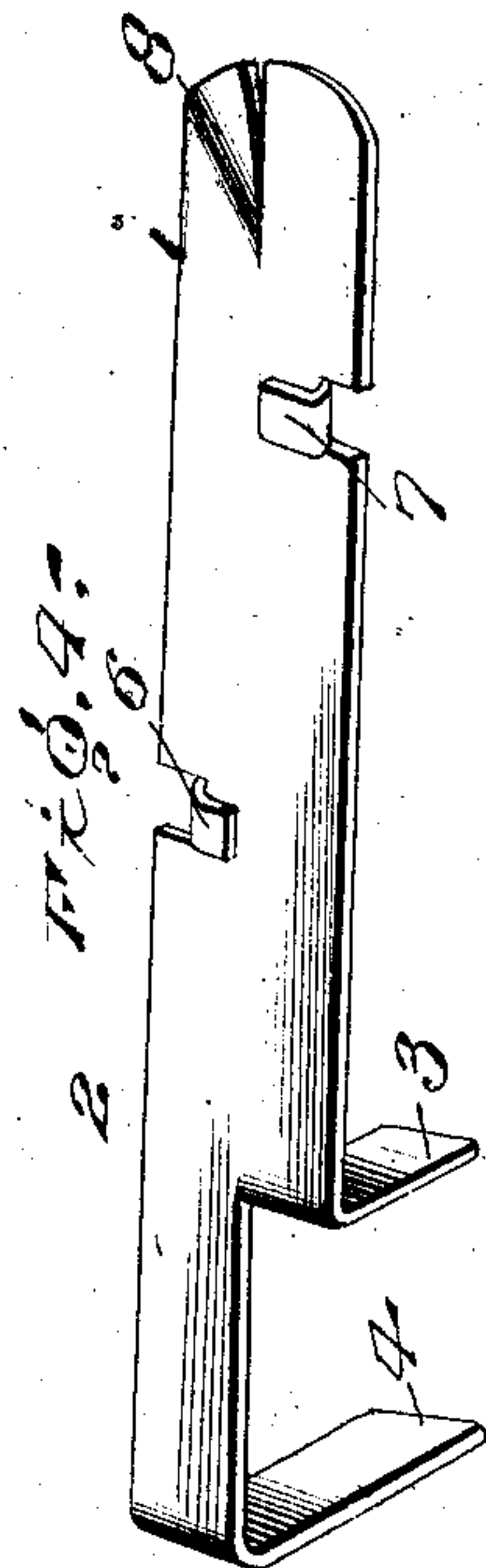
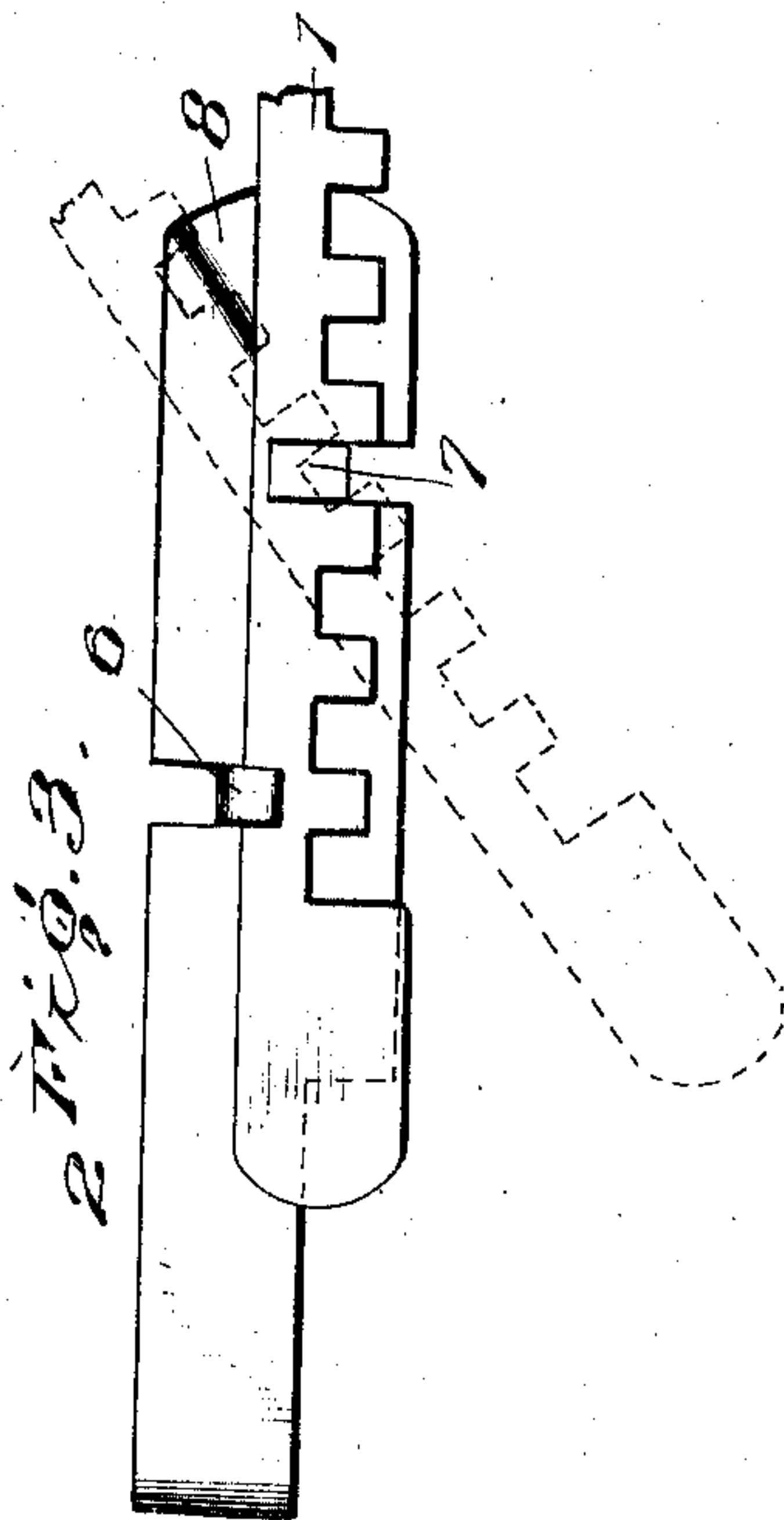
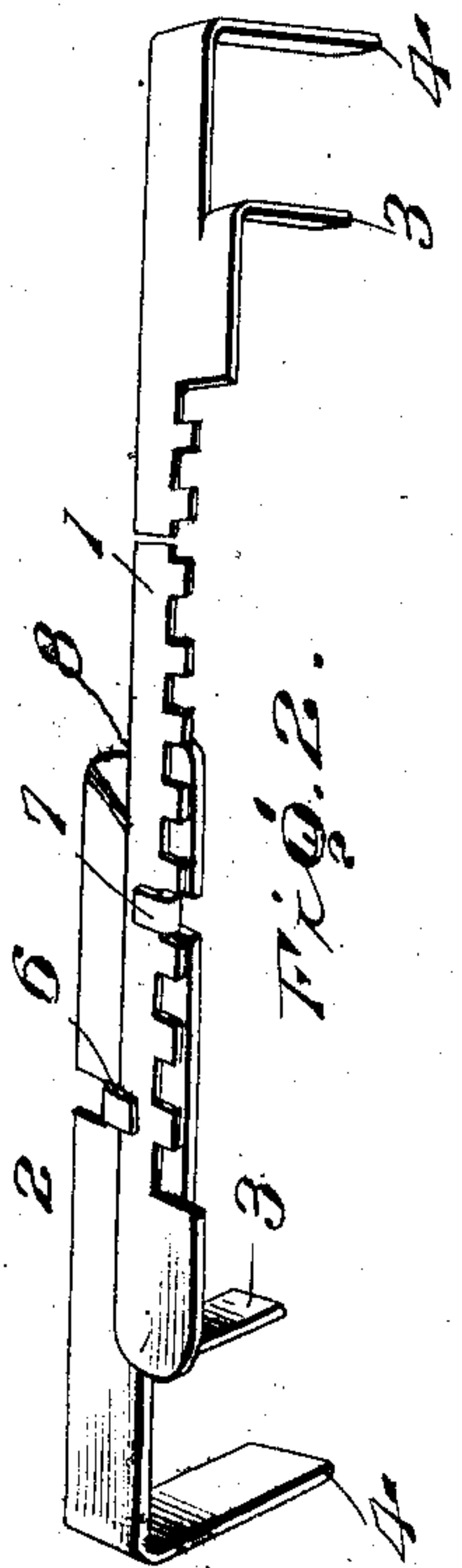
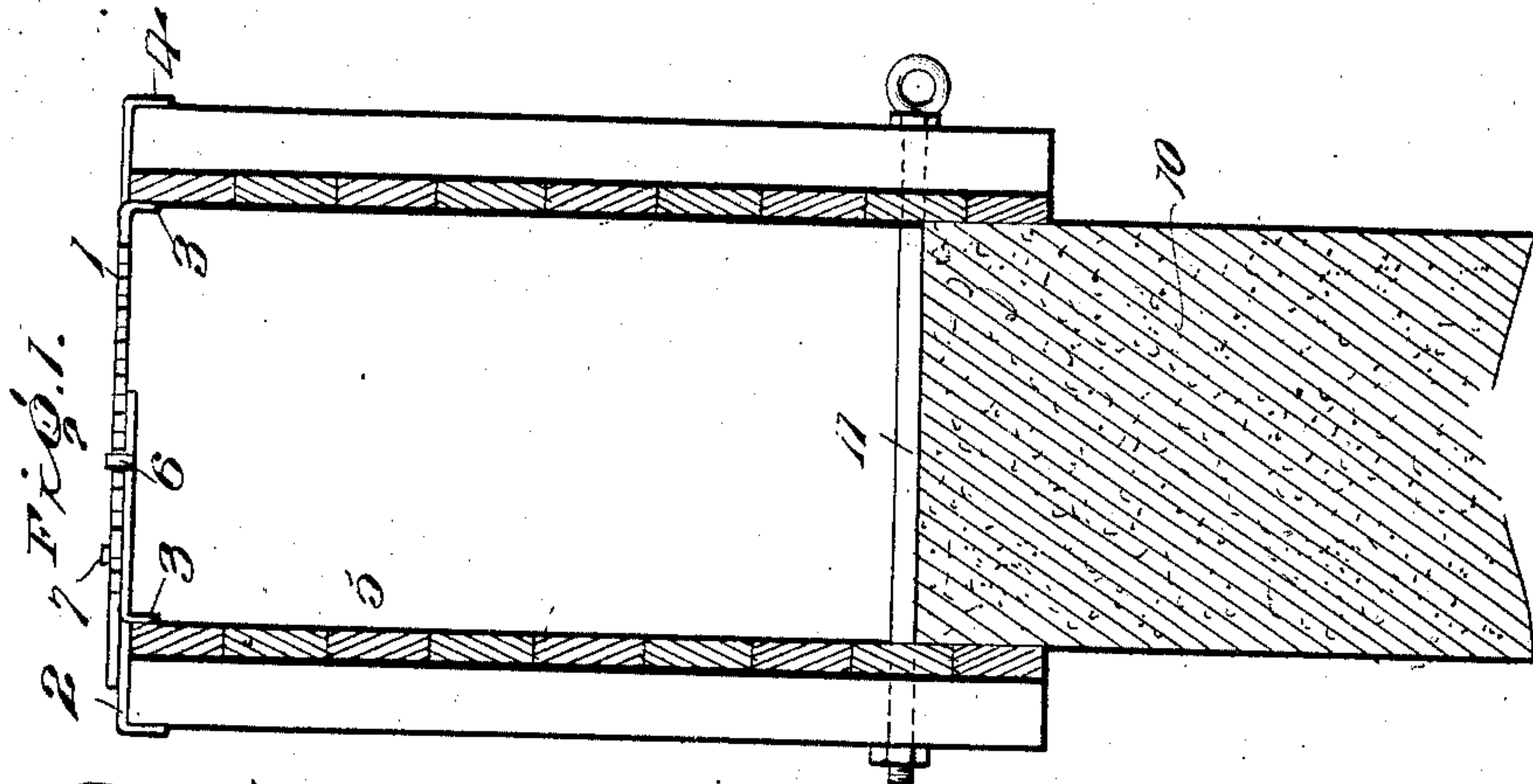


No. 874,151.

PATENTED DEC. 17, 1907.

J. R. & A. ZEISER.  
COMBINED CLAMP AND SPREADER.  
APPLICATION FILED MAR. 15, 1907.



Witnesses

*[Signature]*  
W. R. Woodson

Inventors

J. R. Zeiser  
A. Zeiser

By

*[Signature]*

Attorneys



# UNITED STATES PATENT OFFICE.

JOHN R. ZEISER AND ADLOW ZEISER, OF BERWICK, PENNSYLVANIA.

## COMBINED CLAMP AND SPREADER.

No. 874,151.

Specification of Letters Patent.

Patented Dec. 17, 1907.

Application filed March 15, 1907. Serial No. 362,526.

*To all whom it may concern:*

Be it known that we, JOHN R. ZEISER and ADLOW ZEISER, citizens of the United States, residing at Berwick, in the county of Columbia and State of Pennsylvania, have invented certain new and useful Improvements in Combined Clamps and Spreaders, of which the following is a specification.

In building concrete walls, the material is confined between side pieces which are required to be held apart the proper distance and prevented from outward displacement, said side pieces being removed after the section confined thereby has set sufficiently to retain its shape.

The present invention relates to means for holding the side pieces, crib members or former sections, in place so as to prevent both inward and outward displacement thereof, said means being readily adjustable to any thickness of wall.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment is shown in the accompanying drawings, in which:

Figure 1 is a top plan view of a section of wall, showing a crib or former in position for the next section, the outer ends of the members of the crib or former being held in place by a clamp and spreader embodying the invention. Fig. 2 is a perspective view of the clamp and spreader. Fig. 3 is a front view of the device, an end portion of one of the members being broken away and the dotted lines showing the relative position of the members when released to admit of their adjustment. Fig. 4 is a detail perspective view of the clamp and spreader member provided with hooks and a stop.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The clamp and spreader comprise complementary members 1 and 2. The members 1 and 2 are relatively adjustable to admit of

lengthening or shortening the device according to the thickness of the wall to be constructed. Each member is provided at its outer end with spaced lugs 3 and 4 which embrace opposite sides of the members 5 of the crib or former adapted to receive the concrete or other material employed in the formation of the wall. Each member consists of a bar, the outer end of which is split longitudinally and the portions bordering upon the cut bent laterally to provide the lugs 3 and 4. The distance between a pair of lugs corresponds to the thickness of the crib or former member 5.

One of the members, as 2, is provided at opposite edges with hooks 6 and 7 which are located at different points in the length of the member and are formed by partly severing edge portions of the bar and bending the parts between the cuts to form the hooks. The hooks 6 and 7 are adapted to embrace opposite edge portions of the member 1 so as to hold the two members in fixed position when adjusted and properly fitted together. A stop 8 is provided at the end of the member 2 opposite that provided with the spaced lugs 3 and 4 and acts jointly with the hooks 6 and 7 to retain the members 1 and 2 in proper position. A longitudinal cut extends inward from the extremity of the member 2 near one edge thereof and the part thus separated is bent outward from the side having the hooks 6 and 7 to form the stop 8 which is adapted to engage the smooth edge of the member 1 and hold the same in place.

The member 1 is reduced in width between its end portions, and the edge bordering upon the space formed by cutting away an edge portion of the member is notched to form teeth. The hook 7 of the member 2 is adapted to enter a selected space between adjacent teeth so as to hold the members 1 and 2 from longitudinal displacement. The edge portion of the member 1 opposite the toothed edge is adapted to be engaged by the stop 8 and by the hook 6, and since the hook 7 is located intermediate of the stop 8 and hook 6, the members 1 and 2 when adjusted are prevented from turning, but upon pressing the members 1 and 2 apart to cause the stop 8 to clear the member 1, the latter may be turned about as indicated in Fig. 3, thereby releasing the member from the hooks 6 and 7 and admitting of the mem-



bers being adjusted to any position within their range of movement, and when adjusted to the required position, the members are brought into alinement and are held in fixed-adjusted position by the hooks 6 and 7 embracing opposite edge portions of the member 1, and the stop 8, in the manner hereinbefore stated.

When starting a wall, the side pieces 5, or the crib sections, may be held in proper position by having clamps and spreaders applied to opposite ends or edges as will be readily understood. After a section of wall has been formed as indicated at 10 in Fig. 1 of the drawings, the side pieces or crib sections 5 are removed and adjusted for the next section of wall to be constructed. The ends of the crib sections 5 adjacent to the section of wall 10 previously constructed, are arranged to embrace said section and are clamped thereto by means of a tie rod or bolt 11. The opposite ends of the crib sections 5 are secured and properly spaced by having one or more combined clamps and spreaders fitted thereto in a manner substantially as indicated in Fig. 1. It will thus be understood that the crib sections are not only held from inward and outward displacement, but are spaced apart the required distance. It will also be understood that the combined clamp and spreader may quickly be removed and instantly placed in position and that the same may be adjusted to different thickness of walls. The parts of the clamp and spreader may be separated to be placed in compact form or may be adjusted, or may be instantly adjusted to meet any requirement both as regards assembling the parts or adapting the same to any thickness of wall.

Having thus described the invention, what is claimed as new is:

1. A combined clamp and spreader for the purpose specified comprising complementary members carrying means for engaging the sides of a form, one of said complementary members being formed with oppositely facing hook members and a stop, while the other complementary member is formed with a notched edge having an adjustable and interlocking connection with the hook mem-

bers and normally held in engagement therewith by means of the before mentioned stop.

2. A combined clamp and spreader for the purpose specified comprising complementary members provided with means for engaging the sides of a form, one of the said complementary members being formed with teeth along an edge thereof while the other complementary member carries oppositely facing hook members and is provided with a stop, the said hook members having an adjustable and interlocking connection with the toothed portion of the first mentioned complementary member and being held in engagement therewith by means of the stop.

3. A combined clamp and spreader for the purpose specified comprising complementary members provided with means for engaging the sides of a form, one of the complementary members having an edge portion thereof toothed, while the other complementary member is provided with a stop and a hook near one edge and an oppositely facing hook near the opposite edge intermediate the before mentioned stop and hook, the said hooks being designed to embrace opposite edge portions of the toothed member and the stop being designed to engage the smooth edge of the toothed member and cooperate with the hooks to hold the two members in an adjusted position.

4. A combined clamp and spreader for the purpose specified comprising complementary members provided with means for engaging the sides of a form, one of said complementary members carrying hook members and a stop while the opposite complementary member is reduced in width between its end portions, the edge thereof bordering upon the reduced portion being notched and having an interlocking connection with the before mentioned hook members, the before mentioned stop serving to retain the hook members and notched edge in engagement with each other.

In testimony whereof, we affix our signatures in presence of two witnesses.

JOHN R. ZEISER. [L. s.]  
ADLOW ZEISER. [L. s.]

Witnesses:

JOHN W. EVANS,  
D. E. LEWIS.