

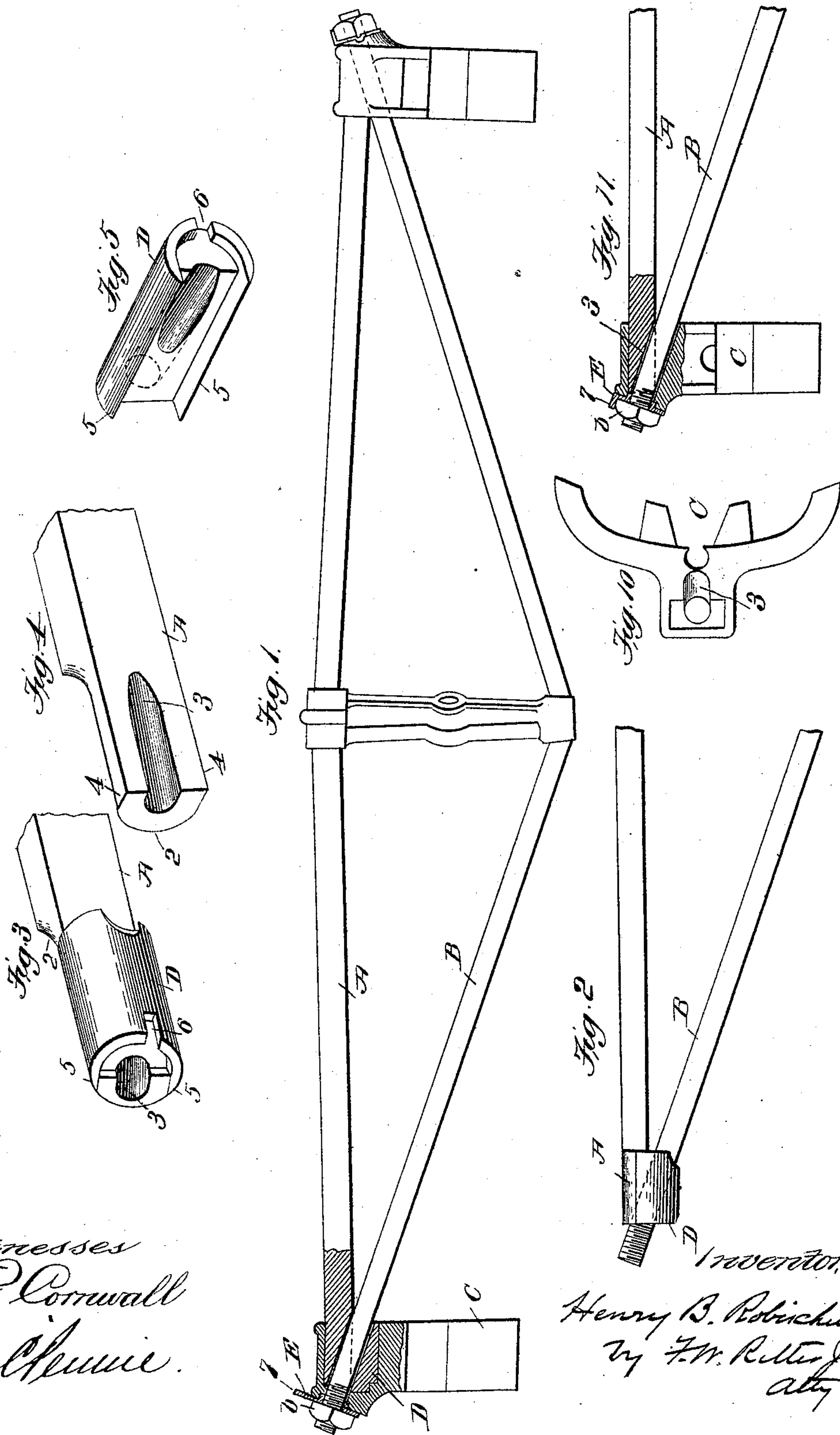
(No Model.)

2 Sheets—Sheet 1.

H. B. ROBISCHUNG.
BRAKE BEAM.

No. 486,218.

Patented Nov. 15, 1892.



Witnesses
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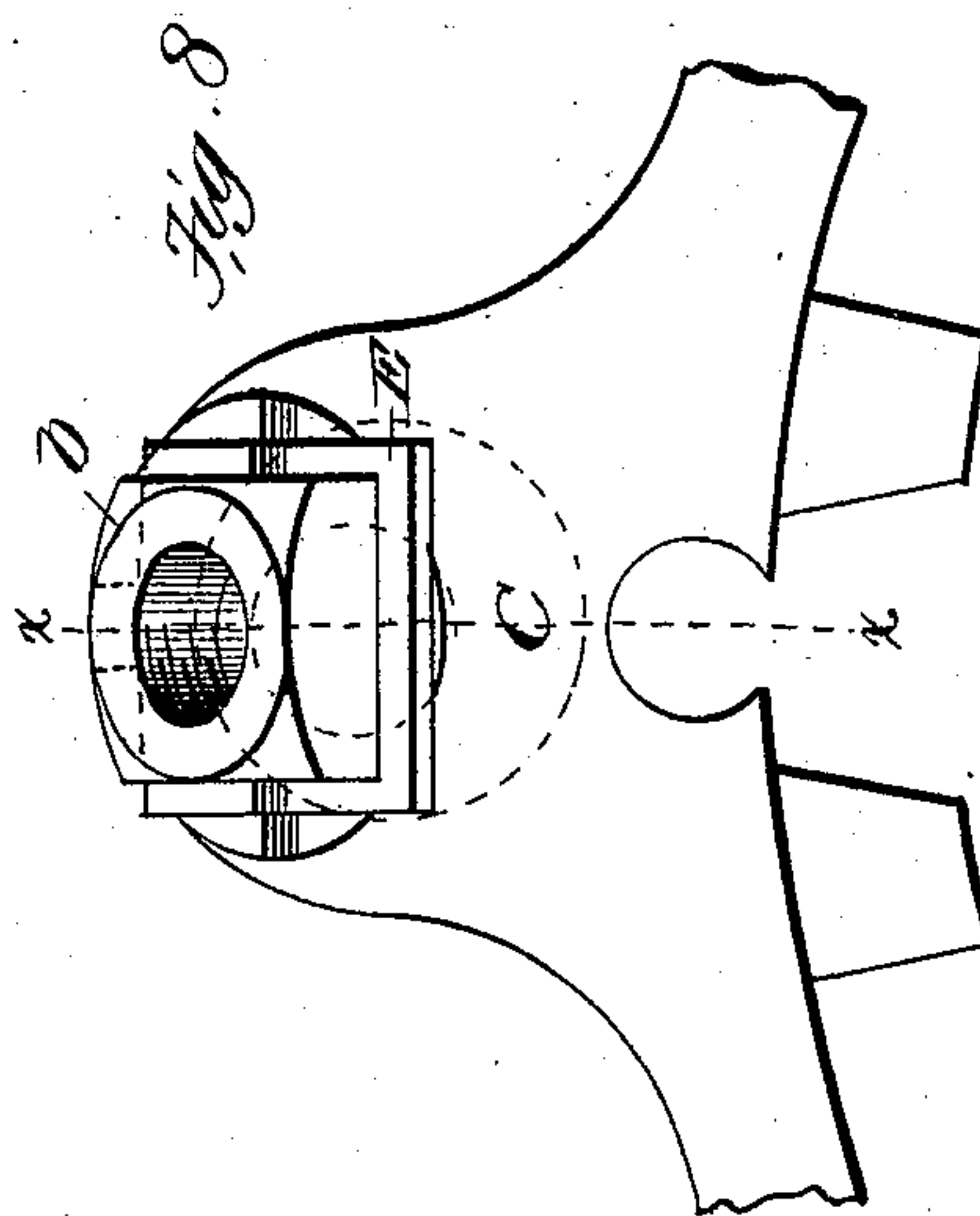
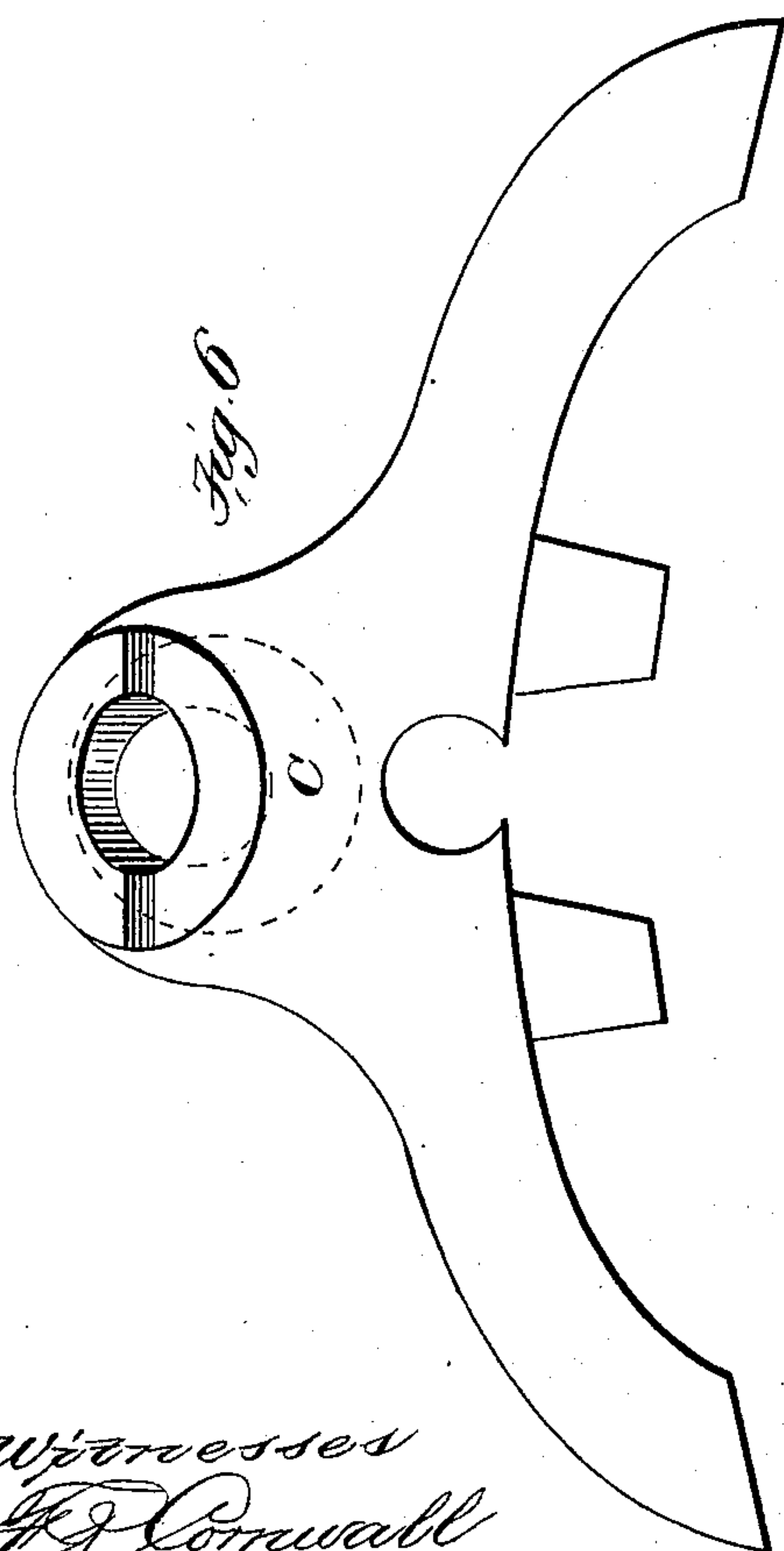
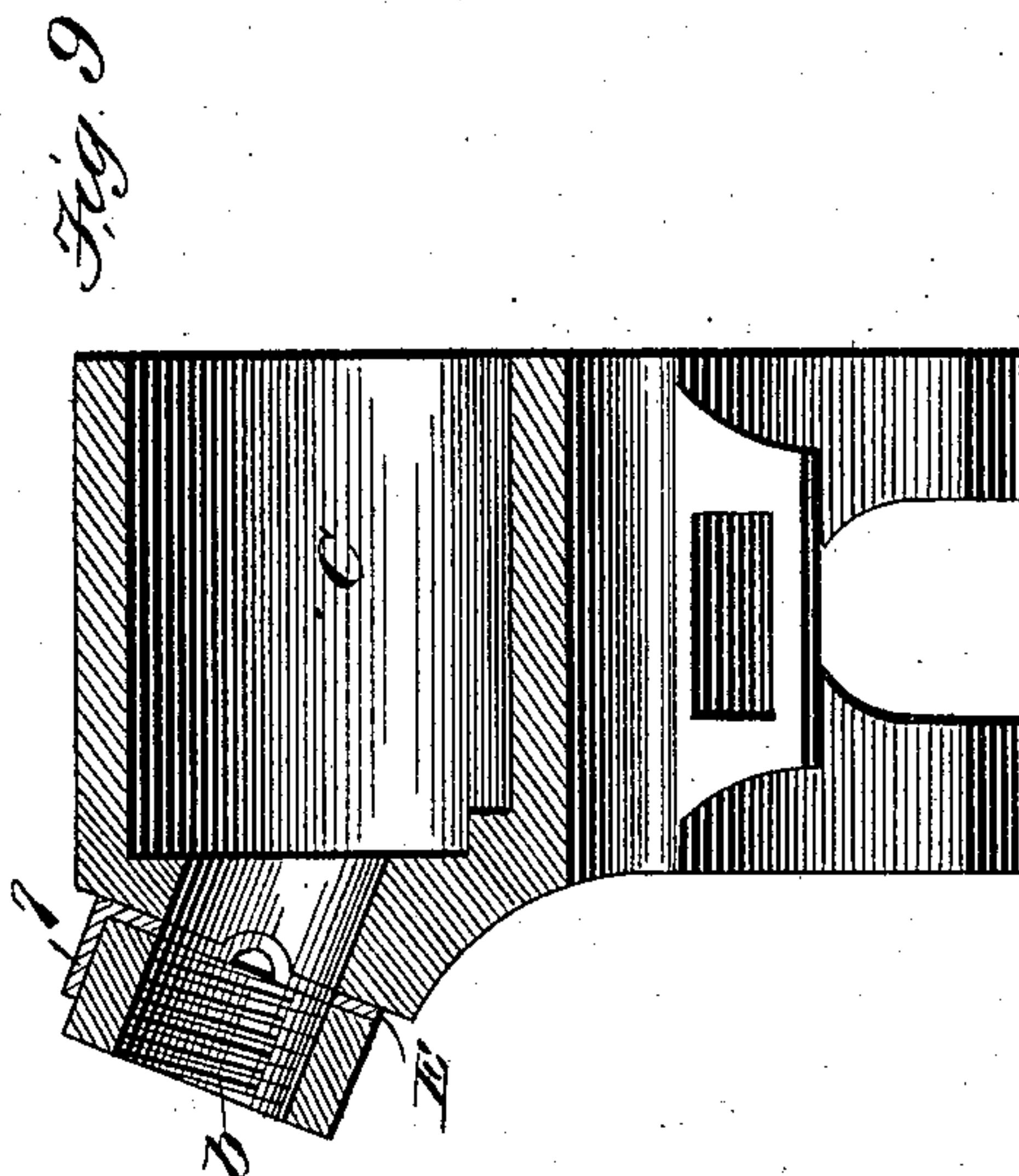
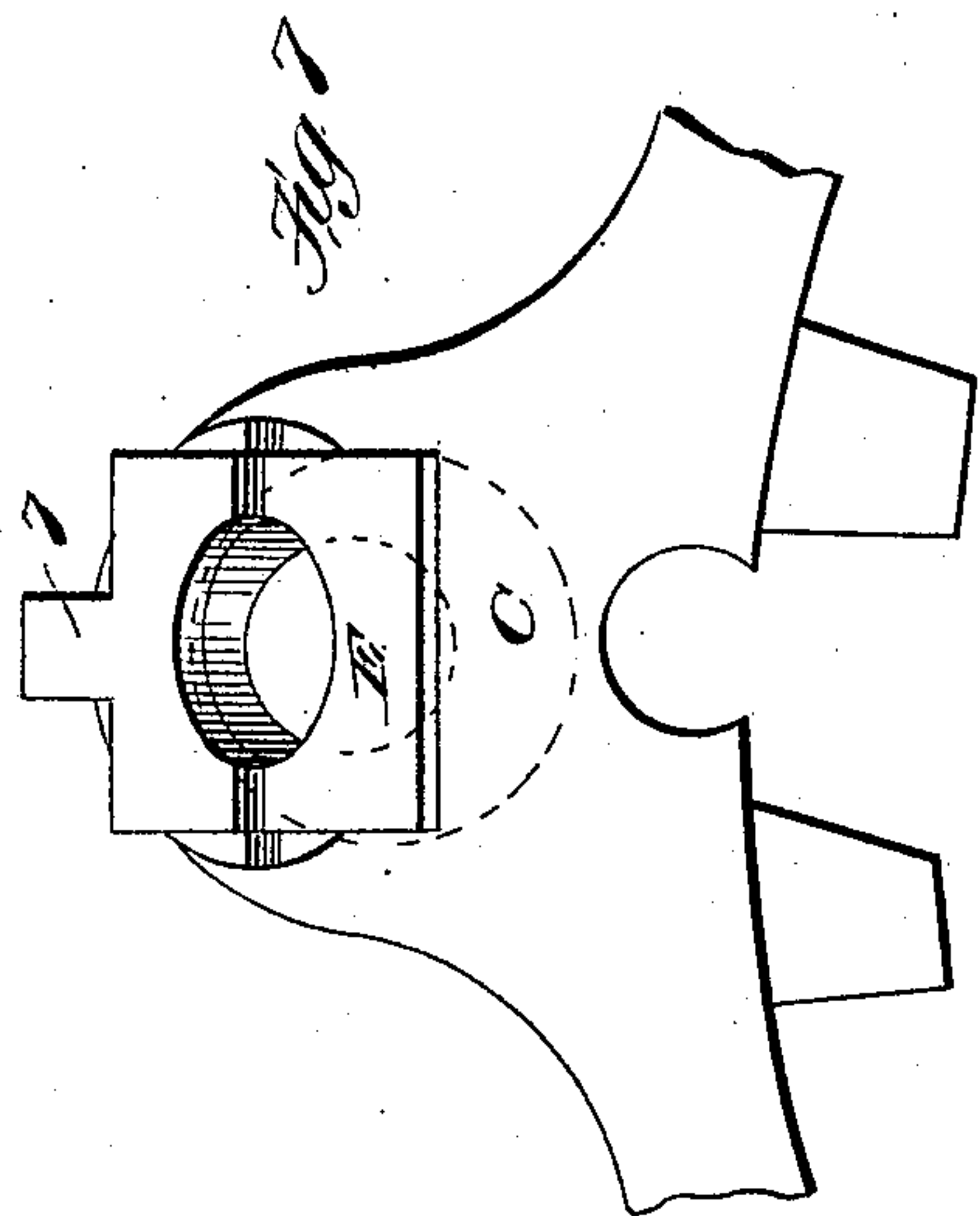
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2 Sheets—Sheet 2.

H. B. ROBISCHUNG.
BRAKE BEAM.

No. 486,218.

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UNITED STATES PATENT OFFICE.

HENRY B. ROBISCHUNG, OF KALAMAZOO, MICHIGAN.

BRAKE-BEAM.

SPECIFICATION forming part of Letters Patent No. 486,218, dated November 15, 1892.

Application filed April 2, 1892. Serial No. 427,521. (No model.)

To all whom it may concern:

Be it known that I, HENRY B. ROBISCHUNG, a citizen of the United States, residing at Kalamazoo, in the county of Kalamazoo and State of Michigan, have invented certain new and useful Improvements in Brake - Beams; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view, partly broken away, of a brake-beam embodying my invention. Fig. 2 a plan view of one end of the compression member and the corresponding portion of the tension member and the filling-block for the brake-head. Fig. 3 is an enlarged and perspective view of the compression member and filling-block. Fig. 4 is a similar view of the end of the compression member, the filling-block removed. Fig. 5 is a perspective view of the filling-block detached. Fig. 6 is an end view of the brake-head, showing the lock-seat. Fig. 7 is a similar view showing the lock-plate in position. Fig. 8 is a similar view with the nut of the tension-rod in position on the lock-plate; and Fig. 9 is a sectional view on the line $x x$, Fig. 8, the lip of the lock-plate being turned up in position to prevent tampering with the camber of the beam. Figs. 10 and 11 are detail views of a modification in the attachment of the head.

Like symbols refer to like parts wherever they occur.

My invention relates to the construction of that class of brake-beams commonly termed "trussed beams," wherein are combined a compression member, a tension member, and a strut or post, and while some of the features hereinafter set forth are generally applicable to all trussed beams other features have been especially devised with reference to the cambered beams. Therefore for the purpose of illustration I have chosen a cambered beam, but without intention of limitation thereto.

In order to obtain the best results in a trussed brake-beam, it is desirable that the line of intersection of the compression and tension members of the beam should correspond as nearly as practicable with the central line of the brake-head or line of applied power. It is also desirable that the strength of the compression member be maintained at

said point of intersection, and for practical purposes it is especially desirable, if not essential, that the adjustability of the head on the beam be preserved, so that any adjustment for any hanging of the beam may be readily made.

In the case of cambered beams it occurs in the course of manufacture that when the beam is set up and given the proper camber said camber is in a degree altered by the testing of the beam, and when subsequently restored must thereafter be maintained to preserve the efficiency of the beam.

The first object of my invention is to maintain the strength of the compression member at its junction with the tension member, so that it shall better resist the strain concentrated at the point of applied power, and to effect this I swage the bar at said point, so as to produce thereat a recess or seat for the tension-rod without destroying the skin of the bar.

The second object of the present invention is to provide means for combining different forms of compression and tension members with a brake-head, so as to preserve the strength of the compression member and the adjustability of the head; and to this end I combine with the compression member and brake-head an interposed filling-block, through which and the head the tension member passes, which combination or its equivalent embraces the second feature of my invention.

The third object of my invention is to prevent any tampering with the camber of the beam after it has been finally adjusted, which unauthorized and injurious tampering with the camber of the beam frequently takes place in attempts to take up or obtain slack in hanging the beams; and this object I accomplish by interposing between the tension member and head a locking device, which must be removed or destroyed before the camber of the beam can be changed.

There are other minor features of invention embracing details of construction and specific combination of parts, all as will hereinafter more fully appear.

I will now proceed to describe my invention more fully, so that others skilled in the art to which it appertains may apply the same.

In the drawings, A indicates the compression member; B, the tension member; C, the brake-head; D, an interposed filling-block, through which the tension member passes; *b*, the nut on the end of the tension member, and E an interposed locking device.

The compression member A, which may be of bar shape and of rectangular or any other desired cross-section, is swaged at each end to form substantially one longitudinal half (more or less) of the journal for the head, as at 2, with longitudinal inclined groove 3 to accommodate the intersecting end of the tension member B, and preferably with square shoulders 4 to receive the flanges on the filling-block D, which completes the journal end of the beam. By so swaging up the end of the compression member A its strength is preserved at the desired point, because its outer skin is maintained at the points where the strain is concentrated and the power applied.

D indicates a filling-block, which completes the journal end of the beam. Said block D is of semicylindrical form, and in case the beam has been formed with shoulders 4 is preferably provided with longitudinal flanges 5 to engage therewith and complete the journal. Said filling-block D is perforated diagonally, or in the line of the tension member B, for the passage thereof, and notched or recessed, as at 6, to engage with a lug or projection on the brake-head and preserve the proper relation of the head and the beam.

As is now well understood in this class of beams, the variation in the hanging of the beam necessitates a corresponding variation in the position of the head in relation to the trussed structure, and as said notch or recess 6 is intended to regulate the position of the head with relation to the structure it will differ in position on different beams, and its position will be determined by circumstances. A series of interchangeable filling-blocks D will, however, permit the fitting up of beams to meet any desired conditions.

In attaching beams to cars or in adjusting them with relation to the different systems of brake-levers, and especially where air-brakes are employed, it has occurred that in order to acquire or take up slack in said system the camber of the beam has been increased or diminished to vary the position of the brake-lever, which is highly detrimental to the effectiveness of cambered beams, and to prevent this I form a lock mechanism for the tension member, preferably as follows: I form in the nut-seat of the head C, adjacent to the opening through which the end of the tension member B passes, a recess or equivalent means for preventing the rotation of an annular disk or frangible locking-plate E, which is interposed between the brake-head C and the nut *b* of the tension member B, and I provide said plate E with a lip 7 or its equivalent, which, having been once turned up into position to hold the nut *b*, cannot thereafter be removed and replaced without destroying

the utility of the locking device. By the use of the above or equivalent device any tampering with the camber of the beam will be at once detected.

The construction of the several members of the beam being substantially that hereinbefore specified, the beam is set up by applying the filling-blocks D to the ends of the compression member B and passing the ends of the tension member through the diagonal opening 6 of said filling-block, after which the head C can be applied, the locking-plate E placed in position, and the nuts turned down until the required camber is obtained. The beam is then tested in the usual manner and the stretch or elongation of the tension member immediately taken up by means of the nuts *b*, after which the locking-lip 7 of locking-plate E is turned up to secure the nut and to prevent subsequent change in the camber of the beam.

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

1. The combination, in a trussed metal brake-beam, of a tension member and a solid compression member having its outer skin continuous, said member provided with inclined tension-rod recesses at its opposite ends, substantially as and for the purposes specified.

2. In a trussed brake-beam, the combination, with the compression member and head, of an interposed filling-block having an orifice for the passage of the tension member of the structure, substantially as and for the purposes specified.

3. In a trussed brake-beam, the combination, with a compression member having a semicylindrical end and provided with an inclined recess for the reception of the tension member, of a semicylindrical filling-block perforated for the passage of the tension member and a brake-head, substantially as and for the purposes specified.

4. In a brake-beam, the combination, with a compression member having a semicylindrical end provided with square shoulders, of a semicylindrical filling-block having longitudinal flanges which engage the square shoulders of the semicylindrical end of the compression member and a suitable brake-head, substantially as and for the purposes specified.

5. In a trussed cambered brake-beam, the combination, with a cambered compression member, a tension member, a brake-head, and a nut for maintaining the camber, of an interposed locking device for preventing any alteration in the camber of the beam, substantially as and for the purposes specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 16th day of March, 1892.

HENRY B. ROBISCHUNG.

Witnesses:

E. T. WALKER,
E. B. LEIGH.