

No. 618,840.

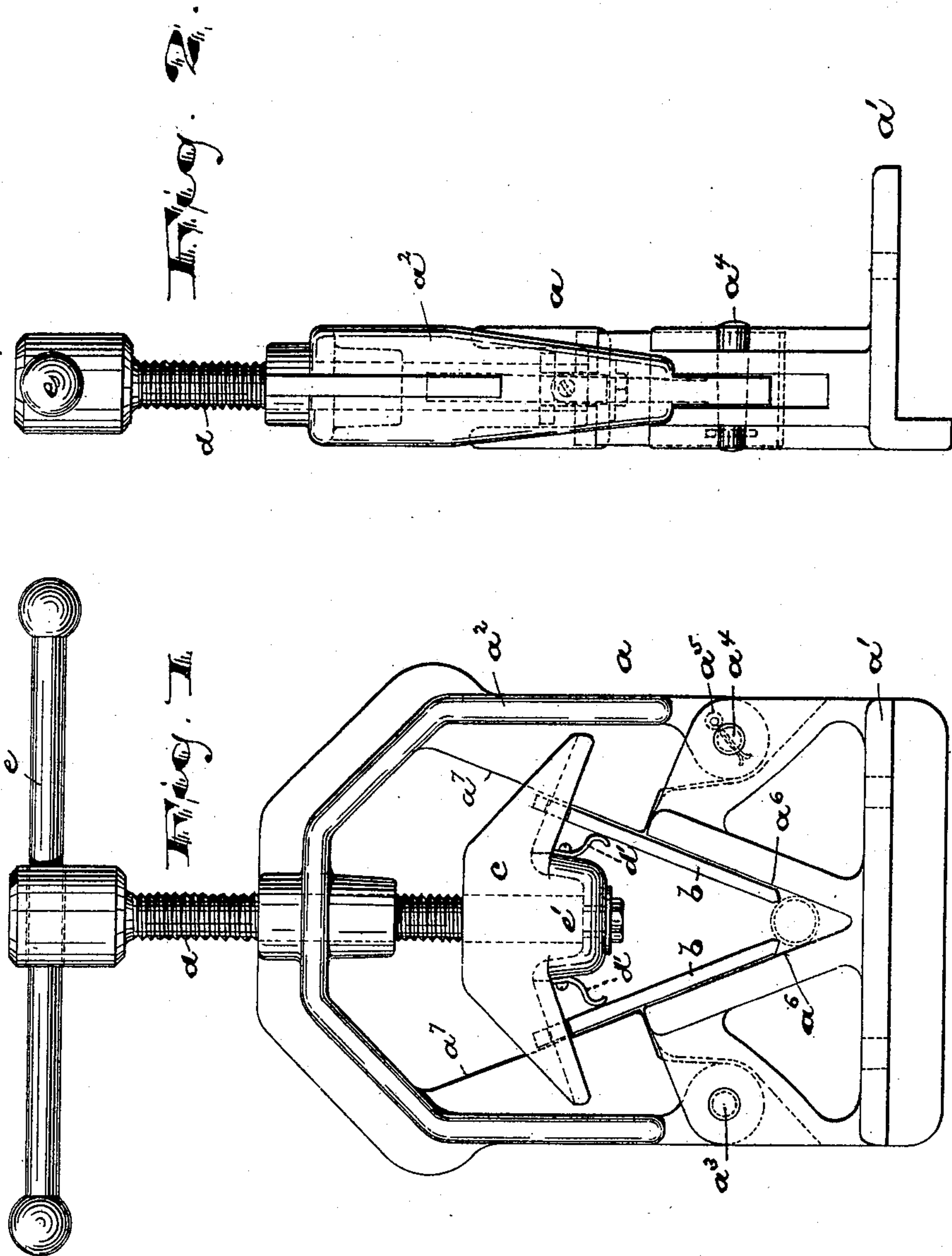
Patented Feb. 7, 1899.

G. F. CONDIT.
PIPE VISE.

(Application filed May 27, 1898.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

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Russell M. Everett

INVENTOR

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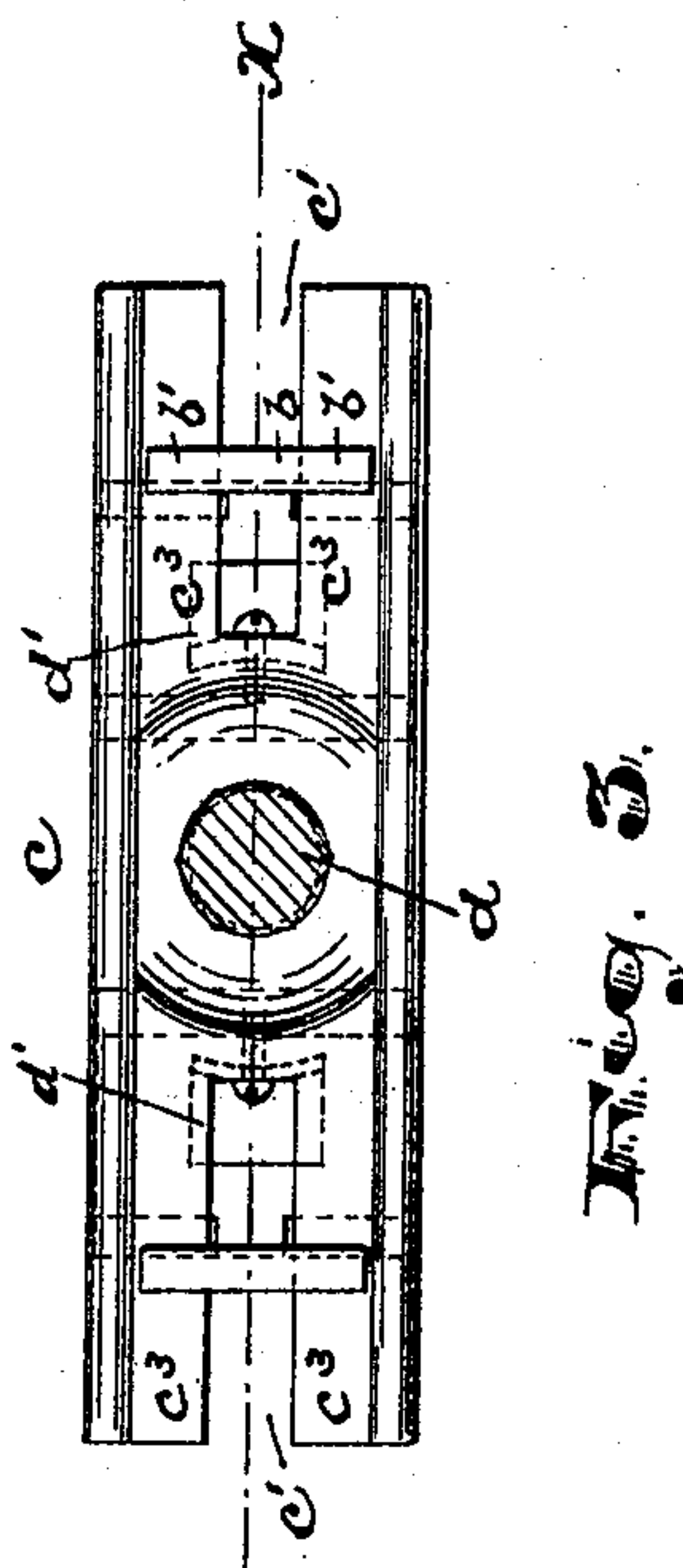
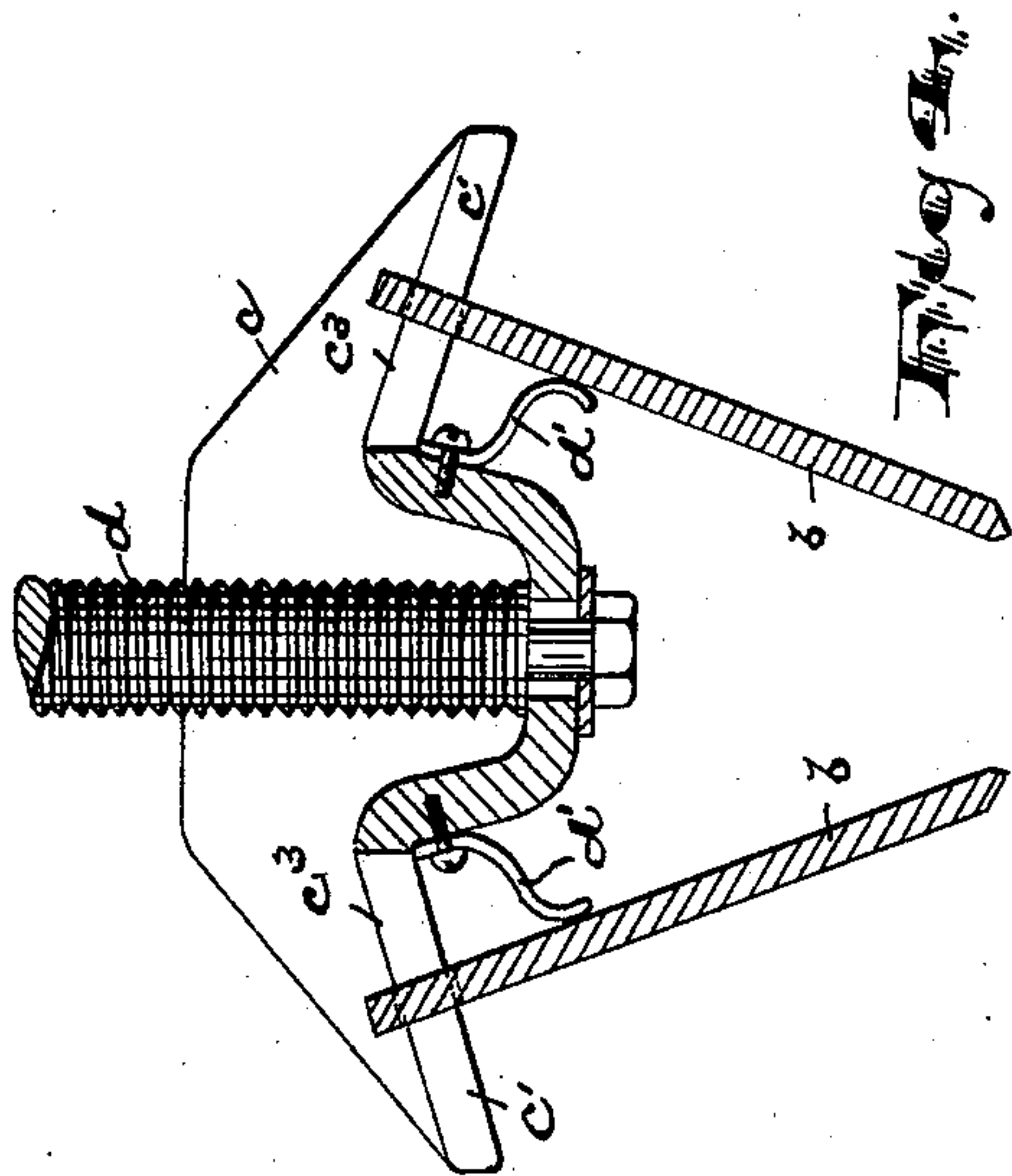
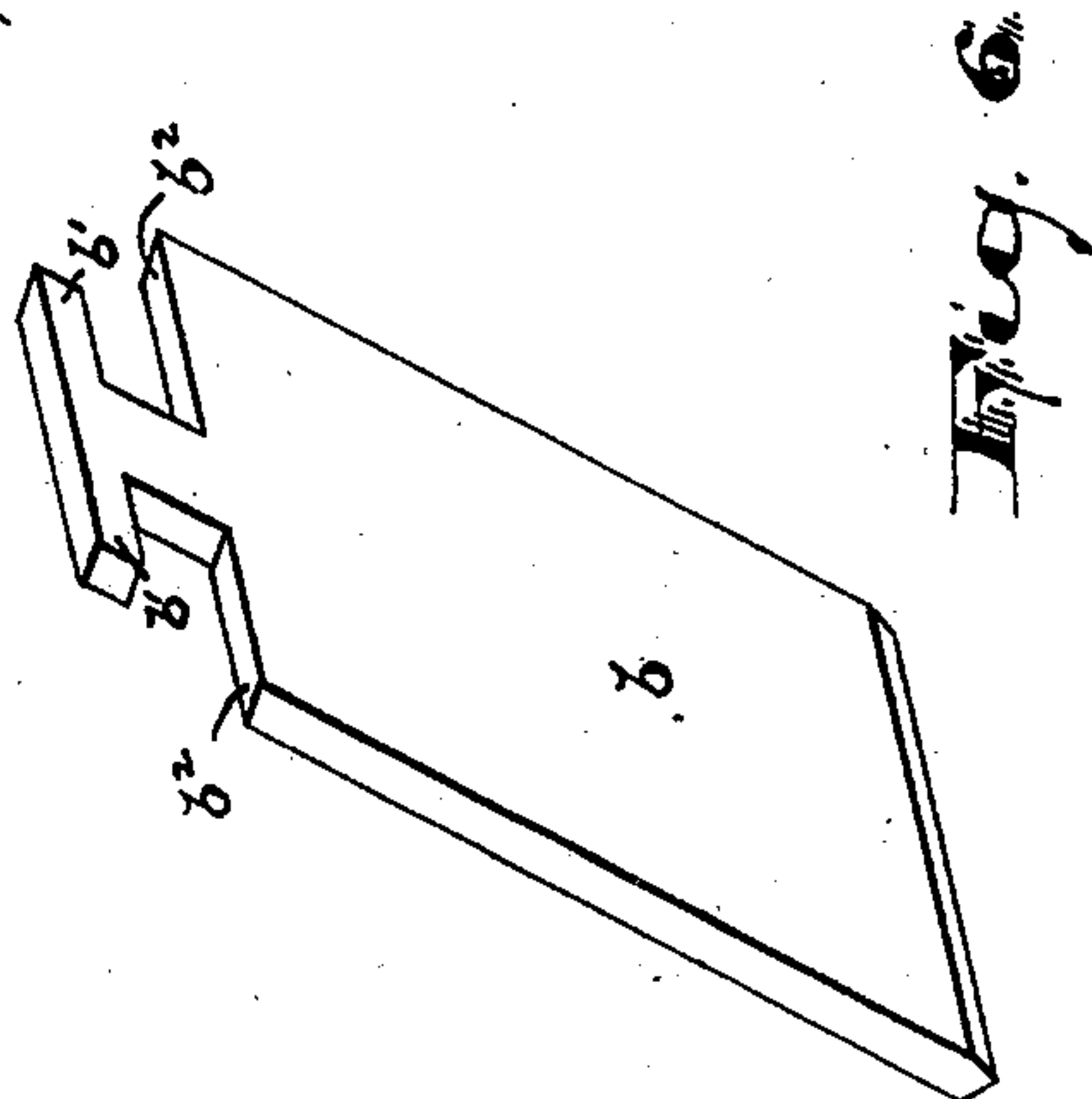
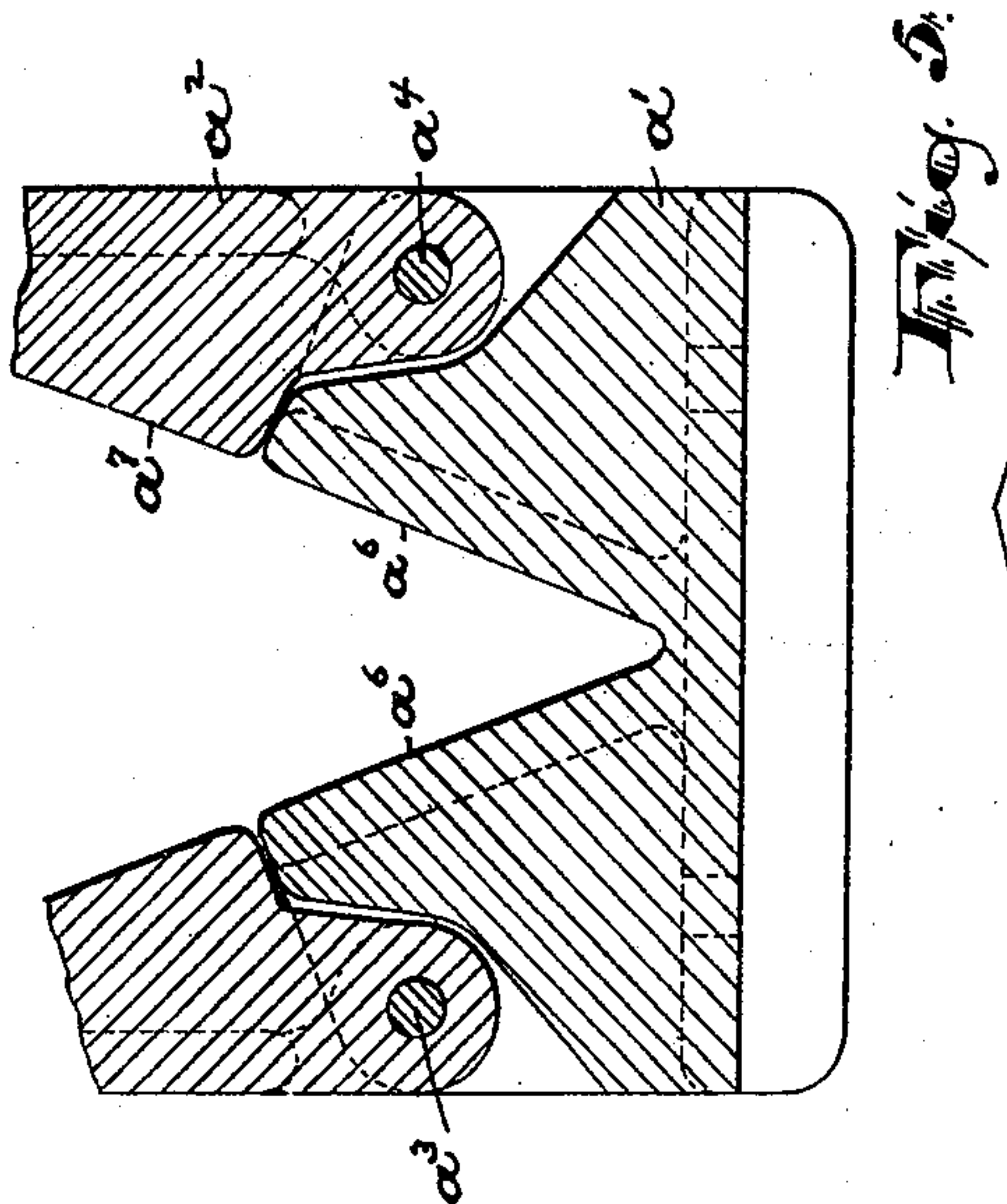
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2 Sheets—Sheet 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE F. CONDIT, OF ORANGE, NEW JERSEY, ASSIGNOR TO MINNIE CON-
DIT, THOMAS DAVIS, AND WINFIELD S. WARDELL, OF SAME PLACE.

PIPE-VISE.

SPECIFICATION forming part of Letters Patent No. 618,840, dated February 7, 1899.

Application filed May 27, 1898. Serial No. 681,855. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. CONDIT, a citizen of the United States, residing at Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Pipe-Vises; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to certain improvements in that class of pipe-vises represented by the one shown and described by me in my prior patent, No. 601,313, dated March 29, 1898, the objects of the present improvements being to secure a more rigid and durable structure and a more perfectly automatic action, to reduce the cost of manufacture, to prevent the pipe-biting blades from springing when pressed into holding engagement with the pipe, and to secure other advantages and results, some of which may be referred to hereinafter in connection with the description of the working parts.

The invention consists in the improved pipe-vise and in the arrangements and combinations of parts of the same, all substantially as will be hereinafter set forth and finally embraced in the clauses of the claim.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several views, Figure 1 is a front elevation of the improved vise. Fig. 2 is a side view of the same. Fig. 3 is a plan of a certain improved cross-head and coöperating parts. Fig. 4 is a section of the same on line x . Fig. 5 is a vertical section of a portion of the base-plate or frame of the vise, and Fig. 6 is a perspective view of one of the biting-blades adapted to engage the pipe and hold it in position.

In said drawings, a indicates the frame of the vise, which is preferably in sections, a' being a bottom section, and a^2 an upper section or yoke. These sections are preferably hinged together, as at a^3 , at one side and at the opposite side joined or connected by a removable pin a^4 , the said pin being removably

fastened in place by a cotter-pin a^5 or any other suitable fastening device.

By making the frame in sections, as described, I am enabled to open up said frame to permit the quick introduction of a pipe into the interior receptacle therefor sidewise, and thus save considerable time in adjusting the device over the longitudinal method of insertion required by my former construction. The said sections a' a^2 are interiorly provided with oppositely-inclined bearings a^6 a^7 . The oppositely-inclined bearings of the lower section a^6 a^6 coincide with or lie in alinement with the inclined bearings a^7 a^7 of the upper section and serve therewith as backings or longitudinal supports for the biting-blades b b , the said blades lying flatwise against said bearings from end to end, and thus when pressure is applied at the upper ends of said blades the said blades are prevented from springing or bowing outward and relaxing their hold upon the pipe. The upper inclined bearings are made suitably narrow or thinner than the lower bearings and serve as guides or slideways for the opposite ends of a cross-head c , the said cross-head at its opposite ends being notched or recessed, as at c' c' in Figs. 3 and 4. These slots are of sufficient length not only to receive the said web-like bearings a^7 , but also to receive the upper ends of the blades b and permit the said blades to slide oppositely therein. The said cross-head at said slots is provided with ways c^3 c^3 , formed at the opposite sides of said slots, to receive lateral lugs b' b' at the upper ends of the blades, the said lugs b' sliding on said ways as the cross-head is raised or lowered, so as to permit the said blades to maintain their parallel relation to and against the oppositely-inclined bearings on which they rest.

The ways c^3 are inclined downward from near the center of the cross-head, and thus the said blades suspended therefrom may automatically gravitate toward the inclined bearings a^6 a^7 at the sides of the frame, as will be understood. I prefer, however, to assist said blades in their outward movements by means of springs d' , which are secured to the downward hub e' of the cross-head and bear outwardly and oppositely against the blades.

At the center of the cross-head is formed

or arranged a suitable bearing for a clamping-screw d , the said screw at its upper end being provided with a hand-bar e , by means of which the said screw may be turned with
 5 great power. The said screw d is arranged in female-threaded bearings in the upper section a^2 , and by turning the said screw the said cross-head will be raised or lowered to bring the blades from or into biting contact
 10 with the pipe at points nearly in line with the opposite sides, so that said blades abut against the supported or thick metal and the pipe will not collapse under great holding pressure.

15 By the construction shown and described I am enabled to obtain a more rigid engagement with the pipe and avoid all the danger of breaking the blades or bending the same, and I am enabled to insert the pipe in the
 20 vise with greater facility and ease. Furthermore, all pivots are dispensed with and the lack of strength incident to their use, and I secure a bearing contact upon the body of the blades inward from the lateral bearings.

25 Having thus described the invention, what I claim as new is—

1. In a pipe-vise, the combination with a frame having oppositely-inclined bearings a^6 , a^6 , of a pair of biting-blades b , b , arranged to
 30 slide on said oppositely-inclined bearings and maintain their parallelism therewith and means for raising and lowering said blades, substantially as set forth.

2. In a pipe-vise, the combination with a
 35 frame having oppositely-inclined bearings, of a cross-head movable vertically in said frame and carrying biting-blades, said blades being arranged near the opposite ends of said cross-head and free to move laterally toward and
 40 from the center of said cross-head at their upper ends, and means for raising and lowering said cross-head, substantially as set forth.

3. In a pipe-vise, the combination with a frame having oppositely-inclined bearings, a
 45 vertically-movable cross-head slotted at opposite ends, biting-blades arranged in the slots of the cross-head and means for raising and lowering said cross-head and blades carried thereby, substantially as set forth.

50 4. In a pipe-vise, the combination with a

frame having oppositely-inclined bearings, of a cross-head movable vertically in said frame and having downwardly-inclined ways c^3 c^3 , biting-blades adapted to slide on said ways, and means for raising or lowering the said
 55 cross-head, substantially as set forth.

5. In a pipe-vise, the combination with the frame having oppositely-inclined bearings, of a cross-head, biting-blades b , b , carried by
 60 said cross-head and springs tending to throw said blades toward said inclined bearings and means for operating said cross-head, substantially as set forth.

6. In a pipe-vise, the combination with the frame having oppositely-inclined bearings, of
 65 blades b , and means for raising and lowering said blades and springs adapted to hold said blades in contact with said bearings, substantially as set forth.

7. In a pipe-vise, the combination with the
 70 frame having oppositely-inclined bearings at its lower part and a yoke or upper part hinged to said lower part and having correspondingly-inclined bearings a^7 , a^7 , means cooperating with the hinge for fastening said upper
 75 part to said lower part and permitting the upper part to open away from said lower part at one side of the frame, biting-blades and means for raising and lowering the same, sub-
 80 stantially as set forth.

8. In a pipe-vise, the combination with the sectional frame, the sections of which are hinged at a^8 , at one side and separably joined or connected at the opposite side, said sec-
 85 tions being interiorly provided with oppositely-inclined and coinciding bearings a^6 , a^6 , a^7 , a^7 , the upper bearings serving as guides or slideways, a cross-head slotted at opposite ends and arranged on said slideways, biting-
 90 blades having lugs b' , b' , and bearings b^2 , b^2 , and adapted to slide on said cross-head and maintain a parallel relation to said inclined bearings, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 11th day of
 95 May, 1898.

GEORGE F. CONDIT.

Witnesses:

CHARLES H. PELL,
 C. B. PITNEY.