

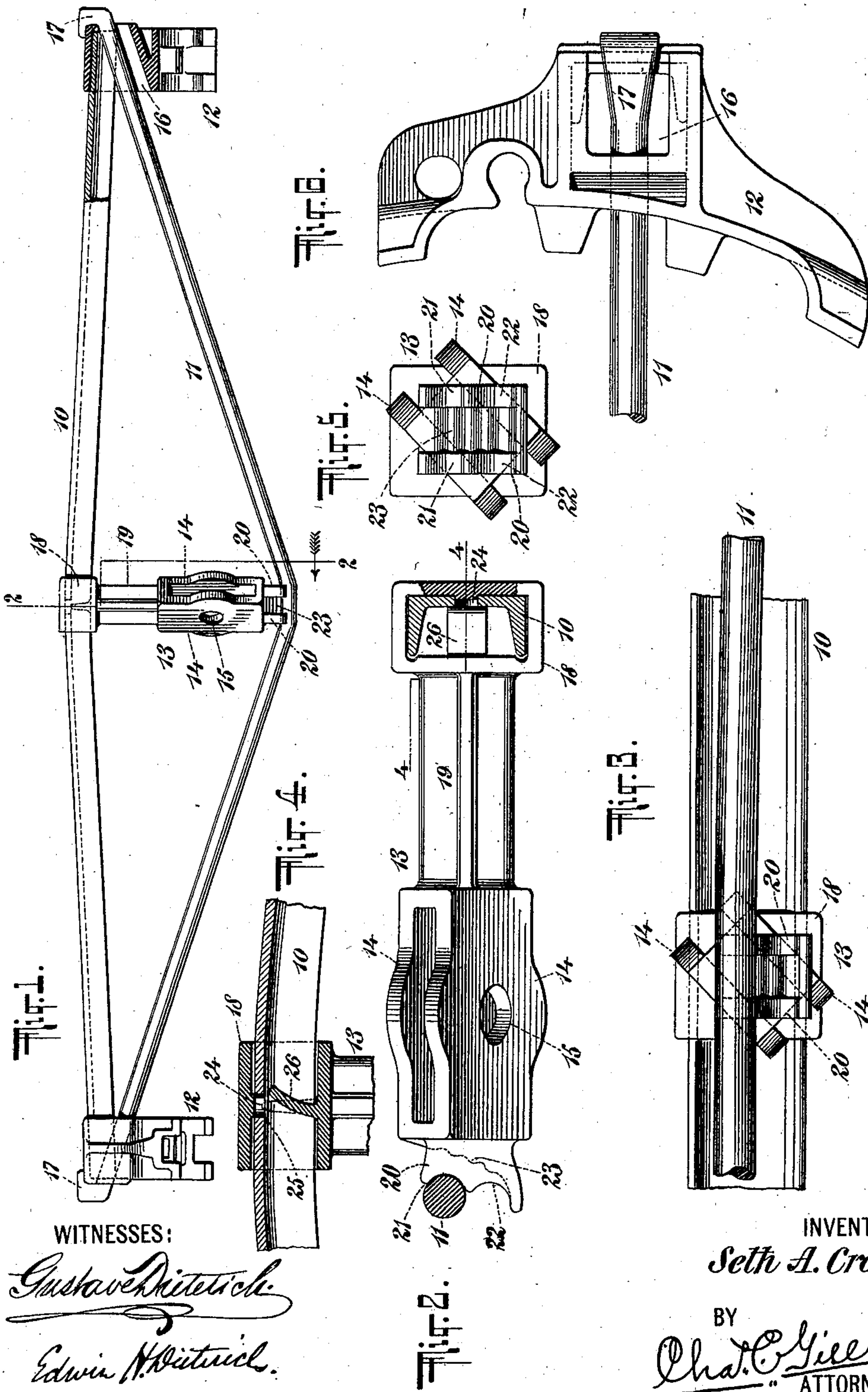
No. 720,678.

PATENTED FEB. 17, 1903

S. A. CRONE.
BRAKE BEAM.

APPLICATION FILED DEC. 18, 1902.

NO MODEL.



UNITED STATES PATENT OFFICE.

SETH A. CRONE, OF NEW YORK, N. Y.

BRAKE-BEAM.

SPECIFICATION forming part of Letters Patent No. 720,678, dated February 17, 1903.

Application filed December 18, 1902. Serial No. 135,705. (No model.)

To all whom it may concern:

Be it known that I, SETH A. CRONE, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Brake-Beams, of which the following is a specification.

The invention relates to improvements in brake-beams; and it consists in the novel features, arrangement, and combinations of parts hereinafter described, and particularly pointed out in the claims.

In its preferred form the brake-beam of my invention comprises a rolled beam member having on its ends the brake-shoe heads, a truss-rod member passing through apertures in and engaging at its outer ends the outer surfaces of said heads, and a central strut adapted to receive the brake-lever and engaging said beam member and said truss-rod member. My invention refers more especially to a novel strut for use in said brake-beams, as hereinafter described; and the object of the invention is to produce a more efficient and desirable brake-beam than those heretofore known.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which—

Figure 1 is a top view, partly in section, of a brake-beam constructed in accordance with and embodying my invention. Fig. 2 is an enlarged sectional view of same on the dotted line 2 2 of Fig. 1. Fig. 3 is an enlarged view of the central portion of same looking at the outer end of the strut. Fig. 4 is a detached sectional view of a portion of same on the dotted line 4 4 of Fig. 2, Fig. 4 being presented to illustrate more clearly the means for fastening the inner end of the strut centrally upon the body-beam. Fig. 5 is an enlarged detached outer end view of the strut; and Fig. 6 is an enlarged end view, partly broken away, of the brake-beam.

In the drawings, 10 designates the rolled beam member; 11, the truss-rod; 12, the brake-shoe heads, and 13 the central strut, the latter engaging the central portions of said rolled beam member and said truss-rod and having the angularly-disposed corresponding sides 14, between which the usual brake-lever (not

shown) is mounted upon a bolt, which will have its bearings in apertures 15, formed in said sides.

The beam 10 is preferably, though not necessarily, a channel-beam, and this beam will be either straight or bowed, as usual, but preferably bowed, as shown.

Upon the ends of the beam 10 are applied the brake-shoe heads 12, which present the usual required edge outline and are formed with sockets conforming to the shape of the ends of the beam 10 and pass upon said ends, as shown in Fig. 1. The heads 12 are also formed with the apertures 16, through which the heads 17, preferably of hook shape, formed on the ends of the truss-rod 11, pass, said heads 17 when the parts of the brake-beam are in position engaging the outer surfaces of said heads 12, as shown.

The central strut 13 is preferably in one integral piece and comprises the sleeve 18, to be slipped upon the beam 10; the parallel angularly-disposed sides 14, hereinbefore referred to, to receive the brake-lever; the section 19, intermediate said sides 14 and said sleeve 18, and the parallel flanges 20, extending outwardly from said sides 14 to receive at their outer edges the central portion of the truss-rod 11, said flanges 20 being disposed at right angles to the line of the beam 10 and truss-rod 11 and preferably having a series of grooves 21 22, into which the central portions of the truss-rod 11 may be forced for the purpose of attaining in said rod the required tension for binding the ends of the latter against the heads 12 and maintaining the parts of the brake-beam in their proper relation to one another. The strut 13, intermediate the parallel flanges 20, is formed with the corrugated or roughened surface 23, to be engaged by the end of a bar or other suitable implement for forcing the central portions of the truss-rod into the grooves 21 or 22, as may be required, the grooves 22 being on a plane outward beyond the grooves 21 and receiving the truss-rod 11 when the proper tension cannot be secured in the latter when said rod is within the said grooves 21.

The sleeve 18 of the central strut conforms to and is adapted to be slipped upon the beam 10, and said sleeve 18 at one side is formed with a pin or stud 24 to enter a correspond-

ingly-shaped aperture 25, formed in the web of the beam 10, as shown in Fig. 4, and at the other side of the interior of said sleeve 18 is formed a lip or tongue 26, which when
 5 straightened out will substantially engage the end of said pin or stud 24, but which when in the deflected or inclined position in which it is shown in Fig. 4 will not engage the pin or stud 24, but allow the sleeve 18
 10 with some freedom to be passed upon the end of the beam 10 and permit the said stud or pin 24 to enter the aperture 25 of said beam, and thereafter the aforesaid lip or tongue 26 will be straightened, as indicated by the dot-
 15 ted lines in Fig. 4, so that it may pass into line with the stud or pin 24 and operate thereby to lock the strut upon the beam 10, the said lip or tongue 26 when straightened out constituting, in effect, a continuation of the
 20 said pin or stud 24 and preventing the sleeve 18 from having any sliding motion upon the beam 10.

The sides 14 of the central strut are closed at their opposite ends and form a box-like
 25 bearing in which the brake-lever may be mounted in an efficient manner, and at the outer end of said sides 14 are formed the flanges 20 and corrugated surface 23, (the latter being preferably on an inclination, as
 30 shown in Fig. 2,) hereinbefore referred to.

In assembling these several parts of the brake-beam the central strut 13 and heads 12 will be passed upon the beam 10, and the truss-rod will have its ends inserted through the
 35 apertures 16 formed in said heads, and thereupon the central portion of the truss-rod will be applied upon the outer grooved end of the said strut 13 for the purpose of securing a proper tension in the parts of the beam and
 40 the firm binding of the heads 17 of the truss-rod against the outer surfaces of the heads 12. The middle portion of the truss-rod 11 will preparatory to the application of said rod into its operative position be heated, so that
 45 the heads 17 thereon may be drawn into engagement with the outer surfaces of the heads 12 by pulling the middle portion of the said rod outwardly to reach a position against the flanges 20 of the strut, the middle portion of
 50 the truss-rod being caused to enter the grooves or recesses 21 or 22 in said flanges, as may be required, the truss-rod being then allowed to cool, and this cooling of the truss-rod resulting in its contraction and in its being firmly
 55 bound against the strut and also at its outer ends against the brake-heads 12. The pull of the middle portion of the truss-rod 11 to reach the recesses or grooves 21 22 may be performed by a bar entered at one end be-
 60 tween the truss-rod and the corrugated surfaces 23 of the strut and operated to draw the truss-rod in a direction outwardly from the strut until said rod enters the recesses or grooves in the flanges 20, where said rod
 65 will be firmly held on the flanges 20. If the truss-rod upon its first application to the strut shall have its central portions seated in the

recesses or grooves 21 and it should be found that the rod is not under sufficient tension, the manufacturer will then force the central
 70 portions of said rod from the recesses or grooves 21 and into the recesses or grooves 22, and thereby the said rod will be placed under an increased tension, since the recesses or grooves 22 are set outwardly from the plane
 75 of the recesses or grooves 21.

The invention made the subject of this application embraces, as will be understood from the foregoing description, more particularly a novel strut to be used intermediate
 80 the body-beam and truss-rod of brake-beams, the strut being equipped with means for fastening it to the body-beam and also with means for enabling the truss-rod to be given an adequate tension in accordance with the
 85 conditions that may prevail, said strut being constructed, although in an integral piece, to facilitate the creation of a greater or less tension in the truss-rod.

What I claim as my invention, and desire
 90 to secure by Letters Patent, is—

1. The brake-beam comprising the beam member 10, the brake-shoe heads on the ends thereof, the truss-rod extending lengthwise of said beam member, and the strut interme-
 95 diate and engaging the central portions of said beam member and truss-rod, said strut at one end having the sleeve 18 to pass upon said beam and being equipped with the pin or stud 24 and locking lip or tongue 26, while
 100 said beam is formed with the aperture 25 to receive said pin or stud; substantially as set forth.

2. The brake-beam comprising the beam member 10, the brake-shoe heads on the ends thereof, the truss-rod extending lengthwise of said beam, and the strut intermediate and engaging the central portions of said beam and truss-rod, said strut having the angularly-
 105 disposed sides 14 to receive between them the brake-lever, and, at its outer end, having the grooves on different planes for the reception of the central portion of the truss-rod; substantially as set forth.

3. The brake-beam comprising the beam member 10, the brake-shoe heads on the ends thereof, the truss-rod extending lengthwise of said beam and engaging said heads, and the strut intermediate of and engaging the central portions of said beam and rod and
 115 adapted to receive the brake-lever, the outer end of said strut being formed with the recessed flanges 20 to receive the truss-rod and with the corrugated surfaces 23 to be engaged by the end of the tool by which said rod may
 120 be forced into the recesses of said flanges; substantially as set forth.

4. The brake-beam comprising the beam member 10, the brake-shoe heads on the ends thereof, the truss-rod extending lengthwise of said beam and engaging said heads, and the strut intermediate of and engaging the central portions of said beam and rod and adapted to receive the brake-lever, the outer
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end of said strut being formed with a recess
to receive the truss-rod and with a surface
adjacent to said recess to be engaged by the
end of the tool by which said rod may be
5 drawn into the said recess; substantially as
set forth.

Signed at New York, in the county of New

York and State of New York, this 17th day of
December, A. D. 1902.

SETH A. CRONE.

Witnesses:

ARTHUR MARION,
CHARLES C. GILL.