

No. 639,252.

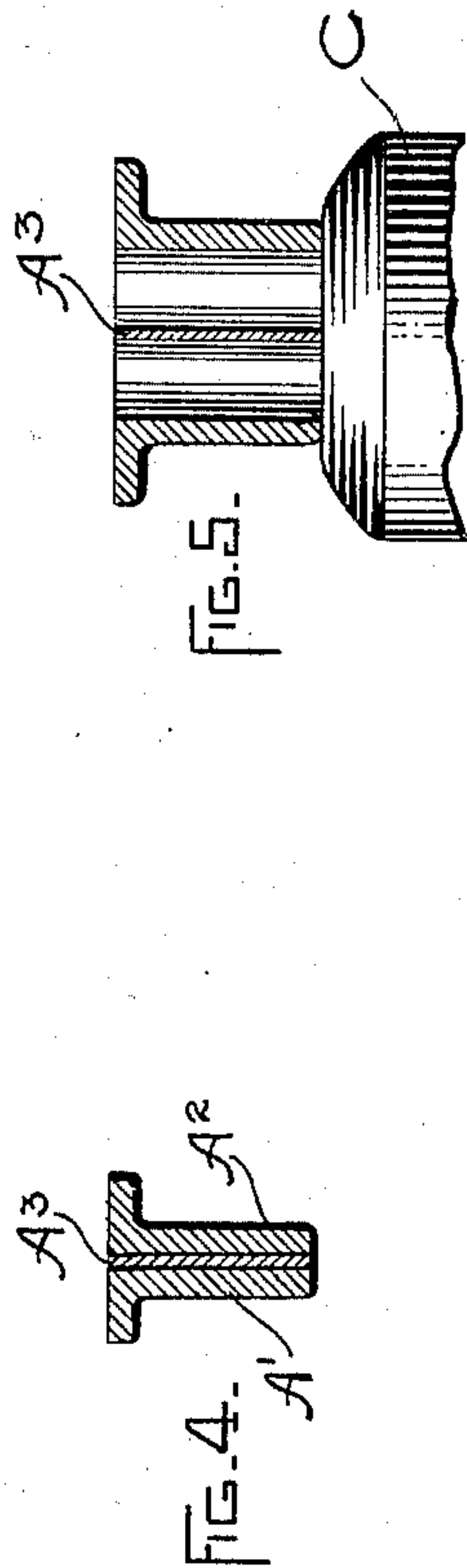
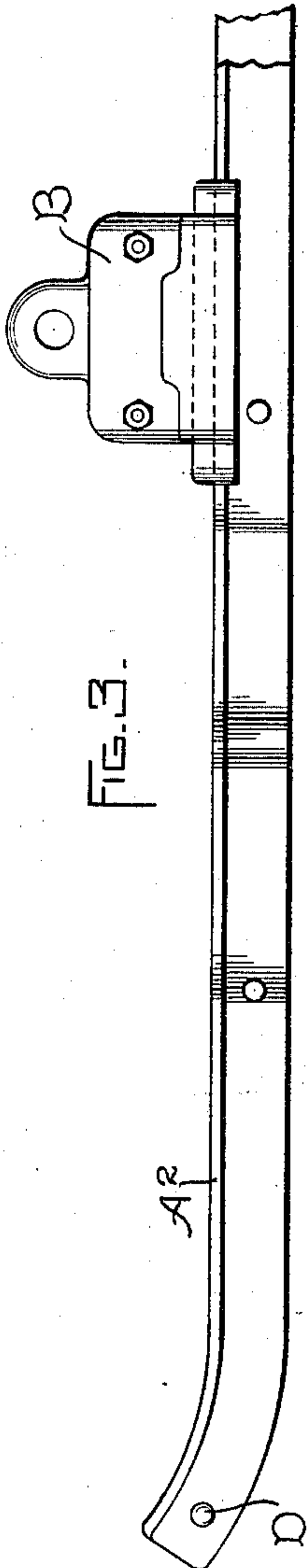
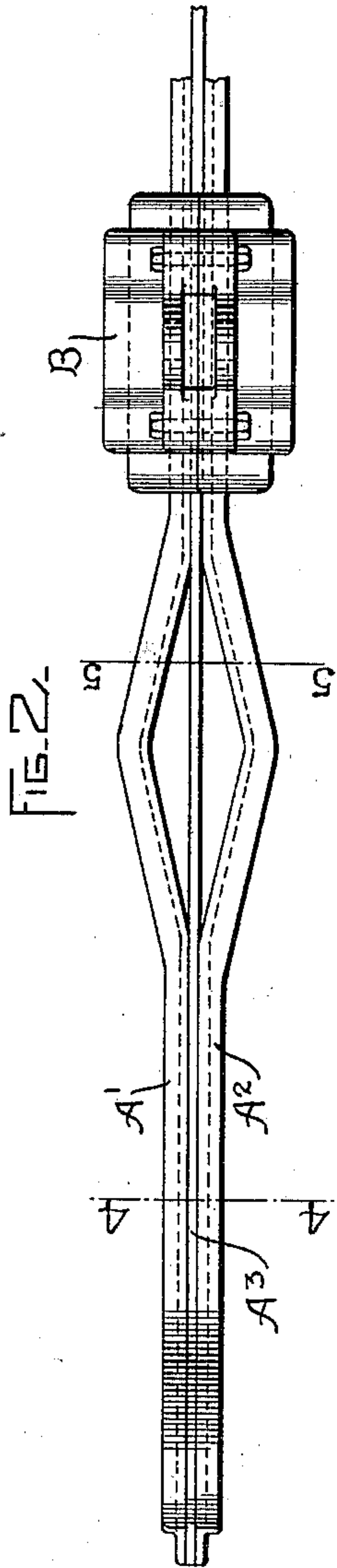
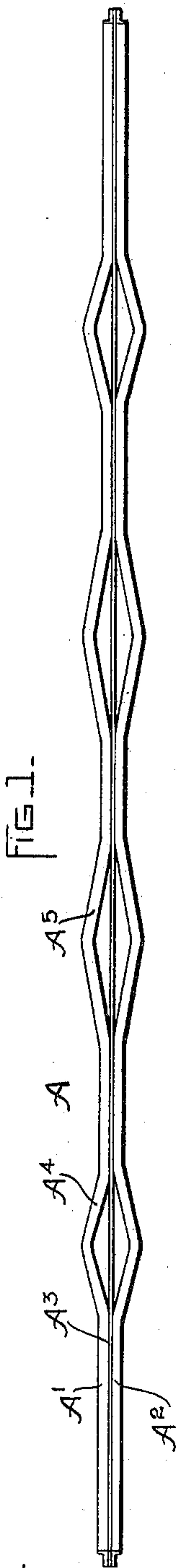
Patented Dec. 19, 1899.

M. T. A. KUBIERSCHKY.

CONTACT SHOE FOR SURFACE CONTACT RAILWAYS.

(Application filed May 3, 1899.)

(No Model.)



WITNESSES.

Edw. Williams, Jr.

A. F. Macdonald.

INVENTOR

Martin T. A. Kubierschky,

by *Albert G. Davis*
Atty.

UNITED STATES PATENT OFFICE.

MARTIN T. A. KUBIERSCHKY, OF BERLIN, GERMANY.

CONTACT-SHOE FOR SURFACE-CONTACT RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 639,252, dated December 19, 1899.

Application filed May 3, 1899. Serial No. 715,407. (No model.)

To all whom it may concern:

Be it known that I, MARTIN T. A. KUBIERSCHKY, a subject of the Emperor of Germany, residing at Berlin, Germany, have invented
5 certain new and useful Improvements in Contact-Shoes for Surface-Contact Railways, (Case No. 1,089,) of which the following is a specification.

My present invention relates to contact-shoes for surface-contact railways. In the
10 ordinary constructions, where studs are used as the sectional conductors, a thin strip of iron turned on edge has been used as a contact-shoe, it being desirable for well-known rea-
15 sons to make the shoe cut slightly, so that it may readily remove ice and snow or cut through any dirt or other insulating matter which may intervene between the contact-stud and the shoe. With this construction
20 the edge of the shoe is apt to wear a groove in the head of the stud, and although the groove is not always of the exact width of the shoe, (because the shoes on different cars do not track,) still the stud becomes rough and
25 irregular and the contact becomes poor in the course of time. It is the object of the present invention to obviate this difficulty by combining with the ordinary narrow edge of the shoe angle-irons, which are alternately close
30 to the strip and displaced somewhat from it, so that in passing over the shoe the wear occurs over the whole surface, and yet the edges are so arranged that dirt or ice is readily displaced.

35 The shoe is illustrated in the accompanying drawings, in which—

Figure 1 is a plan. Fig. 2 is an enlarged view of a part of the shoe shown in Fig. 1 with one of the supports of the shoe attached.
40 Fig. 3 is a side view of the parts shown in Fig. 2. Figs. 4 and 5 are sections taken, respectively, on the lines 4 4 and 5 5 of Fig. 2.

A' is one of the angle-irons of which the shoe is commonly composed, A² is the other, and A³ is the strip which is generally placed
45 between them. As shown in Fig. 1, the supporting angle-irons are displaced into a lozenge shape at A⁴, and another lozenge at A⁵ may also be employed, one being somewhat
50 longer than the other, so that the cutting angles as they slide over the contact will be

different. The same parts are shown in Figs. 2 and 3 upon a somewhat-enlarged scale, in Fig. 2 the support B being illustrated in position, and Fig. 3 showing the rivets or bolts D,
55 by which the parts are held together.

Figs. 4 and 5, as already stated, show sections of the device, the latter one being taken through one of the lozenge-shaped portions. In Fig. 5, C indicates also one of the sectional
60 conductors or road-studs.

The essence of the invention consists of a shoe having a tread or contact-surface which alternately widens and narrows, so that the
65 entire surface or substantially the entire surface of the contact-stud is traversed by the shoe as the latter slides along.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A contact-shoe for a surface-contact railway, composed of alternate wide and narrow
70 portions giving a rubbing contact over substantially the entire surface of the contact-stud.

2. A contact-shoe for an electric railway, comprising a narrow part and a lozenge-shaped expansion of the narrow part.

3. A built-up contact-shoe for a surface-contact railway, comprising angle-irons with a wearing-strip between them, the angle-irons
80 displaced at points in the length of the shoe so as to form wider portions.

4. A built-up contact-shoe for a surface-contact railway, composed of angle-bars secured to opposite sides of the wearing-strip, the angle-bars being displaced at points in the length
85 of the shoe to form lozenge-shaped portions extending substantially over the whole surface of the stud.

5. A built-up contact-shoe for a surface-contact railway, comprising angle-irons with a
90 wearing-strip between them, the angle-irons displaced at points in the length of the shoe so as to form lozenge-shaped portions some of which form different angles with the center line of the shoe from others.

In witness whereof I have hereunto set my hand this 12th day of April, 1899.

MARTIN T. A. KUBIERSCHKY.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.