

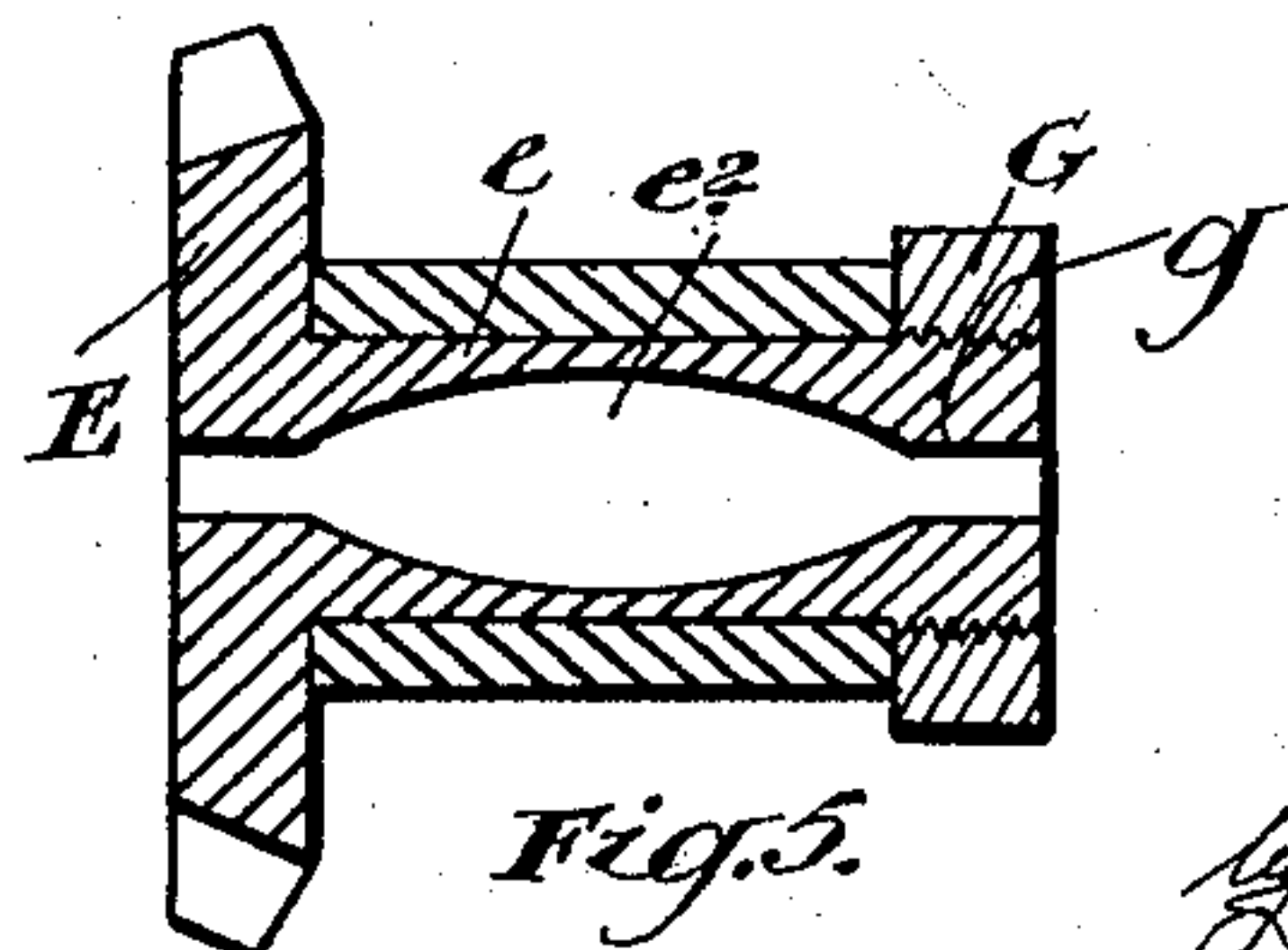
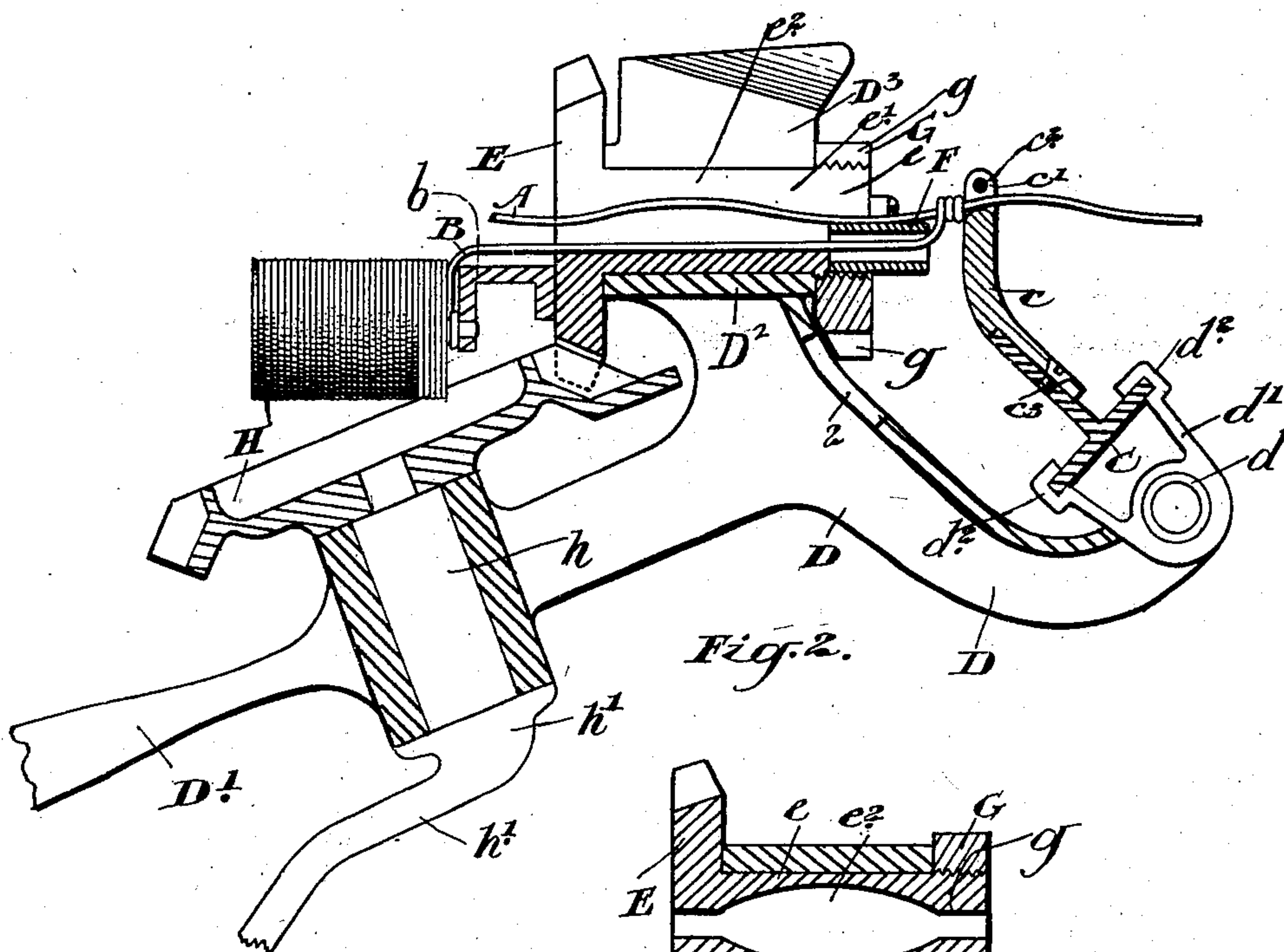
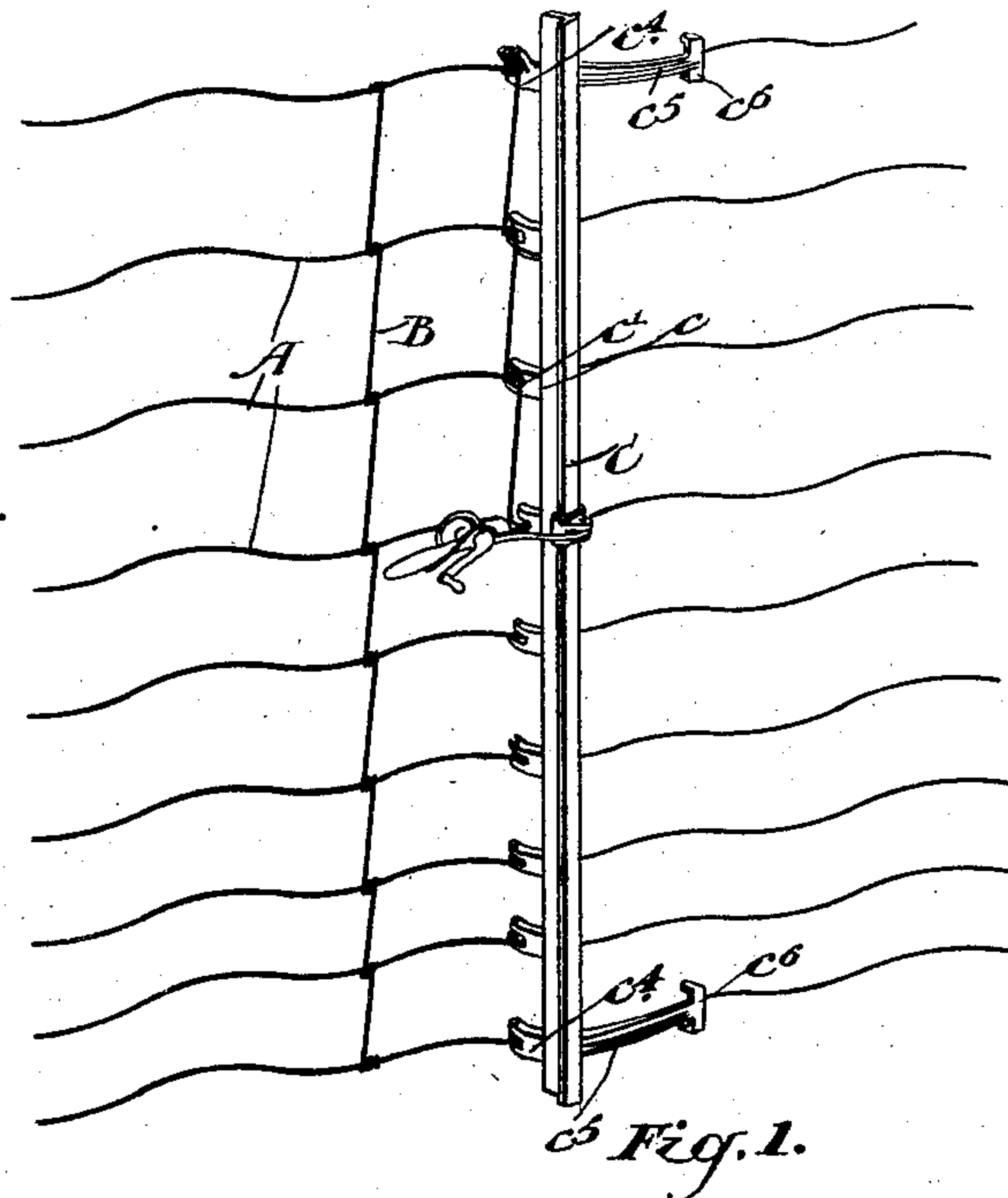
No. 746,139.

PATENTED DEC. 8, 1903.

E. G. OVERHOLT.
FENCE WEAVING MACHINE.
APPLICATION FILED MAR. 17, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses
J. S. Young
C. W. Bate

Inventor
E. G. Overholt.
By Fred B. Jett
attorney

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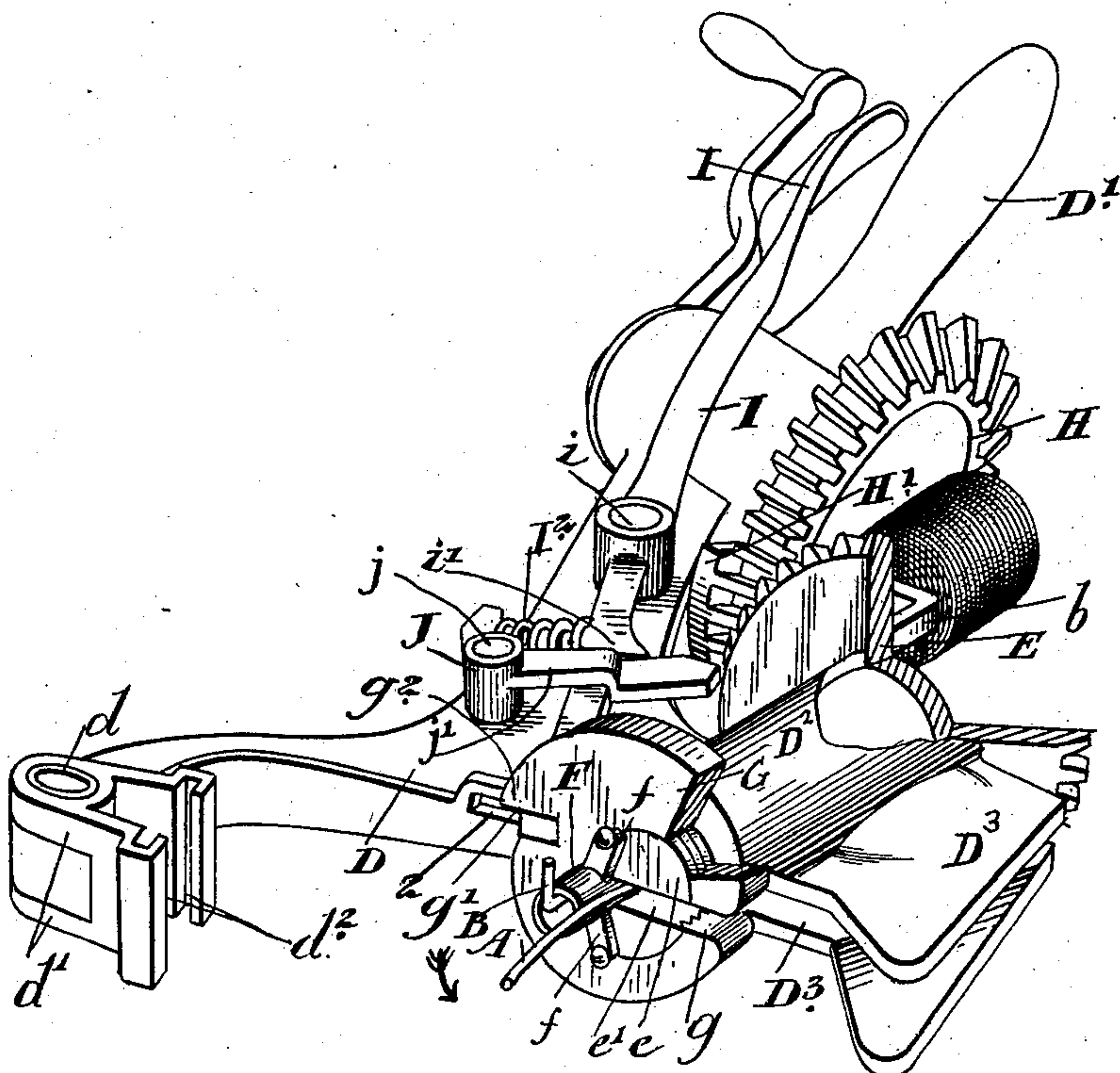
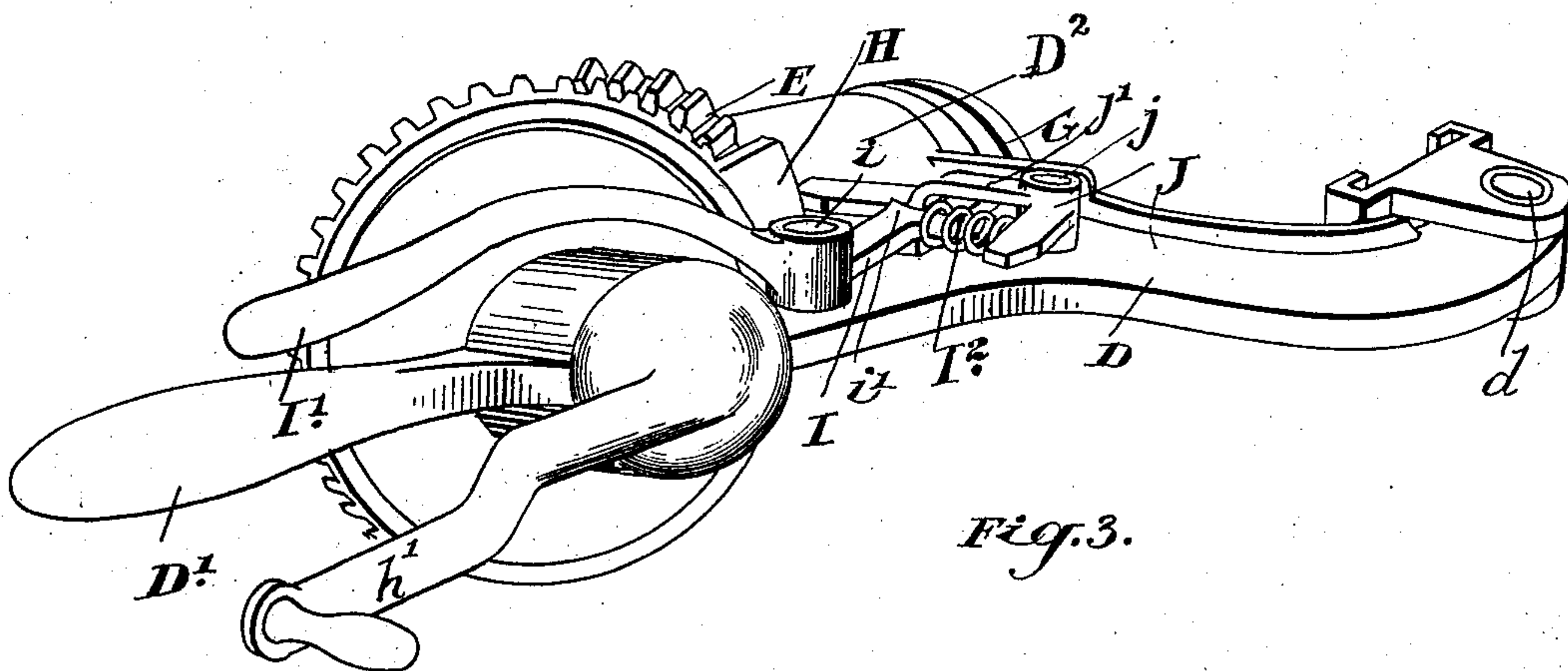
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2 SHEETS—SHEET 2.



Witnesses.

A. J. Young.

G. H. Rake.

Inventor.

E. G. Overholt

by
Fred. B. Sutherland
att'y.

UNITED STATES PATENT OFFICE.

ELLIOTT GRANT OVERHOLT, OF WELLAND, CANADA.

FENCE-WEAVING MACHINE.

SPECIFICATION forming part of Letters Patent No. 746,139, dated December 8, 1903.

Application filed March 17, 1903. Serial No. 148,213. (No model.)

To all whom it may concern:

Be it known that I, ELLIOTT GRANT OVERHOLT, manufacturer, of the town of Welland, in the county of Welland, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Fence-Weaving Machines, of which the following is a specification.

My invention relates to improvements in fence-weaving machines; and the object of the invention is to devise a machine of this class which will be simple and cheap to manufacture and also will be simple and easy to operate, be durable, be not liable to get out of order, and will weave more tightly and accurately than other machines of the same class at present in use; and it consists, essentially, of a vertical bar provided with a series of holding-brackets, through the jaws of which the strand-wires of the fence pass, and an arm pivotally secured on a slidable bracket on such vertical bar and carrying the weaving-wheel, through which the vertical stay-wire passes, such weaving-wheel being rotated by a bevel gear-wheel journaled on the arm and operated through a crank, the parts being otherwise arranged and constructed in detail, as hereinafter more particularly explained.

Figure 1 is a perspective view showing a portion of a fence with my machine in the working position. Fig. 2 is a sectional plan through the working arm. Fig. 3 is a perspective view of the working arm from the operating side. Fig. 4 is a perspective view from the opposite side. Fig. 5 is a sectional detail of the weaving-wheel.

In the drawings like characters of reference indicate corresponding parts in each figure.

A represents the longitudinal strand-wires of the fence.

B represents the stay-wires, and C is the upright bar, which is made, preferably, of a T-angle bar and has secured thereto the brackets c, provided with end jaws c' and split pins c², extending through the ends of the jaws. The brackets c are held on the upright bar C by screws c³. The upper and lower brackets c⁴ are provided with extensions c⁵ and guiding-notches c⁶, such extensions extending relatively to the opposite side of the bar and being designed to hold the upright C in a sub-

stantially vertical position. The jaws c' are fitted onto the strands A and the split pins c² inserted in the outside of the jaws c', so as to hold the bar in position.

D is the working arm, which is pivoted on the pin d, held in the bracket d', which is provided with guideways d² at each side, whereby it may be capable of vertical adjustment on the bar C. The arm D is provided with a handle D'.

E is a bevel gear-pinion having a hollow hub e, such hub extending through a journal D², forming part of the arm D. The pinion E and hub e are provided with a slot e' at one side, such slot extending longitudinally through the hub and wheel, as indicated. The journal D² is provided with guiding-plates D³, which are separated apart corresponding to the width of the slot e' in the hub e and wheel E. It will be noticed that the plates flare, and this is for the purpose of providing an easy admission of the strand-wire A into the hub.

The hub e is provided with a broad arc-shaped internal annular recess e², which is designed to allow of the strand-wires to pass freely thereonto as the working arm is being moved onto the strands of the fence, particularly where coiled wire is employed for the longitudinals.

The stay-wire B is wound in a spool, which is journaled on an arm b, attached eccentrically to the face of the gear-wheel. The wire B is thus arranged to pass eccentrically through the hollow hub e, and at the forward end it passes through a thimble F, eccentrically placed and provided with arms f, whereby it is attached to the disk G, secured on the threaded end of the hub by screws, the holes for which are partly in the disk and partly in the hub to prevent the disk from turning.

It will be noticed that the thimble F is provided with three arms, which are set equidistant apart, so that the distances of the sleeve may be changed circumferentially and reversed in order to provide for the wear, as of course the wear would ordinarily come upon the inner edge of the thimble, and by turning it and reversing it the wear may be distributed evenly without having to provide a new thimble.

The beveled gear-pinion E is driven from a beveled gear-wheel H, which is secured on the end of the stud-shaft *h*, journaled in the arm D and provided with a crank-handle *h'*.

5 It will be noticed that the bevel-wheel H is set at an obtuse angle to the bevel-pinion E, and consequently I am enabled to get a larger ball or spool of wire for the stays B, and thereby I am enabled to weave a greater
10 number of stays from the one ball.

The disk G is provided with a slot *g*, which registers with the slot *e'* in the hub *e*. The disk G is also provided with a notch *g'*, as indicated, and the disk is so formed as to
15 have an overhang *g²*, which extends over or beyond one of the sides of the notch *g'*.

The arm D is provided with a slot 2 at one end, and through this slot extends the end of the lever I, which is pivoted on the stud *i*,
20 attached to or forming part of the arm D. The opposite end of the lever I lies in proximity with the handle D'.

The lever I has a lateral projection *i'*, which normally engages with the bell-crank J when
25 the end of the lever I extends into the notch *g'*. The bell-crank J is pivoted on a stud *j* on the arm D and is provided with a raised portion *j'*, underneath which the lever extends. The lever I is also provided with a pro-
30 jection which is encircled by a spiral spring *I²*, such spring extending between the lever and the opposite end of the bell-crank J, as indicated in Figs. 3 and 4.

The wheel H is provided with a cam pro-
35 jection H', and such wheel is proportioned relatively to the pinion E in the proportion of three to two—that is to say, that on every two turns of the wheel H the pinion E will give three turns.

40 Having now described the principal parts involved in my invention, I shall briefly describe its operation and utility. The bar C is placed upright against the strands and the jaws are placed so as to grasp the strands,
45 such strands being held in the jaws by means of the split pins. Starting at the top strands, a plier or other suitable instrument is used for bending the top of the stay-wire onto the top strand, the arm being placed close to the
50 strands. The handle D' is grasped by one hand and the crank-handle *h'* is turned once, the workman being careful at the same time to hold the outer end of the lever I, so as to hold the inner end thereof out of the notch
55 *g'*. The stay-wire B is thus twisted, by means of the eccentrically-placed thimble F, around the longitudinal strand, and as soon as the workman has turned the handle *h'* one turn he lets go of the lever I and then gives the
60 handle another turn, whereupon the inner end of the lever I will, when the disk G turns around in the direction indicated by arrow, drop into the notch *g'*, the overhanging part *g²* serving to prevent the end of the lever
65 passing the notch. Of course the lever I is forced in by the spring *I²*. When the lever I has passed into the notch *g'*, it will be seen

that the slot *g* comes opposite the slot *e'* in the hub *e*, and consequently the arm may be pulled outwardly from the strand and then
70 allow it to drop on its guiding-bracket *d'* upon the bar C to the next strand, when the arm may be thrown inwardly again over the next strand. In order to relieve the lever from the notch, and thereby permit the wheel E to
75 be turned, it will be seen that the outer end of the lever is pressed inwardly by hand, so as to withdraw the inner end from the notch. The handle *h'* is now turned, and at the same
80 time the end of the lever is grasped, so that the inner end is held out from the notch *g'*. When the lever is thrown out, necessarily the long arm of the bell-crank J is turned so that the
85 projection *i'* of the lever is within the raised portion *j'* and abutting the depressed portion of the arm. After the disk G turns once past the inner end of the lever the handle *h'* is re-
90 leased, so that when the cam H' is brought around again such cam strikes the long arm of the bell-crank J, throwing it forwardly, and thereby causing the spring *I²* to act against the
95 inner end of the lever, so as to press it against the periphery of the disk. It will thus be seen that as soon as the disk turns around sufficiently the inner end of the lever will
100 spring into the notch *g'*, and thus hold the slot *g* opposite the slot *e'* preparatory to withdrawal from the longitudinal strand. At the same time, of course, the treble twist is given to the stay-wire.

What I claim as my invention is—

1. In a device of the class described, a frame, a rotary slotted hub journaled there-
in, a wire-spool carried by said hub having the free end of the wire passing eccentrically
105 through the hub, means for rotating said hub, a locking-lever designed to hold said hub against rotation, a device for holding said locking-lever out of locking action, and means
110 for automatically operating said holding devices to release the locking-lever after the hub has made a certain number of rotations, substantially as described.

2. In a fence-weaving machine, the combination with the upright and holding brackets
115 for the strands, the arm pivoted on the back of the upright, and the bevel-pinion suitably driven and having a hollow hub slotted at one side, a suitable journal for the hub in the arm provided with a slot of corresponding size
120 to the slot in the hub, a disk provided with a slot and notch, a thimble secured thereto, and means for engaging the notch upon a predetermined number of revolutions of the disk having taken place, as and for the purpose
125 specified.

3. In a fence-weaving machine, the combination with the upright and holding brackets
for the strands, the arm pivoted on the back of the upright, and the bevel-pinion suitably
130 driven and having a hollow hub slotted at one side, a suitable journal for the hub in the arm provided with a slot of corresponding size to the slot in the hub, a disk provided with a

slot and notch, a thimble secured thereto, a lever pivoted on the arm and having one end extending inwardly to the disk and provided with a projecting lug and spring-holder, a
5 bell-crank pivoted on a stud on the arm in proximity to the lever and having a portion of the long arm raised for the passing of the

lever, and a spring interposed between the short end of the bell-crank and the lever, as and for the purpose specified.

ELLIOTT GRANT OVERHOLT.

Witnesses:

M. McLAREN,
H. STRICKLAND.