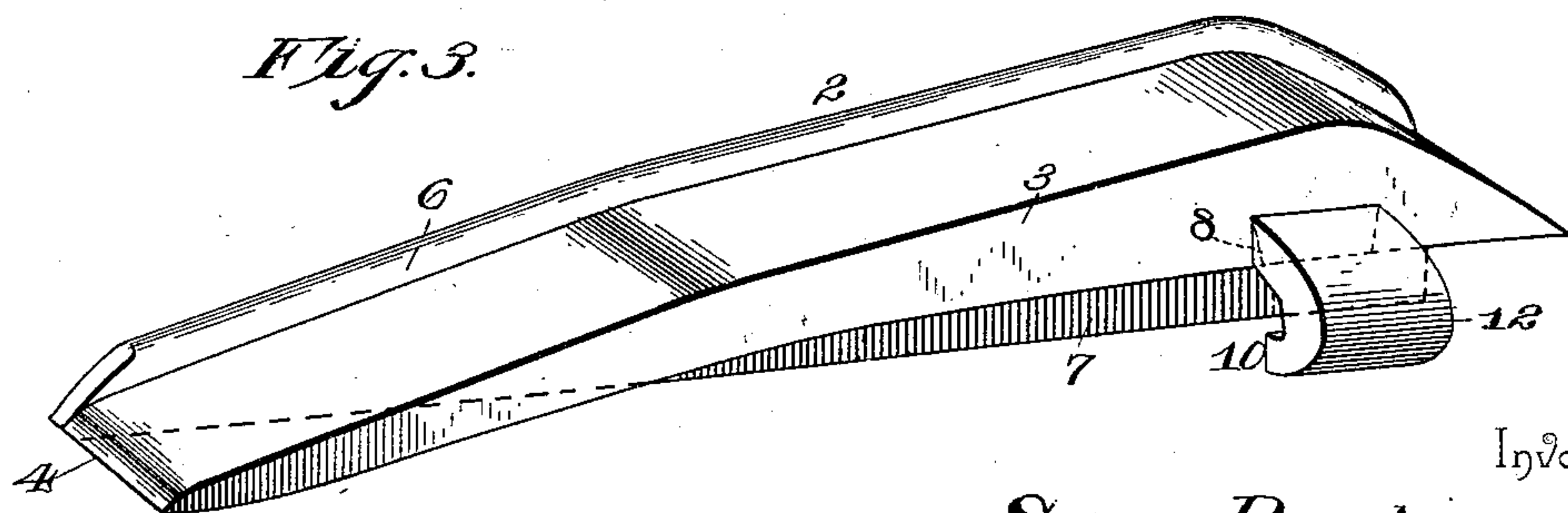
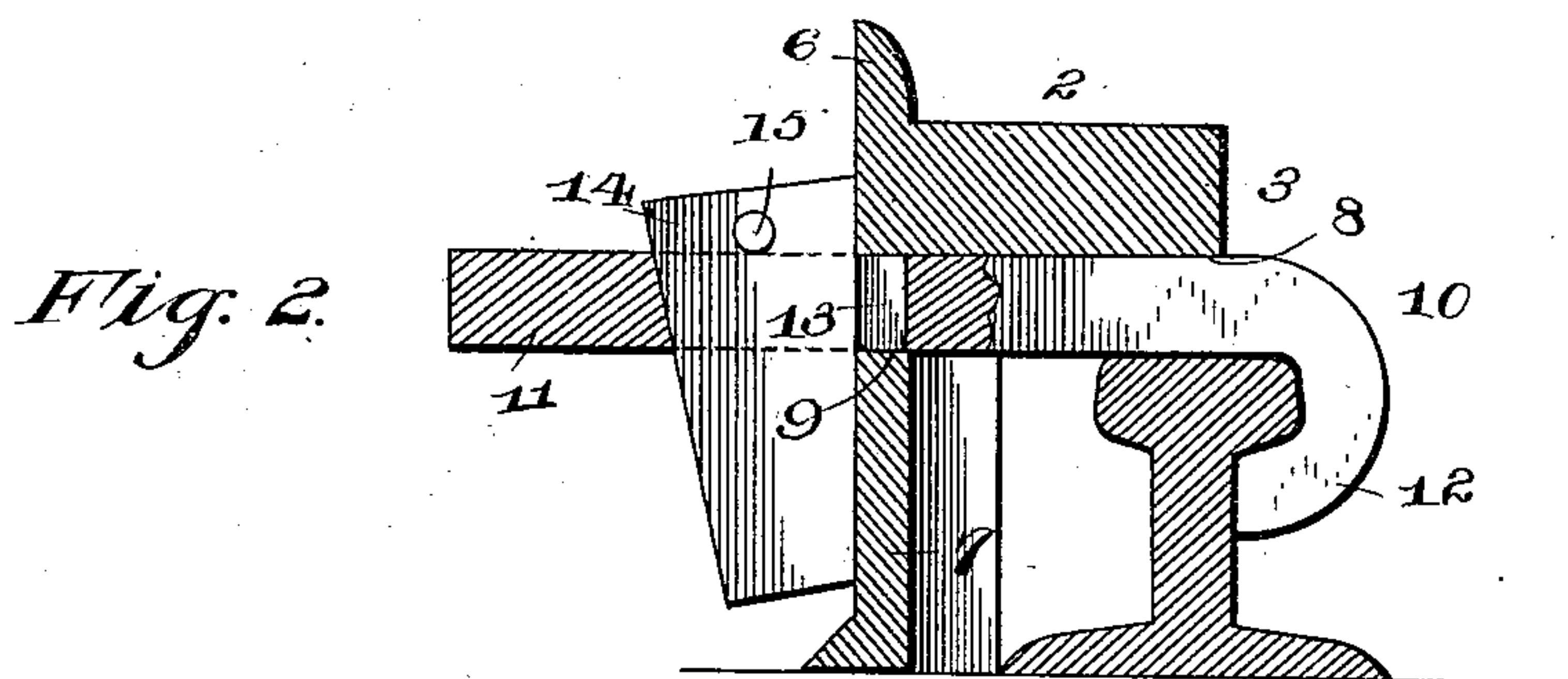
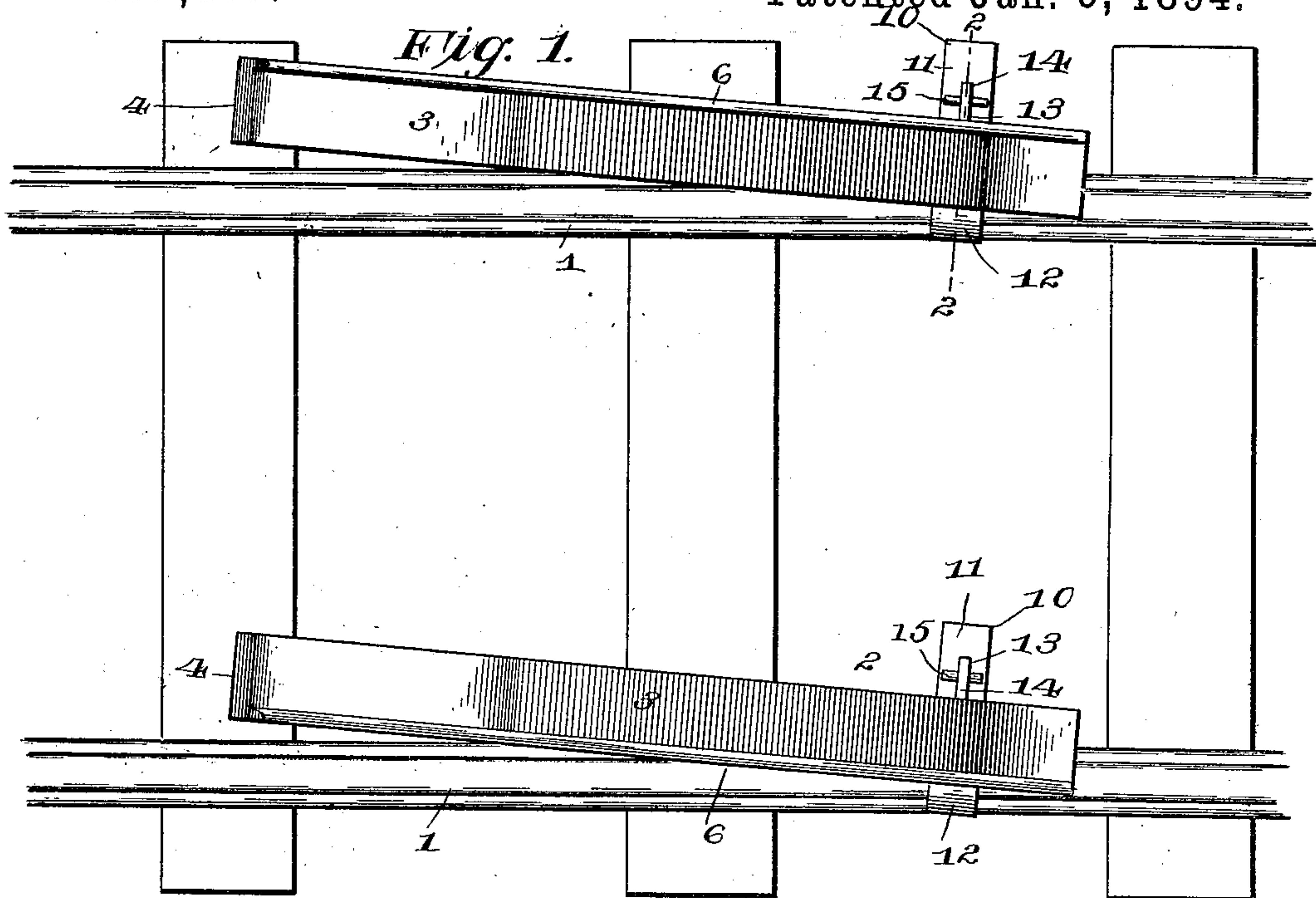


(No Model.)

S. RYDEN.
LOCOMOTIVE OR CAR REPLACER.

No. 512,487.

Patented Jan. 9, 1894.



Witnesses

C. A. Ford.

J. E. Wolfe.

By his Attorneys.

C. A. Snow & Co.

Inventor
Sven Ryden,

UNITED STATES PATENT OFFICE.

SWEN RYDEN, OF DULUTH, MINNESOTA, ASSIGNOR OF ONE-HALF TO JOHN
GOTHENER, OF SAME PLACE.

LOCOMOTIVE OR CAR REPLACER.

SPECIFICATION forming part of Letters Patent No. 512,487, dated January 9, 1894.

Application filed September 5, 1893. Serial No. 484,848. (No model.)

To all whom it may concern:

Be it known that I, SWEN RYDEN, a citizen of the United States, residing at Duluth, in the county of St. Louis and State of Minnesota, have invented a new and useful Locomotive or Car Replacer, of which the following is a specification.

My invention relates to car replacers, and has for its object to provide a simple, inexpensive and efficient device provided with strengthening webs to avoid the necessity of heavy castings, and having clamps for locking the frogs to the track-rails which are held from deflection and displacement, as well as vertical strain, by their interposition between the rails and the frogs.

Further objects and advantages of my invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claim.

In the drawings: Figure 1 is a plan view of a pair of replacing frogs, embodying my invention, applied in the operative position to a portion of a track. Fig. 2 is a transverse sectional view of one of the frogs, upon the line 2—2 of Fig. 1. Fig. 3 is a perspective view of one of the frogs.

Similar numerals of reference denote corresponding parts in all the figures of the drawings.

1 designates a section of track to which are applied the frogs 2, and as the latter are identical in construction with the exception that the guard flanges are placed at opposite edges of the blocks to suit the different tracks and the arrangement of the wheels upon opposite sides of the car the description of one will suffice.

3 designates a tapered block having a concave under surface and a convex upper surface, and it is tapered gradually toward its lower end, 4, which rests upon the ties, and is tapered abruptly at its upper end which rests upon the tread of the rail. A guard flange, 6, is arranged longitudinally upon one side edge of the block to guide the wheels upon the block and prevent deflection after mounting the same, and depending vertically from the under side of the block is a supporting web,

7, having a straight horizontal lower edge to rest upon the ties and bear the superposed weight. In the outside frog, or the frog which is to be used on the outside of a rail, as shown at the top in Fig. 1, this depending flange is under the guard flange 6, and in the other or inside frog the depending flange is arranged under the opposite edge from said guard flange. In other words, the guard flanges are arranged respectively at opposite side edges of the frogs, whereby they co-operate to prevent the wheels of a car from moving laterally in either direction beyond their proper places, but the depending flanges of both frogs are arranged under the edges which do not extend over the tracks when in operative position. The under surface of the tapered block is transversely channeled, as shown at 8, adjacent to its upper end, or the portion which rests upon the tread of the rail, and in alignment with this channel the web, 7, is provided with an opening, 9. The clamp, 10, is provided with a dove-tailed shank, 11, which rests in said aligned channel and opening with its under surface flush with the under surface of the block, whereby it is in contact with the tread of the rail and cannot be bent or deflected by the weight supported. This clamp is provided with a hook, 12, which engages the tread of the rail, and the other end of the shank, beyond the supporting web is longitudinally slotted, as shown at 13, to receive the key 14. By means of this key the inner surface of the supporting web, at the upper end of the block, may be drawn closely against the side of the rail to avoid vibration of the parts during use. A pin 15 is arranged in a transverse perforation near the upper extremity of the key 14, to prevent the latter from becoming detached from the clamp when the replacer is detached from the rail. The greatest altitude of the upper surface of the block above the rail is directly above the clamp, the interval between the upper surface of the block and the upper surface of the clamp being equal to the depth of the flange of a wheel in order that the latter may be carried over the clamp. From this highest point of the block the upper surface thereof inclines abruptly to the plane of the tread of the rail.

It will be understood that the block is supported throughout its length by the web and is supported at its upper end upon the tread of the rail in addition, the under surface of the shank of the clamp being in contact with the tread of the rail to guard against deflection.

In practice, various changes in the form, proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described my invention, I claim—

15 A car-replacing device having a tapered block provided with a concave under-surface to enable the upper end of the block to rest upon the tread of a rail, a longitudinal guard flange arranged at one edge of the block, a depending supporting web, provided with a straight lower edge to rest upon the ties, said

web being provided with an opening in alignment with a transverse channel in the under-surface of the block, a clamp having a shank fitted in said aligned channel and opening with its under-surface flush with the under-surface of the block to rest upon the tread of the rail and provided at one end with a hook to engage the tread, and a key fitting in a longitudinal slot in the shank of the clamp beyond the outer surface of the supporting web, and adapted when driven to place to draw the inner surface of said web at the upper end of the block in contact with the side of the tread, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

SWEN RYDEN.

Witnesses:

H. LARSON,

A. F. SWANSTROM, Jr.