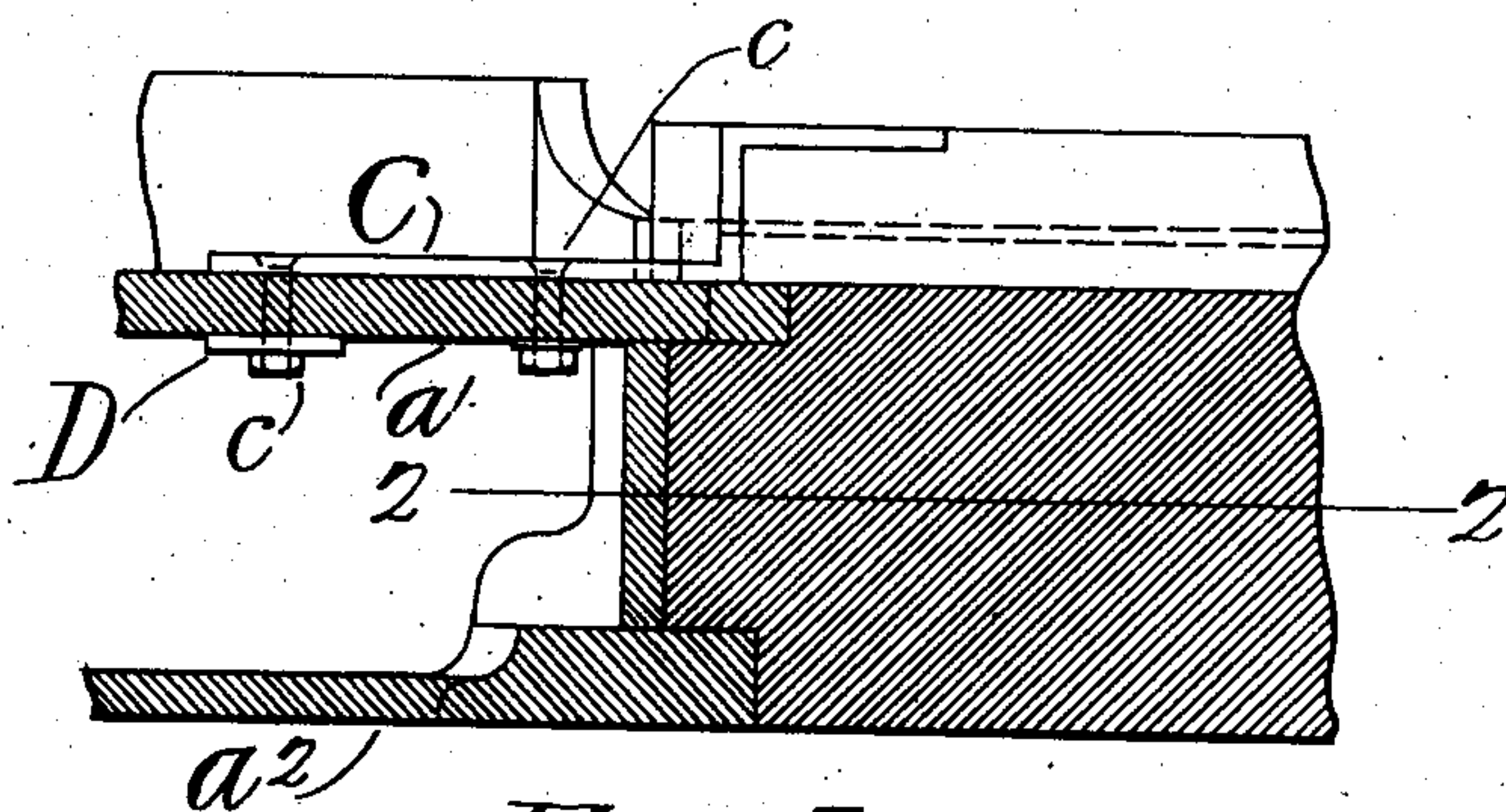
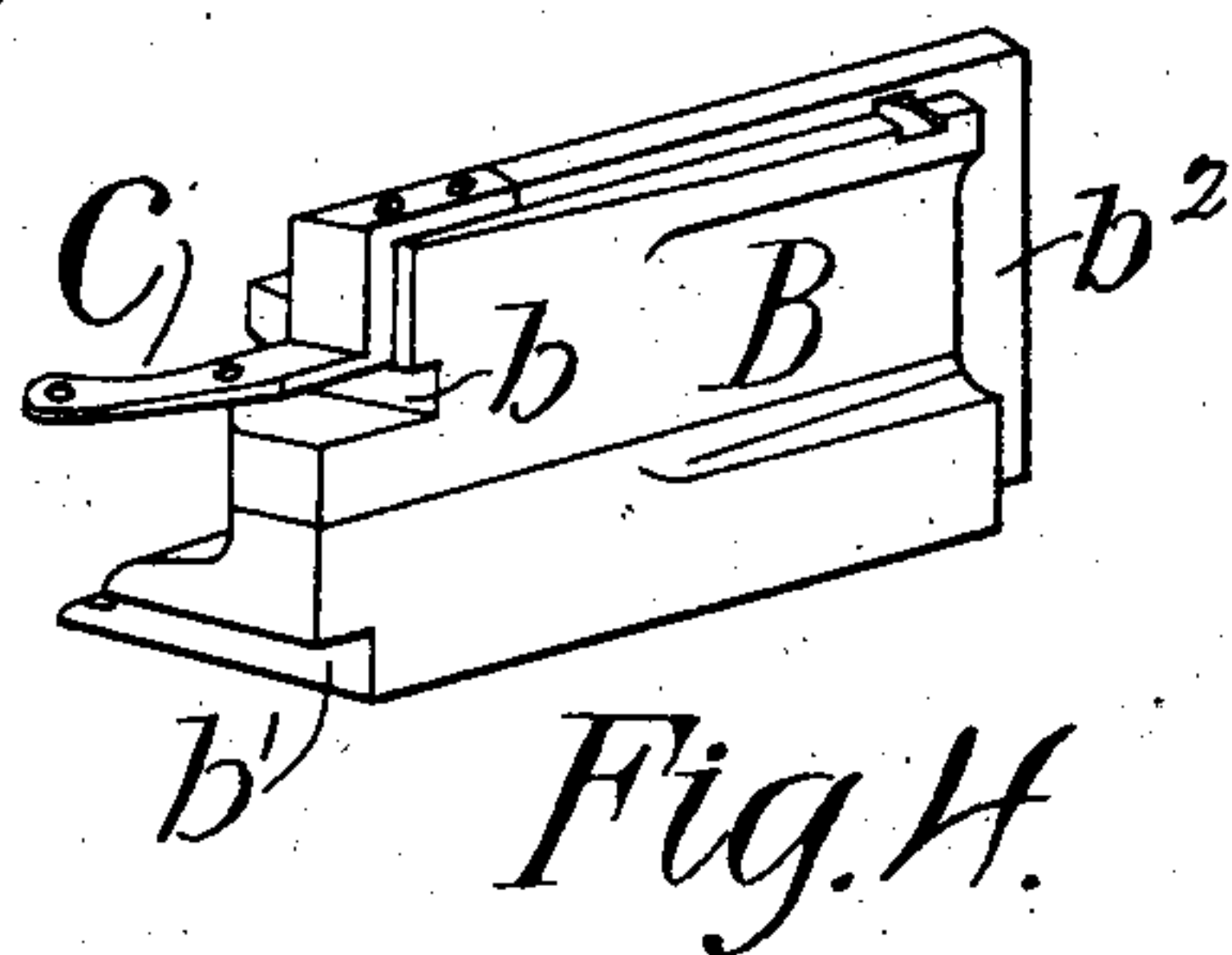
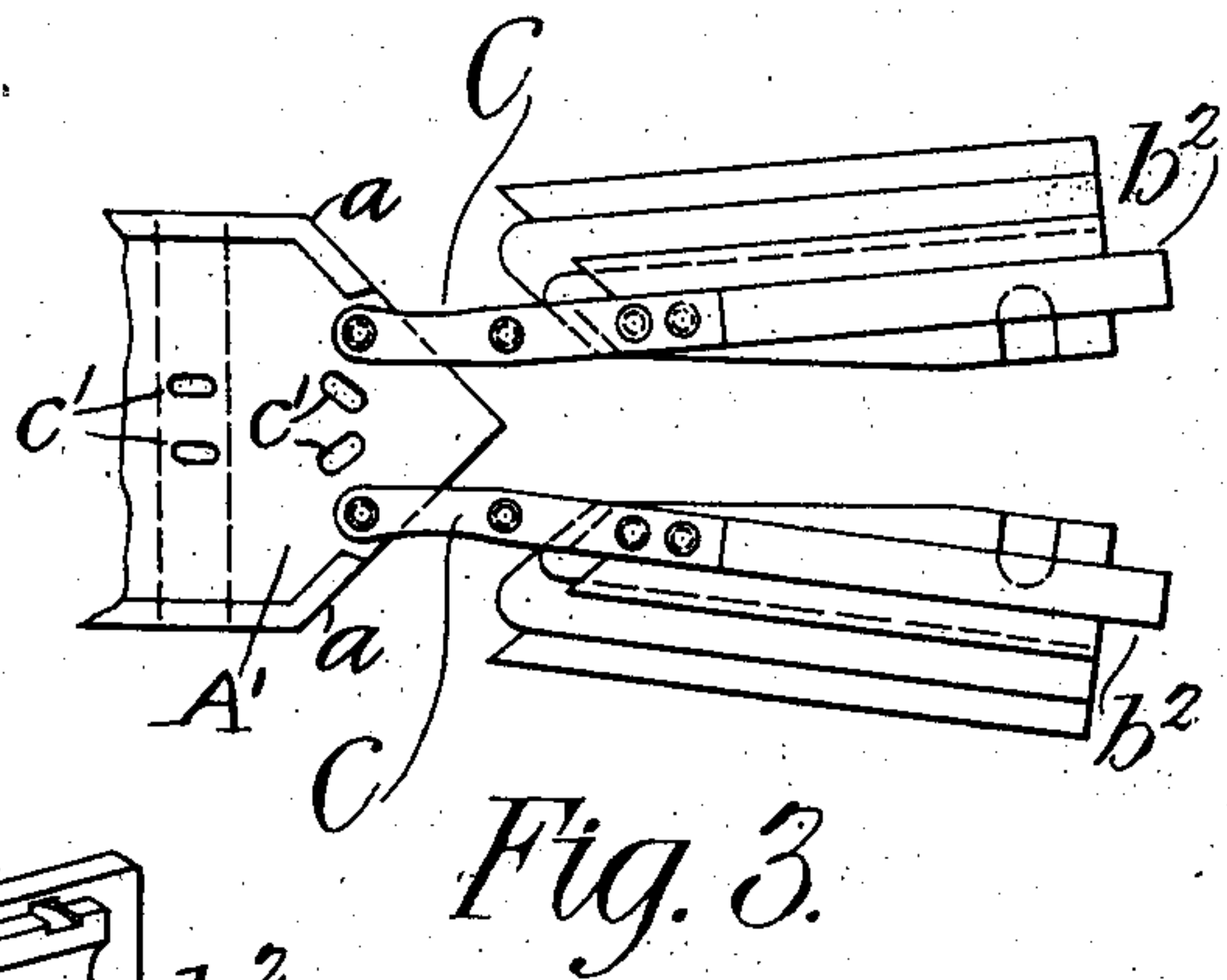
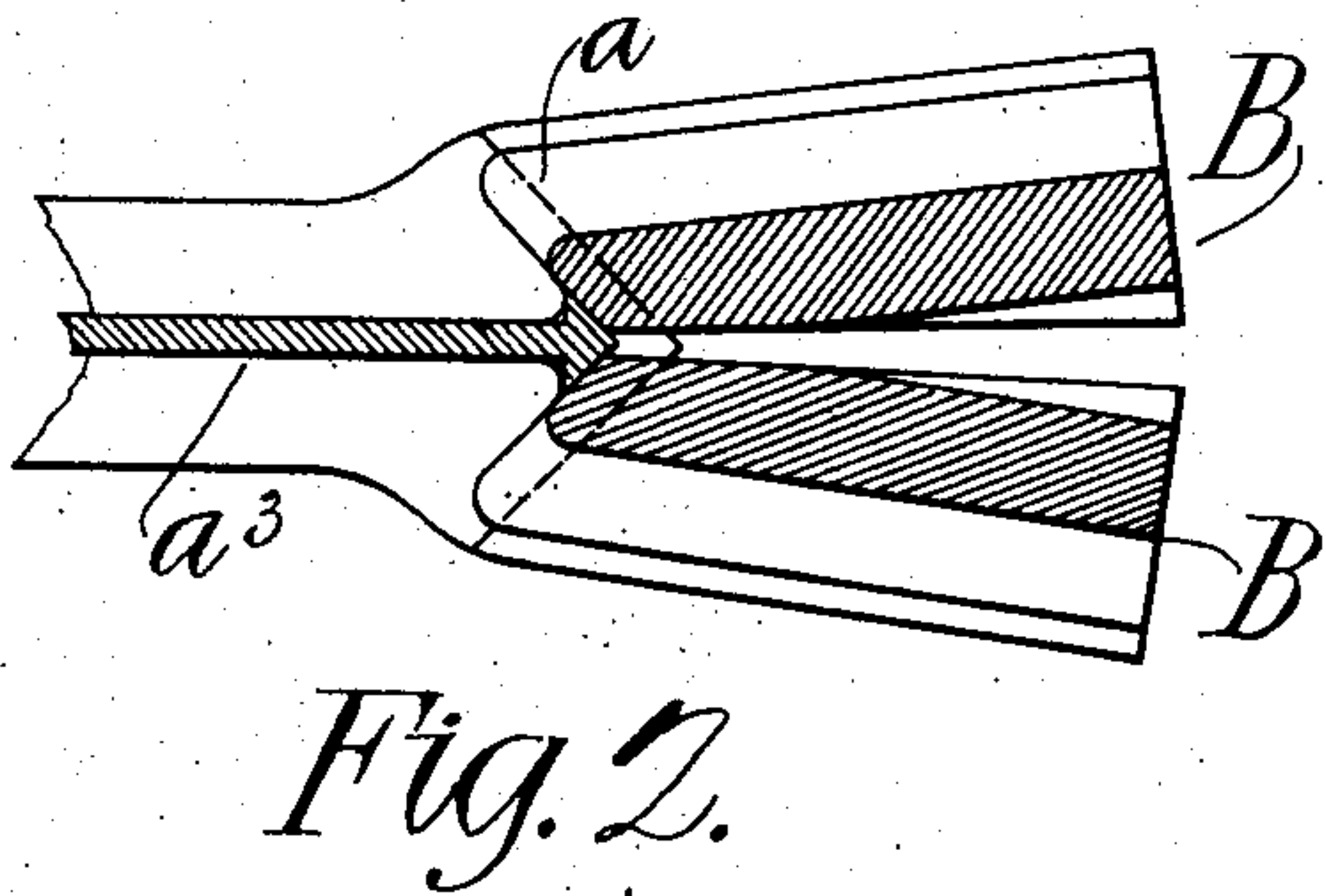
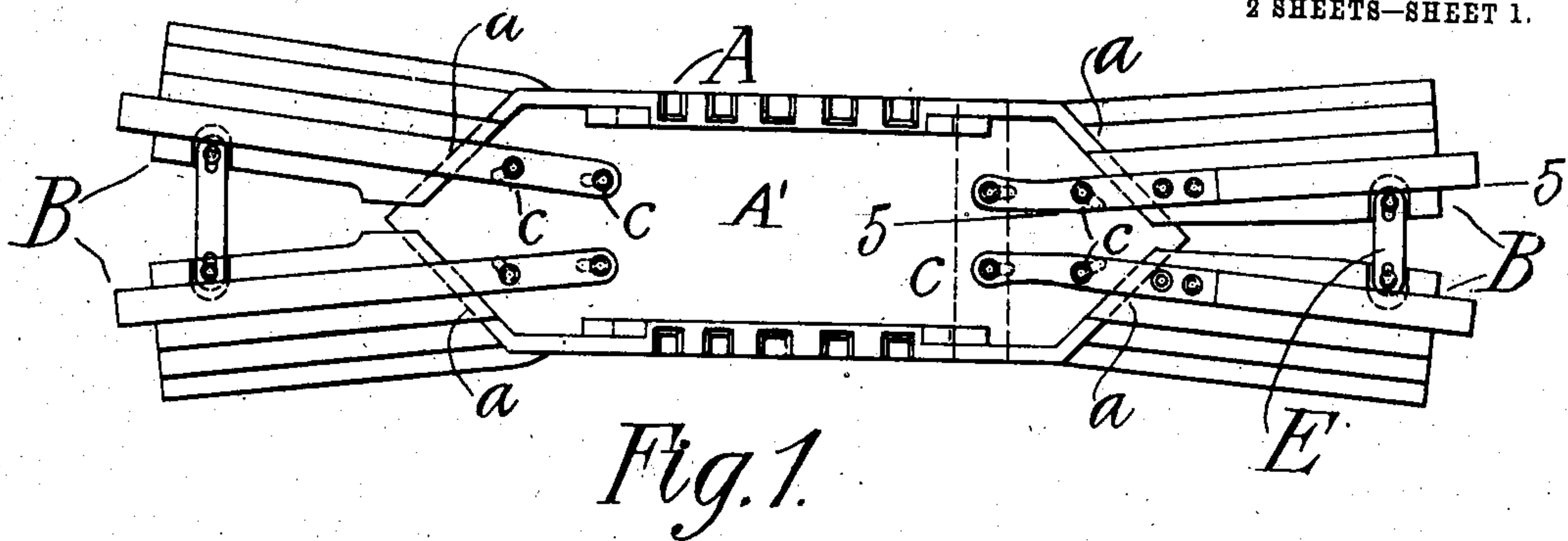


No. 834,279.

PATENTED OCT. 30, 1906.

G. M. ERVIN.
PATTERN FOR RAILWAY TRACK STRUCTURES.
APPLICATION FILED APR. 22, 1905.

2 SHEETS—SHEET 1.



WITNESSES:
Chas. O'ram Jr.
Loretto O'Connell

Fig. 5.

INVENTOR
Geo. M. Ervin,
BY
Geo. H. Parmelee,
his ATTORNEY.

No. 834,279.

PATENTED OCT. 30, 1906.

G. M. ERVIN.
PATTERN FOR RAILWAY TRACK STRUCTURES.

APPLICATION FILED APR. 22, 1905.

2 SHEETS—SHEET 2.

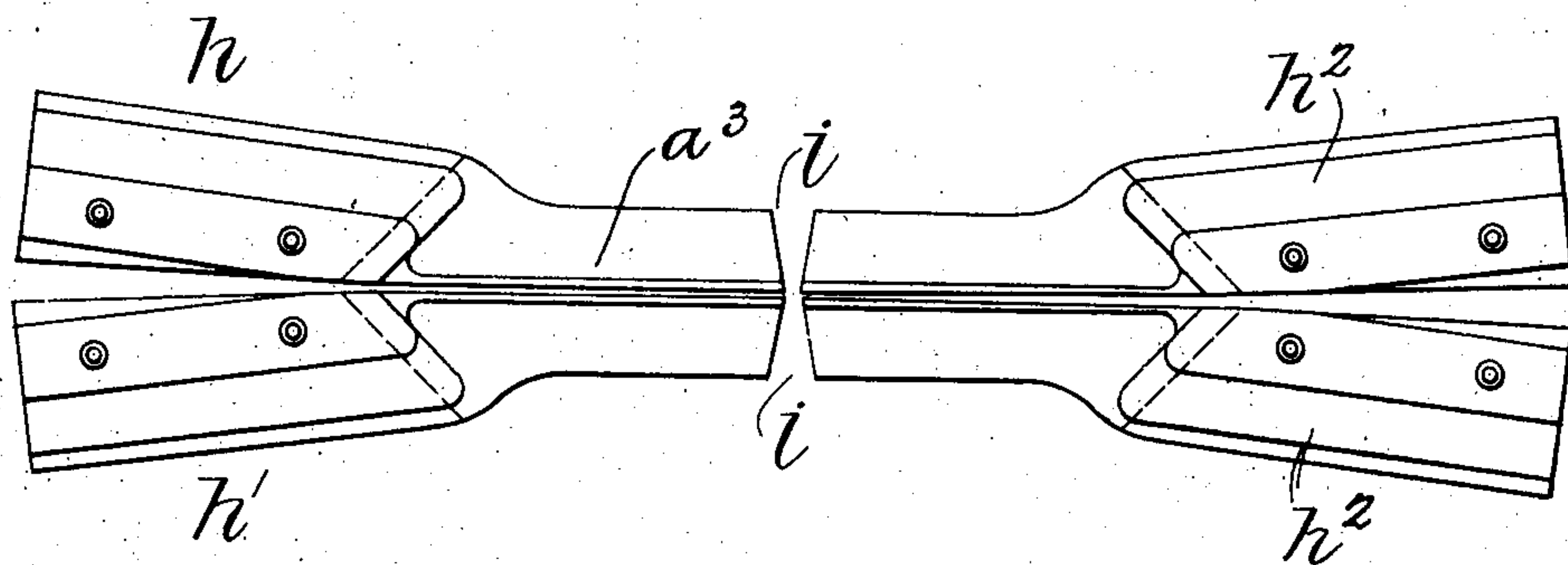


Fig. 6.

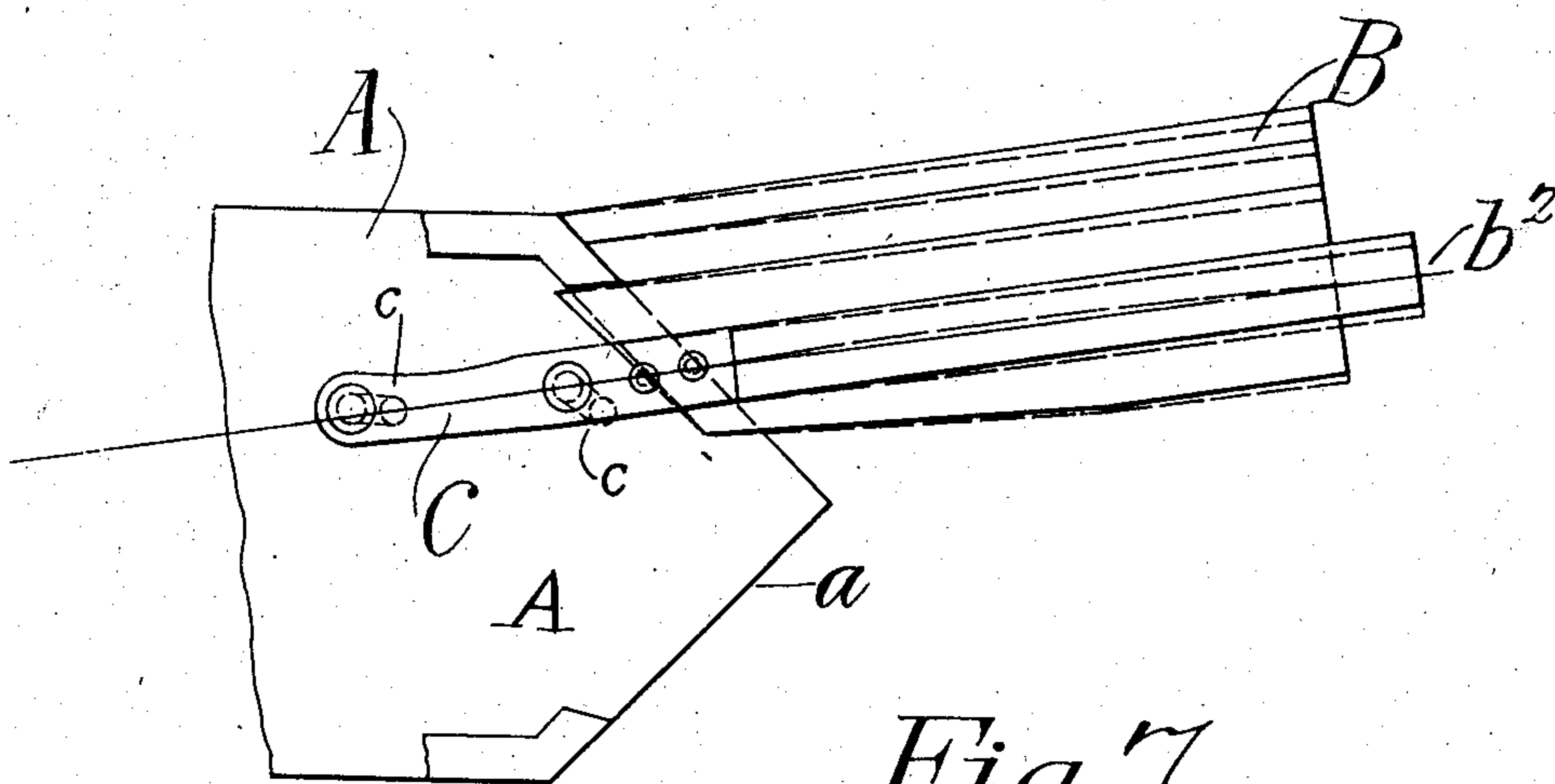


Fig. 7.

WITNESSES:

Chas. Duram Jr.
Loretta O'bonnell

Geo. M. Ervin, INVENTOR
BY
Geo. H. Parmelee,
his ATTORNEY.

UNITED STATES PATENT OFFICE.

GEORGE M. ERVIN, OF JOHNSTOWN, PENNSYLVANIA, ASSIGNOR TO THE
LORAIN STEEL COMPANY, A CORPORATION OF PENNSYLVANIA.

PATTERN FOR RAILWAY-TRACK STRUCTURES.

No. 834,279.

Specification of Letters Patent.

Patented Oct. 30, 1906.

Application filed April 22, 1905. Serial No. 256,844.

To all whom it may concern:

Be it known that I, GEORGE M. ERVIN, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Improvement in Patterns for Railway-Track Structures, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention has relation to patterns for casting railway-track structures, such as those described and claimed in my Patent No. 784,735, dated March 14, 1905, in which the cast body portion of the structure is provided with diverging arms in which the connecting rail members are pocketed.

The object of my invention is to provide an adjustable pattern whereby within certain limits the same pattern can be used notwithstanding differences of angle or radius, or both. It has heretofore been proposed to accomplish this object by making the diverging arm portions of the pattern capable of a radial movement with respect to the central body portion. This type of pattern if used in a structure such as shown in my said patent would require the rail ends and also the ends of the intersection-plate to be milled and shaped to a true radial fit, which would materially increase the cost of making the structure and would offset the advantage of the adjustment feature.

My present invention enables the rail ends to be cut at an angle, which angle need not be changed notwithstanding changes in the angle of the structure.

My invention, as above stated, also enables me to take care of changes in the radius of one or both of the intersecting track members.

With these objects in view my invention consists in the novel construction and combination of parts, all substantially as hereinafter described, and pointed out in the appended claims, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of a pattern embodying my invention; Fig. 2, a horizontal section through one end portion of the same, the section being taken on the line 2 2 of Fig. 5; Fig. 3, a plan view of one end portion of the pattern, showing the arms partially removed; Fig. 4, a perspective view of one of the said arms removed; Fig. 5, a vertical sec-

tion taken on the line 5 5 of Fig. 1; Fig. 6, a plan view of the removable foot portion of the pattern and showing a slight modification; Fig. 7, a partial plan view illustrating different adjustments of one of the arm portions.

The letter A designates the central or body portion of the pattern having the core-seat A' for the core, which forms in the finished casting the seat for the usual hard-metal intersection-plate. This body portion has the angular ends *a a*, with its floor portion *a'* and base portion *a²* projecting beyond its web portion *a³*, as shown in Fig. 5.

B designates the adjustable arm members of the pattern, which are formed with their inner ends at the same angle as the ends *a* of the part A, said inner ends being slotted at *b* to receive the projecting floor portion *a'* and shouldered at *b'* to fit the base portion *a²*, as clearly shown in Figs. 4 and 5.

Each arm B has a portion *b²*, which is a core-print for the core, which forms the rail-seating pocket in the finished casting. Secured to each of these core-prints is a metallic arm or strap C, which is offset downwardly to fit the upper surface of the floor *a*, to which it is secured by means of the bolts *c*, which pass through oblong slots *c'* in said floor.

To strengthen the pattern and to form a bearing for the nuts of the bolts *c* or some of them, a metal plate D is secured to the under side of the floor.

E designates adjustable braces for securing and bracing the arms B at the proper adjustment.

Fig. 1 shows the arms B adjusted to the widest angle of which they are capable. To adapt the pattern for use in casting a frog of smaller angle, the bolts *c* are loosened and the arms B at each end of the pattern are moved toward each other, the bolts *c* moving in the slots *c'*. This movement of the arms B is both inward and endwise. This changes the angle of the inner ends of the arms to a slight extent only, and such change can be readily taken care of by the molder, so that in all cases the rail ends of the track structure can be cut at the same angle. The only break which these adjustments make in the outline of the pattern is a slight break at the outer junction of the arms with the portion A, which can be readily taken care of by the

molder, or preferably the foot portion of the pattern is divided into four separate pieces h h' h^2 h^3 , as shown in Fig. 6, in which case the only break due to different adjustments is at the points i , which can be still more easily taken care of by the molder. It is frequently desired to use these patterns for structures where one or both of the intersecting tracks of the structure are curved. For this purpose the cores which form the rail-seating pockets are made sufficiently large so as to permit of an adjustment within certain limits of the rails when the latter are seated in such pockets to take care of the curvature thereof. In such case it will be evident that a slight difference will be necessary in the adjustment of the arm members B of the pattern—that is to say, the said arms will have to be adjusted to a slightly different position for casting a structure wherein a curved rail is to be seated in the casting formed by such arms, as will be readily seen by an inspection of Fig. 7, wherein the dotted lines show the adjustment for such a case and the full lines show the corresponding adjustment where the casting is to be used with the straight rail-arm. This variation of adjustment is permitted by reason of the fact that the slots c' are somewhat larger than the diameter of the bolt c .

By constructing the pattern as above described I am enabled to use the same pattern (provided the rail-section is substantially the same) for all variations of angle and radius which are not sufficiently great to require a different pattern for the body portion A, and where the latter must be changed the same arm portions can still be used—that is to say, the same arm portions B can be applied to different constructions of the body portion A. I am thus enabled to very largely reduce the number of patterns which the manufacturer of street-railway special work must have in stock.

It will be understood that the particular design of pattern shown in the drawings is illustrative only of my invention and that the invention is generally applicable to track structures having a central portion with projecting arm portions.

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

1. The herein-described adjustable pattern for railway-track special work, comprising a body portion, arm portions, adapt-

ed to be secured to the said body portion and means for adjusting said arm portions by a lateral and endwise movement thereof.

2. The herein-described adjustable pattern for railway-track special work, comprising a body portion having angular ends, arm portions also having angular inner ends fitting said body portion, and means for adjusting said arm portions by a lateral and endwise movement thereof.

3. In a pattern for railway-track structures, the combination with a body member having projecting angular end portions, of arm members, and metal straps secured to the arm members and adjustably secured to the body member for endwise and lateral movement.

4. In a pattern for railway-track structures, the combination with a body portion, of an arm member, and means for securing said arm member to the body portion whereby it may be angularly adjusted by a lateral and endwise movement thereof.

5. In a pattern for railway-track special work, the combination with a body portion, of an arm member adjustably secured to the body portion and having a core-print for the core which forms the rail-seating pocket of the completed casting, said core-print being materially larger in section than the section of the rail to be seated in said pocket.

6. In a pattern for railway-track structures, the combination with a pocketed central portion, of arm members having core-print portions, metallic straps secured to said core-print portions, and means for permitting an endwise and lateral adjustment of said arm members and straps.

7. In an adjustable pattern for railway-track structures, the combination of the central body portion, the laterally and endwise adjustable arm members, and adjustable braces for adjacent pairs of said arm members.

8. In an adjustable pattern for railway-track structures, the combination with the body portion, of arm portions, and means for changing the adjustment of the arm portions to adapt the pattern to changes in both angle and radius.

In testimony whereof I have affixed my signature in presence of two witnesses.

GEORGE M. ERVIN.

Witnesses:

GEO. H. PARMELEE,

H. W. SMITH.