E. C. COVERT.

TRUSSED BEAM CONSTRUCTION.

APPLICATION FILED MAY 12, 1910.

993,574. Patented May 30, 1911.

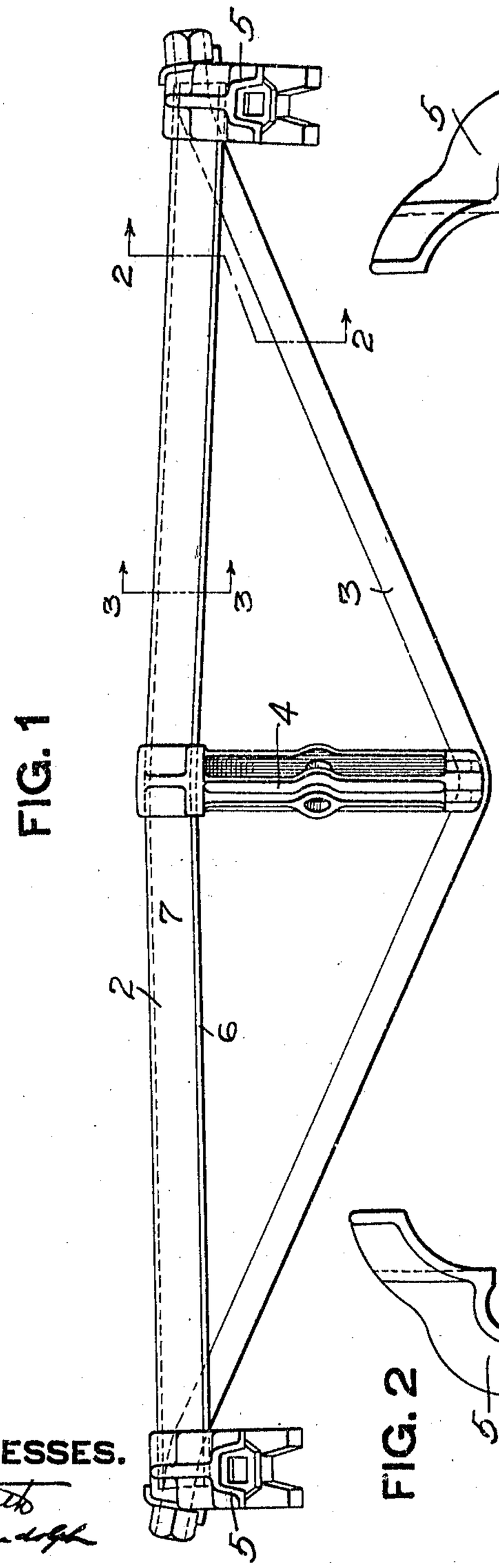

FIG. 1

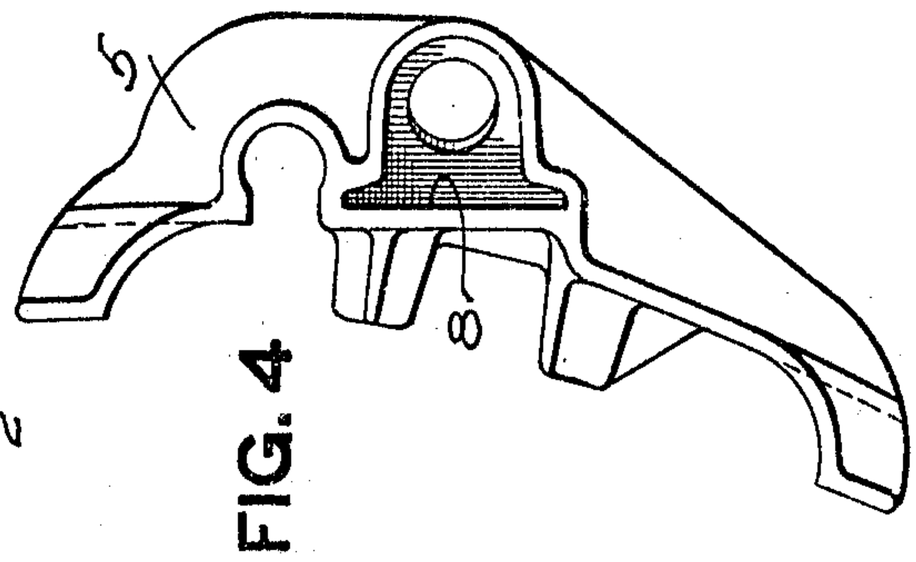

FIG. 4

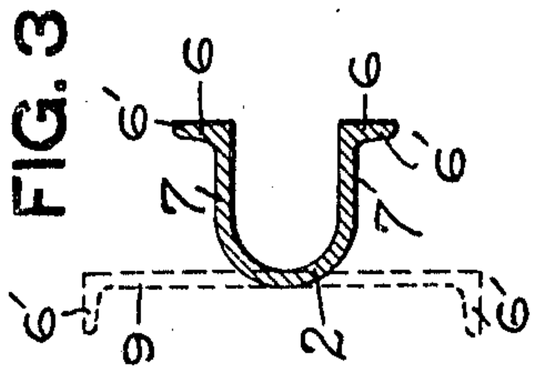

FIG. 3

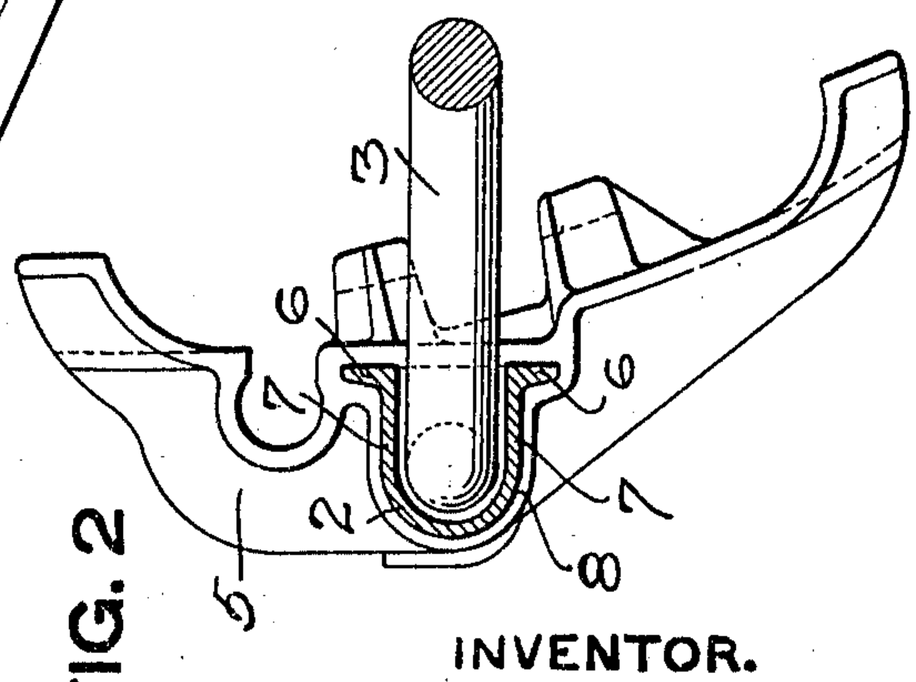

FIG. 2

WITNESSES.

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TRUSSED-BEAM CONSTRUCTION.

993,574. Specification of Letters Patent. Patented May 30, 1911.

Application filed May 12, 1910. Serial No. 561,022.

To all whom it may concern:

Be it known that I, EDSON C. COVERT, of New Kensington, county of Westmoreland, and State of Pennsylvania, have invented certain new and useful Improvements in Trussed-Beam Construction, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form part of this specification.

This invention relates to trussed beams,—more particularly to that type of beam known as the "Creco" beam,—that is, a trussed beam in which the compression member is formed of a substantially U-shaped rolled section, and its primary object is to so construct this compression member as to enable it to withstand, under the enormous stresses to which these beams are subjected, cambering and wall-collapsing with their consequent destruction of the truss integrity.

In the accompanying drawings my invention is shown as applied to a brake beam although it will be apparent to those skilled in the art that it is applicable to body and truck bolsters.

Figure 1 is an elevational view of my improved beam; Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1; Fig. 3 is a section taken on the line 3—3 of Fig. 1, and illustrating one manner of forming the compression member from a rolled conventional channel section; and Fig. 4 is an elevational view of the inside face of the brake shoe head and showing recessed seat for the reception of the end of the compression member.

In the brake beam shown, the reference numeral 2 indicates the U-shaped compression member, 3 the tension member, 4 the strut, and 5 the brake shoe heads; the brake shoe heads being of the type generally identified with the National hollow and Creco brake beams.

In carrying out my invention I so form the U-shaped compression member 2 as to provide the oppositely disposed edge flanges 6 which lie preferably in the same plane, and project in opposite directions, as shown in Fig. 3. These flanges strengthen the member at this point where there is a tendency of deflection or collapsing of the wall 7, enabling the beam to withstand the maximum stresses to which it is subjected. A more rigid mounting of the brake head 5 is also obtainable by my improved construction of the compression member, the projecting flanges 6 taking appropriate recessed seats 8 in the brake heads, serving effectually to prevent "working" of the head on the beam. In Fig. 3 is shown the preferable manner of forming this compression member 2. I take a conventional channel section 9 of suitable dimensions for the beam construction contemplated and then by rolling or pressing bend the web portion thereof to the U-shape shown and cause the flanges 6′ to project outwardly in opposite directions and in preferably the same plane. The channel may be heated before the bending operation, or bending may be done without heating, as desired, and the member may be formed to the desired length, either before or after shaping.

The cross sectional distribution of material in the ordinary commercial or conventional rolled channel section renders it peculiarly adaptable to the formation of my improved form of compression member; the metal lying within the zone of the flanges 6′ being somewhat thicker than the web or body portion 9, thus enabling these flanges 6′ to effectually resist collapsing of the walls of the member. This cross sectional distribution of the metal not only enables the wall 7 to withstand collapsing but also imparts to the compression member a general rigidity which enables it to resist deflection or cambering of the beam as a whole on the line of draft of the beam.

The advantages of my invention will be appreciated by those skilled in the art. In my improved beam there is presented a construction capable of receiving without deflection, maximum loads with a minimum amount of metal.

As stated above, while I have shown and described my invention as applied to a brake beam, it also may be applied to body bolsters and truck bolsters, in which latter cases the members 5 would take the form of a spring seat casting or the like.

It will be apparent that other changes may be made in my improved beam construction without departing from the spirit of my invention.

What I claim and desire to secure by Letters Patent is:

1. A compression member for trussed beams, embodying a conventional rolled channel section having its web portion substantially U-shaped.

2. A compression member for trussed beams, embodying a conventional rolled channel section having its web portion substantially U-shaped and its flanges projecting in opposite directions.

3. A compression member for trussed beams, comprising a conventional rolled channel section having its web portion substantially U-shaped and its flanges lying in the same plane and projecting in opposite directions.

4. A compression member for trussed beams, comprising a body portion substantially U-shaped in cross section and having an angularly disposed edge flange tapering outwardly in cross section.

5. A compression member for trussed beams, comprising a body portion substantially U-shaped in cross section and having an angularly disposed edge flange of greater thickness than the body portion and tapering outwardly in cross section.

6. A compression member for trussed beams, comprising a body portion substantially U-shaped in cross section and having an angularly disposed edge flange joined thereto by a fillet of greater thickness than the body portion.

7. In a trussed beam, the combination of a compression member substantially U-shaped in cross section and having an outwardly disposed edge flange adjacent the ends thereof, a tension member and brake shoe heads carried by the compression and tension members and having recessed seats adapted to receive the respective flange ends of the compression member.

In testimony whereof, I have hereunto set my hand.

EDSON C. COVERT.

Witnesses:
PETER H. MURPHY,
M. ARTHUR KELLER.