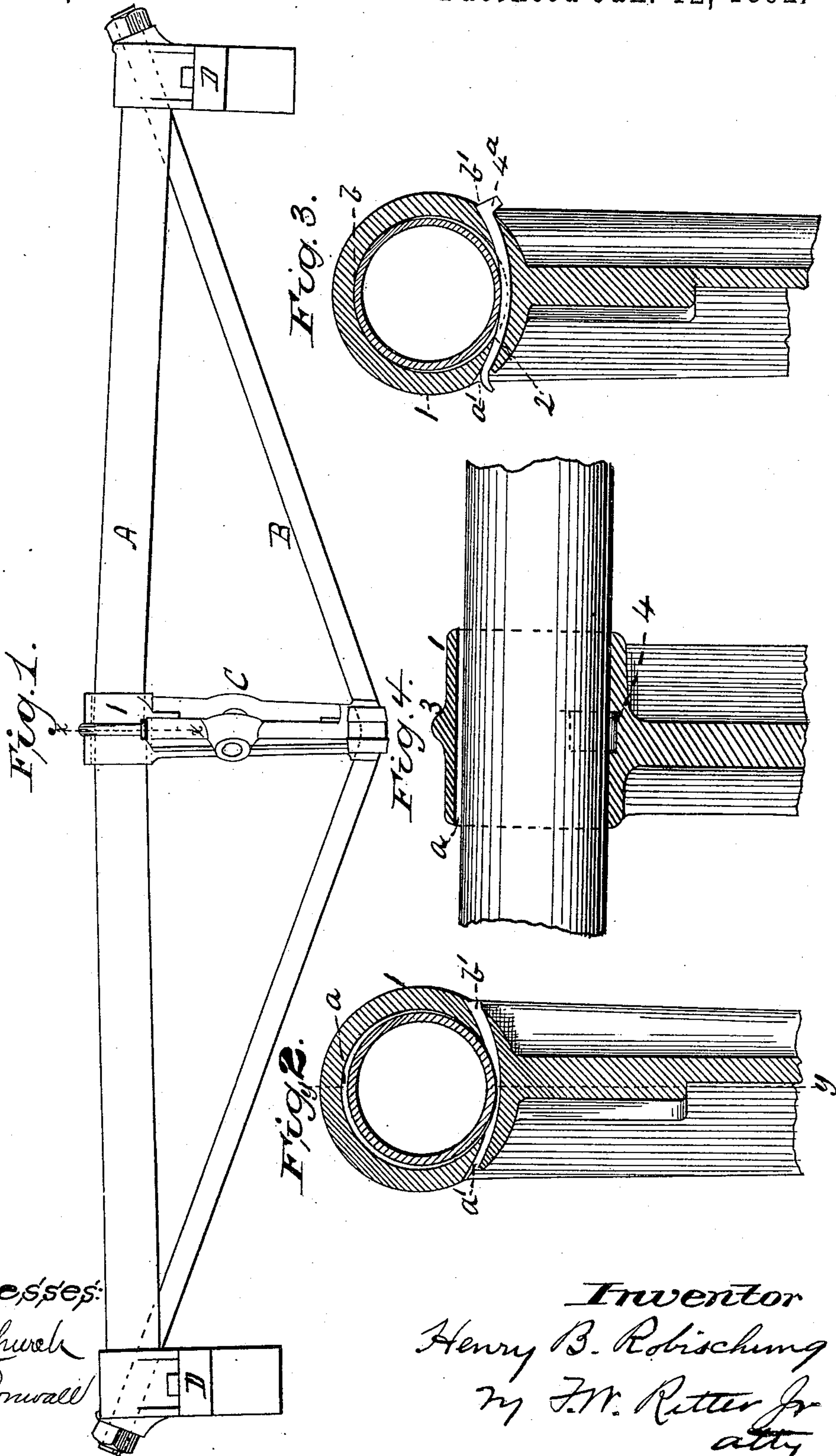


(No Model.)

H. B. ROBISCHUNG.  
BRAKE BEAM.

No. 466,984.

Patented Jan. 12, 1892.



Witnesses:  
M. W. Church  
J. P. Cornwall

Inventor  
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att'y



# UNITED STATES PATENT OFFICE.

HENRY B. ROBISCHUNG, OF KALAMAZOO, MICHIGAN, ASSIGNOR TO THE  
NATIONAL HOLLOW BRAKE BEAM COMPANY, OF CHICAGO, ILLINOIS.

## BRAKE-BEAM.

SPECIFICATION forming part of Letters Patent No. 466,984, dated January 12, 1892.

Application filed September 28, 1891. Serial No. 407,044. (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 of a trussed brake-beam embodying my invention. Figs. 2 and 3 are enlarged longitudinal sections of part of a strut or post and transverse section of the compression member of the beam on line  $x x$ , Fig. 1. Fig. 4 is a view of a portion of the compression member of the beam, together with a transverse section of a portion of a strut or post on the line  $y y$ , Fig. 2.

Like symbols refer to like parts wherever they occur.

My invention relates to improvements in trussed brake-beams, and especially to that class of trussed beams wherein the compression member is cambered, and has for its object to take up the slack commonly occurring between the strut or post and the compression member, so as to obviate lost motion and any tendency of the compression member to twist or buckle and insure perfect co-action in the several members of the beam.

In the construction of trussed brake-beams having cambered compression members as now commonly practiced the compression member is passed loosely through a collar on the inner end of the strut or post and the tension-rod is passed over a seat or through a slot in the outer end of the strut or post, so that when the camber is put in the beam more or less slack occurs between the collar on the strut and the compression member of the beam, as indicated at  $a$  in Figs. 2 and 4 of the drawings. In using the brake-beam the braking power is applied by means of the brake-lever to the strut or post, and thence distributed throughout the structure; but owing to this slack between the collar of the strut and the compression member the power is not uniformly distributed at once, being first brought on the tension-rod and thence on the com-

pression member until such time as the compression member has moved back (or the strut moved forward) into the position shown at  $b$  in Fig. 3 of the drawings. The effect of this slack and the movement of the strut to take it up is to cause a twisting or torsional action of the compression member, which sometimes produces a cross bending or buckling of said member, and always results in lost motion, so very objectionable in such structures. To overcome these objectionable conditions and produce a brake-beam which shall be entirely free from lost motion in any of its parts, I interpose between the strut and compression member a key or wedge, inserting the same after the proper tension and camber has been given to the beam, and said wedge or key so inserted will not only prevent the forward and backward movement of the strut and the change of tension and camber incident thereto, but will also relieve the compression member of the torsional strain incident to such initial movement of the strut, and such a construction or its equivalent embodies the main feature of my invention.

In carrying out my invention I prefer to slot the beam-collar of the strut at its inner side, or next to the strut proper, so as to interpose the key or wedge between the foot of the strut and the compression member of the beam, and I also prefer to form a wedge or key channel in the inner surface of said beam-collar, which matters of detail form minor features of the invention.

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, and C the strut or post, of a trussed cambered brake-beam provided with the usual brake-heads D D. The strut or post C is provided with a beam-collar 1, or collar which encircles the compression member A, and this collar 1, I slot at opposite points, and in line with the inner surface thereof, as at  $a'$  and  $b'$ , for the reception of a curved key or wedge 2, preferably arranging the said slots at the middle of the collar, which may be provided with an



annular rib 3, and also channeling the inner surface of the collar, as at 4, to provide a wedge or key seat.

2 indicates the taper key or wedge, which may be of wrought or malleable metal and provided with a suitable head 4<sup>a</sup> to facilitate the insertion and withdrawal of said key.

The parts composing the trussed beam are first set up, as indicated in Fig. 1 of the drawings, and are then given a camber and tension slightly less than that ultimately desired. At this time the foot or inner end of the strut or post C will rest directly on the inner or adjacent surface of the compression member A, as shown in Figs. 2 and 4, and the slack *a* will exist between the beam-collar 1 and the outer surface of the compression member. The wedge or key 2 is then inserted in the slots *a' b'* and forced between the foot of the strut or post C and the inner surface of the compression member A until the latter is forced to its seat or bearing on the outer part of collar 1, as shown in Fig. 3 of the drawings, which not only takes up the slack and lost motion between the compression member A and strut C, but gives the beam its ultimate camber and tension and insures the perfect coaction of the parts when the breaking power is subsequently applied to the beam, and this without subjecting the compression member to twisting or torsional strain, and

without liability of cross bending or buckling the same.

Having thus described the nature, operation, and advantages of my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a cambered trussed brake-beam, the combination, with the compression member and the strut or post, of an interposed key or wedge, substantially as and for the purposes specified.

2. In a cambered trussed brake-beam, the combination, with the compression member, of a strut or post having a collar for the compression member, said collar provided with key-slots, and a key or wedge, substantially as and for the purposes specified.

3. In a cambered trussed brake-beam, the combination, with the compression member, of a strut having a slotted and channeled collar adapted to encircle the compression member, and a key or wedge, substantially as and for the purposes specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 26th day of September, 1891.

HENRY B. ROBISCHUNG.

Witnesses:

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