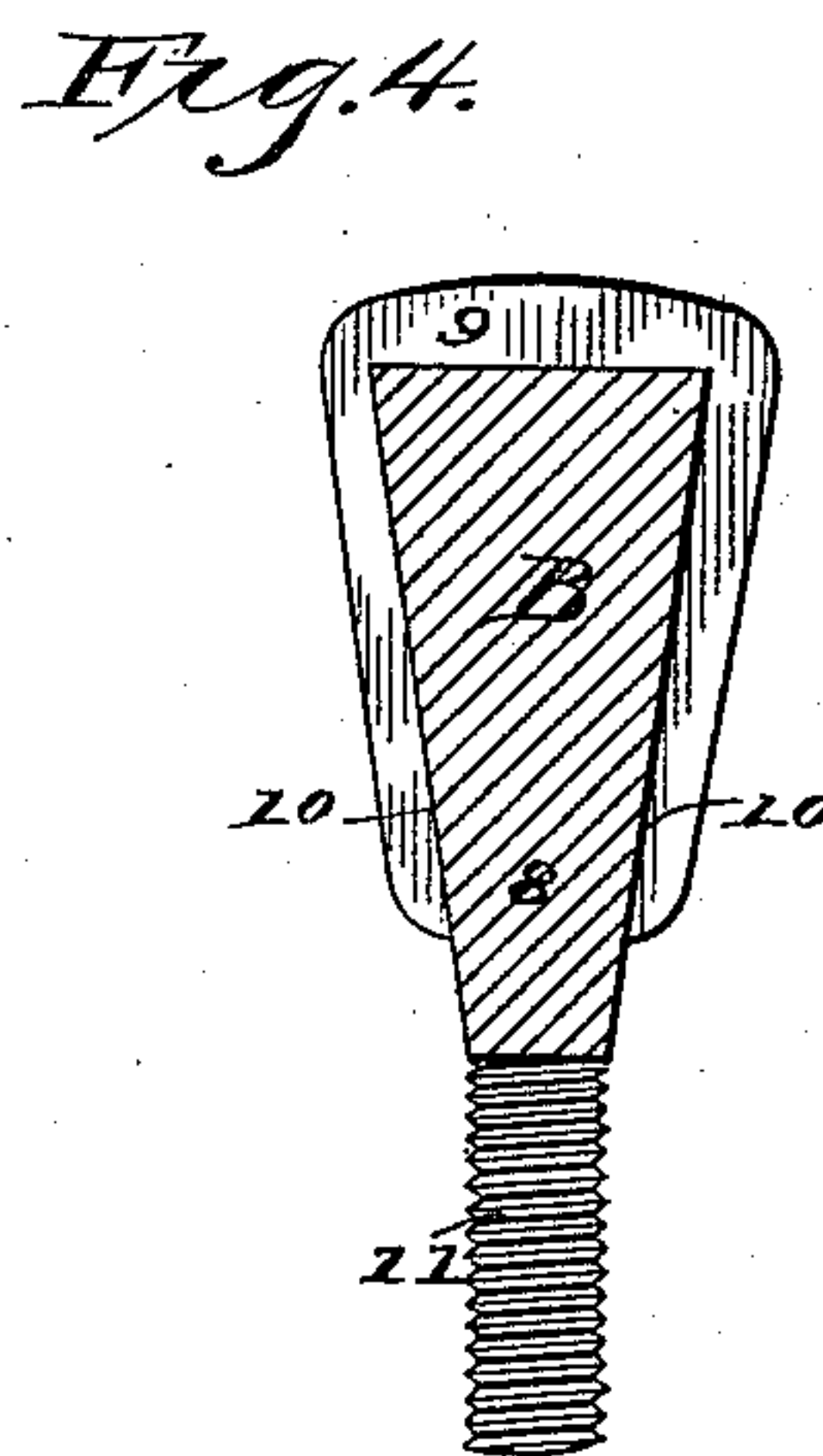
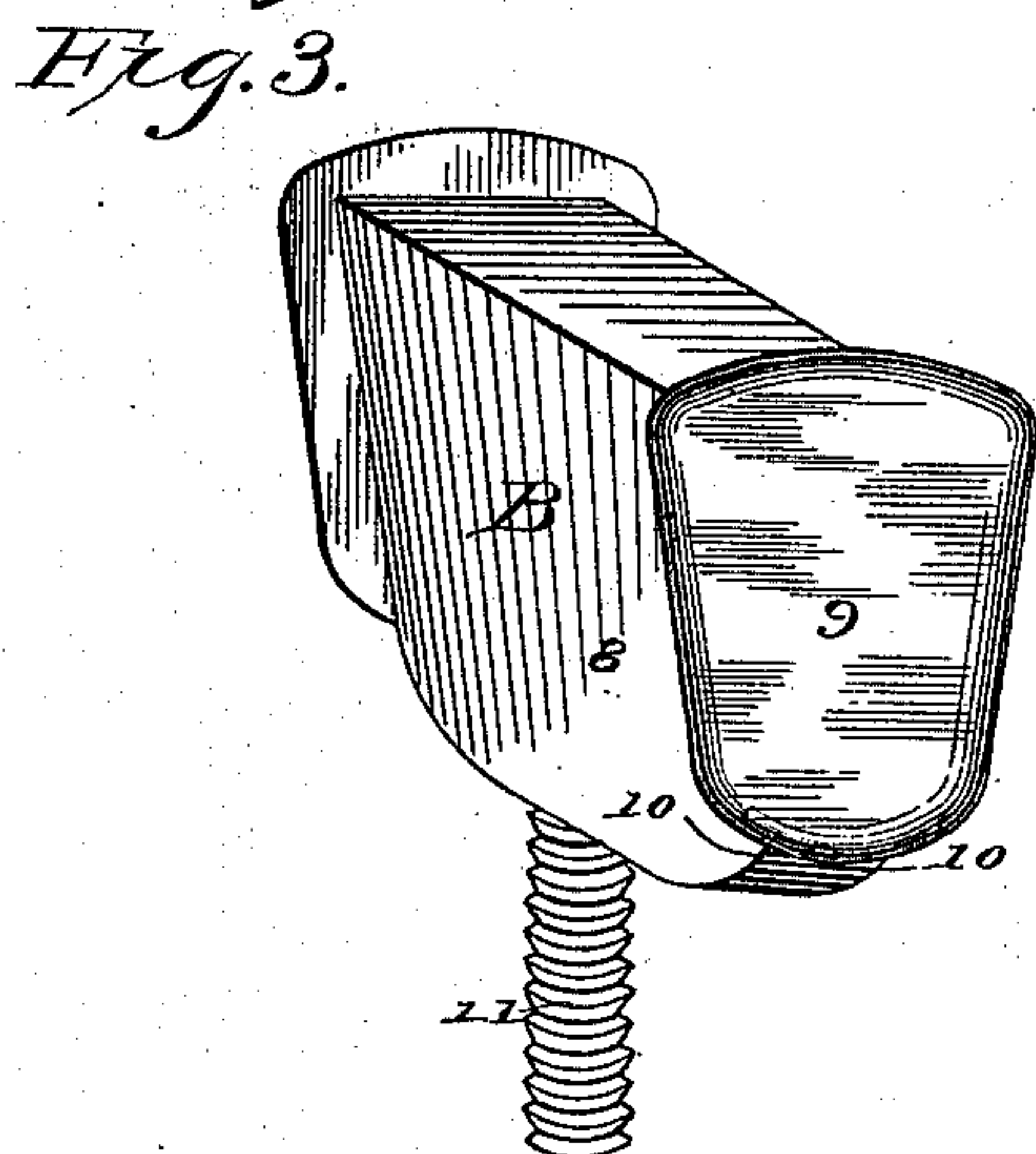
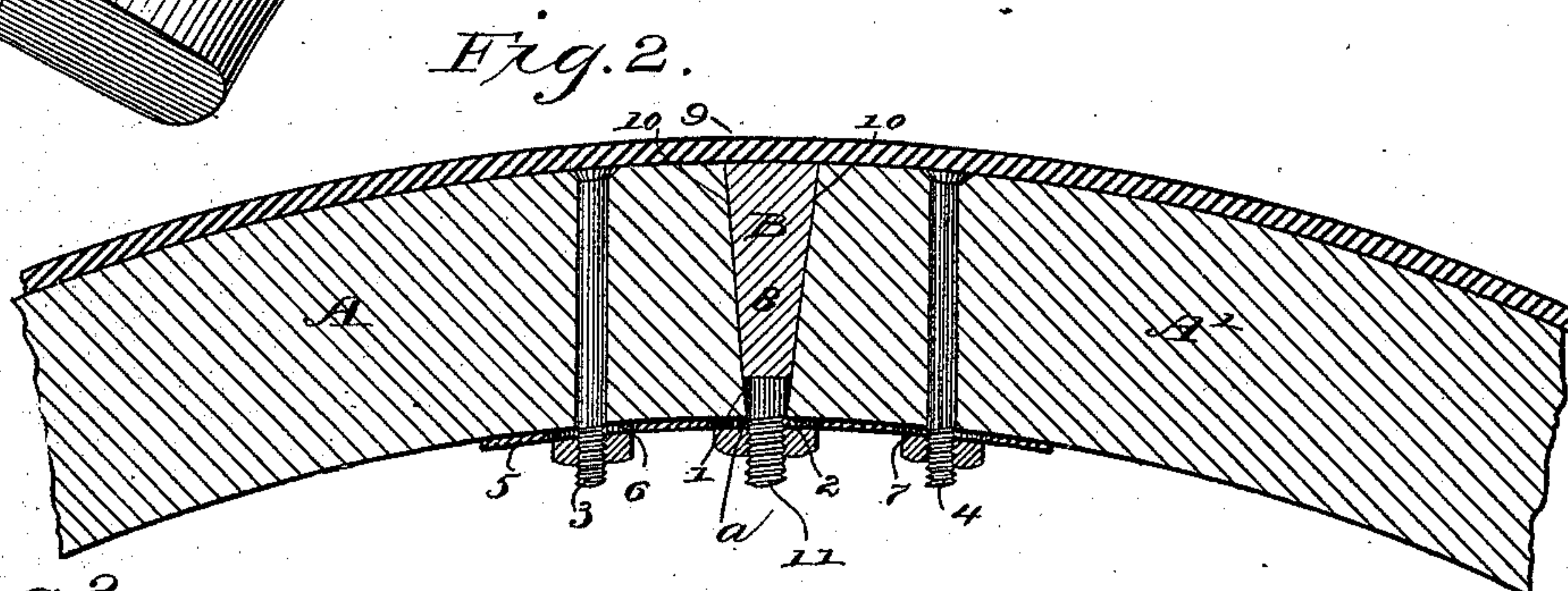
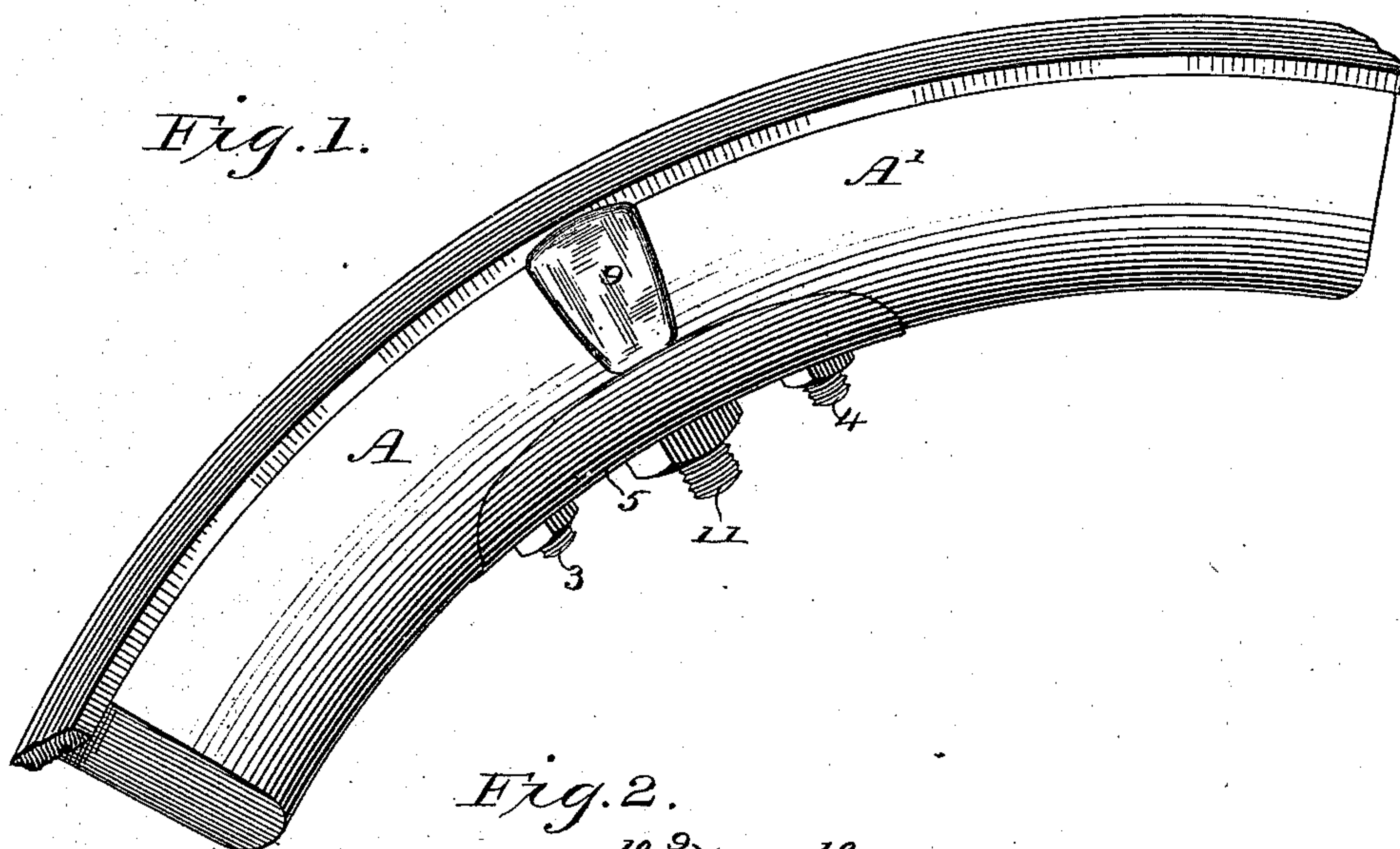


(No Model.)

M. KEECH & B. M. MILLER.
FELLY JOINT HOLDER.

No. 413,672.

Patented Oct. 29, 1889.



Witnesses

Wm. Messer.
C. W. Sommers.

Inventors

Milton Keech
Benjamin M. Miller.
By their Attorney
A. G. Heyman.

UNITED STATES PATENT OFFICE.

MILTON KEECH AND BENJAMIN M. MILLER, OF GOUVERNEUR, NEW YORK.

FELLY-JOINT HOLDER.

SPECIFICATION forming part of Letters Patent No. 413,672, dated October 29, 1889.

Application filed June 19, 1889. Serial No. 314,872. (No model.)

To all whom it may concern:

Be it known that we, MILTON KEECH and BENJAMIN M. MILLER, citizens of the United States of America, residing at Gouverneur, in the county of St. Lawrence and State of New York, have invented certain new and useful Improvements in Felly-Joint Holders, of which the following is a specification.

Our invention has relation to improvements in felly-joint holders, and the object is to provide a certain, convenient, reliable, and durable clip or holder, whereby the joints of the fellies of a road-vehicle may be securely and adjustably held together; and our invention consists in the improved clip and holder hereinafter fully described and specifically distinguished, as the statute requires.

We have fully and clearly illustrated our invention in the accompanying drawings, wherein—

Figure 1 is a perspective of our improved felly-joint and clip applied. Fig. 2 is a longitudinal central section of the fellies and clip-plate and a vertical section of the adjustable joint-piece. Fig. 3 is a detail in perspective of the adjustable felly-joint. Fig. 4 is a vertical sectional view of the joint-piece.

A-A' designate the fellies of the wheel, the approaching ends of which are cut to form a wedge-shaped opening between them, as indicated at 1 2 in the drawings, and conform to the planes of the body of the wedge of the felly-joint. Through the end of each felly is projected a bolt 3 4, having threaded ends to pass through the bolt-slots of the clip-plate. The clip-plate 5 consists of a metal plate having its body formed to fit the under face of the fellies, and its sides turned up, as usual, to aid in keeping the fellies in alignment. The plate is formed with elongated bolt-holes 6 7, through which the threaded ends of the bolts 3 and 4 project, screw-nuts being used to secure the parts in relation and together. A central bolt hole *a* in this plate is for the passage of the bolt of the felly-joint.

B designates our improved felly-joint, consisting of a metal body 8, made wedge-shaped, and formed with side flanges 9 and end flanges 10, and having projected from the foot of the wedge a threaded bolt 11, which passes through the central bolt-hole of the clip-plate

5. The side flanges of the felly-joint serve to hold and keep the ends of the fellies in alignment, and the end flanges assist to keep the tire from lateral displacement. The parts being arranged, adjusted, and secured to the fellies, the functional effects and operative effect are that by tightening the nut on the wedge's bolt the felly-joint piece is drawn inward and the fellies spread and pressed firmly against the tire, thereby tightening the tire and preventing the ends of the fellies at the felly-joint from flattening. The flanges on each side form a socket or seat for the ends of the fellies, keep the fellies firmly in place, prevent them from breaking and cracking at the ends, and the flanges at the ends hold the tire against side displacement.

It will be perceived that by use of this felly-joint piece the common dowel and pin to join the ends of the fellies are done away with. The slots in the clip-plate permit the spread of the fellies when adjustment is required. Whenever adjustment is required to "set" the tire, the nuts at each end of the clip-plate are loosened and the nut on the felly-joint tightened, thereby spreading the fellies, and after the proper adjustment has been reached the end nuts are screwed up tight and the parts are firm in their new positions. Should the fellies swell, the results are obviated by loosening the end nuts, then loosening the nut on the bolt of the felly-joint piece, moving it up, thus retaining the pressure, and then again securing the end nuts. This prevents the wheel from becoming unduly "dished."

Having thus described our invention, what we claim is—

1. The felly-joint comprising the wedge-shaped body 8, having the bolt-shanks 11 at its foot, the side flanges 10 to bear against the sides of the fellies, and the head-flanges 9 to bear against the edges of the tire, substantially as described.

2. The combination of the fellies having their approaching ends cut to form a wedge-shaped opening between them, the wedge-shaped body 8 in said opening and having the side flanges 10, bearing against the sides of the fellies, the head flanges 9, bearing against the edges of the tire, and the bolt-shanks 11, pro-

jecting from its foot, the clip-plate 5, bearing
against the inner sides of the jointed fellies
and having the hole *a* on the shank 11, and
the end slots 6 7, and the bolts 4 5 in the ends
5 of the fellies and extending through the end
slots, said bolts and shanks having the nuts
to clamp the clip-plate to the fellies, substan-
tially as described.

In testimony whereof we affix our signatures
in presence of two witnesses.

MILTON KEECH.
B. M. MILLER.

Attest:

C. N. REYNOLDS,
G. S. CONGER.