

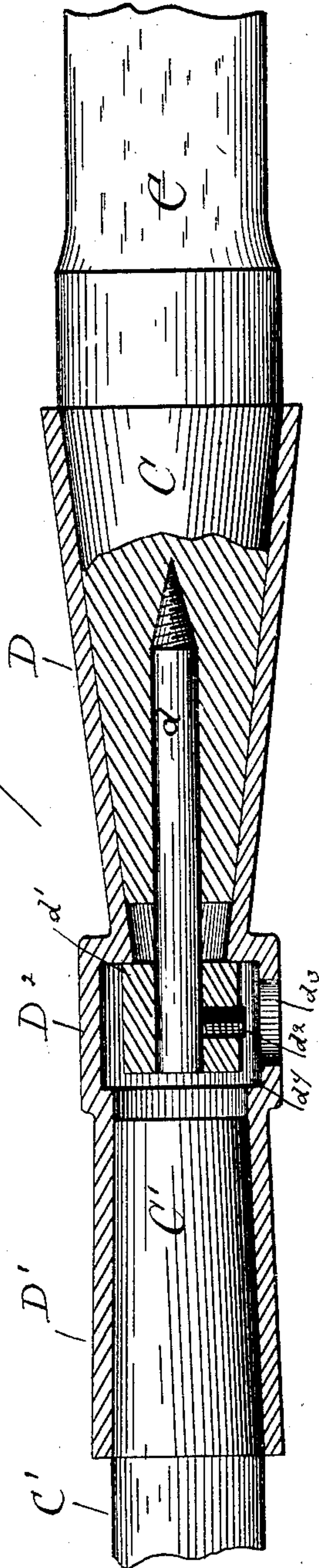
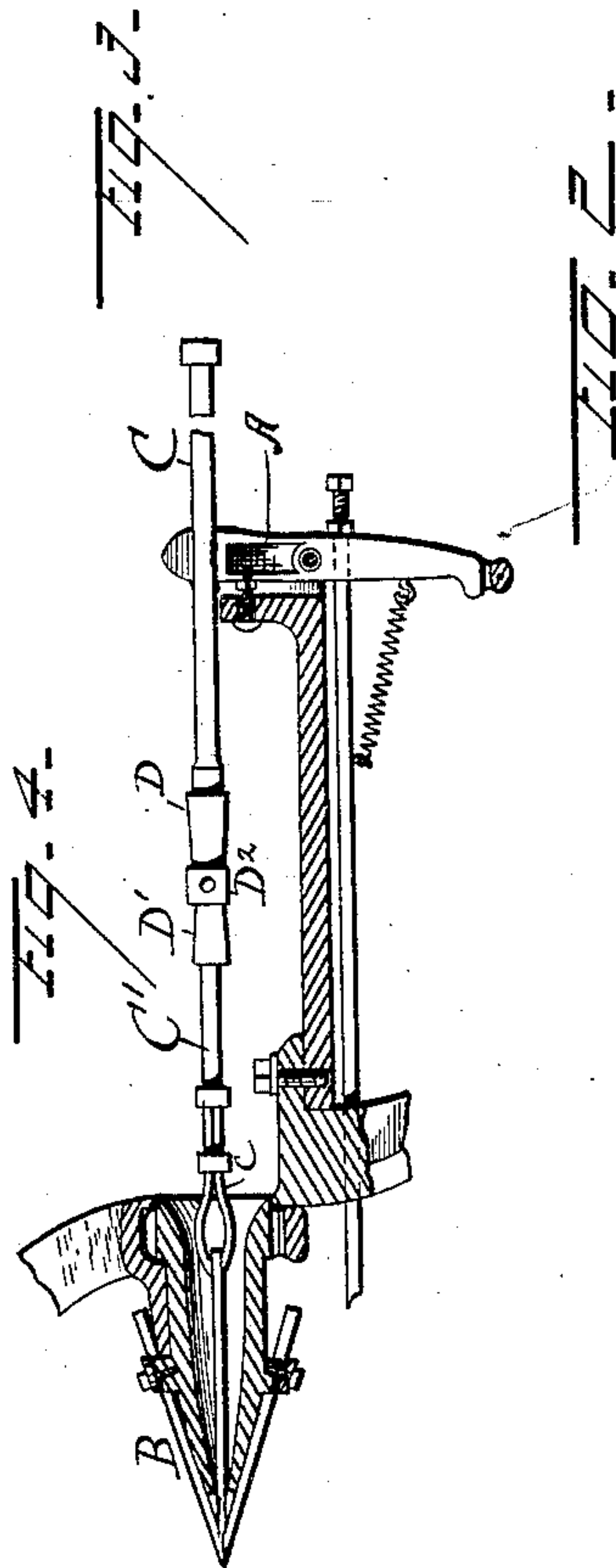
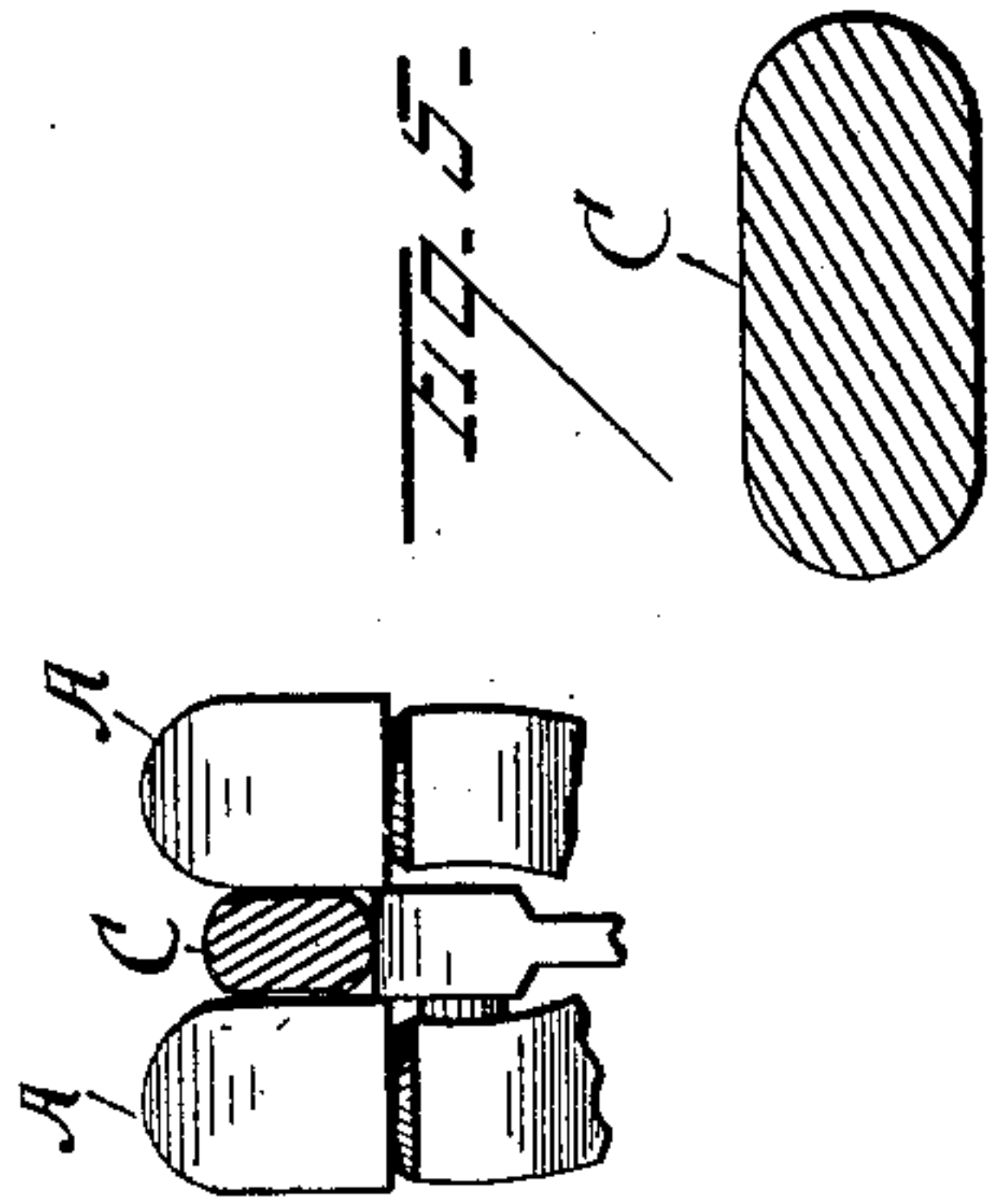
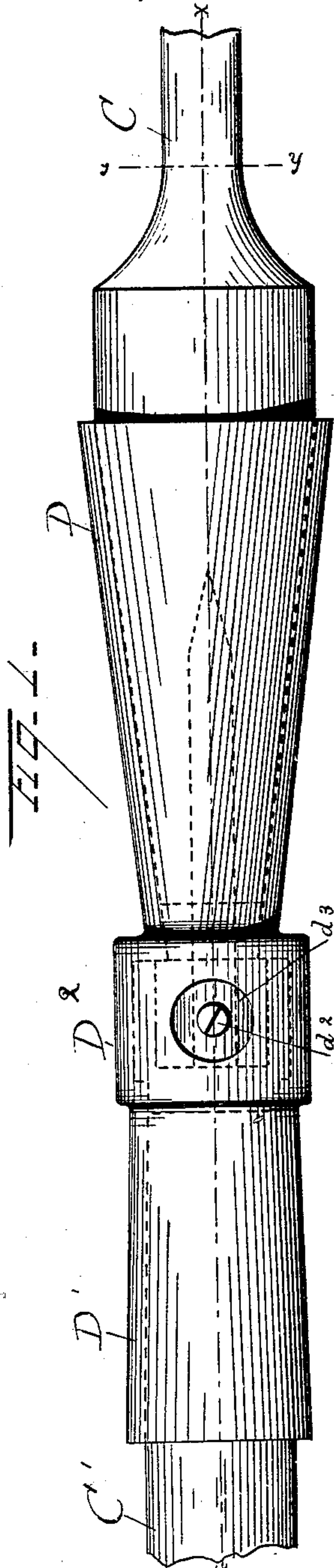
(No Model.)

J. C. GOULD.

NIPPER ROD FOR NAIL PLATE FEEDERS.

No. 318,105.

Patented May 19, 1885.



WITNESSES

A. S. Paré
H. W. Munday.

INVENTOR

John C. Gould
by Munday Everts & Adcock
His Attorneys

UNITED STATES PATENT OFFICE.

JOHN C. GOULD, OF CHICAGO, ILLINOIS.

NIPPER-ROD FOR NAIL-PLATE FEEDERS.

SPECIFICATION forming part of Letters Patent No. 318,105, dated May 19, 1885.

Application filed January 27, 1885. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. GOULD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have
5 invented a new and useful Improvement in Nipper-Rods for Nail-Plate Feeders, of which the following is a specification.

In that class of feeders wherein the nipper-rods are alternately gripped and released by
10 feeding-grippers, it is customary to employ round material for the rods, as such form possesses decided advantages. With the use of the round rod there is, however, one result which it is desirable to avoid—viz., they do
15 not bear upon the entire surface of the gripper-faces, but instead bear upon a narrow line across the same, and hence the constant friction soon wears the faces away and forms grooves in them. This necessitates compensating changes or adjustments in the grippers,
20 and in default of provision therefor the frequent renewal of the gripping-faces.

The present invention is designed to do away with this evil; and it consists in the combination, in a nail-plate feeder and with the
25 intermittently-acting grippers thereof, of a rod made in two parts, the rear part, which is acted upon by the grippers, being flat and joined to the forward or nipple part by a
30 swivel-coupling, so that the nipper end is free to turn axially with the reversing-barrel, while the flat portion avoids the wearing of grooves in the grippers, and is always in the proper position to be seized.

35 The invention also consists in the novel construction of the joint between the parts of the rod, as more fully set forth hereinafter.

In the drawings which form a part of this specification, and in which similar letters of
40 reference indicate like parts, Figure 1 is an exterior view of my improved rod. Fig. 2 is a section upon line *xx* of Fig. 1. Fig. 3 shows the rod in position between grippers. Fig. 4 is a section of a feeder, showing the manner
45 in which the rod is used. Fig. 5 is a section upon *yy* of Fig. 1.

In said drawings, *A A* represent the grippers of a nail-plate feeder, which are intermittently actuated in the usual manner to seize
50 and feed forward the nipper-rod, and *B* is the

reversing-barrel, by which the rod is oscillated upon its axis between each cutting operation. The rod is composed of two sections or parts, *C* and *C'*. The rear part, *C*, is acted by upon the grippers and is flat, as shown by the cross-
55 section, Fig. 5, which conformation exposes broad contact-surfaces to the grippers and prevents the forming of grooves therein, and at the same time such conformation insures the proper positioning of the rod when seized, because it is such as compels the rod to right
60 itself as the grippers approach to take hold of it. This latter action will be understood when it is suggested that the section *C* cannot enter between the grippers except its broad sides be
65 vertical. Of course this construction prevents any rotation of the section *C*. The forward section, *C'*, carries the nipper device proper *c*, and turns axially with the reversing-barrel *B*, and in order to permit this semi-rotation, the
70 parts *C* and *C'* are joined by a swivel-coupling. The form of this coupling which I deem the most desirable is the following: A metal socket-piece, *D D' D²*, receives the ends of the
75 two rod-sections. One part, *D*, of this socket-piece is tapered and receives the correspondingly-shaped end of the section *C*, but the latter is free to turn in the former. To prevent the rod slipping out of this socket, a pin or
80 screw, *d*, is firmly inserted longitudinally in it, and a collar, *d'*, of sufficient diameter to prevent its passage through socket *D*, is slipped upon the exposed end of the pin and secured thereon by a set-screw, *d²*, access to this set-
85 screw being afforded through an opening, *d³*, in the part *D²* of the socket-piece inclosing the collar. The joint is completed by securing the end of rod-section *C'* frictionally or otherwise in the part *D'* of the socket. This form of joint
90 permits the drawing into the socket of the rod-section *C*, as the tapering end of the latter wears away under the action of the rotation, the set-screw *d²* permitting the collar *d'* to be moved whenever such adjustment becomes necessary. The socket-piece, it will be noticed,
95 is made in one piece, and by making it tapering at one end, I obtain means for tightening the rod within it and compensating for surface wear of the rod, which could not be done if the tapering feature were omitted. It will
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be also noticed that the part D^2 of the socket is cored out, forming an enlarged chamber, d^4 , giving room for the set-screw d^2 , and allowing the socket to rotate freely without interference with the head of said screw.

I claim—

1. The combination, in a nail-plate feeder, with the grippers of the kind shown, and which intermittently seize and feed the nipper-rod, of a two-part rod joined by a swivel-coupling, the part acted upon by the grippers being flat, substantially as and for the purpose set forth.

2. The combination, with the two-part nipper-rod, of the socket-piece having a tapered portion to receive the tapered end of one of the rod-sections, the pin inserted in said tapered section, and the collar secured adjustably to the pin, substantially as specified.

3. A swivel-coupling for the sections of a two-part nipper-rod, consisting of sockets for each of the rod-sections, one socket being

adapted to hold its section rigidly, and the other to rotate upon its section, both sockets being formed in one piece, substantially as specified.

4. The combination, with a two-part nipper-rod, of a socket-piece tapering at one end, and means, substantially such as specified, for securing and tightening the rod in such tapered portion, substantially as specified.

5. The combination, with a two-part nipper-rod, of the socket-piece $D D' D^2$, made in one piece and having the opening d^3 , the pin d , the collar and screw, substantially as specified.

6. The piece $D D' D^2$, made in one piece, having the enlarged chambers d^4 , in combination with the collar and its holding-screw, substantially as specified.

JOHN C. GOULD.

Witnesses:

H. M. MUNDAY,
EDMUND ADCOCK.