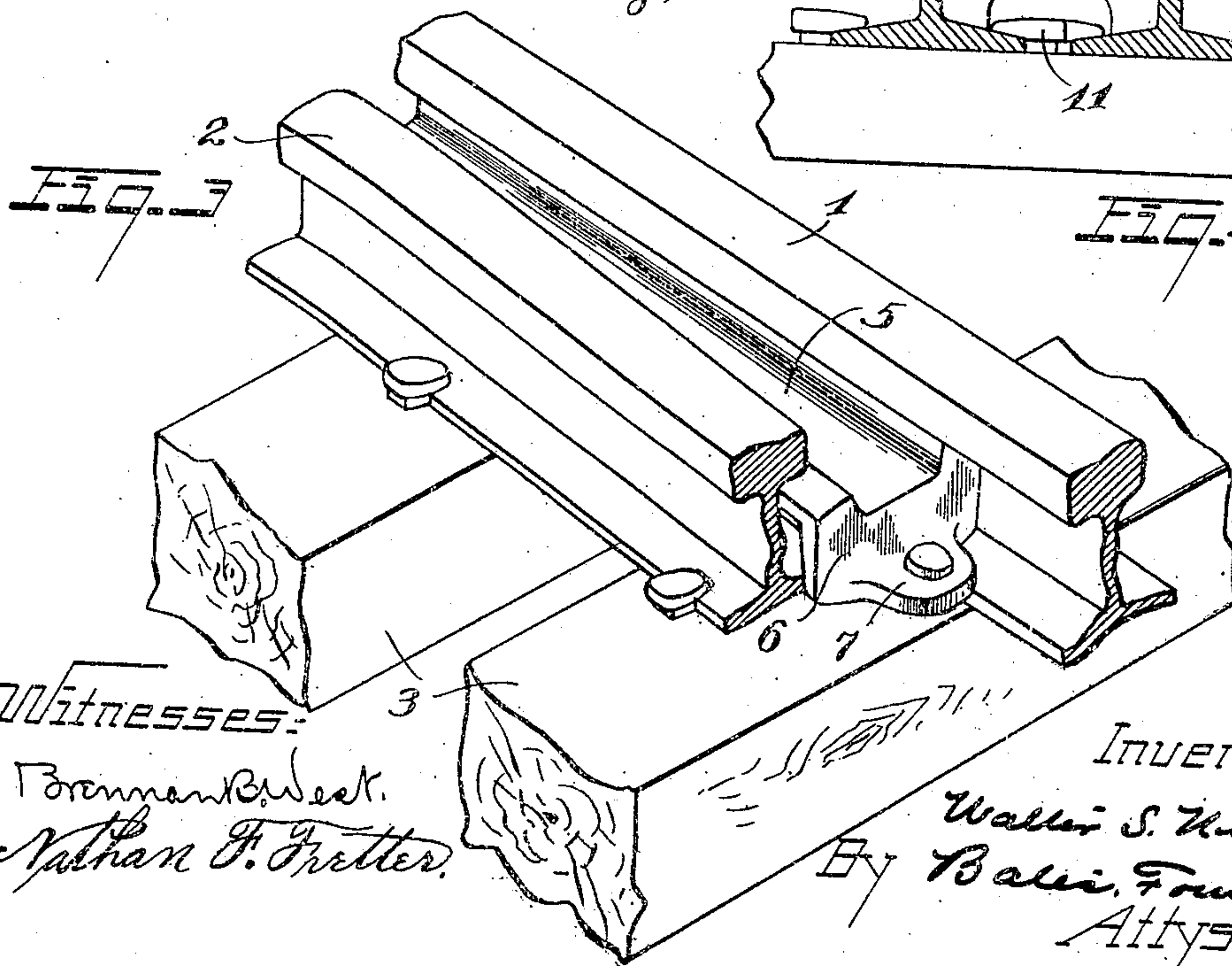
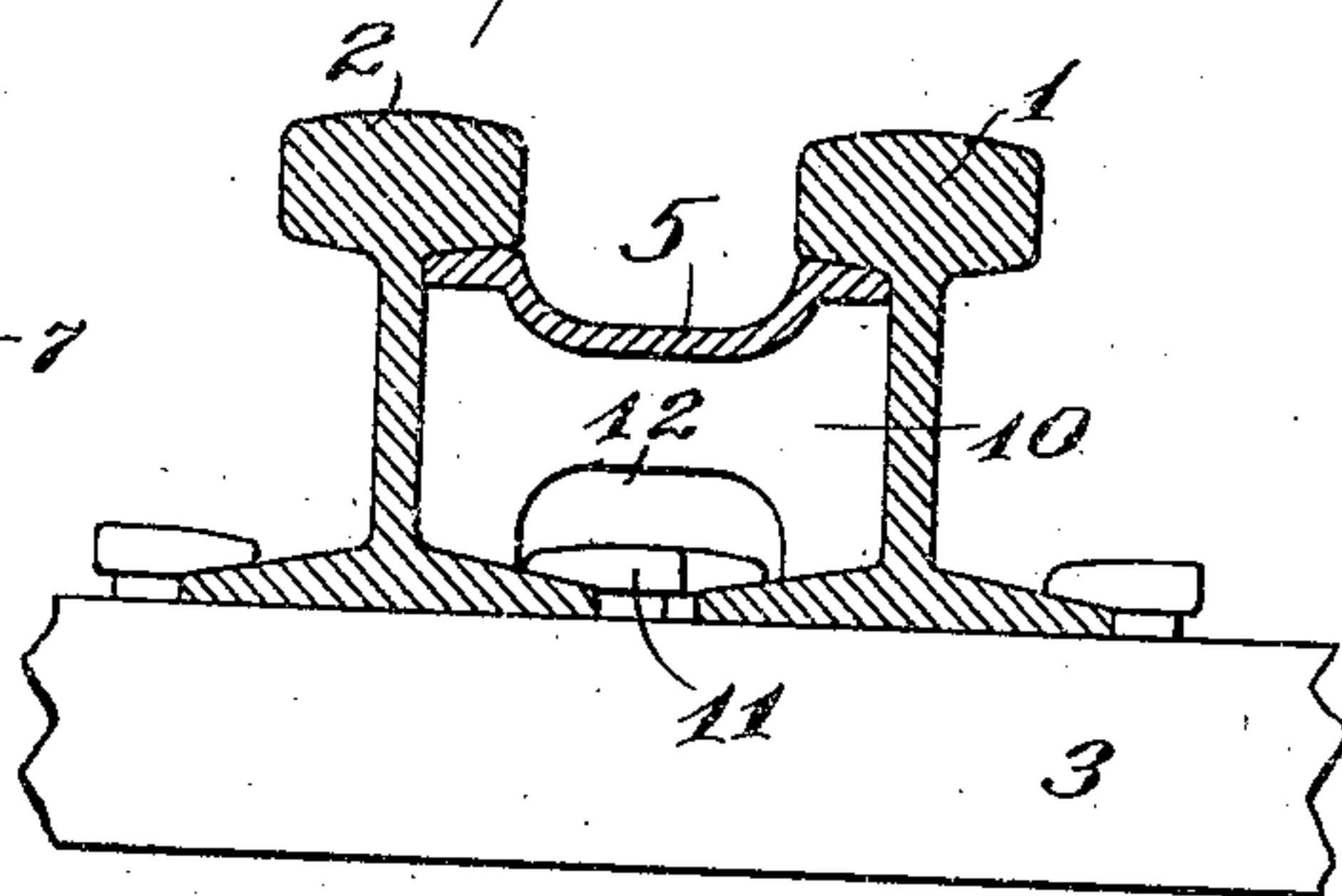
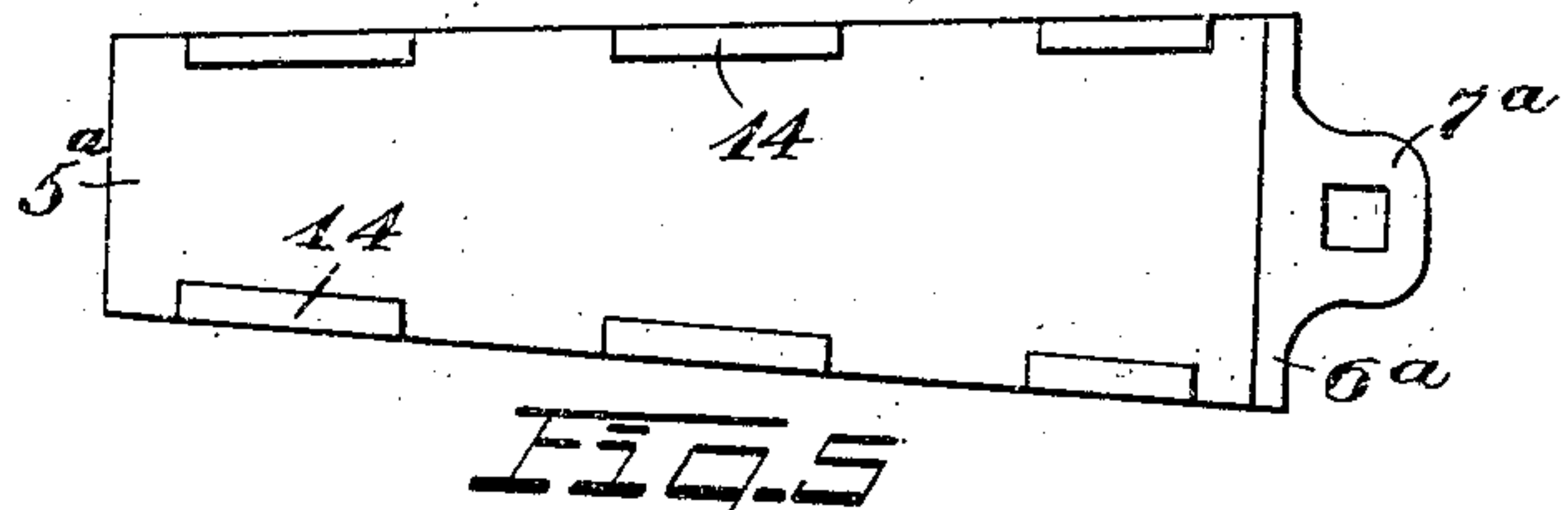
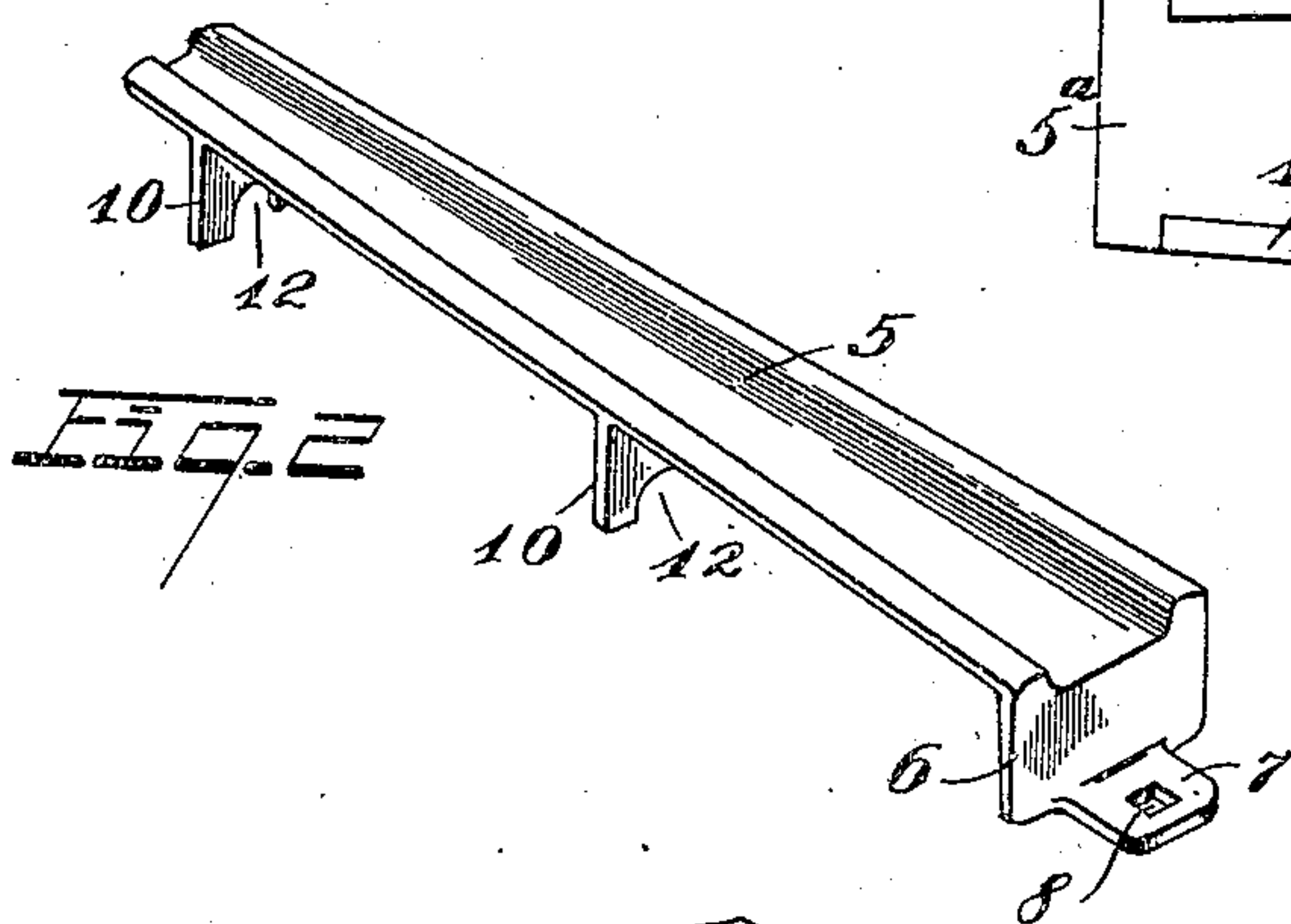
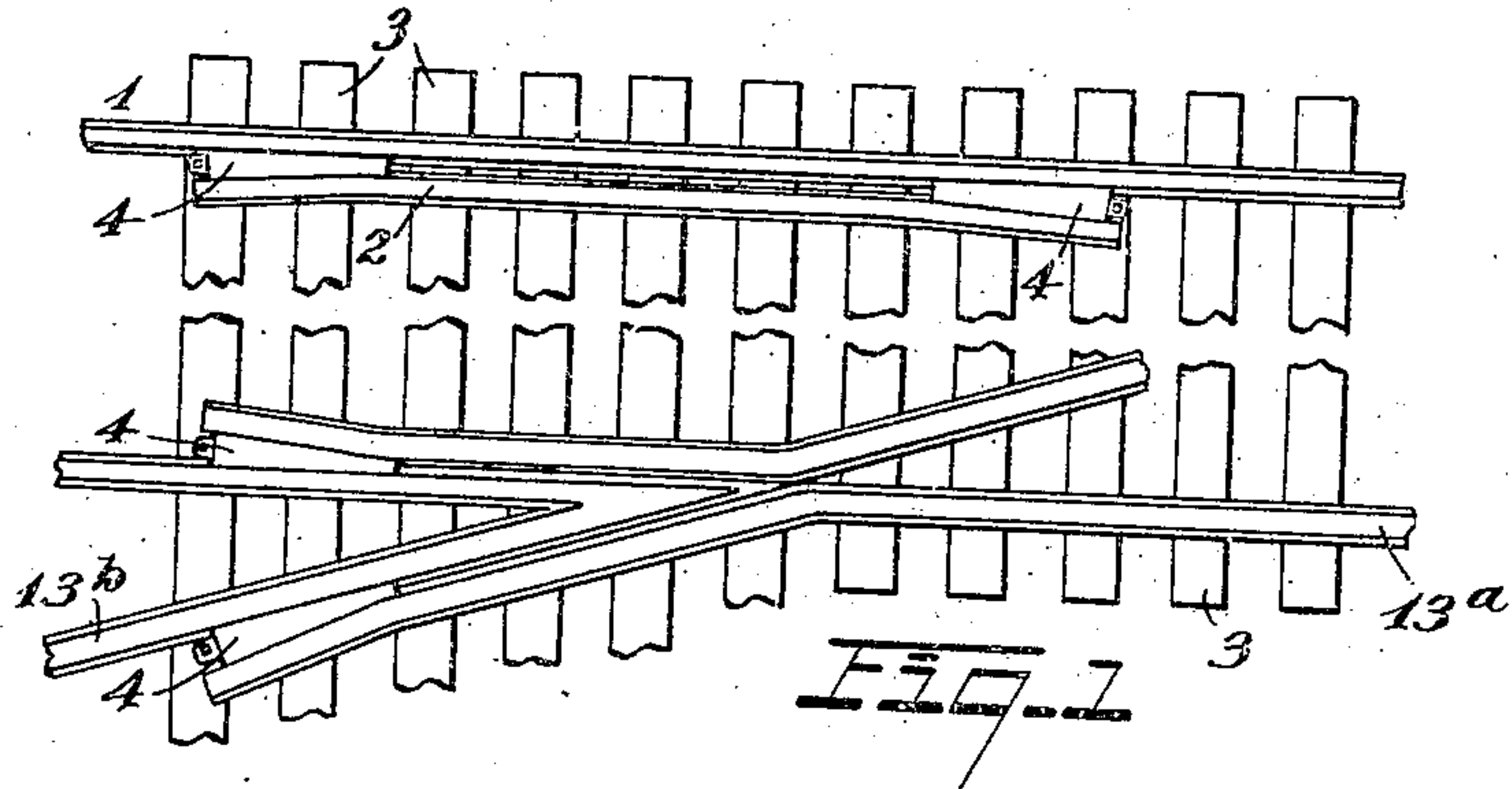


960,035.

W. S. NEWHALL.
FOOT GUARD.
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Patented May 31, 1910.



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UNITED STATES PATENT OFFICE.

WALTER S. NEWHALL, OF CLEVELAND, OHIO, ASSIGNOR TO THE CLEVELAND RAILWAY SUPPLY COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

FOOT-GUARD.

960,035.

Specification of Letters Patent.

Patented May 31, 1910.

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To all whom it may concern:

Be it known that I, WALTER S. NEWHALL, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Foot-Guards, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to foot-guards for railways, the same being used at the ends of guard-rails, at the heels of switches, or in the frogs for the purpose of preventing the feet of the railway workmen or pedestrians from becoming caught and held, such an accident being liable to result in the person thus caught being run down by a passing train.

The object of the invention is the production of a foot-guard that is economical in manufacture and that is strong and durable in use, many guards heretofore made being of thin metal, which guards rapidly rust away and soon become useless.

In the accompanying drawings forming a part of this application, Figure 1 is a plan view of a railway, the ties being broken away at their centers, said view showing my foot-guard applied to a guard rail, and to a frog; Fig. 2 is a perspective view of one form of the foot guard; Fig. 3 is a perspective view of parts of the main and guard rails having the foot guard in place; Fig. 4 is a transverse section taken through the rails and foot-guard of Fig. 3; and Fig. 5 is a bottom plan view of a modified form of my invention.

My foot guard is a casting, the same being preferably of malleable iron or steel, as cast-iron is too liable to break in use.

Referring to the drawings, 1 represents a main rail and 2 a guard rail, said rails lying upon the ties 3. The guard rail extends parallel to the main rail for the greater portion of its length, but has each of its ends turned outwardly at a slight angle, as shown in Figs. 1 and 3. The diverging portions of the guard rail form with the main rail an angular space in which the feet of workmen and other persons are liable to be caught and held. The object of the foot guard is to fill this angular space and thus prevent the feet of workmen being thus caught.

The foot guard is shown at 4 in Fig. 1, and the same is also illustrated in perspec-

tive in Fig. 2, from which it will be seen that the guard consists of the horizontal plate 5, that is gradually tapered throughout its length, the upper surface of the plate being so formed with a groove or depression to accommodate the flanges of the car wheels. At its wider end, the guard is provided with a downwardly extending flange 6, from the lower end of which projects a horizontal eye-piece 7, having a spike hole 8 therein through which a spike may be driven into the tie 3 for holding the guard in position. At intervals along the length of the plate 5, I provide supporting abutments 10, the same being cast integral with the plate and extending transversely of the same.

As shown in Fig. 4, the contour of the plate 5 and the abutments 10 is such as to substantially fit the space between the main and the guard rails, the side edges of the plate 5 fitting beneath the heads of the rails, the edges of the abutments 10 fitting the webs of the rails, and the lower edges of the abutments fitting the base flanges of the rails, whereby the foot guard when in place, substantially fills the space between the rails. The rails are held to the ties 3 by the ordinary spikes 11, which, of course, project above the base flanges, and would interfere with the insertion of the foot guard between the rails except for the fact that the abutments 10 are provided with cutaway portions 12 which permit the abutments to pass the spike heads. As many of the abutments may be employed as are deemed necessary, Fig. 2 of the drawings showing two such abutments.

The flange 6 at the end of the guard substantially closes the end of the space between the rails and thus prevents the accumulation of dirt beneath the foot guard, said flange also forming a means of attachment for the foot guard, as hereinbefore stated.

In the lower part of Fig. 1 I have shown the foot guard applied to a frog in which 13^a represents a rail of one track, and 13^b represents the rail of the other track.

In Fig. 5 I have shown a modified form of the foot guard in which 5^a represents the tapered plate, 6^a the end flange, and 7^a the horizontal eye-piece through which a spike may be driven to hold the guard in place. These parts are substantially the same as in the guard hereinbefore described. Instead,

however, of extending the abutments 10
across the plate, the same are arranged at
intervals along the sides of the plate as
shown at 14, the same extending down-
5 wardly parallel with the webs of the rails
and resting upon the base flanges. Inas-
much as the opposing lugs on opposite sides
of the plate are spaced apart, it is clear that
the guard may be inserted between the rails
10 without interference from the spike heads 11.

The foot guards are cast in a single piece,
and owing to the thinness of the main plate
and of the abutments, which are light in
weight, they may be conveniently and eco-
15 nomically produced. Moreover the guards
are neat in appearance, and are durable and
strong. They are also convenient in appli-
cation, as they are simply inserted between
the rails and secured in place by a single
20 spike.

Having thus described my invention, what
I claim is:

1. A foot-guard made of a single piece
and having a tapered plate that is adapted
25 to fit between the diverging portions of the
railway rails, abutments extending down-
wardly from the said plate at intervals for
supporting the plate, a depending flange at
the wider end of the plate, said flange clos-
30 ing the space between the rails, and means
connected with said flange by which the
foot-guard may be secured in its position
between the said rails.

2. A foot-guard for railways, said guard
35 being formed of a single piece and having
a tapered main plate that is provided with
a horizontal groove, said plate being adapted
to substantially fit between the diverging
portions of the rails and below the heads
40 of the rails, abutments formed integral with
the said plate and extending transversely be-
low the rails, the edges of the abutments
being adapted to substantially fit the sides
of the webs of the rails and the lower edges
45 of the abutments substantially fitting the
base flanges of the rails, said abutments being
provided with cutaway portions for the pur-

pose specified, an end flange depending from
the wider end of the main plate, said flange
closing the spaces between the rails, and 50
means connected with the end flange for
securing the foot-guard in position between
the rails.

3. A foot guard made of a single piece
and having a tapered plate that is adapted 55
to fit between the diverging portions of rail-
way rails, abutments extending downwardly
from said plate at intervals for supporting
the plate, a depending flange at the wider
end of the plate, said flange closing the space 60
between the rails, and an eye-piece project-
ing from the end flange, said eye piece hav-
ing a spike aperture therein through which
a spike may be driven for holding the foot
guard in position. 65

4. A foot guard for railways, said guard
being formed of a single piece and having
a tapered main plate provided with a hori-
zontal groove, said plate being adapted to
substantially fit between the diverging por- 70
tions of rails and below the heads of the
latter, abutments made integral with the
said plate and extending transversely below
the latter, the edges of the abutments being
adapted to substantially fit the sides of the 75
webs of the rails and the lower edges of the
abutments substantially fitting the base
flanges of the rails, said abutments being
provided with cutaway portions for the
purpose specified, an end flange depending 80
from the wider end of the main plate, said
flange closing the space between the rails,
and an eye piece cast integral with the end
plate and projecting substantially at right
angles from the end flange, said eye piece 85
being provided with an aperture through
which a spike may be driven for holding the
guard in position.

In testimony whereof, I hereunto affix my
signature in the presence of two witnesses. 90

WALTER S. NEWHALL.

Witnesses:

S. E. FOUTS,

A. J. HUDSON.