

B. HASKELL.  
BRAKE BEAM.

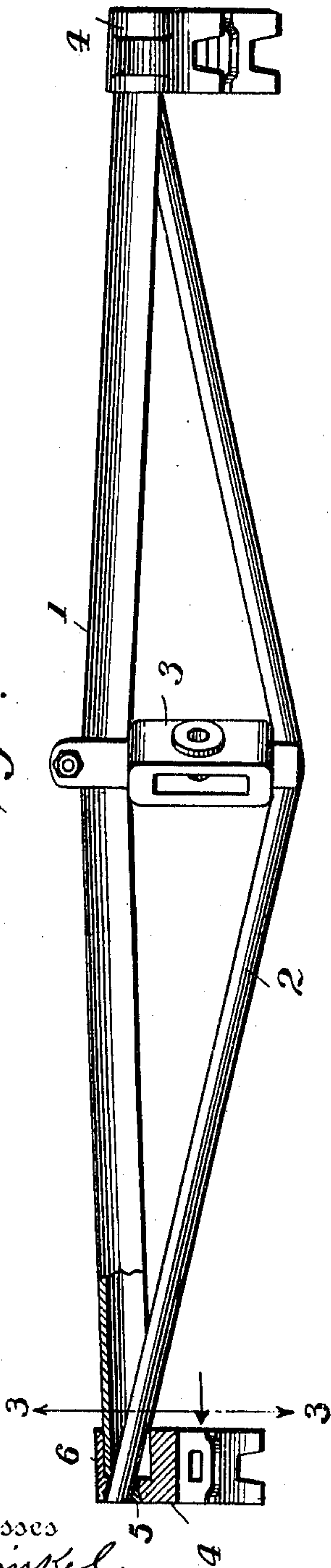
APPLICATION FILED JULY 7, 1909.

969,861.

Patented Sept. 13, 1910.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses  
*J. G. Stink*  
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Fig. 2.

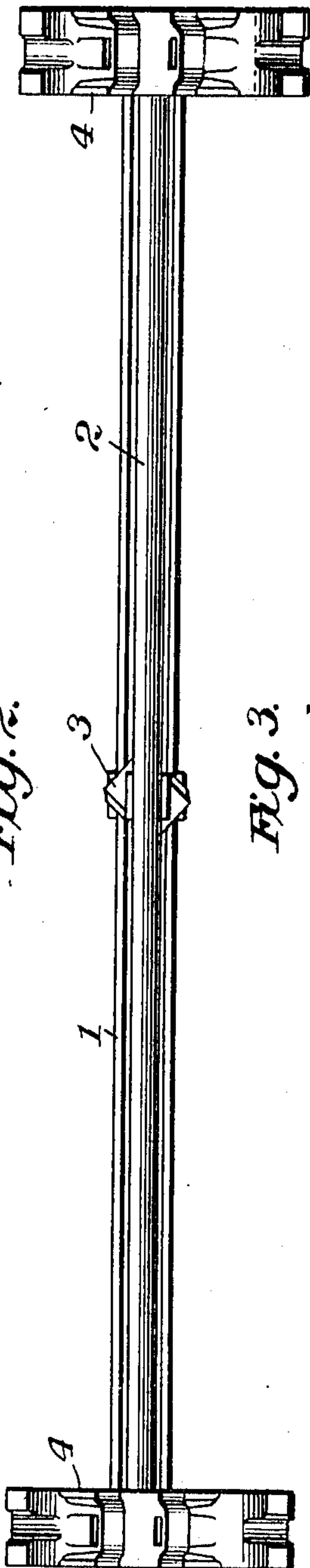
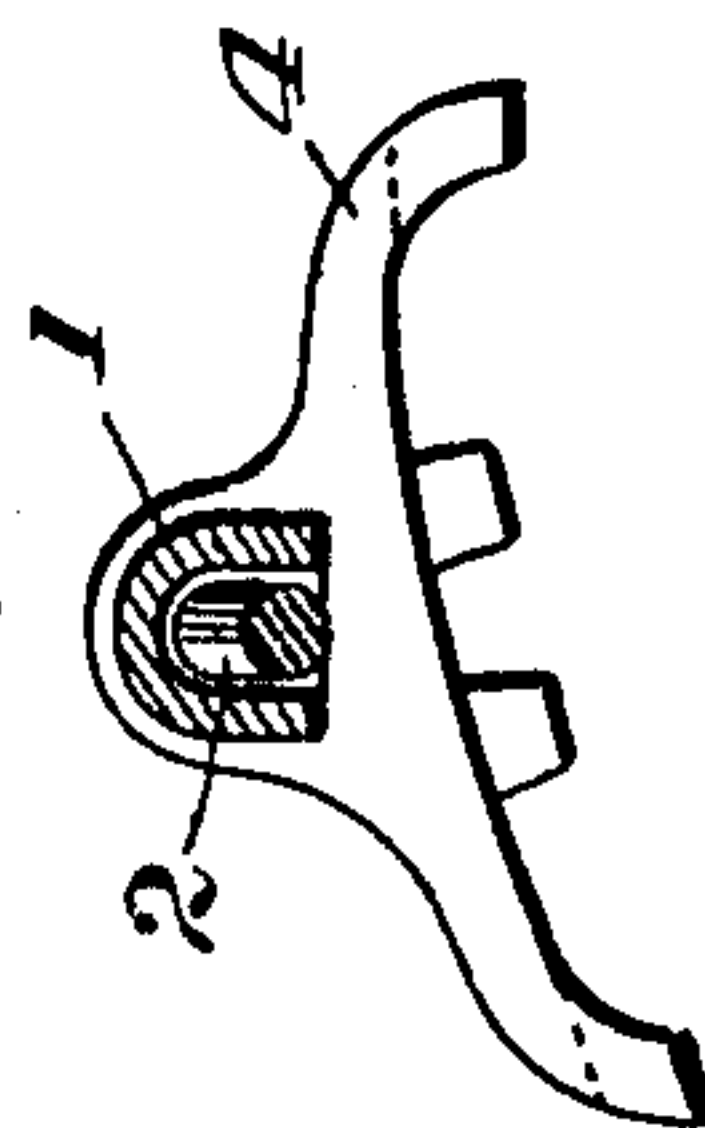


Fig. 3.



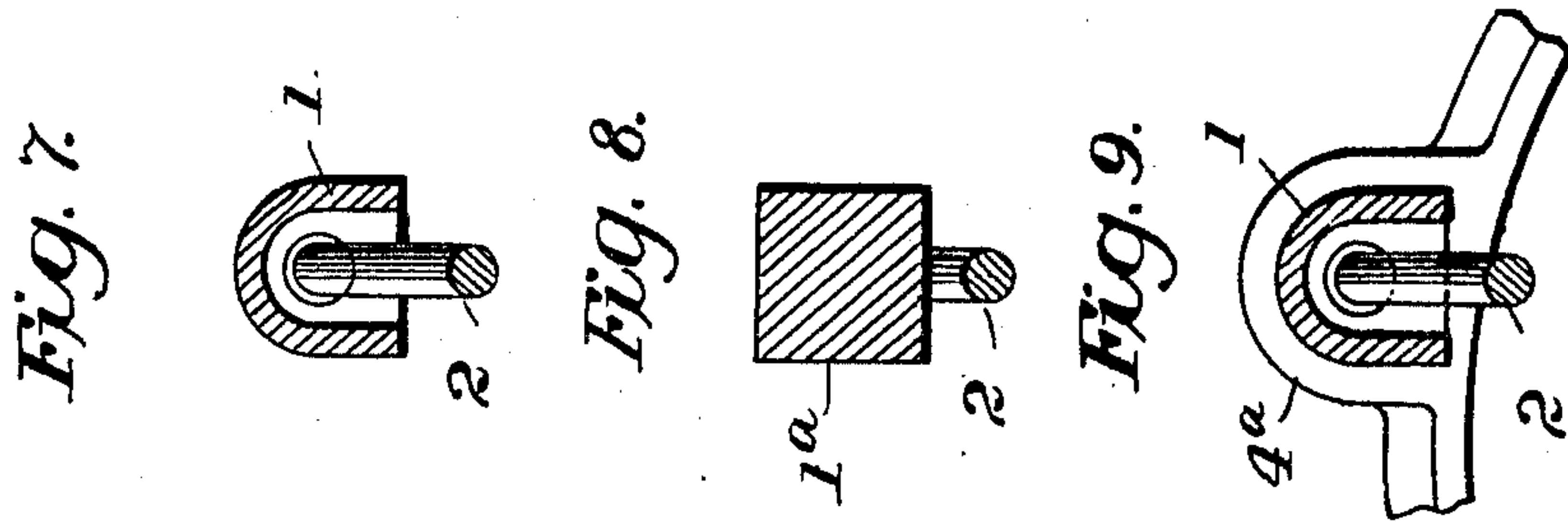
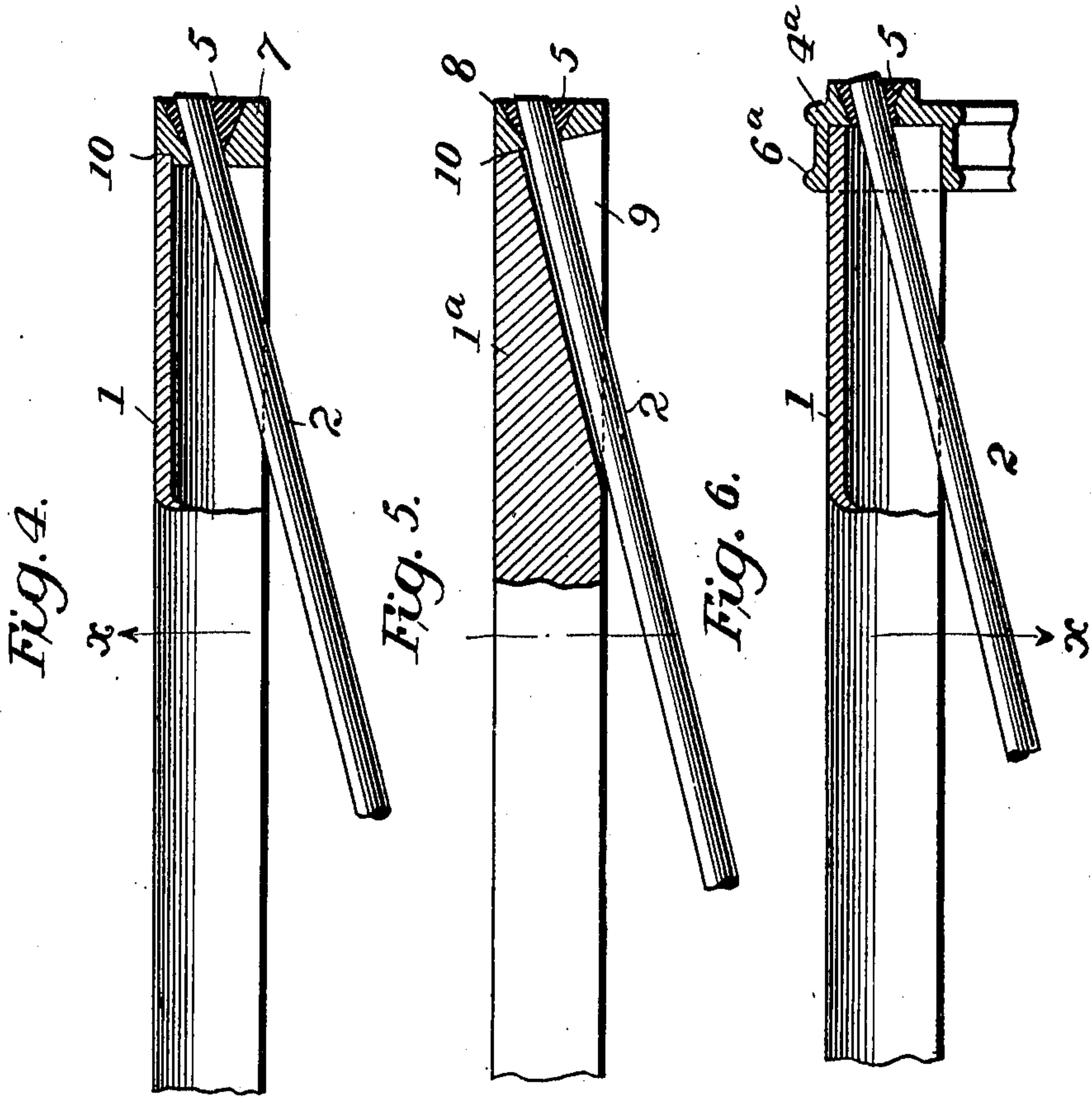
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2 SHEETS—SHEET 2.



Witnesses  
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# UNITED STATES PATENT OFFICE.

BRODERICK HASKELL, OF FRANKLIN, PENNSYLVANIA.

BRAKE-BEAM.

969,861.

Specification of Letters Patent. Patented Sept. 13, 1910.

Application filed July 7, 1909. Serial No. 506,370.

*To all whom it may concern:*

Be it known that I, BRODERICK HASKELL, a citizen of the United States, residing at Franklin, in the county of Venango and State of Pennsylvania, have invented certain new and useful Improvements in Brake-Beams, (Case A,) of which the following is a specification.

My invention relates to metallic truss brake beams and has for its objects to provide such a beam of exceptional strength, lightness and simplicity; which may be cheaply constructed of few parts and wherein the connection between the tension and compression members is effected in such a manner as to preclude any possibility of accidental loosening or displacement.

The particular matters of novelty will be better understood from the following detailed description, taken in connection with the accompanying drawings and the same will thereafter be pointed out in the appended claims.

Referring to the drawings: Figure 1 is a side elevation partly in section of a beam embodying my present improvements. Fig. 2 is a plan view thereof, Fig. 3 is a transverse section taken on line 3—3 of Fig. 1. Figs. 4, 5 and 6 are similar enlarged detail views partly in longitudinal section showing as many possible modifications in details of my improved connection, while Figs. 7, 8 and 9 are transverse sectional views of Figs. 4, 5 and 6 on the line  $x-x$  passing through like positions of said figures.

In carrying out my invention the compression member or body 1 of the brake beam, may be formed of a steel plate pressed, or bent or rolled into a U or channel section, or the same may be solid for example as shown in Fig. 5, or of various other forms, the particular form of this member being immaterial to the essential features of the invention as will appear. The tension member 2 may likewise assume various forms, the common one of a round bar or rod being selected merely for illustration. As is usual the tension member is bent centrally and the compression also slightly cambered at this point to form a truss construction, the usual strut 3 being secured to said members at this point. The brake-heads 4 are secured to the ends of the

truss construction thus formed and it is in the novel connection of these elements that the essential novelty resides.

As shown in Fig. 1 and likewise in a slightly modified form in Figs. 6 and 9 the brake-heads 4 are formed with outwardly flaring openings through which the ends of the rods 2 are passed, said heads having sleeves 6 which fit over the ends of the compression members 1, and shoulders against which the ends of the compression members abut. In the space around the outer ends of the rods 2 is now tamped a quantity of metal of a kind adapted to be easily rendered plastic by a welding temperature and also adapted to co-act with the surfaces of the brake head and rod 2 to form a reliable welded union. The particular metal used for this purpose is not material, it being possible to select any one of a number of metals having these properties as is well understood in the art of welding, and any high grade iron, such as Swedish iron or wire, and ends of Roebling cables answer the purpose. A welding heat from any suitable source as an oxyacetylene flame or an electric current is now applied to the parts at the place of union and with the usual manipulation incident to metal welding the parts are firmly united together forming virtually an integral structure.

In the forms shown in Figs. 4 and 5 instead of the tension rod 2 being welded directly to the brake head, it is welded in a similar manner as before described to blocks 7 and 8 respectively said blocks having suitable surfaces 10 against which the ends of the compression members abut as shown and suitably welded together. In these forms the blocks 7 and 8 have preferably the same exterior configuration as the compression member and the brake heads are adapted to be placed thereover and suitably secured thereto.

In the form shown in Figs. 5 and 8 a solid bar compression member 1<sup>a</sup> is employed, the same being recessed as at 9 to receive the ends of the tension member. The particular cross section of the compression member is obviously immaterial to the present invention in its broader aspects.

In Figs. 6 and 9 the brake head 4<sup>a</sup> is shown as provided with a ribbed sleeve 6<sup>a</sup> completely encircling the end of the com-



pression member and to this head the tension member is securely welded in the manner above described.

It will thus be seen that I have produced  
5 a strong and rigid and at the same time exceedingly simple, cheap and easily constructed brake beam which further is of very few parts.

Having now fully described my invention  
10 what I claim as new and desire to secure by Letters Patent is as follows:

1. A brake beam comprising tension and compression members, blocks adapted to  
15 abut against the ends of said compression members, said blocks having openings to receive said tension member, and a readily plastic metal filler for said opening, the same forming a molecular union with said blocks and said tension members.

20 2. A brake beam comprising tension and compression members, blocks adapted to abut against the ends of said compression

members and welded thereto, said blocks having openings to receive said tension member, and a readily plastic metal filler  
25 for said opening, the same forming a molecular union with said blocks and said tension members.

3. A brake beam comprising tension and compression members, blocks adapted to  
30 abut against the ends of said compression members, said blocks having enlarged flaring openings to receive said tension member, and a readily plastic metal filler for said openings the same forming a molecular  
35 union with said blocks and said tension members.

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

BRODERICK HASKELL.

Witnesses:

L. A. ARNOLD,  
B. A. KRENZ.