(No Model.) 2 Sheets—Sheet 1.

L. GODDU.

MACHINE FOR SCREW THREADING WIRE.

No. 385,801. Patented July 10, 1888.

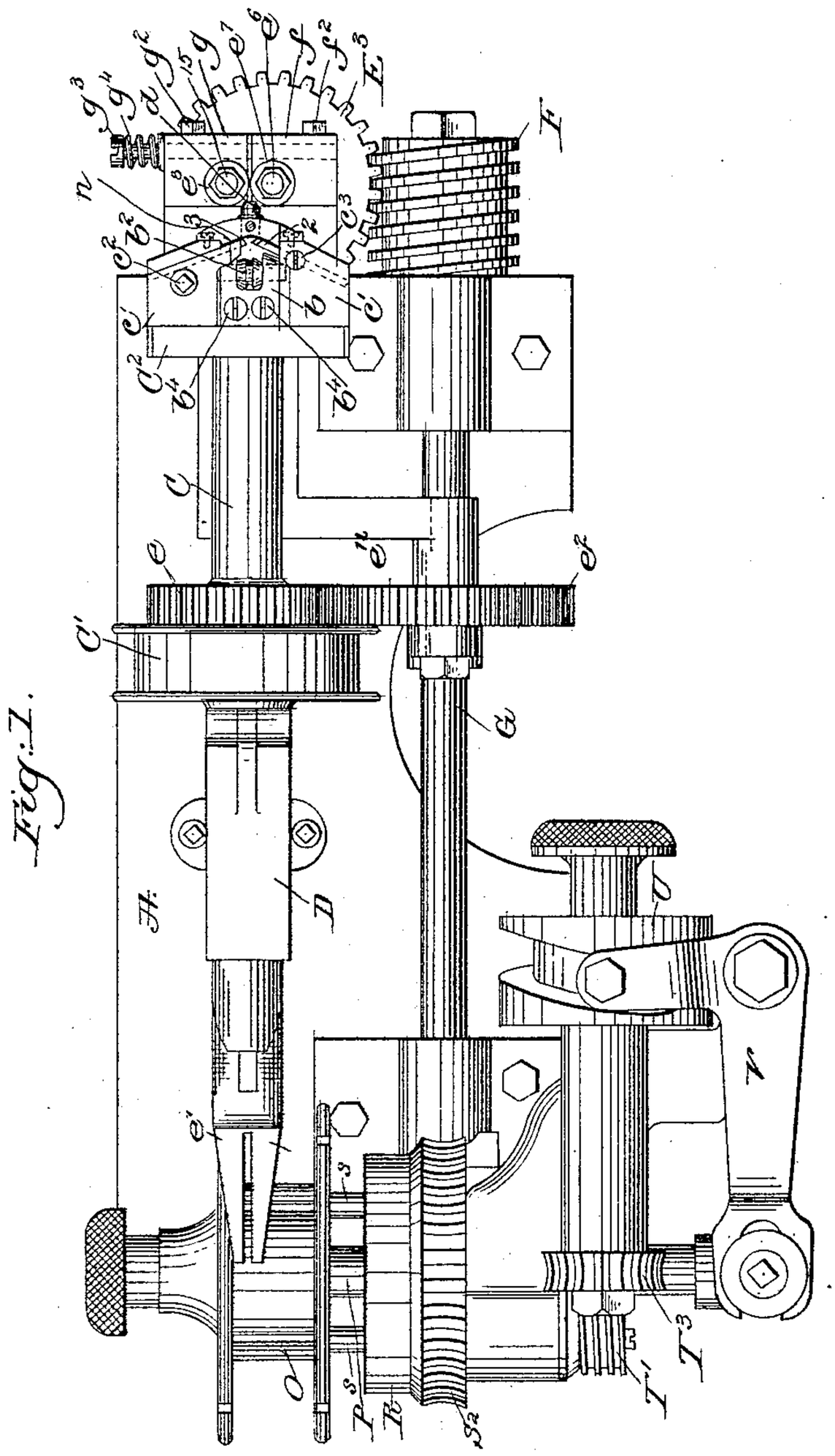


Fig. 1.

Witnesses.
Fred. S. Greenleaf.
Fred L. Emery.

Inventor.
Louis Goddu.
By Crosby & Gregory.
Attys.

(No Model.) 2 Sheets—Sheet 2.

L. GODDU.

MACHINE FOR SCREW THREADING WIRE.

No. 385,801. Patented July 10, 1888.

Fig: 2.

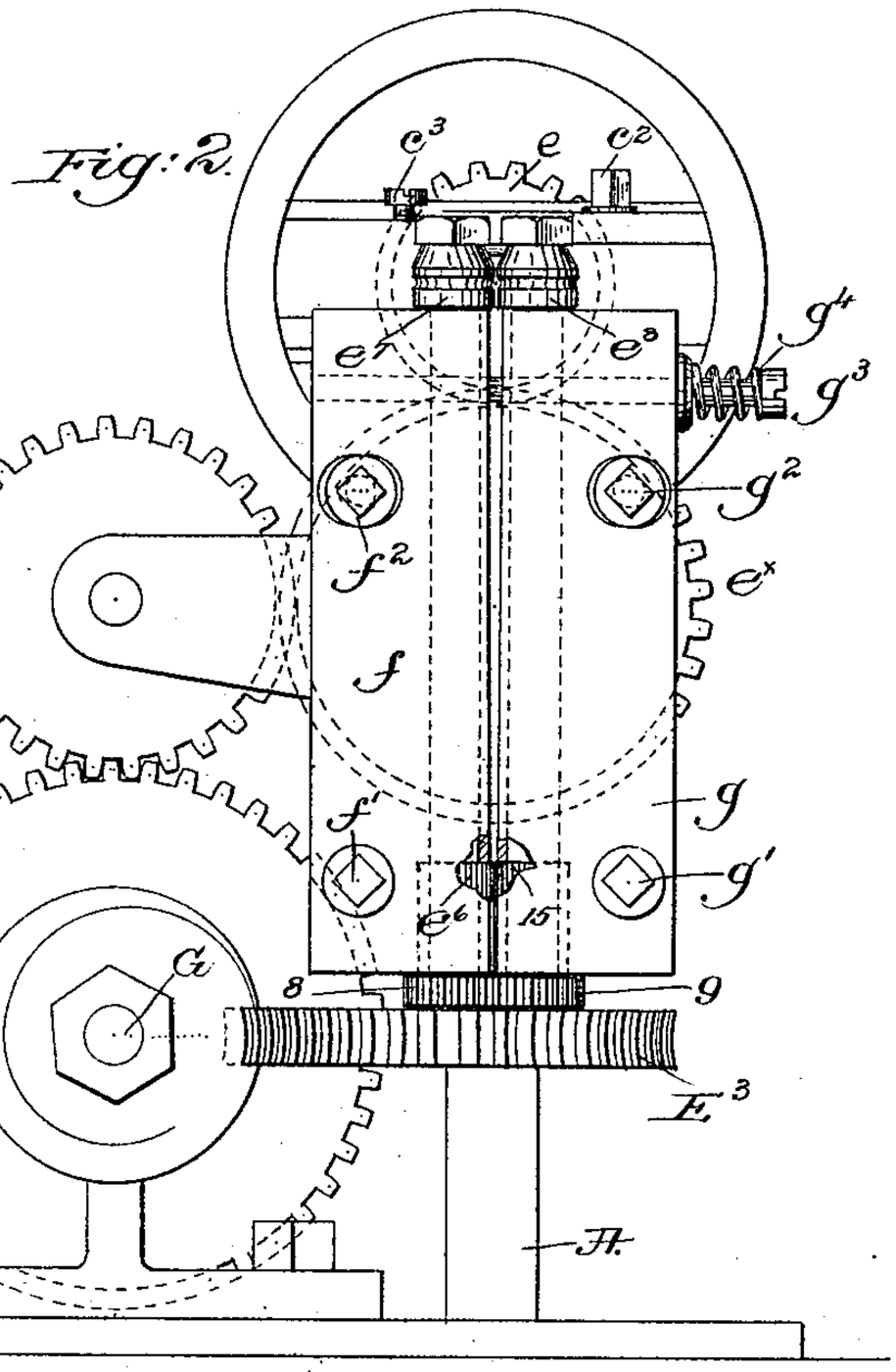


Fig: 3.

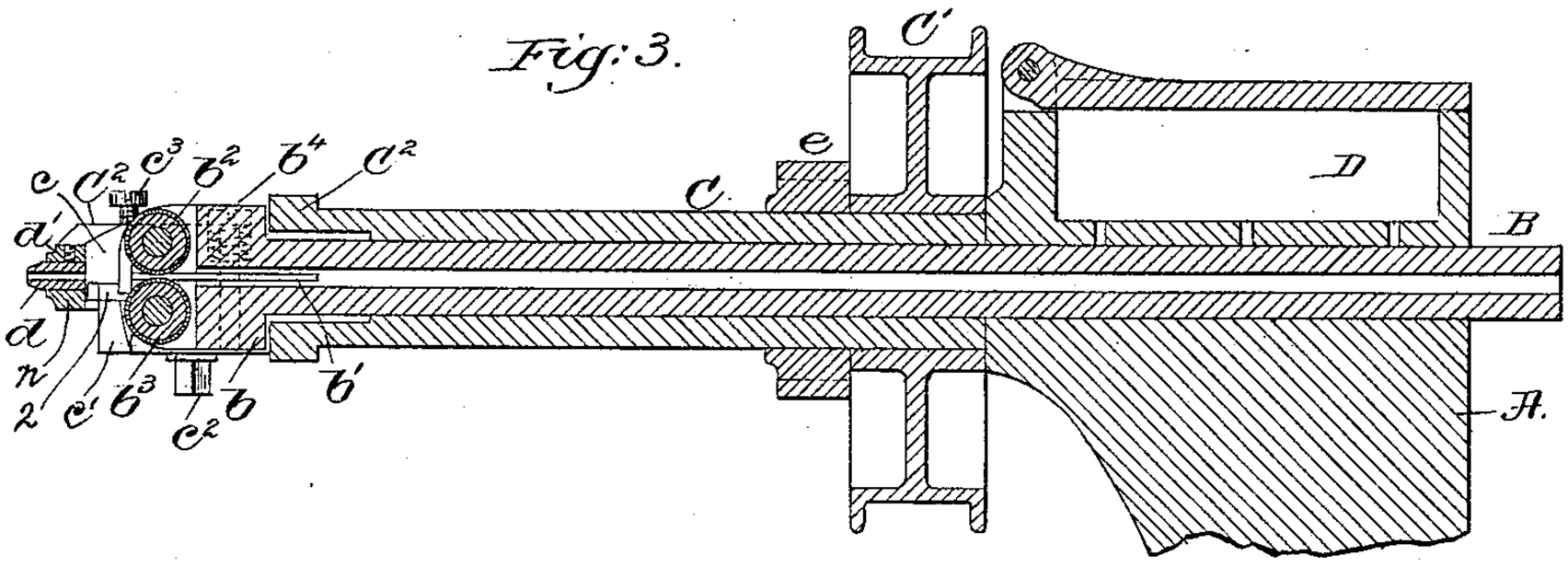
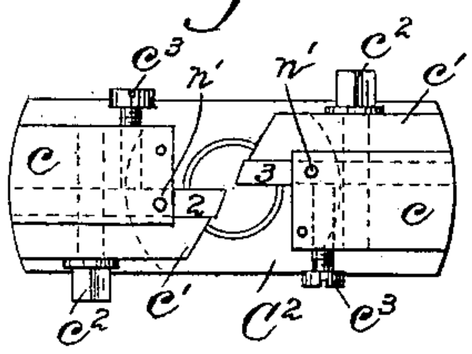


Fig: 4.



Witnesses.
Fred. L. Gerlach
Fred L. Emery.

Inventor.
Louis Goddu
by Crosby & Gregory
Attys.

UNITED STATES PATENT OFFICE.

LOUIS GODDU, OF WINCHESTER, ASSIGNOR TO JAMES W. BROOKS, TRUSTEE, OF CAMBRIDGE, AND FRANK F. STANLEY, ASSOCIATE TRUSTEE, OF SWAMPSCOTT, MASSACHUSETTS.

MACHINE FOR SCREW-THREADING WIRE.

SPECIFICATION forming part of Letters Patent No. 385,801, dated July 10, 1888.

Application filed November 29, 1887. Serial No. 256,407. (No model.)

To all whom it may concern:

Be it known that I, LOUIS GODDU, of Winchester, county of Middlesex, State of Massachusetts, have invented an Improvement in Machines for Screw-Threading Wire, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object the production of a machine by which to manufacture the double-threaded sole-fastening wire described in United States Patent No. 370,136, granted to me on the 20th day of September, 1887.

The machine herein described contains a rotating head provided with two diagonally-placed chasing tools or cutters, which engage the wire at opposite sides and also at exactly-opposite points to thereby cut two independent threads. The base of one is just opposite the other, the said cutters engaging the wire close to a guide through which the wire is fed by feeding-rollers, the threaded wire being taken away from the cutters and guide between a pair of clamping-rolls serrated to receive the threads of the wire on its way to be wound upon a spool, from which it is taken in coil form for use in a nailing machine.

My invention consists in the feed-rolls, the wire-guide, and the clamping-rolls grooved to fit the thread cut into the wire, combined with the tube B, the rotating sleeve having a head, and the two attached diagonally-set cutters arranged to act upon the opposite sides of the wire at diametrically-opposite points, to thereby cut two threads, each exactly in line with the other diametrically, as will be described.

Figure 1 is a top or plan view of a machine embodying my invention for threading wire; Fig. 2, a front elevation thereof; Fig. 3, a partial longitudinal section, on a larger scale, in a line intersecting the longitudinal center of the spindle; and Fig. 4, a front end view of the rotating head and cutting-tool detached, the nose-pieces *n* being removed to show the cutters.

The frame-work A, of suitable shape to contain the working parts, has an upright portion, in which is secured the tube B, having at one end a head, *b*, which is split, as at *b'*, the said head having suitable studs to constitute bearings for the two clamping-rolls b^2 b^3, each scored or cut away annularly to form grooves, as best shown in Fig. 1, for the passage between the rolls of the threaded wire, the said grooves being toothed or serrated diagonally to form teeth, the said teeth being of such shape and inclination as to correctly fit the grooved surface of the threaded wire, the said rolls clamping or fitting the surface of the wire, thus preventing it from twisting or getting out of line.

The head *b'* receives through it one or more adjusting screws, b^4, which cross the slots *b* and screw into one part of the divided head, each of said screws near its head passing through a spiral spring, (see Fig. 3,) which enables the two rolls b^2 b^3 to be maintained by a yielding pressure against the wire. (Not shown.)

The stationary tube B receives upon it the sleeve C, provided, as herein shown, with a belt pulley or whirl, C', the front end of the sleeve having a head, C^2, provided with lips *c*, (see Fig. 4,) between which and suitable caps, *c'*, under the control of screws c^2, are held the two cutters 2 3, the said cutters having V-shaped edges and meeting the wire, as will be understood from Fig. 4, at opposite sides thereof, so that one cutter serves the purpose of a support for the wire, while the other cutter enters it, the two cutters being presented to the wire diagonally, as shown in Fig. 1, and with the point of one cutter exactly opposite the point of the other cutter diametrically, but one above the other, as best shown in Fig. 4, so that the wire is provided with two independent threads, the bottoms of which, at opposite sides the wire, are in line each with the other, the said cutters engaging the wire close to and just as it emerges from the rear or right-hand side of the guide *d*, attached to the nose-piece *n* of the head C^2 by a screw, *d'*, so that the guide may be quickly renewed, if worn, and to permit a guide of any desired internal diameter to be used, that depending upon the size of the wire to be threaded, the guide supporting and guiding the wire up to the cut-

ters. The nose-piece *n* is attached to the head by two screws, (shown by dotted lines in Fig. 1,) the said screws entering holes *n'* in the head. (See Fig. 4.)

The screws c^3 act as adjusting-screws for the cutters, whereby the depth of the thread may be varied.

The sleeve C, rotated by a belt or in other usual manner, has a pinion, *e*, which, through gears e^{12} $e^{\times}$, drives the toothed gear e^2, which is fast on and rotates the shaft G, as in United States Patent No. 167,760, granted to me September 14, 1875, to which reference may be had, the said shaft, as in the said patent, having upon it two worms, only one of which, as F, is herein shown, it engaging the worm-toothed pinion E^3, fast on the lower end of the feed shaft e^6.

In practice, as in the patent referred to, the rear end of the shaft G has a worm (not herein shown) which engages a gear-wheel, S^2, which is frictionally connected with a friction-disk, R, provided with pins *s*, which pass through the inner disk of a spool, O, mounted on a spool-shaft, P, which is slid longitudinally, taking with it the spool O, by a bell-crank lever, V, deriving its motion from a cam-hub, U, all substantially as shown in the said patent, the spool being rotated frictionally, so as to take upon its surface the wire as it is threaded, it turning upon the devices which impart rotation to it to accommodate for the varying diameter of the mass of wire, the spool-shaft P being reciprocated, and with it the spool with relation to the guide *e'*, to enable the wire to be led from one to the other head of the spool in uniform manner.

The spool and the mechanism for rotating it, being old in the said patent, need not be herein further described.

The feed-shaft e^6 has at its upper end the feed-roll e^7. The shaft e^6 has its bearings in the block *f*, secured to the frame-work in an adjustable manner by the screws f' f^2, so that the upper end of the block may move somewhat laterally. The shaft 15, carrying the feed-wheel e^8, it being also grooved annularly to fit and to co operate with the roll e^7 to feed the wire, has a pinion, as 9, which is engaged by a pinion, 8, of like diameter, on the shaft e^6. The shaft 15, carrying the feed-wheel e^8, has its bearings in the block *g*, secured to the frame-work in an adjustable manner by the screws g' g^2. The holes in the upper ends of the blocks *f* and *g*, to receive the screws f^2 g^2, are of greater diameter than the said screws, so that the blocks *f* and *g* may turn somewhat on the screws *f'* and *g'*. The block *f* has connected with it a screw, g^3, which is passed loosely through a hole in the block *g*, and a spring, g^4, on the said screw, between its head and the block *g*, causes the said blocks to be held one toward the other in a yielding manner, the said spring serving to keep the feed-rolls c^7 c^8 pressed in a yielding manner against the wire passing between them, the said rolls, rotated in unison, acting to force the wire through the guide *d*, pushing the wire up to and past the cutters, the wire beyond the clamping-guide rolls being led through the tube B, and thereafter it is wound upon the spool O, already described.

The inner edges of the boxes *f* and *g* are provided with semicircular grooves to fit the outer side of the shafts e^6 and 15 of the feed-rolls, and preferably the diameters of the said shafts just above the pinions 8 and 9 are of such size as to meet when the gears are in mesh, one roll thus steadying the other and running one on the other, the wear being less than if the said shafts ran in boxes entirely surrounding them, as in the said patent.

The rear end of the tube B, beyond the oil-box D, has connected to it the delivery-guide *e'*, slotted for the passage of the wire to the spool O.

I claim—

The feed-rolls, the wire-guide, and the clamping-rolls grooved to fit the thread cut into the wire, combined with the guide B, the rotating sleeve having a head and the two attached diagonally-set cutters arranged at opposite sides of the wire and diametrically opposite each other, to operate substantially as described.

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

LOUIS GODDU.

Witnesses:
G. W. GREGORY,
B. DEWAR.