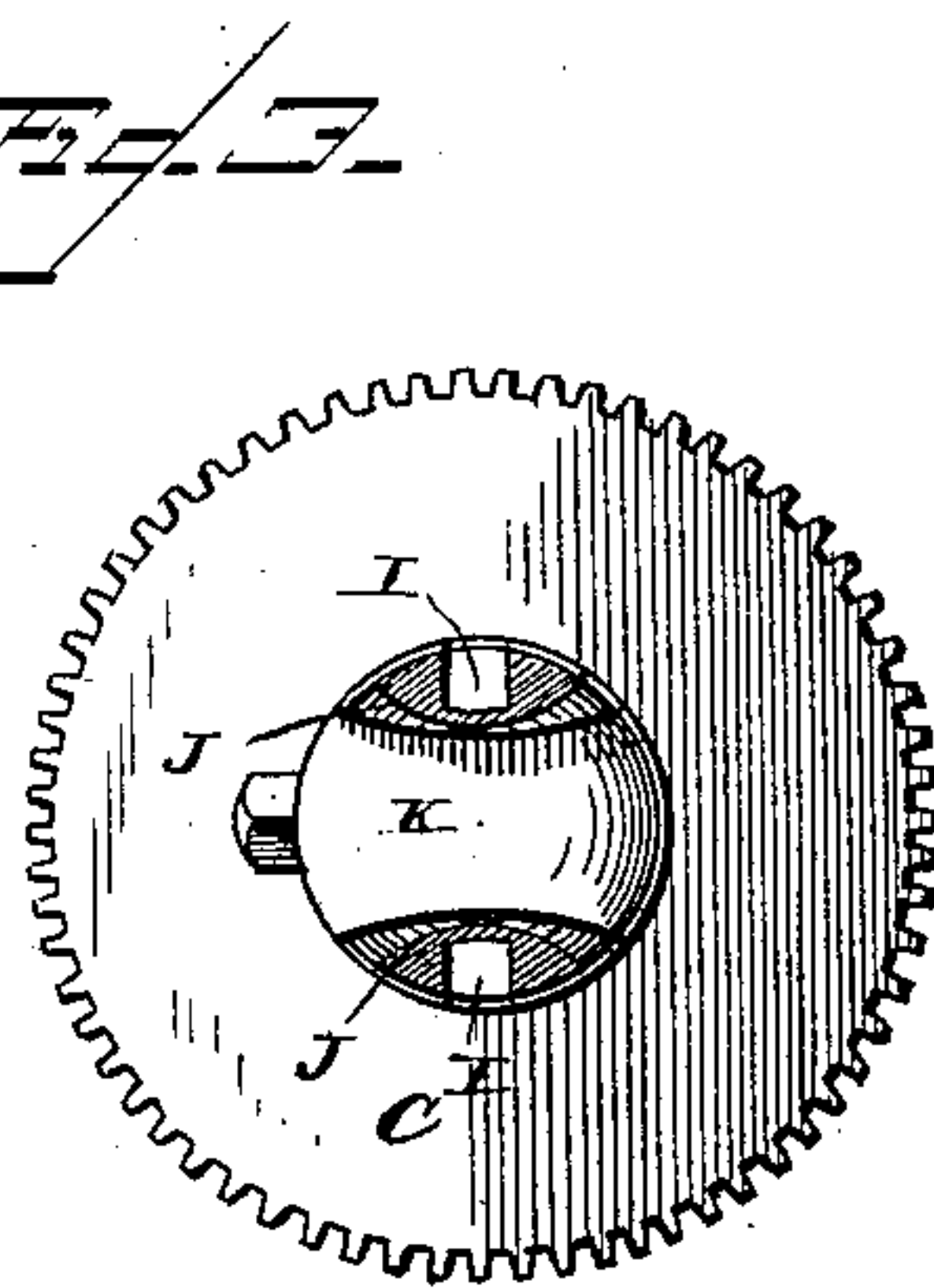
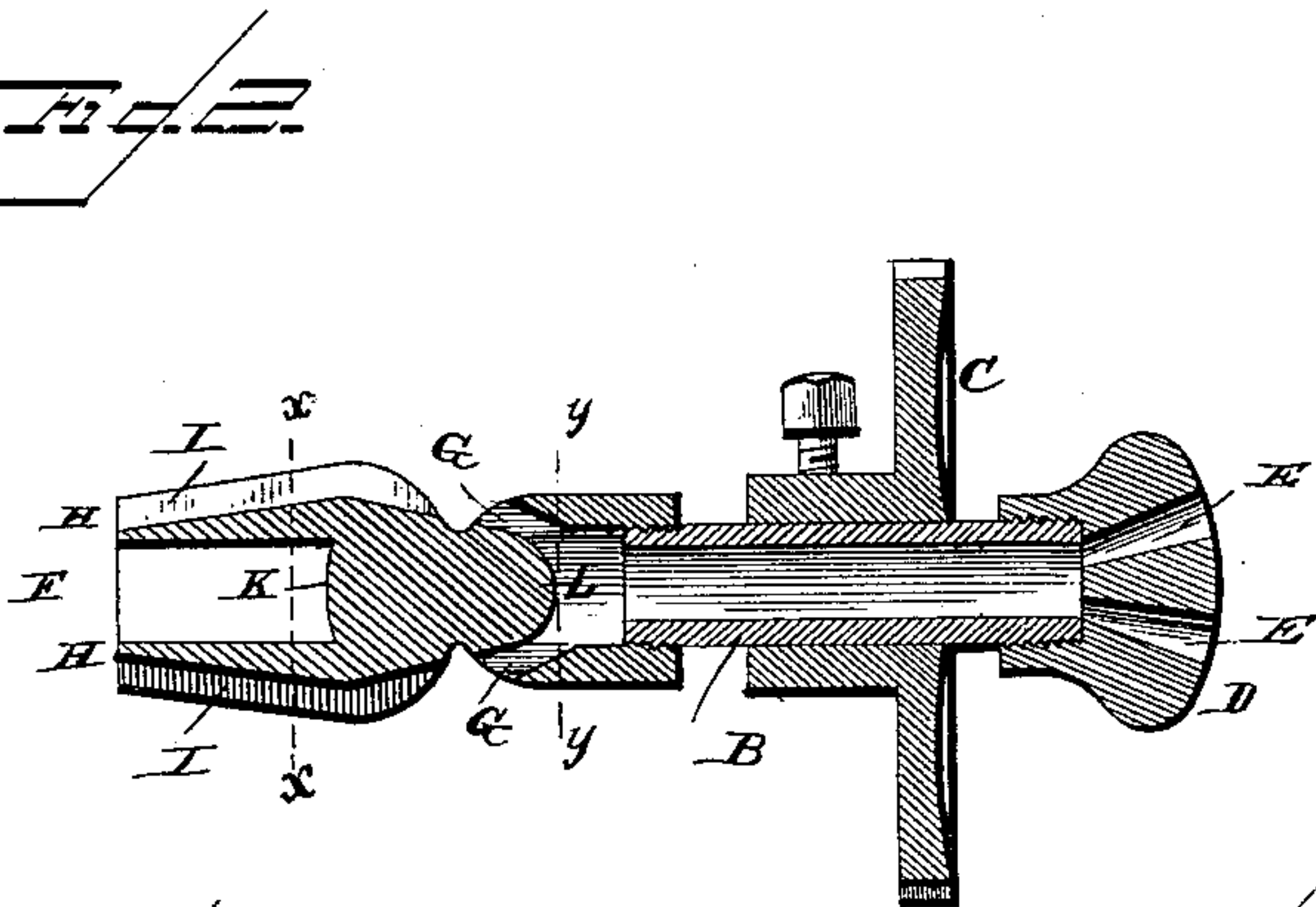
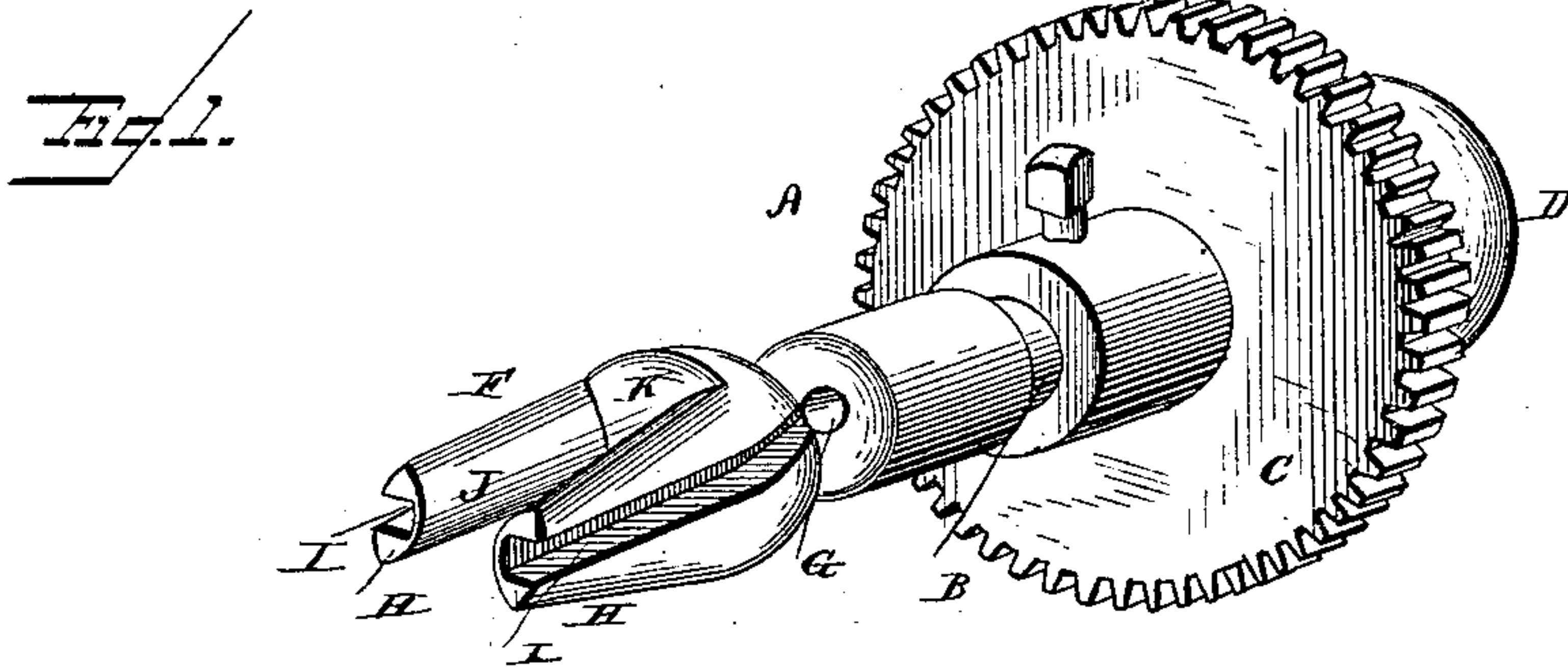


(No Model.)

J. B. THIES.
FENCE MAKING MACHINE.

No. 335,399.

Patented Feb. 2, 1886.



WITNESSES

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JOHN B. THIES, OF DAYTON, OHIO.

FENCE-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 335,399, dated February 2, 1886.

Application filed October 24, 1885. Serial No. 180,848. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. THIES, a citizen of the United States, and a resident of Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Fence-Making Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved fence-wire twister. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a cross-section on line *xx*. Fig. 4 is a similar section on line *yy*, and Fig. 5 is a rear view of the device.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to that class of machines for making picket and wire fences, in which strands of wire are twisted around the pickets by means of revolving twisters, through which the wire strands pass; and it contemplates certain improvements in the construction of the revolving twisters, which will be hereinafter more fully described, which will admit of the picket being dropped between the bifurcated arms of the twister, and by means of which the tension upon the strands of wire may readily be regulated at will.

As an illustration of that class of machines to which my present improvement is applicable, I would, for the sake of convenience, refer to the machine for manufacturing picket-fences, for which Letters Patent of the United States, No. 316,849, were granted to me on the 28th day of April, 1885; but I desire it to be understood that this invention is equally applicable to other machines of the same class, which are operated upon substantially the same principle.

By reference to the accompanying drawings it will be seen that my improved twister A consists of a tube, B, having a suitable gear-wheel or sprocket-wheel, C, secured upon it, by means of which the twisters are revolved in the usual manner, and having a cap, D, at its rear end, which cap increases in width toward its closed

end, which is formed with two diametrically-opposite diverging and flaring perforations, E E, while the forward end of the tube is provided with a bifurcated head, F, having perforations G G at the inner ends of the twister-arms H H, and having grooves I in the outer sides of the said arms, forming continuations of the perforations at their inner ends. The middle portion of the head F is of a greater diameter than at either end, and the bottom of each groove forms two inclined planes with an angle at their intersection, so that the wires in passing from the holes G to the outer ends of the arms pass over this angle, which helps to regulate the tension. The holes G are made diverging, and have a rounded head, L, between them, so that the wires can be more easily passed through them from the rear. The inner sides of the parallel twister-arms are rounded, as shown at J, and the inner end of the slot formed between the arms is also rounded, as shown at K, so that all the surfaces of the slot formed between the twister-arms are rounded. By means of this construction the pickets can be placed in position between the arms, even if the machine is rotated a trifle too much or too little after twisting the wires around the last picket. The cap upon the rear end of the twister-tube is screwed upon the said end, so that it may be adjusted with its perforations in any desired relative position to the apertures in the sides of the head and to the grooves in the arms, and by having the perforations in the cap diverging the wires are held farther apart, and consequently they are not so liable to become fouled by reason of being alternately twisted in opposite directions, and by making the hole flaring kinks and splices in the wires pass into and through them more readily and without the danger of catching and breaking.

In using this device the wires are drawn in pairs from a suitably-arranged spool to the twisters, after these have been adjusted to their desired positions and relative distances, and each strand of a pair of wires is drawn through one of the perforations in the cap of the twister, whereupon each strand is carried out through its respective aperture in the head, placed in its groove in the twister-arm, and at last secured to the post in the usual

manner. By turning the cap the relative position of the apertures in the cap and the apertures in the head and the grooves in the arms may be changed so as to give the wire strands a torsional tension, which will more or less retard their passage through the twist-
 5 ers, and thus govern the tension of the twists made by the twisters.

It will readily be seen that this twister may
 10 be used with other machines besides with the machine hereinbefore referred to, the twister being capable of being applied to any machine having the wire strands passing in pairs through revolving twisters, and it will also be
 15 seen that the twisters may be revolved by other means than by sprocket-wheels and chains, as described in said patent, and that the cap may be used with a twister having tubular instead of grooved arms, all these applications of ele-
 20 ments of my invention being practicable without departing from the spirit of my invention.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

25 1. A twister-head for a machine for making wire and picket fences, consisting of a tube having a twister having oppositely-situated apertures upon one end and an adjustable cap upon the other, said cap having two oppo-
 30 sitely-situated diverging apertures, and means for rotating said head, substantially as and for the purpose set forth.

2. A twister-head for a machine for making wire and picket fences, consisting of a tube
 35 having a twister having oppositely-situated apertures upon one end and an adjustable cap upon the other, said cap having two oppositely-situated flaring diverging apertures, and means for rotating said head, substantially as
 40 and for the purpose set forth.

3. A twister-head for a machine for making wire and picket fences, consisting of a tube hav-
 ing a twister secured thereto, said twister be-
 ing of a larger diameter at its middle portion,
 and having two diverging apertures at its rear 45
 part, and a rounded head between said aper-
 tures, and means for rotating said head, sub-
 stantially as and for the purpose set forth.

4. A twister-head for a machine for making wire and picket fences, consisting of a tube 50
 having a twister secured thereto, said twister having apertures G, communicating with the tube, being of a larger diameter at its middle portion, and having its front part bifurcated,
 forming arms, the outer sides of which are 55
 grooved and the inner sides rounded, and means for rotating said head, substantially as and for the purpose set forth.

5. A twister-head for a machine for making wire and picket fences, consisting of a tube hav- 60
 ing a twister secured thereto, said twister being of a larger diameter at its middle portion than at either end, and having diverging apertures at its rear end, and being bifurcated at its front end, forming arms, the outer sides of which arms 65
 are grooved, the bottoms of said grooves being two inclined planes forming an angle at their intersection, and means for rotating said head, substantially as and for the purpose set forth. 70

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

JOHN B. THIES.

Witnesses:

BERNHARD ROEMHILDT,
 JAMES H. BAGGOTT.