

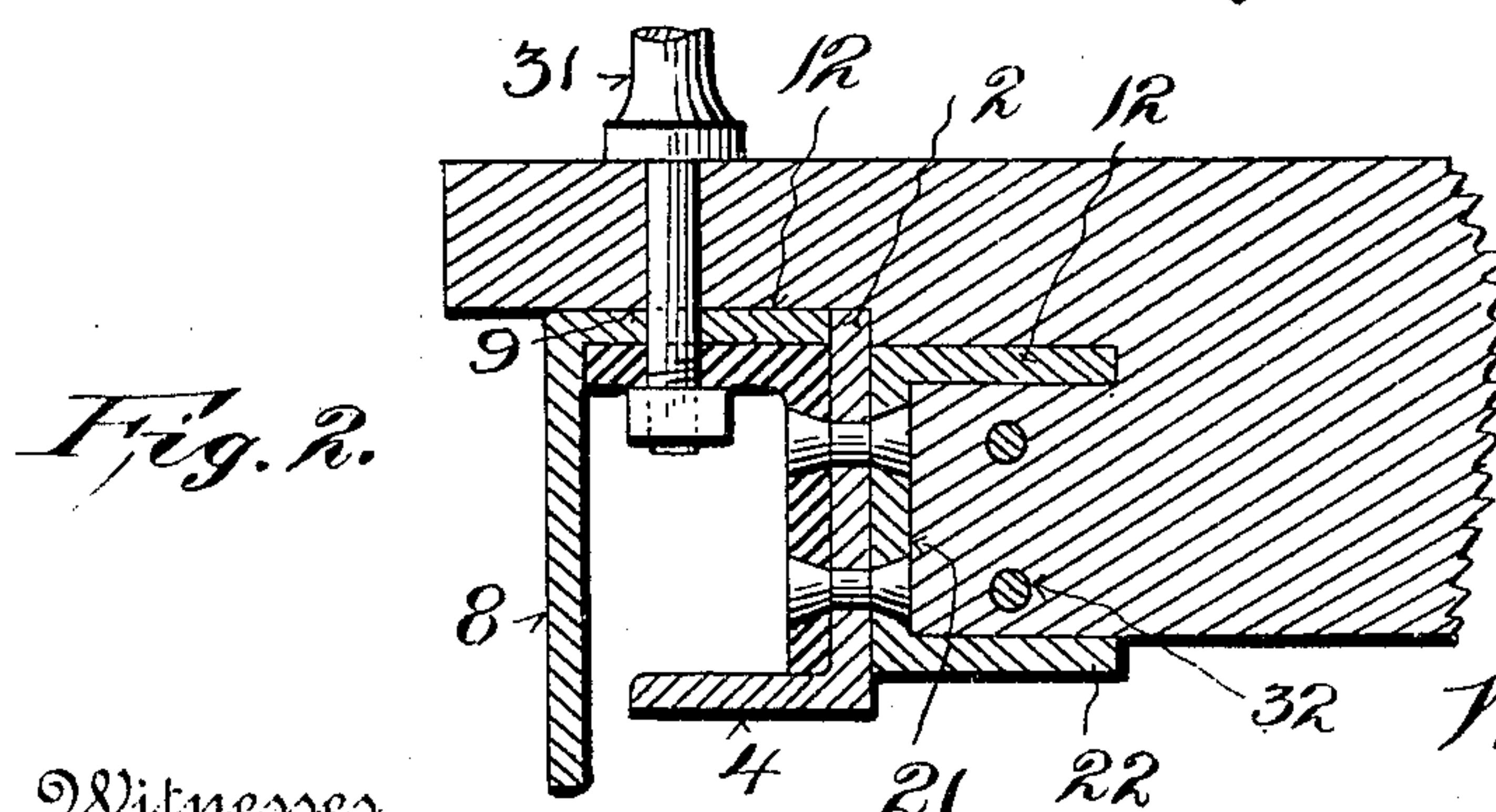
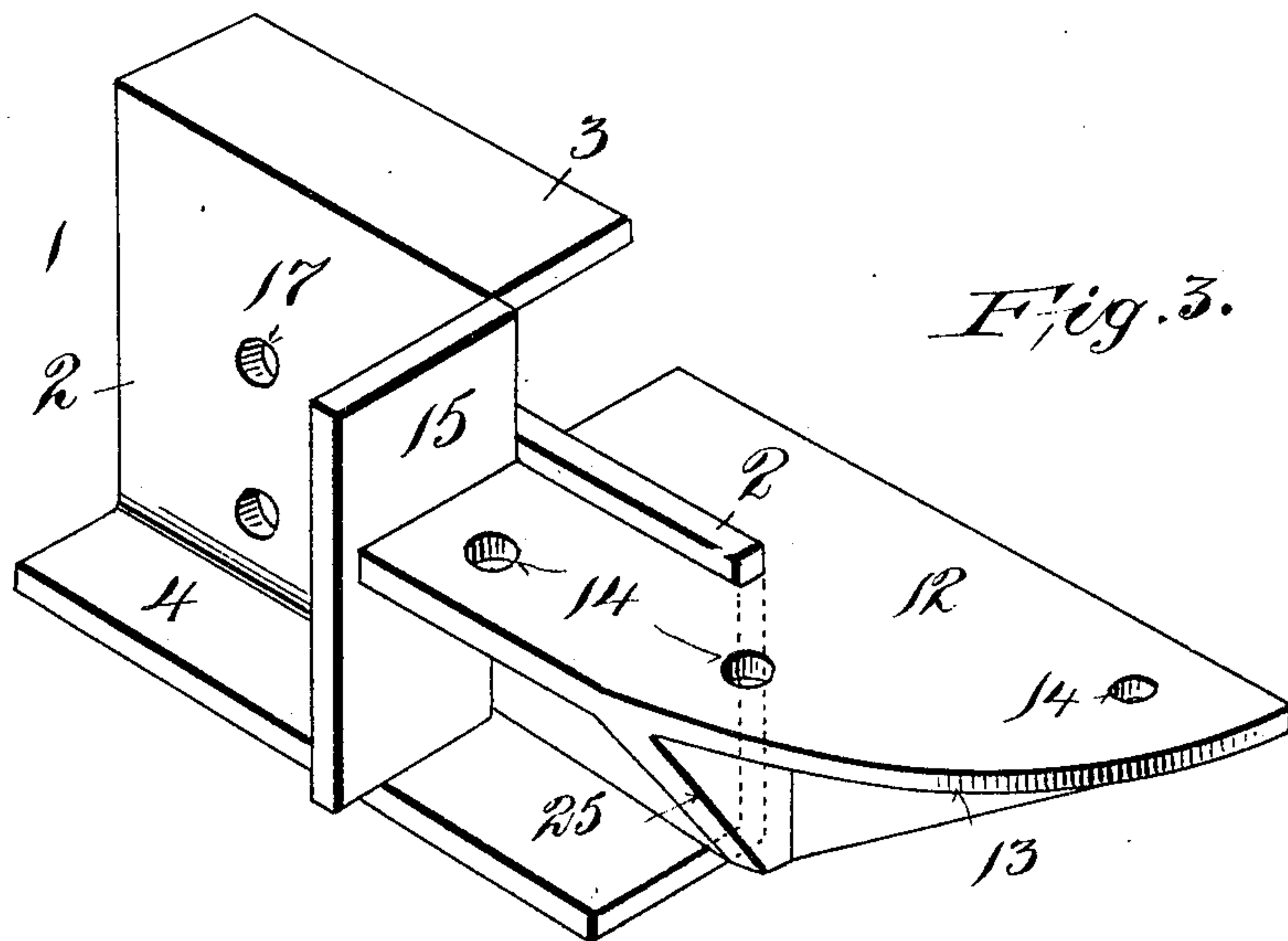
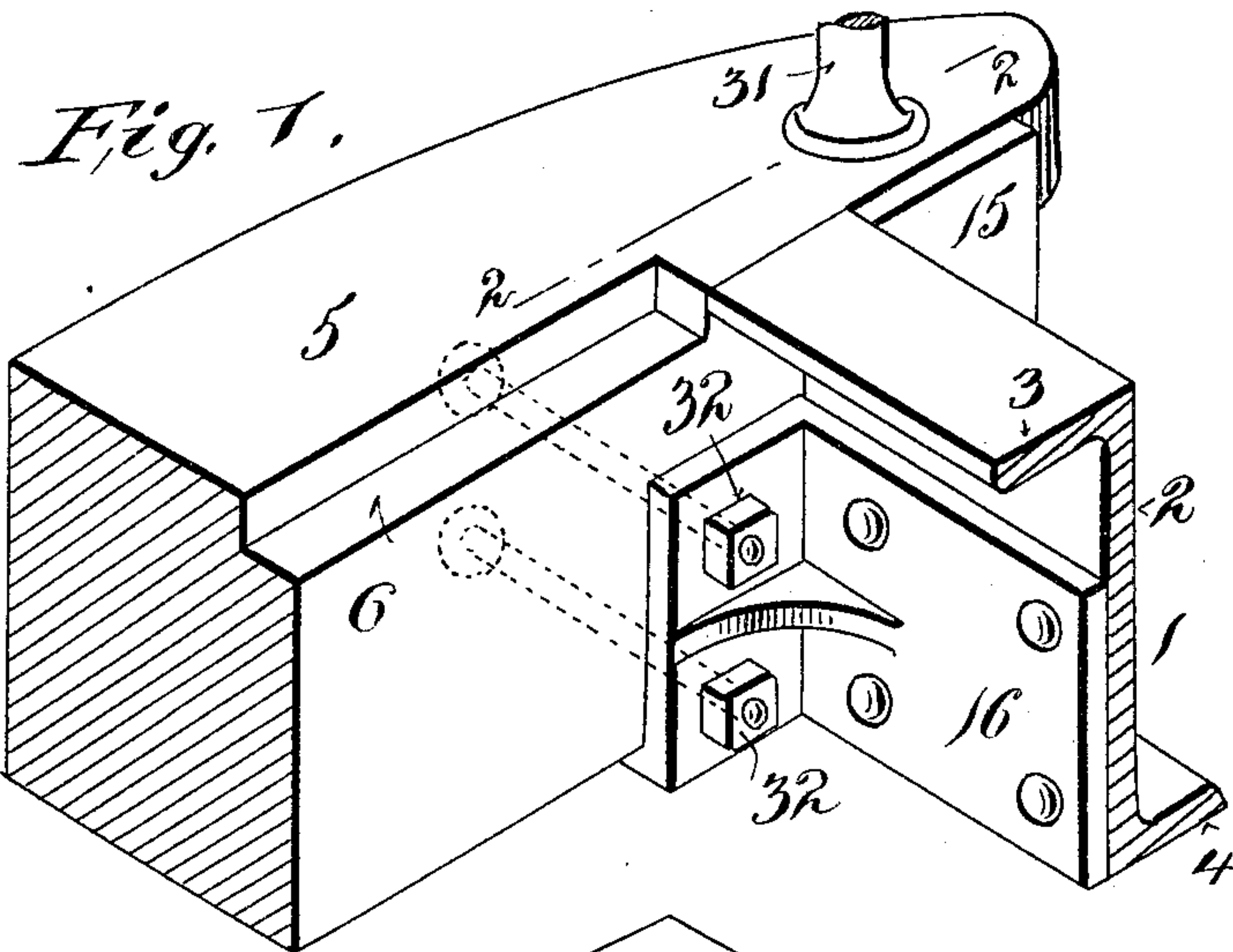
No. 784,355.

PATENTED MAR. 7, 1905.

W. M. SMITH.
CAR CONSTRUCTION.

APPLICATION FILED OCT. 26, 1904.

2 SHEETS—SHEET 1.



Witnesses
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2 SHEETS—SHEET 2.

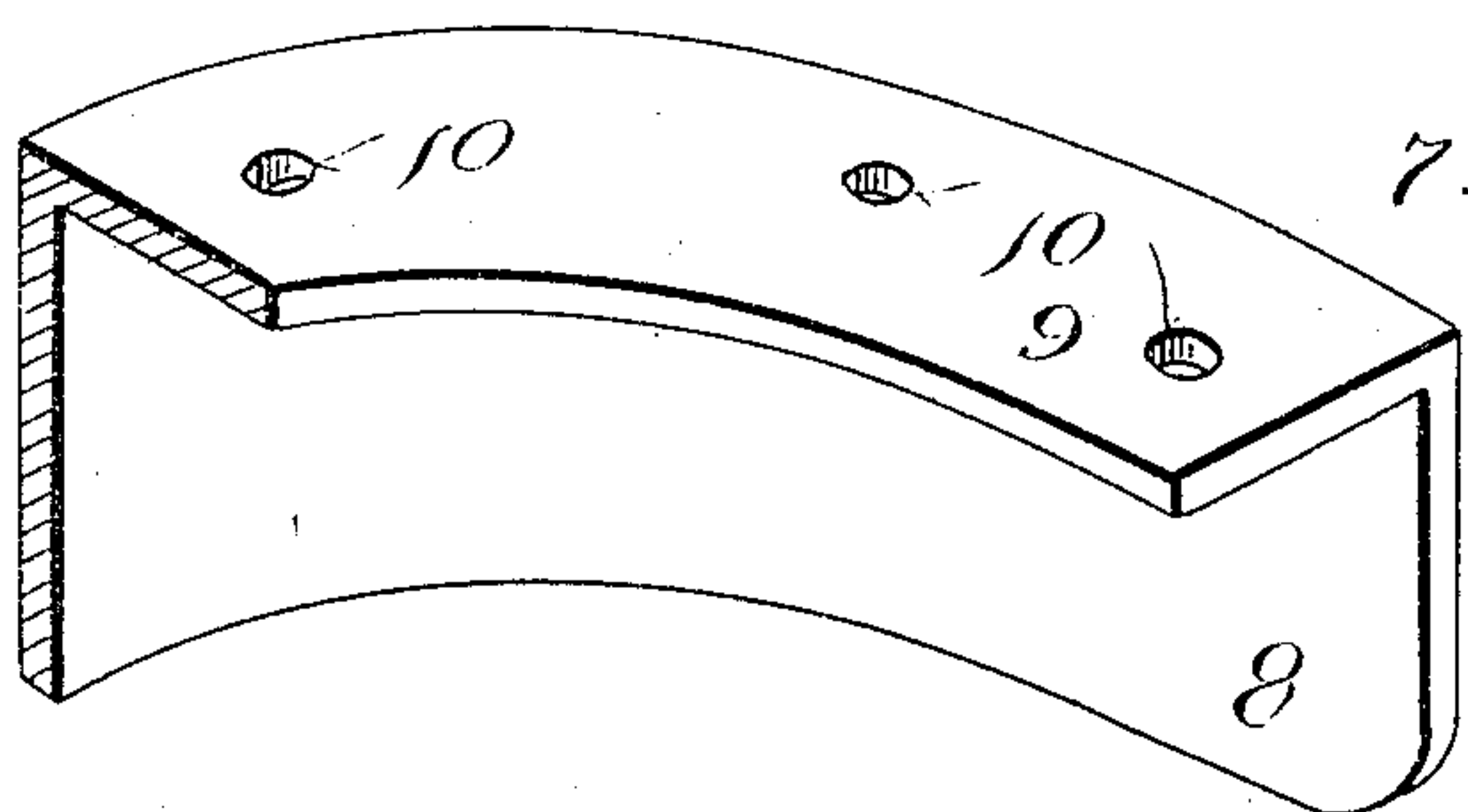


Fig. 5.

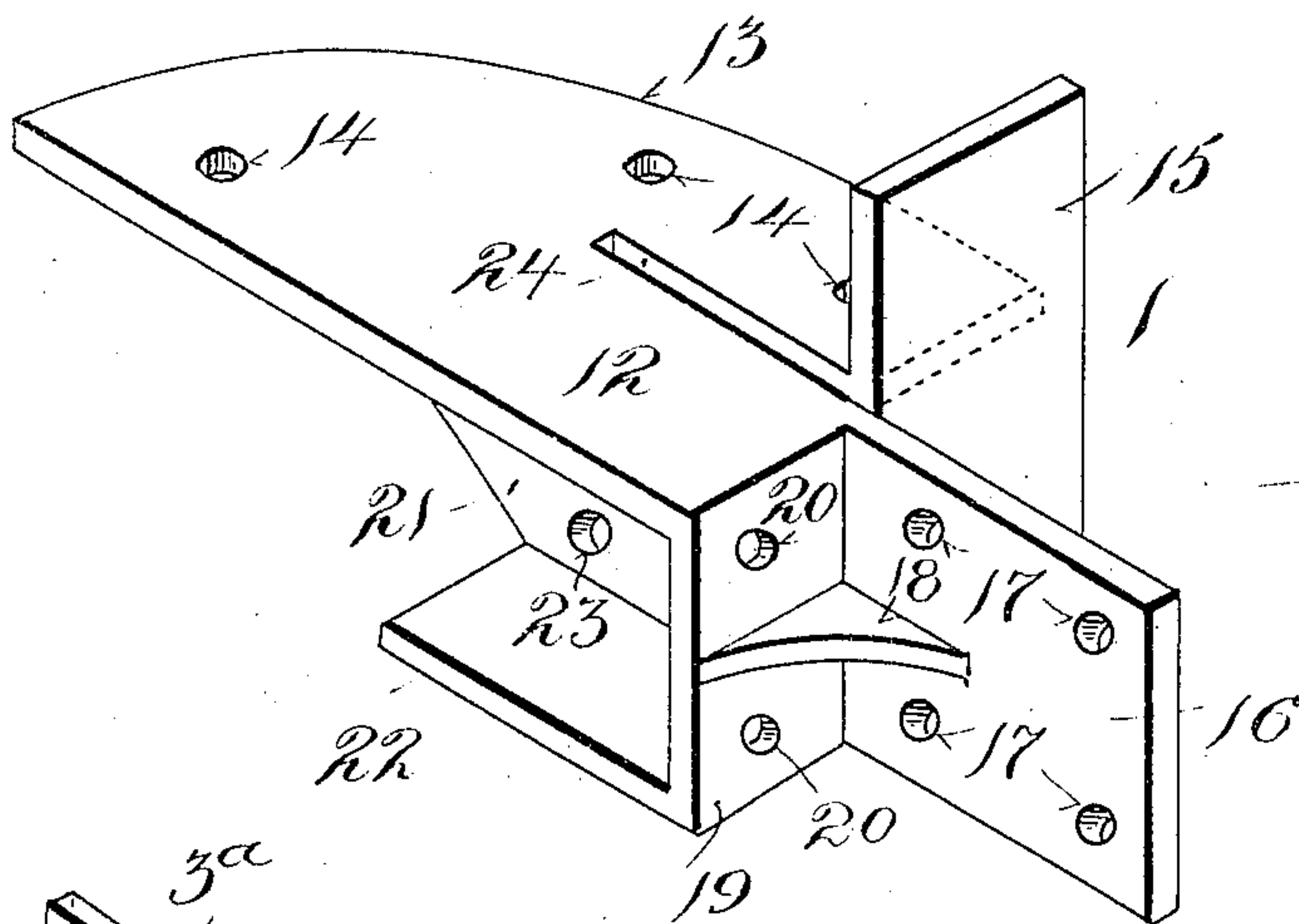


Fig. 4.

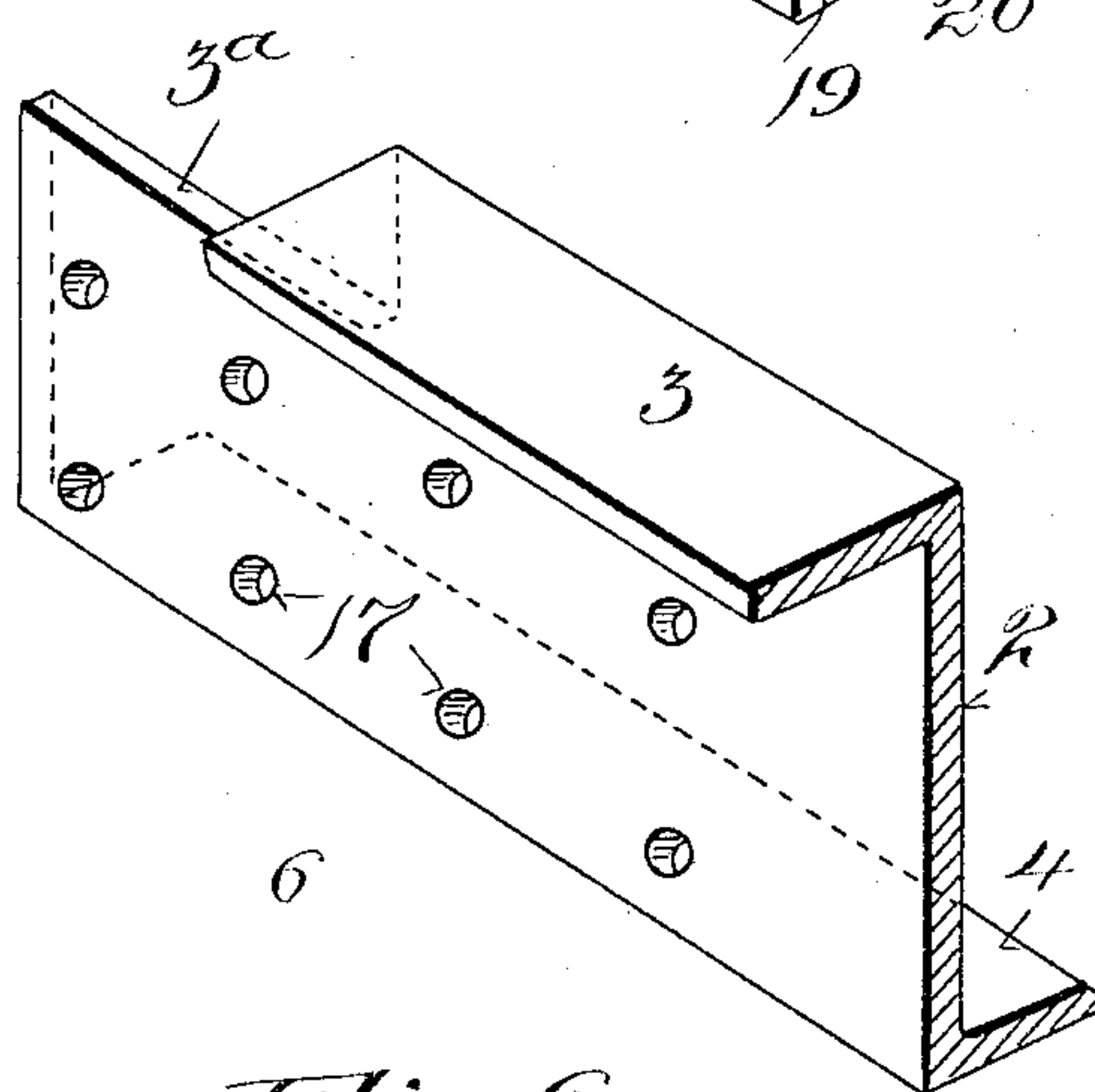


Fig. 6.

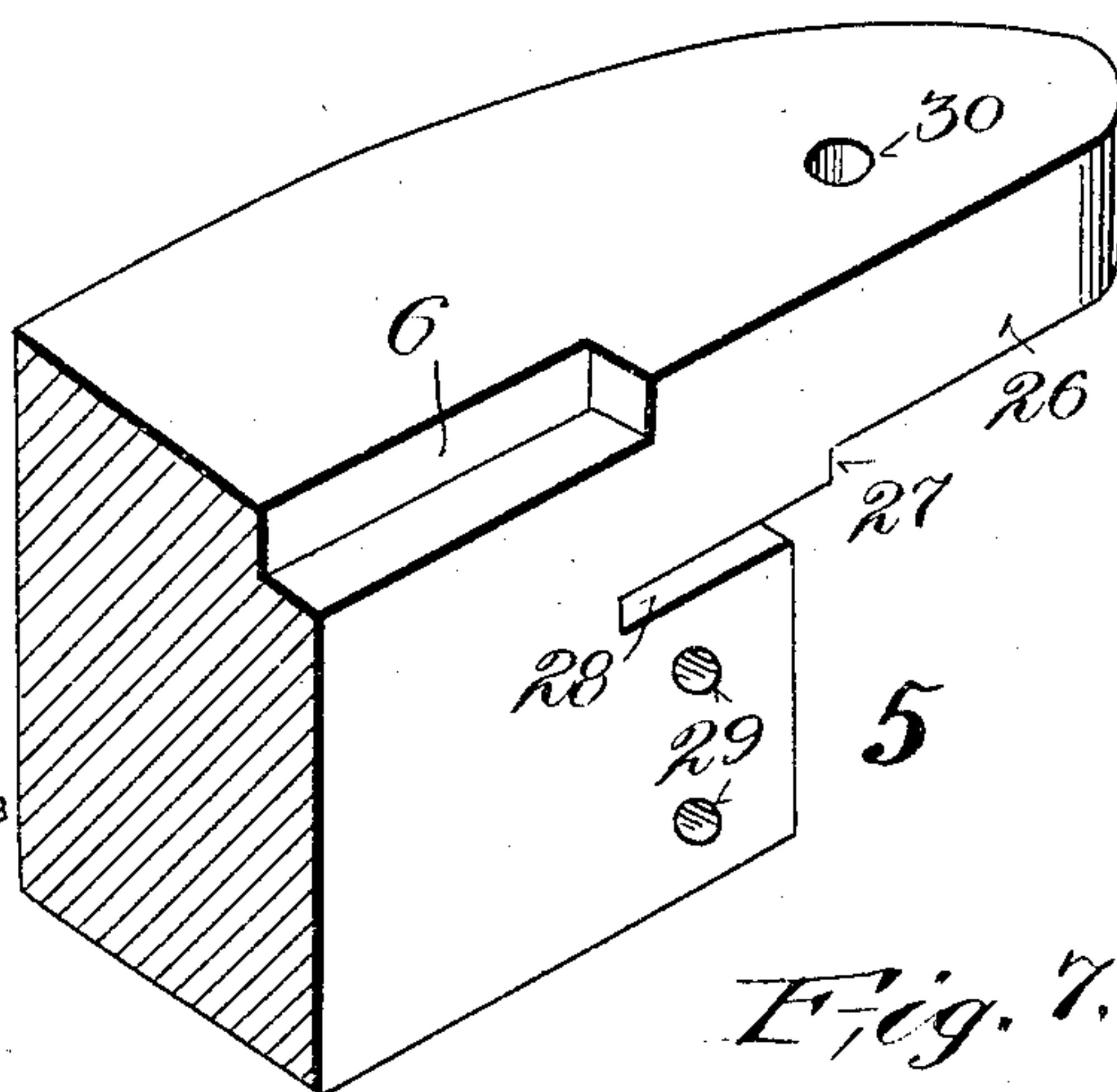


Fig. 7.

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CAR CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 784,355, dated March 7, 1905.

Application filed October 26, 1904. Serial No. 230,117.

To all whom it may concern:

Be it known that I, WARREN M. SMITH, a citizen of the United States, and a resident of the city and county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Car Construction, of which the following is a specification.

My invention relates to the construction of railway-cars, and more particularly to a head-block and means for connecting the ends of the sill and crown-piece. It is my object to provide a strong and simple means for uniting the sill ends, bumper, and crown-piece together, so as to make a rigid and stable construction at the car-platform.

The object and results of my improvements will be more readily understood by the description and claims hereinafter.

In the drawings forming a part of this specification, in which similar numerals of reference indicate the same parts throughout the several views, Figure 1 is a perspective view of the crown-piece and side sill of a car with my improved head-block. Fig. 2 is a section taken on the line 2 2 of Fig. 1. Fig. 3 is a perspective view of my improved head-block. Fig. 4 is a similar view from the opposite direction. Fig. 5 is a perspective view of the end of the angle-iron bumper. Fig. 6 is a perspective view of the end of an angle-metal side sill, and Fig. 7 is a perspective view of the end of a crown-piece.

It is well known that the stronger and more rigid the construction of the end of a car the nearer perfect is the construction, because it tends to strengthen the whole underframing of the car, as well as strengthening the platform when the car is a passenger-car.

The object of my invention is to provide a metallic head-block for uniting the various members at the ends of the car—such as the crown-piece, hood-support, bumper, and sill—together and is preferably cast in one piece.

My invention may be applied to various kinds of cars; but it is especially adapted in the construction of a passenger-car.

In the drawings I have illustrated only such parts of the car as my invention bears direct

relation to. I will describe my invention as applied to a car having an angle-metal side sill and an angle-metal bumper, to which it is especially adapted, although the same may be adapted to cars of different sills and bumper without departing from my invention in its broadest aspect.

In Fig. 1 I have illustrated a Z-metal side sill 1, which has a vertical web 2 and upper and lower horizontal webs 3 and 4, the former being cut away at 3", and a crown-piece 5, which is provided with a recess 6 to receive the flooring of the platform. I have also shown in the various views the end of a circular angle-metal bumper 7, which is provided with vertical and horizontal webs 8 and 9, the latter being provided with holes 10.

For the purpose of uniting the ends of the sill, the crown-piece, and bumper I have provided a head-block 11, which is preferably cast in one piece and which consists of a top plate 12 with a curved outer edge 13 to conform to the shape of the bumper and provided with apertures 14, with which the apertures of the bumper are adapted to register; a vertical plate 15 at the end of the plate 12, against which the crown-piece rests and extending a sufficient distance above to correspond with the thickness of the crown-piece; a rearwardly-extending plate 16, against which the sill is secured and which is provided with rivet-holes 17 and which may have a bracket 18 to brace it against another member of the head; a vertical wall 19, against which the crown-piece rests and which is provided with bolt-apertures 20, and vertical and horizontal walls 21 and 22, adapted to form an abutment for a portion of the end of the crown-piece, the wall 21 being provided with apertures 23 to receive rivets which pass through it and the sill. A slot 24 is provided in the top plate parallel with the plate 16. A bracket 25, Fig. 3, may be provided to brace the top plate.

The crown-piece as constructed for the head-block is provided with an overhanging end 26, having a shoulder 27 to abut against the upper edge of the vertical web of the side sill

and a slot 28 to receive the plate 12. There are also apertures 29 to register with the apertures 20 and an aperture 30 on the extension to register with one of the apertures 10 in the bumper to receive a hood-support 31.

When the different parts are assembled as shown in Figs. 1 and 2, the sill lies in the slot 24 of the top plate and the vertical web is riveted or otherwise secured to the rear plate 16 and the walls 21 and 21^a, so that the top edge of the sill extends above the top plate the same distance as the thickness of the bumper-iron and the upper web 3 abuts against the crown-piece. The bumper is riveted or otherwise secured to the top plate (see Fig. 2) by means of the corresponding apertures and abuts against the vertical plate 15. The crown-piece is then placed so that the extension 26 lies on top of the top plate of the head and on the bumper and the lower part enters into the space between the top and bottom plates 12 and 22 and abuts against the wall 21. It is then held in place by bolts 32, which pass through the apertures 20 and 29, securing it against the wall 19, and the hood-support 31, which secures it to the bumper and top plate.

It has been customary in car construction where a platform is provided with side steps to provide platform-knees to help support the platform, as well as for other purposes. By utilizing the Z-iron side sill for supporting the platform it not only increases the strength of the platform, but simplifies the whole construction of the end of the car, as well as provides a stronger step. Heretofore it has been customary to end the side sill at the end of the car-body proper; but in this construction by extending the sill to the crown-piece a stronger platform is provided and the sill itself is utilized as a step.

By using a head-block I am enabled to secure the side sill and bumper together, as well as the crown-piece, without the use of any intermediate construction, such as platform-knees.

The objects of my invention are numerous when all the parts as described are used; but some of the features may be utilized separately for their individual advantages.

While I have described the various elements in detail, I do not wish to be limited in the scope of the annexed claims to the specific construction, except where the specific elements are included in the claims, as various changes may be made without departing from the spirit of my invention in its broadest aspect.

Having described my invention, what I claim is—

1. A railway-car having side sills, a crown-piece and bumper, and means for securing the sill, crown-piece and bumper together.

2. A railway-car having Z-shaped metal side

sills forming a support for the platform, a crown-piece and bumper, and a head-block adapted to secure the sill, crown-piece and bumper together.

3. A railway-car having a longitudinal member as a platform-support, a crown-piece and bumper, and a head-block secured to the platform-supporting means, and on which the said bumper and crown-piece are secured.

4. A railway-car having a platform-supporting member, a crown-piece, and bumper, and a head-block, secured to the platform-supporting means, and having a plate to which is secured the said crown-piece and bumper.

5. A railway-car having a longitudinal platform-supporting means, a crown-piece and bumper, and a head-block having a recess to receive said platform-support, and a plate to which the crown-piece and bumper are secured.

6. A railway-car having a longitudinal platform-supporting means, a crown-piece, and a head-block having a recess to receive said platform-support, and a plate to which said crown-piece is secured.

7. A railway-car having longitudinal platform-supporting means, an angle-iron bumper, and a head-block having a plate secured to the platform-supporting means and having a plate to which said bumper is secured.

8. A railway-car having side sills, a crown-piece and bumper and a head-block having a recess to receive the side sill, a plate secured to said sill, and a plate to which said crown-piece and bumper are secured.

9. A railway-car having side sills, a crown-piece, and bumper, and a head-block secured to the side sill, and having a longitudinal plate to which the said crown-piece and bumper are secured and a vertical abutting plate.

10. A railway-car having side sills, a crown-piece, and bumper, and a head-block secured to the sill, having a plate, and means for securing the said plate, crown-piece, and bumper together.

11. A railway-car having side sills, a crown-piece, and bumper, and a head-block secured to the side sill, and having a plate to which the said crown-piece and bumper are adapted to be secured and a hood-support securing the crown-piece, bumper, and head-block together.

12. A railway-car having an angle-metal side sill, an angle-metal bumper, a crown-piece, and a head-block provided with a top plate, having a slot to receive the end of the side sill, a rear plate to which the sill is secured, the upper edge of the sill projecting above the said top plate and against which the bumper abuts, the said crown-piece being secured on the bumper and top plate, and a hood-support securing the crown-piece, bumper, and head-block together.

13. As an article of manufacture, a head-

block for railway-cars, having a rearward plate adapted to be secured to a side sill, and a top plate adapted to be secured to the bumper and crown-piece of a railway-car.

5 14. As an article of manufacture, a head-block for railway-cars comprising a rear plate adapted to be secured to a side sill, a top plate adapted to be secured to a bumper, said plate

being provided with a slot 24, vertical walls, 15, 19, and 21, and a horizontal wall 22. 10

Signed this 20th day of October, 1904.

WARREN M. SMITH.

Witnesses:

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