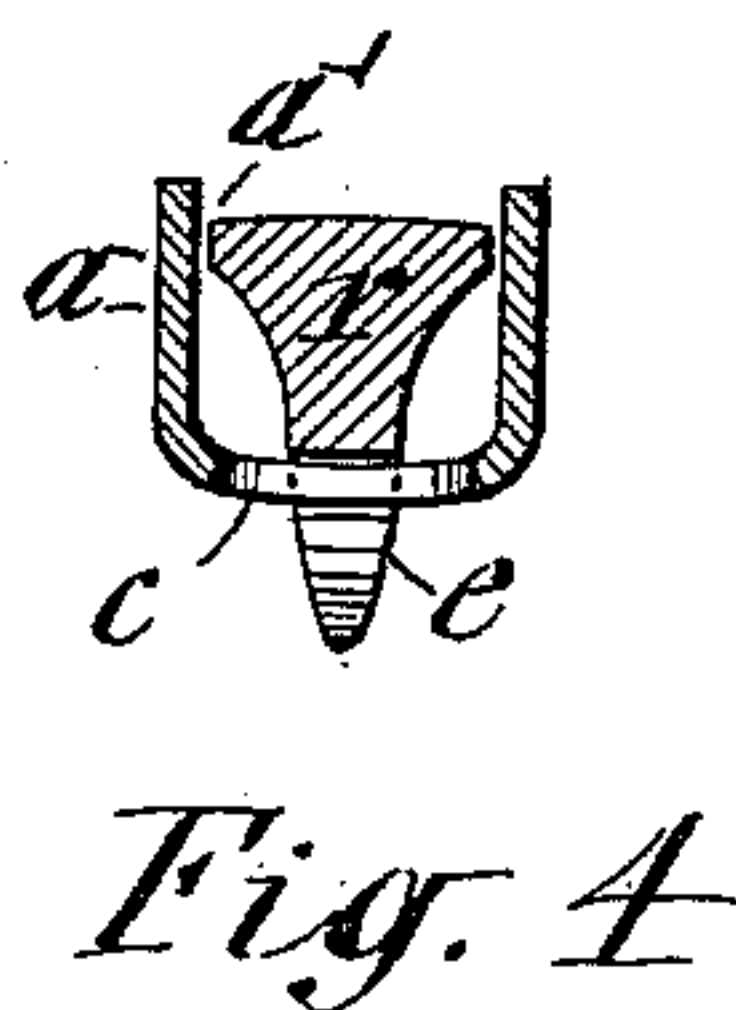
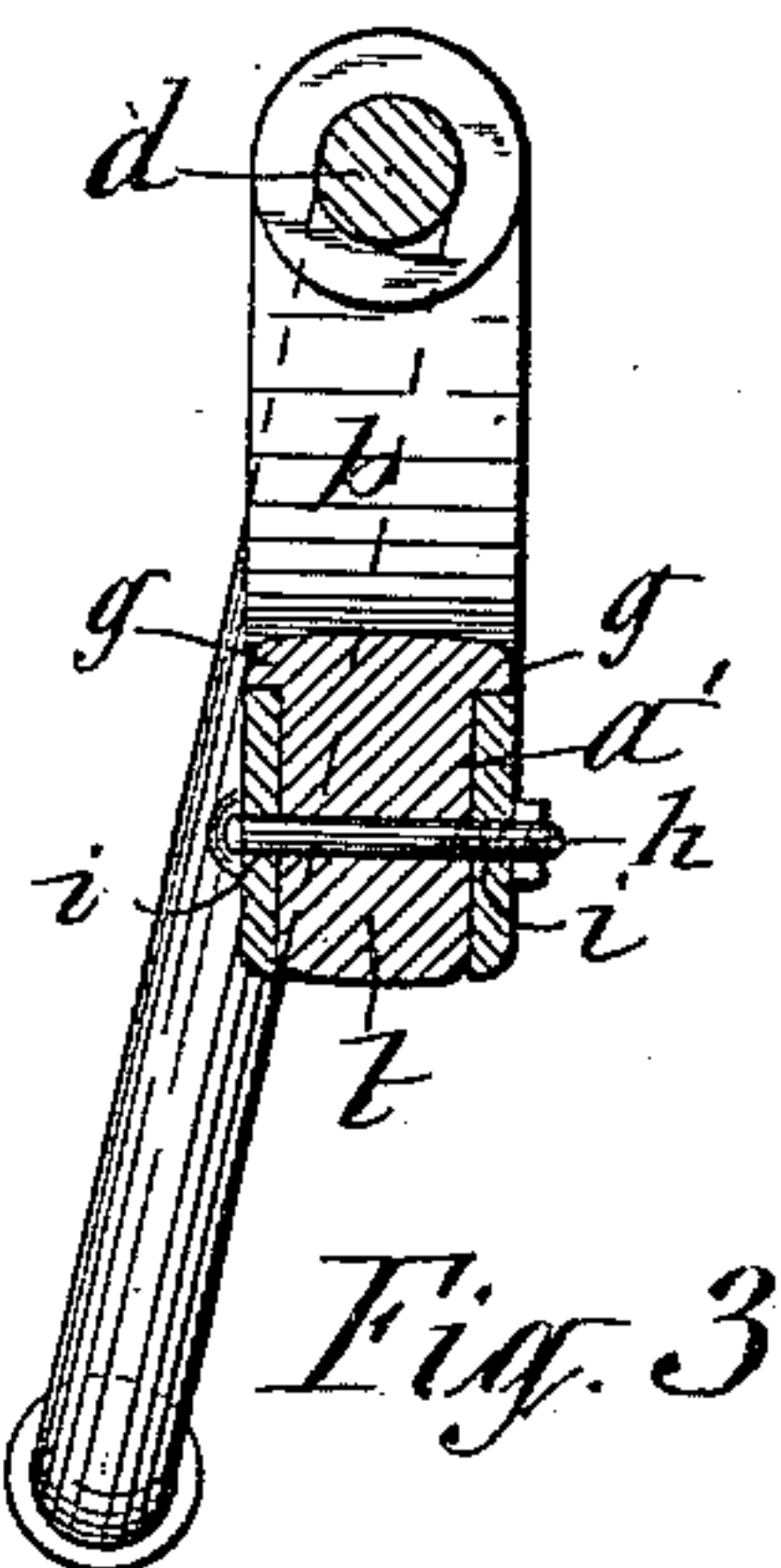
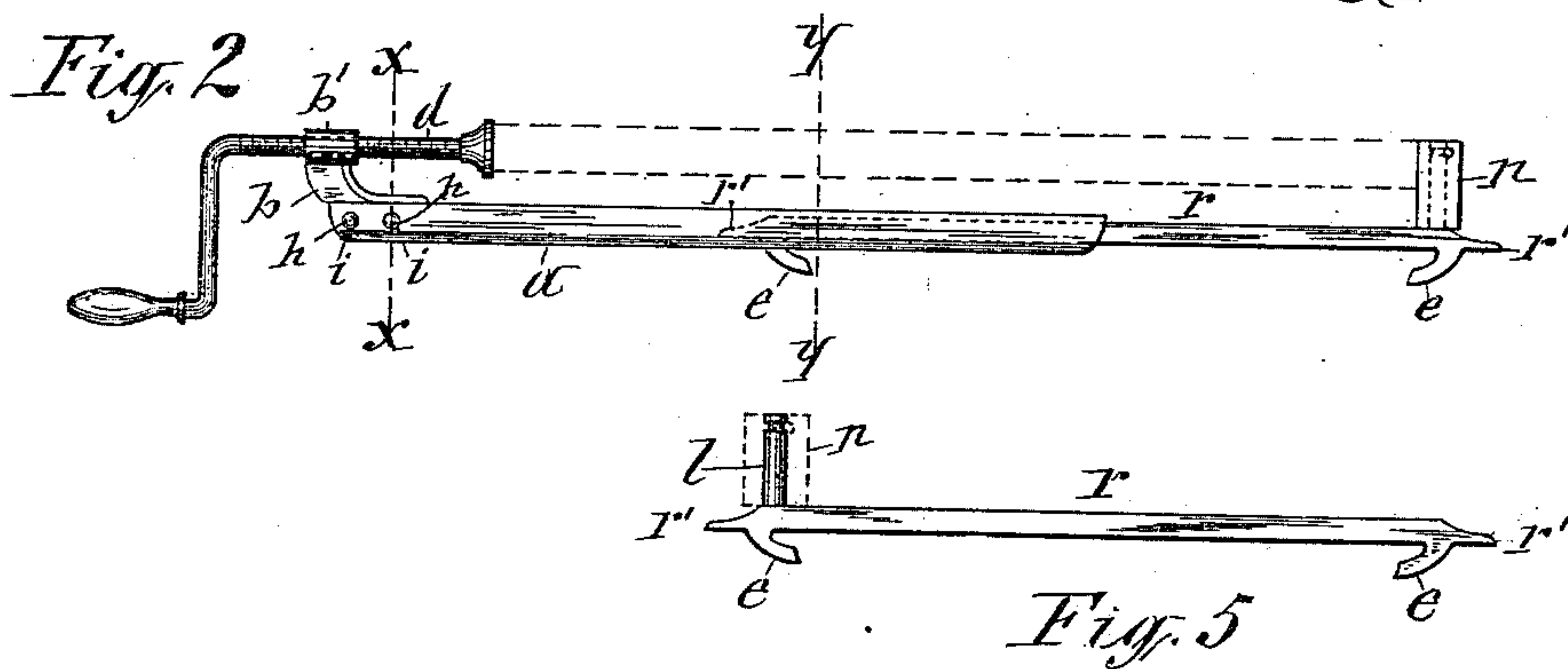
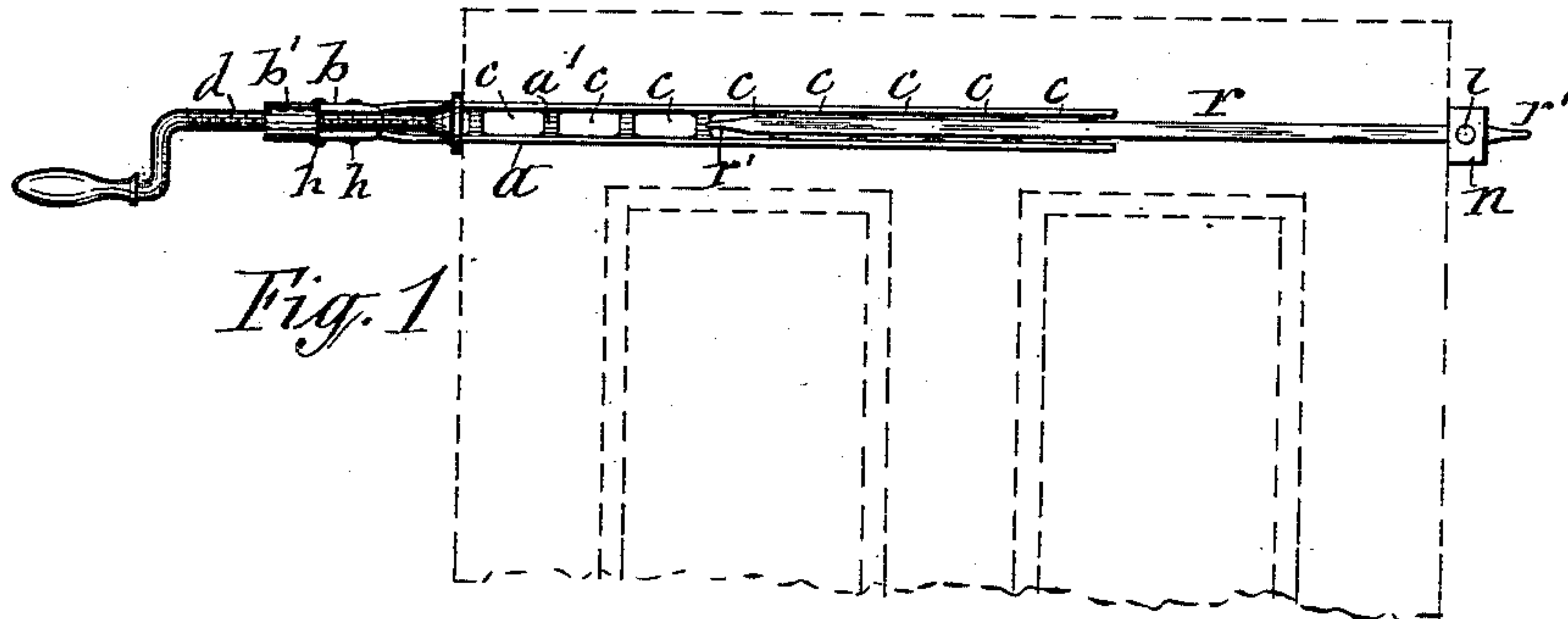


(No Model.)

J. J. TANNER.
EXTENSION CLAMP.

No. 420,216.

Patented Jan. 28, 1890.



WITNESSES:

C. L. Bendixon
Mark W. Dewey

INVENTOR
Jesse J. Tanner
BY
Ludh, Laass & Bull
ATTORNEYS

UNITED STATES PATENT OFFICE.

JESSE J. TANNER, OF ONEIDA, NEW YORK, ASSIGNOR OF ONE-HALF TO
ROBERT J. FISH AND DANIEL C. BURKE, OF SAME PLACE.

EXTENSION-CLAMP.

SPECIFICATION forming part of Letters Patent No. 420,216, dated January 28, 1890.

Application filed April 15, 1889. Serial No. 307,239. (No model.)

To all whom it may concern:

Be it known that I, JESSE J. TANNER, of Oneida, in the county of Madison, in the State of New York, have invented new and
5 useful Improvements in Extension-Clamps, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to that class of clamps
10 in which the clamping-bar is composed of two sections, one of which is provided with a series of perforations at different points in the length thereof, and the other section is provided with a hook which is adapted to be in-
15 serted in any one of the aforesaid perforations, and thus permits of varying the length of the clamp.

My present invention consists in an improved construction and combination of the
20 constituent members of the clamp, as hereinafter described, and specifically set forth in the claims.

In the annexed drawings, Figure 1 is a
25 plan view of the clamp, showing its application in the construction of a door in dotted lines. Fig. 2 is a side view of the same. Figs. 3 and 4 are enlarged transverse sections, respectively, on lines *x x* and *y y*, Fig. 2; and Fig 5 is a detached side view of one
30 of the clamping-bars.

Similar letters of reference indicate corresponding parts.

a represents an arm constituting one of the
35 clamping-bars. Said arm is formed with a longitudinal channel *a'*, and with a series of perforations *c c c* through the bottom of the channel at different points in the length thereof, as shown in Fig. 1 of the drawings. To one end of said arm is rigidly attached a
40 bracket *b*, which projects from the channel side of the arm, and is formed with a screw-threaded eye *b'*, which is axially parallel with the channel *a'*, and in said eye works the clamping-screw *d*, which is provided with a
45 crank or suitable handle for turning it.

The attachment of the bracket *b*, I prefer to effect by perforating the side walls of the channel *a'*, as shown at *i i*, and forming the bracket *b* with a tongue *t* and flanges *g g*, the
50 tongue being inserted into channel *a'* and

perforated to correspond with the holes *i i*, and bolts or rivets *h h* pass through the perforations of the said parts, as shown in Fig. 3 of the drawings. The bottom of the channel *a'* being cut away at the attachment of
55 the bracket *b*, allows the two side walls of said channel to be clamped tightly against opposite sides of the tongue, and when the said parts are thus united the flanges *g g* rest on the edges of the channeled side of the arm
60 *a*, and thus further stay the bracket in its position.

r denotes the companion clamping-bar, which is of the form of a rod which lies in the channel *a'*, so as to be confined from lat-
65 eral movement in three directions. This rod is formed with a hook or hooks *e* at one or both ends, preferably at both ends, for the purpose of rendering the same reversible end for end, and thus afford greater range of ad-
70 justment. One end of the rod *r* has a gudgeon *l* projecting from the side opposite to that from which the hook *e* projects, and on this gudgeon is swiveled a block *n*, which serves as a shoulder or one of the bearings by which
75 the clamp takes hold of the work or article to be clamped. Said swivel-connection allows the block to accommodate itself to various angles of the surface with which it is to be brought in contact. In order to prevent
80 the rod from accidentally dropping out of the channel *a'* when the arm *a* is placed in an inverted position, I form the rod *r* with an end extension *r'* beyond the hook *e*. The bearing of said extension on the bottom of the inte-
85 rior of the channel *a'* prevents the free end of the rod *r* from swinging away from the arm *a*.

Having described my invention, what I claim as new, and desire to secure by Letters
90 Patent, is—

1. The improved extensible clamp consisting of the arm *a*, formed with the longitudinal channel *a'*, provided with perforations *c c c*, the bracket *b*, attached to one end of said
95 arm and projecting from the channeled side thereof and provided with the screw-threaded eye *b'*, standing axially parallel with the channel of said arm, the screw *d*, working in said eye, and the rod *r*, lying in the channel *a'* 100

and formed with the hook *e*, entering one of the perforations *c*, and with a shoulder for engaging the work to be clamped, all constructed and combined substantially in the manner described and shown.

2. In a clamp of the character herein described, the arm *a*, formed with the longitudinal channel *a'*, provided with perforations *c c* through the bottom of said channel and with holes *i i* through the sides of one end, the bracket *b*, formed with the screw-threaded eye *b'*, perforated tongue *t*, and flanges *g*, and seated with the tongue in the channel *a'* and with the flanges on the edges of the channeled side of the arm *a*, and bolts or rivets *h h*, passing through the holes *i i* and perforated tongue, and the screw *d*, working in the eye *b'*, in combination with the rod *r*, provided with hooks *e e* and the gudgeon *l*, substantially as described and shown.

3. In combination with the arm *a*, formed with the longitudinal channel *a'* and perforations *c c c* through the bottom of said chan-

nel, and the clamping-screw *d* on one end of said arm, the rod *r*, lying in the channel and adapted to be reversed end for end and provided at opposite ends with the hooks *e e* and at one end with the gudgeon *l*, and block *n*, swiveled on said gudgeon, substantially as described and shown.

4. In combination with the arm *a*, formed with the longitudinal channel *a'* and perforations *c c c* through the bottom of said channel and the clamping-screw on one end of said arm, the rod *r*, lying in the channel *a'* and formed with the hook *e* and with the extension *r'* beyond the said hook, and a shoulder or gudgeon projecting from the opposite side of the rod, substantially as described and shown.

In testimony whereof I have hereunto signed my name this 11th day of April, 1889.

JESSE J. TANNER. [L. S.]

Witnesses:

J. J. LAASS,
C. H. DUELL.