A. J. COOVER.

TRACK BRACE.

APPLICATION FILED MAR. 10, 1908.

948,390.

Patented Feb. 8, 1910.

2 SHEETS—SHEET 1.

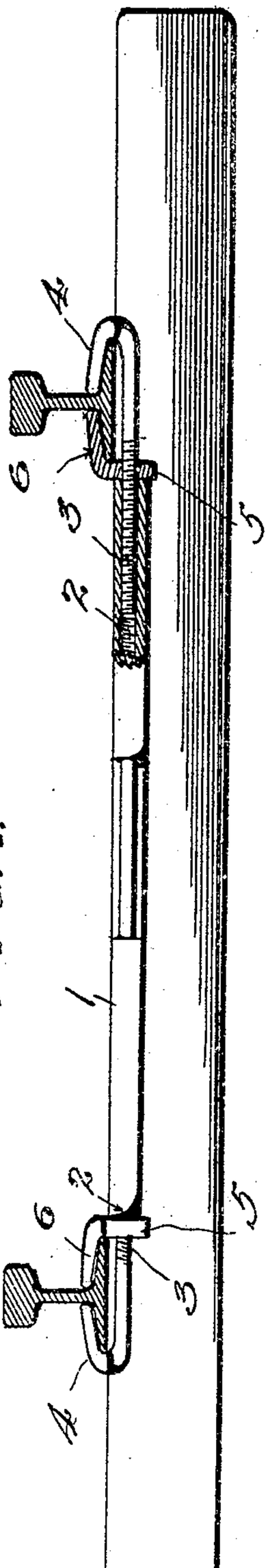

FIG. 1.

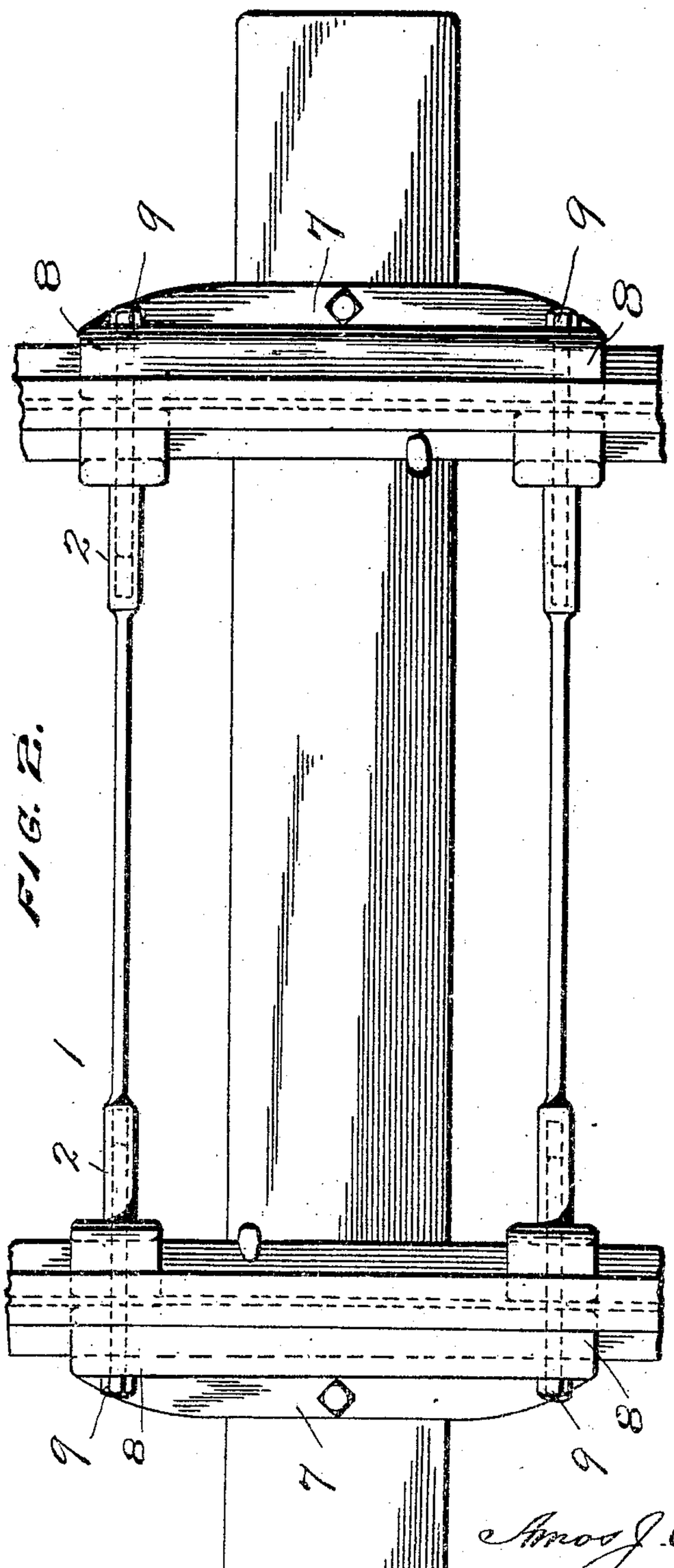

FIG. 2.

WITNESSES

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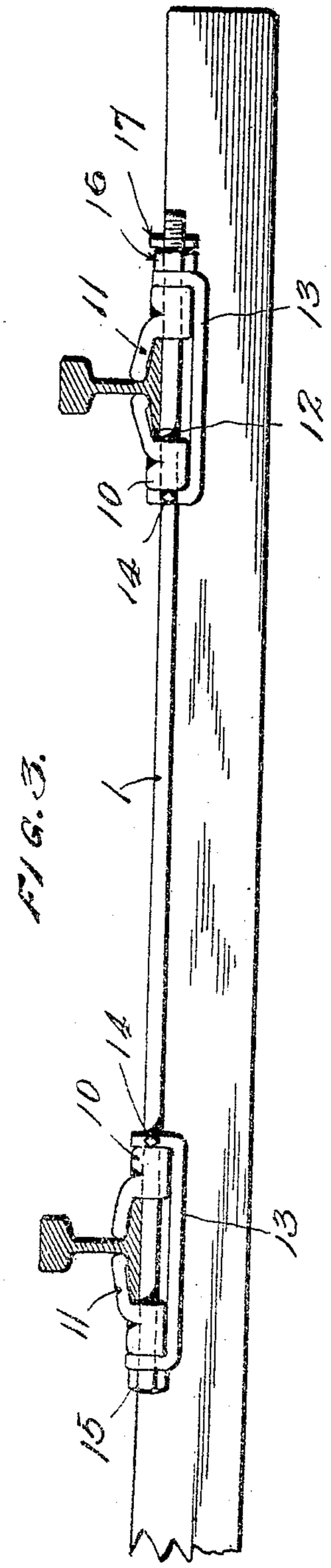

FIG. 3.

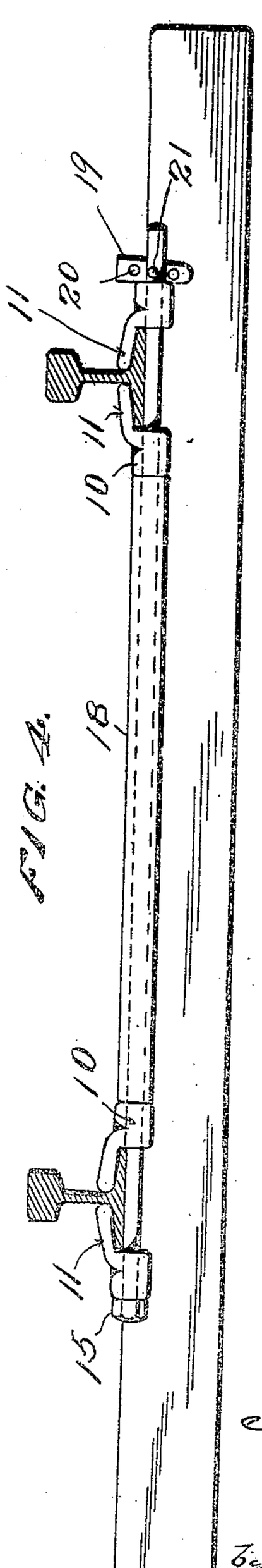

FIG. 4.

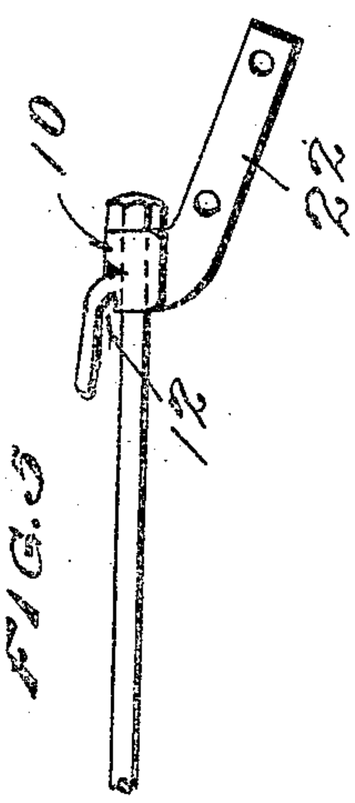

FIG. 5.

WITNESSES

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UNITED STATES PATENT OFFICE.

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TRACK-BRACE.

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Application filed March 10, 1908. Serial No. 420,146.

To all whom it may concern:

Be it known that I, AMOS J. COOVER, a citizen of the United States, residing at Medway, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Track-Braces, of which the following is a specification.

My invention relates to improvements in track braces, and has for its object the provision of simple, durable and practical means for tying the rails of a trackway together to prevent spreading of the rails and to form a more substantial and lasting structure in every way.

Another object of the invention is to provide means for fastening the rails to the ties or roadbed as well as tying the rails together.

A further object of my invention is the provision of a track brace which will also serve as a gage to assist in laying the track, and which if found desirable may be used in connection with concrete or the like material to form a tie proper.

A final object of the invention is the provision of a track brace which is adjustable so that any wear between the parts may be taken up to hold the rails properly spaced and in perfect alinement.

With these and other similar objects in view, my invention comprises a strut or spacing member, clamping means mounted on said strut to engage and hold the rails, and means for adjusting said clamping means.

The invention further consists of a railway track construction embodying certain other novel features of construction, combination and arrangement of parts substantially as disclosed herein and as illustrated in the accompanying drawings, in which:

Figure 1, is an elevation of the brace as applied to the rails of the track with one end shown in section. Fig. 2, is a plan view of a slight modification of the invention showing a form of the brace such as might be used upon short heavy curves in the track. Fig. 3, is a view in elevation of another modified form of the brace, rails being shown in section. Fig. 4, is a like view of another form of the device similar in most respects to the one illustrated in Fig. 3. Fig. 5, is a detail view of a form of clamp which may be used with the brace for anchoring the rail structure to the tie.

Referring to the accompanying drawings and more particularly to Fig. 1, which illustrates the preferred embodiment of the invention: the numeral 1, designates the strut or tie rod, preferably tubular in form, and whether tubular or solid, having screw threaded sockets 2, in its ends, to receive the threaded shanks 3, of the rail hooks 4. The outer hooked ends of these rail engaging members conform to the shape of the base and engage over the foot of the rails. The screw threaded sockets in the ends of the strut are formed with right and left threads so that by rotating the strut, the hooks are drawn inward or forced apart to hold the rails at the proper gage. Annular collars 5, are engaged on the shanks of the hooks on the inner sides of the rails, and these collars are provided with angularly projecting lugs 6, to engage over the inner side of the foot of the rails. In this way the rails are firmly held to the strut and clamped between the hooks and the clamping collars. The strut thus serves as a turnbuckle to clamp and hold the rails and when necessary to preserve the proper gage, washers may be inserted between the ends of the strut and the clamping collars.

The brace just described is suitable for use upon any portion of the trackway, but the form of brace shown in Fig. 2, is more especially adapted for heavy curves. Here the struts and the clamping collars are the same as the ones just described but instead of the hooks, tie bars 7, are employed which have inwardly extending angular projections 8, to engage over the outer portion of the foot of the rail. The struts are placed between the ties or on either side of a tie and the bolts 9, are passed through the bars and collars into the threaded ends of the struts to clamp and hold the rails in proper spaced relation. Here the adjustment is accomplished by means of the bolts instead of as in the first case, using the strut as a turnbuckle.

As shown in Figs. 3 and 4, the strut may be in the form of a tie rod, upon which are mounted the sleeves 10, carrying angular clamping jaws 11, to engage the foot of the rail, the clamping jaws leaving the sleeve at a sharp acute angle to provide an angular wedge slot or recess 12, to make clamping engagement with the foot of the rail. In order to clamp the jaws against the rails and at the same time hold the rails properly spaced, chairs or bridge pieces 13, are em-

ployed which are mounted on the tie rod embracing the clamps, and the chairs are anchored upon the tie rods by means of fastening bolts 14. The rod is provided with a head 15 upon one end and upon the opposite threaded end thereof is mounted a nut 16, the cotter pin 17, serving to prevent accidental displacement of the nut. The use of the chair pieces may be dispensed with by using a spacing pipe or tube 18, engaged on the tie rod between the inner clamps to hold the rails properly spaced, in the manner shown in Fig. 4. The parts would preferably be held locked by means of a wedge 19, entered in a slot in the end of the tie rod, the wedge having a series of openings 20, therein for the reception of the cotter pin 21, to lock the wedge in place. Instead of the wedge fastening, the tie rod might be screw threaded and a clamping nut engaged on such threaded portion.

In order to anchor the rails to the tie or roadbed, the clamping sleeves may be provided with an angular depending leverage arm or extension 22, which is secured to the tie by means of a spike or other suitable fastening. A clamp of this character is desirable for use upon curves and like places where the rails are subjected to undue strain and are therefore more liable to become spread.

If desired, my improved rail braces may be set in concrete and a complete tie structure would thereby be provided which would be practical and would answer all requirements.

From the foregoing description taken in connection with the drawings, it will be evident that I have provided a simple, practical and efficient track brace which accomplishes all the objects herein set forth in a thoroughly satisfactory manner.

I claim:

1. A track brace, comprising a strut, inner and outer clamps in engagement therewith making wedge engagement with the foot of the rails, and bridge members on the strut extending lengthwise thereon and embracing the clamps and holding them in engagement with the foot of the rails.

2. In combination with the rails, a brace therefor comprising a strut, clamps in engagement therewith making wedge engagement with the foot of a rail, and means slidably mounted on the strut for retaining the clamps in engagement with the rail.

3. In combination with a rail, a brace therefor comprising a strut, clamps in engagement therewith making wedge engagement with the foot of the rail, integral means on certain of the clamps having openings therein, means passed through said openings for securing the device to the ties, means on the strut for retaining the inner clamp in engagement with the rail, and means engaging the strut for forcing the outer clamp into engagement with the rail.

In testimony whereof I affix my signature, in presence of two witnesses.

AMOS J. COOVER.

Witnesses:
CHARLES E. SWADENER,
MYRTLE M. BULL.