

No. 706,654.

Patented Aug. 12, 1902.

A. W. HENRY.
TRUSS ROD BEAM.

(Application filed Feb. 21, 1902.)

(No Model.)

Fig. 1.

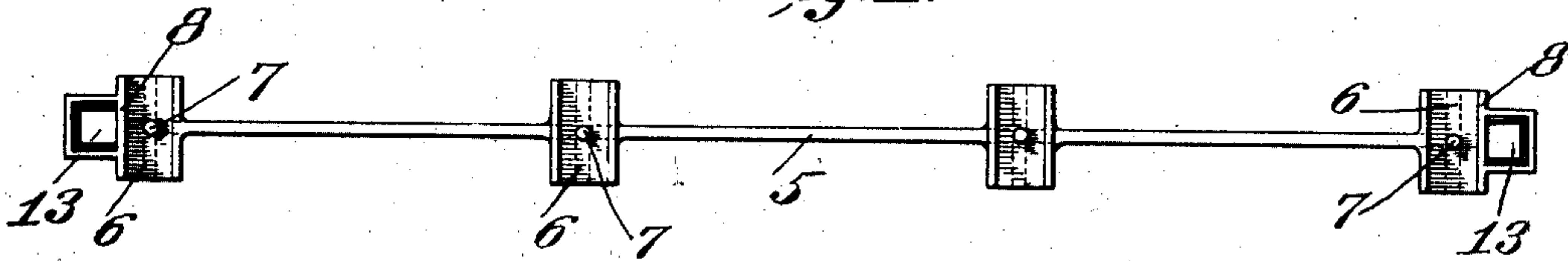


Fig. 2.

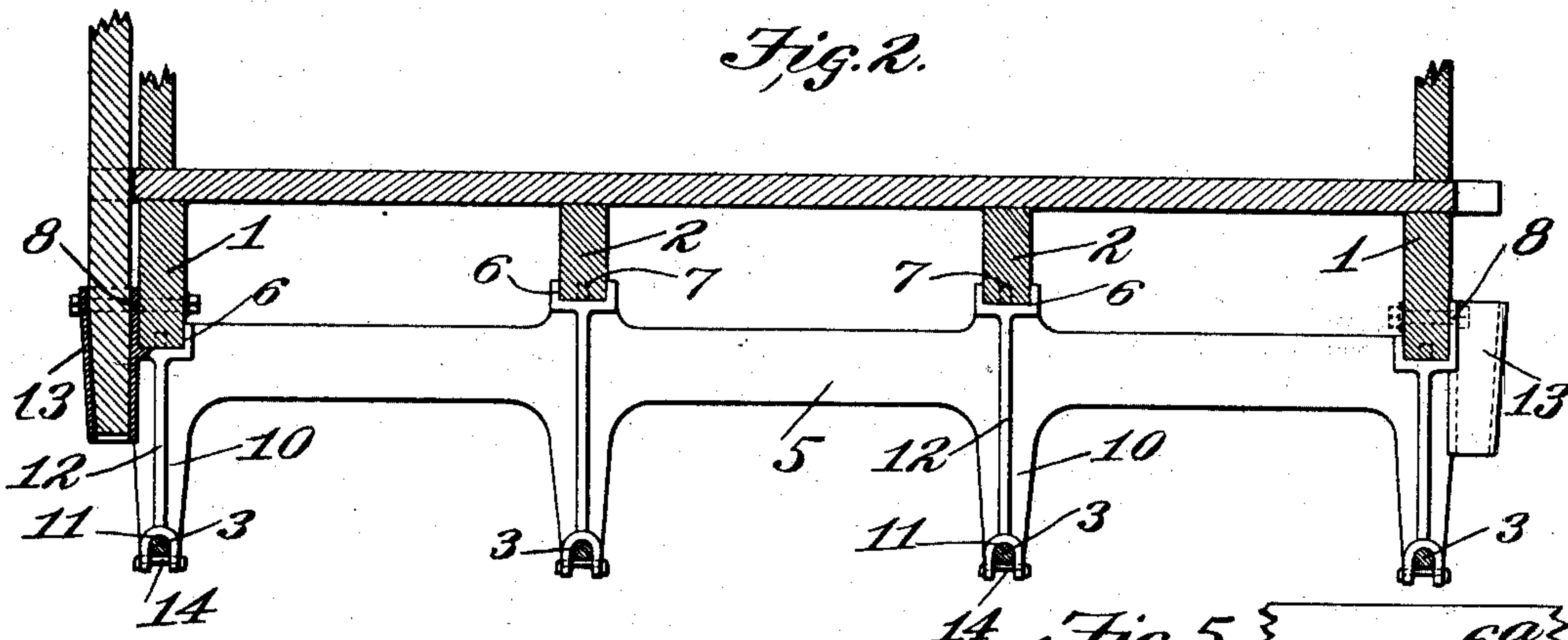


Fig. 3.

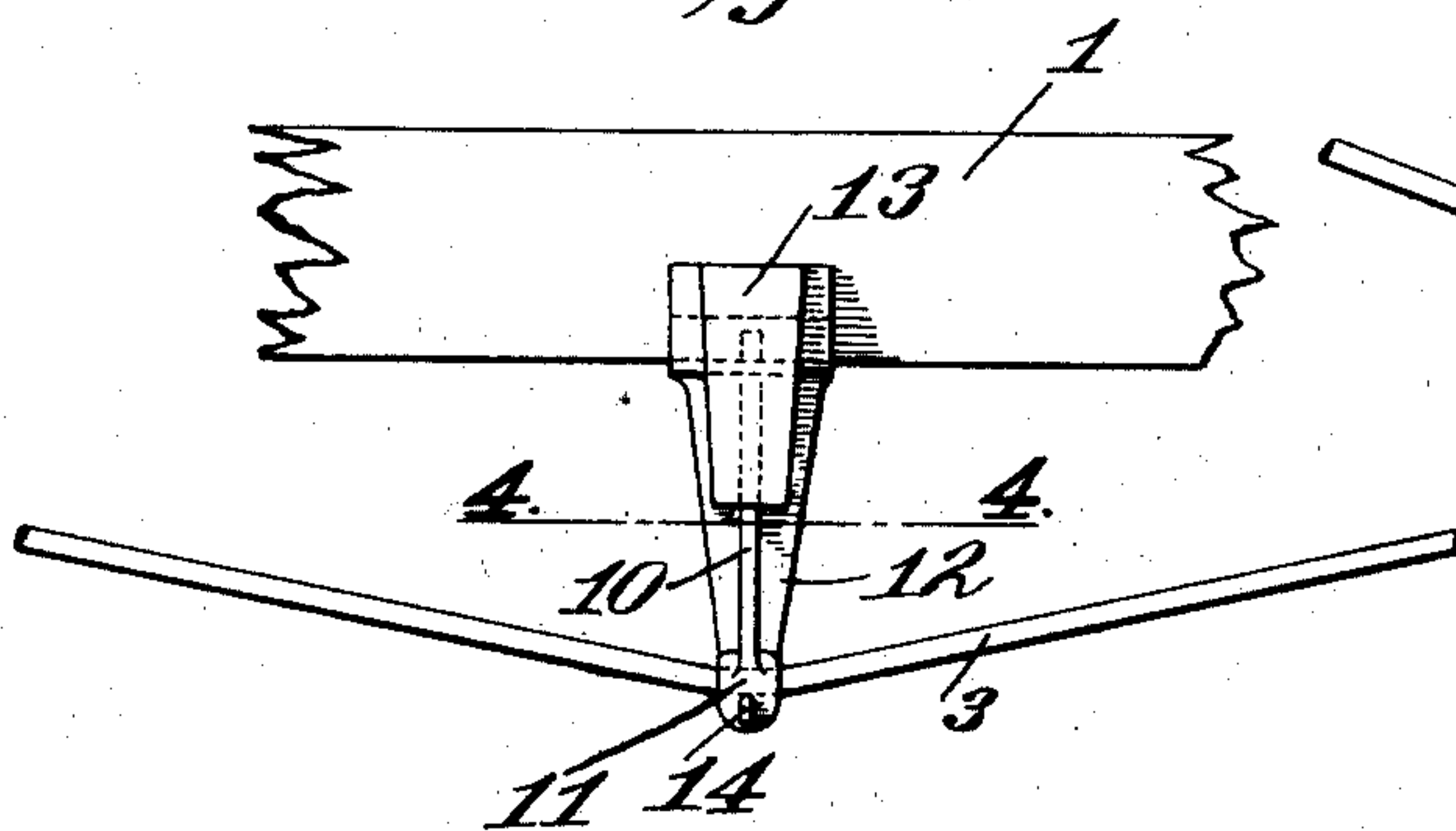
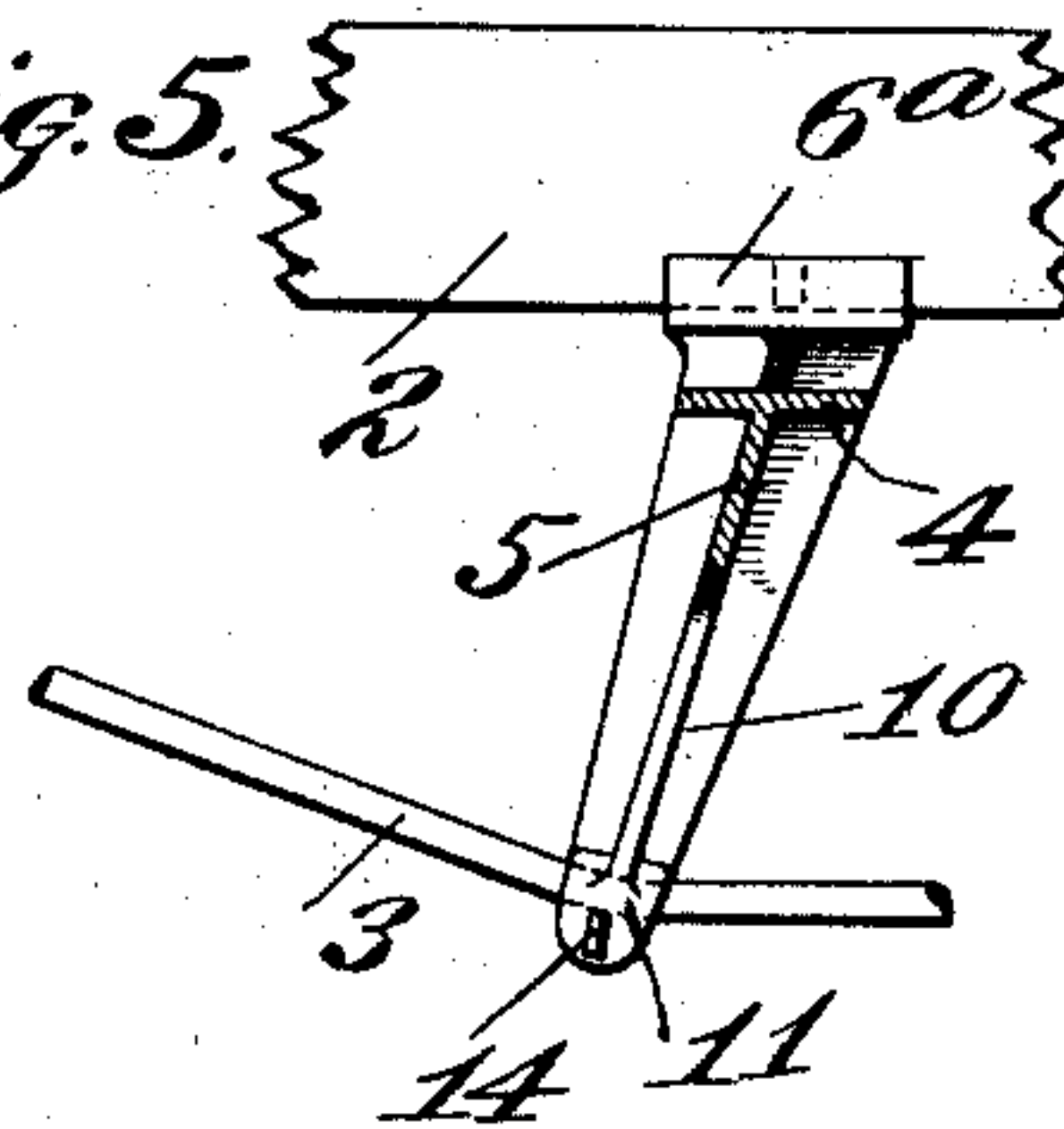


Fig. 4.



Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

ALFRED W. HENRY, OF ST. LOUIS, MISSOURI.

TRUSS-ROD BEAM.

SPECIFICATION forming part of Letters Patent No. 706,654, dated August 12, 1902.

Application filed February 21, 1902. Serial No. 95,063. (No model.)

To all whom it may concern:

Be it known that I, ALFRED W. HENRY, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Truss-Rod Beams, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view of my truss-rod beam for railway-cars. Fig. 2 is a side elevational view of the same, showing it applied in position under a car. Fig. 3 is an end elevational view. Fig. 4 is a sectional view on line 4 4, Fig. 3; and Fig. 5 is a side elevational view of an improved form.

This invention relates to a new and useful improvement in truss-rod beams designed for use in connection with railway-cars, the object being to make in one piece, such as a casting, a truss-rod beam with integral associated parts, dispensing with the connections and securing means heretofore resorted to, where the beam in common use is made of wood and the queen-posts, or "truss-rod columns," as they are sometimes called, are attached thereto.

With these objects in view my invention consists in the construction, arrangement, and combination of the several parts, all as will hereinafter be described and afterward pointed out in the claims.

In the drawings I have illustrated the underframing of a car, in which 1 indicates the side sills, 2 the intermediate sills, and 3 the truss-rods.

My improved "truss-rod beam," as it is termed, consists, essentially, of a structure, preferably in the form of a casting, extending transversely from side to side of the car, whose upper edge is provided with seats for the longitudinal sills of the car, while from its lower edge depend projections in the form of queen-posts or truss-rod columns having seats in which the truss-rods are received. Means may be provided for securing the structure in position under the car, and such means may be in the form of dowel-pins, as shown, to prevent longitudinal movement, or securing-bolts may be employed, as is obvious.

5 indicates the web of the truss-rod beam, which may for the sake of lightening, if desired, be provided with openings.

6 indicates seats, preferably elongated, so as to afford ample support for the longitudinal sills of the car, and in these seats are dowel-pins 7, which are designed to be received in openings in the longitudinal sills of the car, whereby the parts are held in fixed relation to each other. The side walls of the seats at the ends of the beam are extended upwardly, as indicated at 8.

10 indicates depending projections extending from the lower edge of the beam and preferably in alinement with the seats 6. These downward extensions form truss-rod columns or queen-posts and are provided with seats 11 in their lower ends for receiving the truss-rods 3.

12 indicates reinforcing-webs, which serve to strengthen the overhanging portions of the seats 6 and also the columns 10.

As shown in Fig. 5, the beam may be constructed so that when in position its seats 6 will lie in the proper plane to receive the longitudinal sills of the car, while the web and its depending posts will lie in a plane other than vertical in order to take care of the stresses to which the structure is subjected in practice. In Fig. 5 I have also shown a flange 4, arranged at the upper edge of the web 5 and preferably extending on each side thereof for strengthening said web.

In the form of my invention herein illustrated I have shown pockets 13 cast upon the ends of the beam and integral therewith, said pockets being adapted to receive the ends of stakes when the beam is used upon flat-cars, gondola cars, &c. It will be apparent, however, that these pockets can be omitted without in the least departing from the spirit of my invention. When the pockets are employed, the stakes entering the same serve as a means of securing the beam more firmly in position, and the pockets in turn serve to more firmly secure the stakes. The upwardly-extending side walls 8 serve at all times to give a broad firm bearing for the sills, and when the pockets are omitted bolts can be passed through the sills and seated in said side walls, as indicated by dotted lines in Fig. 2.

If desired, the side walls of the truss-rod

seats 3 can be extended to accommodate pins 14, which lie under the truss-rods and guard against the same dropping from their sockets.

I am aware that many minor changes in the construction, arrangement, and combination of the several parts of my device can be made and substituted for those herein shown and described without in the least departing from the nature and principle of my invention. For example, bolts can be extended through the side sills and seated in the side walls 8, even when the pockets are employed, or such bolts can be extended through the side sills and also through the stakes when the stakes are in position in the pockets, these bolts serving as additional securing means for the stakes.

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

1. A truss-rod beam for railway-cars consisting of a body portion extending continuously from side to side of the car and having seats on its upper edge for the longitudinal sills of a car, and projections extending downwardly from its lower edge, said projections having seats for the truss-rods of a car, said body portion, seats, and projections being formed in one piece; substantially as described.

2. A truss-rod beam for railway-cars consisting of a body portion having seats on its upper edge, and columns depending from its lower edge in alinement with the seats, all of said parts being made in one piece; substantially as described.

3. A truss-rod beam for railway-cars consisting of a web, overhanging seats on the upper edge of said web and integral therewith, and integral columns in alinement with said seats, the integral side walls of the seats at the ends of the beam being extended upwardly; substantially as described.

4. A truss-rod beam for railway-cars in the

form of a casting comprising a body portion, seats, for the longitudinal sills of the car, dowels in said seats, seats for the truss-rods, and reinforcing-webs; substantially as described.

5. A truss-rod beam for railway-cars in the form of a casting comprising a body portion extending continuously from side to side of the car and having seats for the longitudinal sills, and depending columns extending from said body portion, said columns being arranged at an angle other than a right angle, with relation to said seats; substantially as described.

6. A truss-rod beam for railway-cars, in the form of a casting comprising a substantially vertical web extending continuously from side to side of the car, seats for the longitudinal sills of the car, said seats being arranged at the upper edge of said casting, and depending posts formed with seats in their lower ends, said posts being strengthened by reinforcing-webs; substantially as described.

7. The combination with a truss-rod beam, of stake-pockets carried thereby; substantially as described.

8. The combination with a truss-rod beam, of stake-pockets upon the ends thereof and integral therewith; substantially as described.

9. A truss-rod beam for railway-cars consisting of a body portion having a plurality of seats on its upper edge for receiving the longitudinal sills of the car, and columns depending from the lower edge, each of said columns being provided with a seat for a truss-rod, all of said parts being integral; substantially as described.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 17th day of February, 1902.

ALFRED W. HENRY.

Witnesses:

M. B. NOLAN,

GALES P. MOORE.