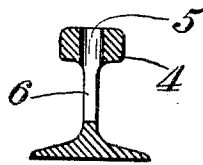
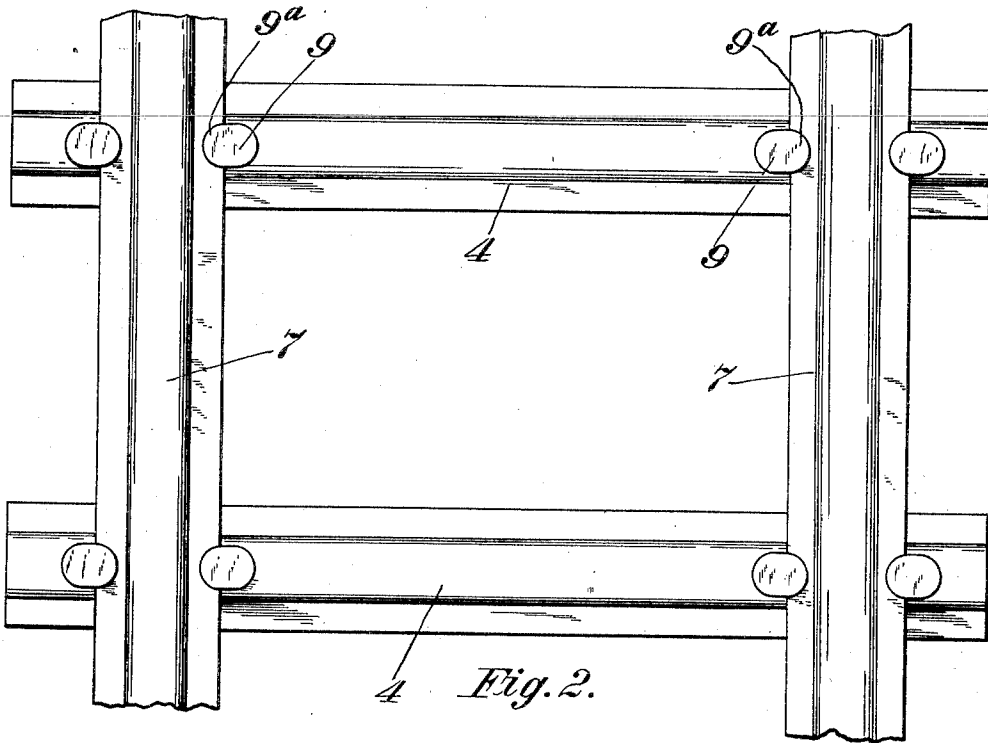
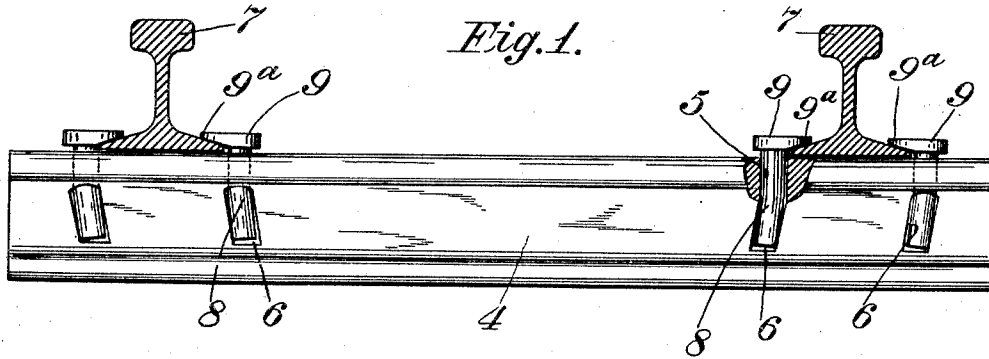


J. W. BLOWER.
RAILROAD TIE.
APPLICATION FILED DEC. 15, 1910.

1,009,717.

Patented Nov. 28, 1911.



Witnesses
Ray J. Finkel
Mayme Ford

Inventor
Joseph W. Blower
by *J. Finkel* & *J. Finkel*
his Attorneys

UNITED STATES PATENT OFFICE.

JOSEPH W. BLOWER, OF COLUMBUS, OHIO.

RAILROAD-TIE.

1,009,717.

Specification of Letters Patent. **Patented Nov. 28, 1911.**

Application filed December 15, 1910. Serial No. 597,428.

To all whom it may concern:

Be it known that I, JOSEPH W. BLOWER, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Railroad-Ties, of which the following is a specification.

The object of this invention is to provide a simple, cheap and efficient tie for railroads or tramways in which tie no wooden parts need be employed, but can be if desired.

The invention is embodied in the example of it herein shown and described by novel features being particularly pointed out in the claims.

In the accompanying drawing—Figure 1 is a sectional view taken transversely of the rails and looking toward one of the ties which appears in side elevation but broken out at one place. Fig. 2 is a top plan view showing two short pieces of rail secured to two of the ties. Fig. 3 is a vertical section through the tie at one of the spike holes. In the views like characters of reference designate corresponding parts.

The tie body 4 is economically made of a piece of ordinary standard rail or I-beam of suitable length. In practice the upper portion or head of the rail or beam is first drilled with four vertical holes like that shown at 5, two for each rail that is to be secured to the tie, said holes extending to or into the web of the rail or beam, and then the web below the hole is transversely punched out to form a through slot as seen at 6 to form a downward extension of the hole portion 5. The portions 6 are cut or punched to stand at an incline to the vertical, the two parts 5 and 6 of the hole being at an angle to each other. The hole portions 6 at each end of the tie are shown as being inclined in the same direction and each pair of such portions is inclined from the portion 5 toward the middle of the tie. 7 designates the rails.

The spike consists of a portion 8 and a head 9 having one side extended more than the other as seen at 9^a so that when driven into the hole 5—6 said extended portion

shall reach over the adjacent foot of the rail. The spikes are made out of short stout pieces of round bar, the heads being forged or otherwise formed on them. The shanks of the spikes should be of a diameter to fairly snugly fit in the hole portions 5 and longitudinally the shanks of the spikes will be made straight so that when driven into the holes provided for them they shall be bent substantially as exhibited in Fig. 1. This bending or flexing of the spike when driven into its hole causes the sides of the spike and particularly one side of it at its lower end to pinch tightly against the wall forming the hole thereby fixing it securely in place.

As is well known, when rails are subjected to a heavy load of cars they tend to spread and tilt outward. This tilting tendency of the rails exerts, of course, an upward and outward pull upon the spikes and I have found that the pull of this pressure is more effectually resisted by flexing the spikes at their lower ends toward the middle of the tie.

The forms and proportions of the parts can be varied without departing from the gist of the invention.

It will be noted that the tie and spikes can be manufactured out of standard material and at extremely small cost.

What I claim is:

1. A railroad tie of I-beam form and including a head and a web portion, said tie provided with a spike hole formed in said head and web portions, the portion of the hole in the web being a through-slot inclined to the portion of the hole in the head, said slot adapted to receive and retain within the slot the penetrating end of the spike.

2. A railroad tie of I-beam form and including a head portion and web, said tie being provided with a spike hole formed in said head and web, the portion of the hole in the web being a through slot inclined to the portion in the head and also inclined from the portion in the head toward the middle of the tie.

3. A railroad tie of I-beam form and including a head portion and a web, said tie

provided with spike holes for receiving rail-
holding spikes at opposite sides of a rail,
said spike holes being each formed in the
head and web of the tie, the portions of said
5 holes in the web being through slots in-
clined to their respective hole portions in
the head, and each inclined from its hole

portion in the head toward the middle of
the tie.

JOSEPH W. BLOWER.

Witnesses:

E. B. GRAHAM,
BENJAMIN FINCKEL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
