

No. 720,603.

PATENTED FEB. 17, 1903.

J. MURRAY & W. W. HAVRE.

TIE SPACING JACK.

APPLICATION FILED OCT. 6, 1902.

NO MODEL.

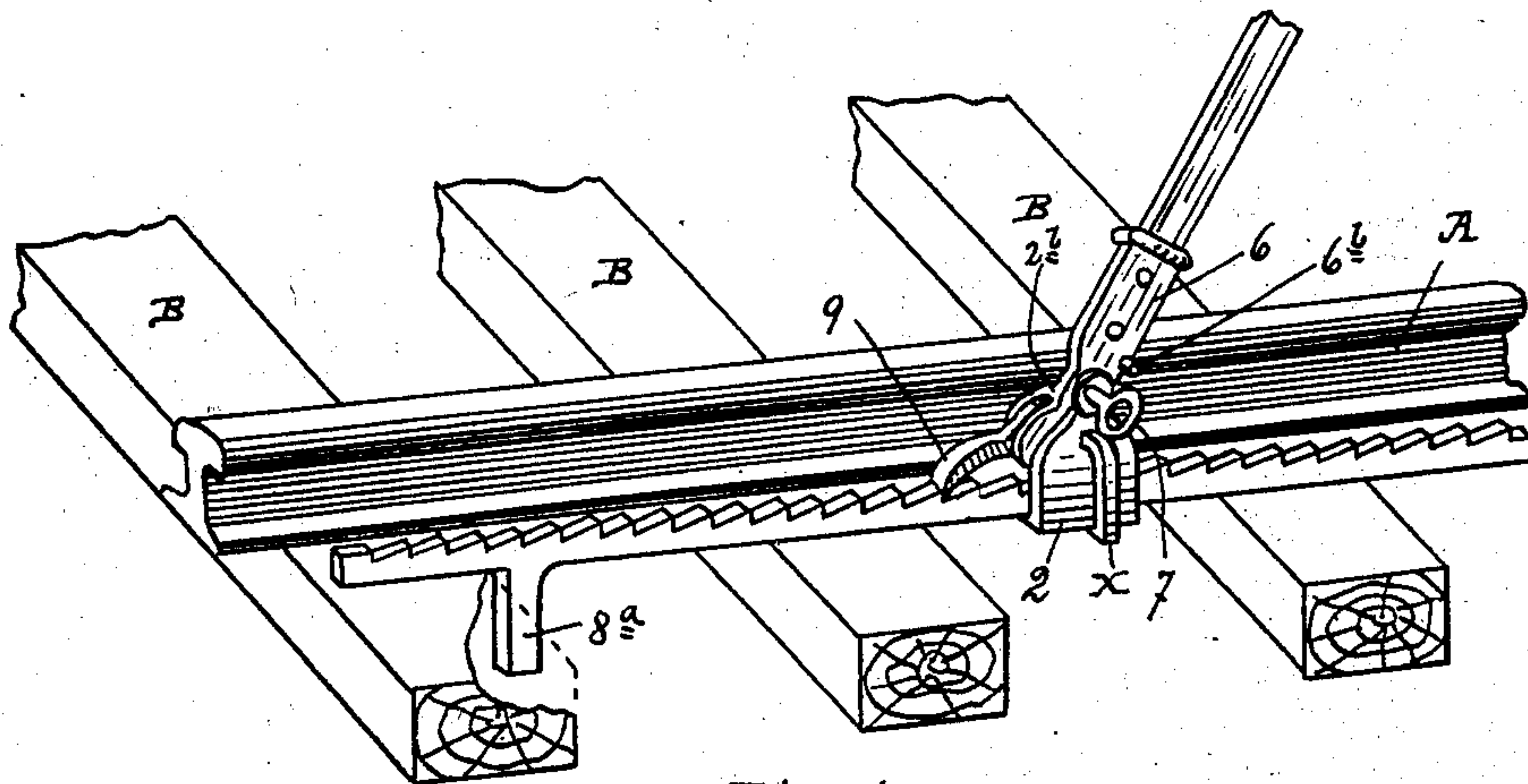


Fig. 1.

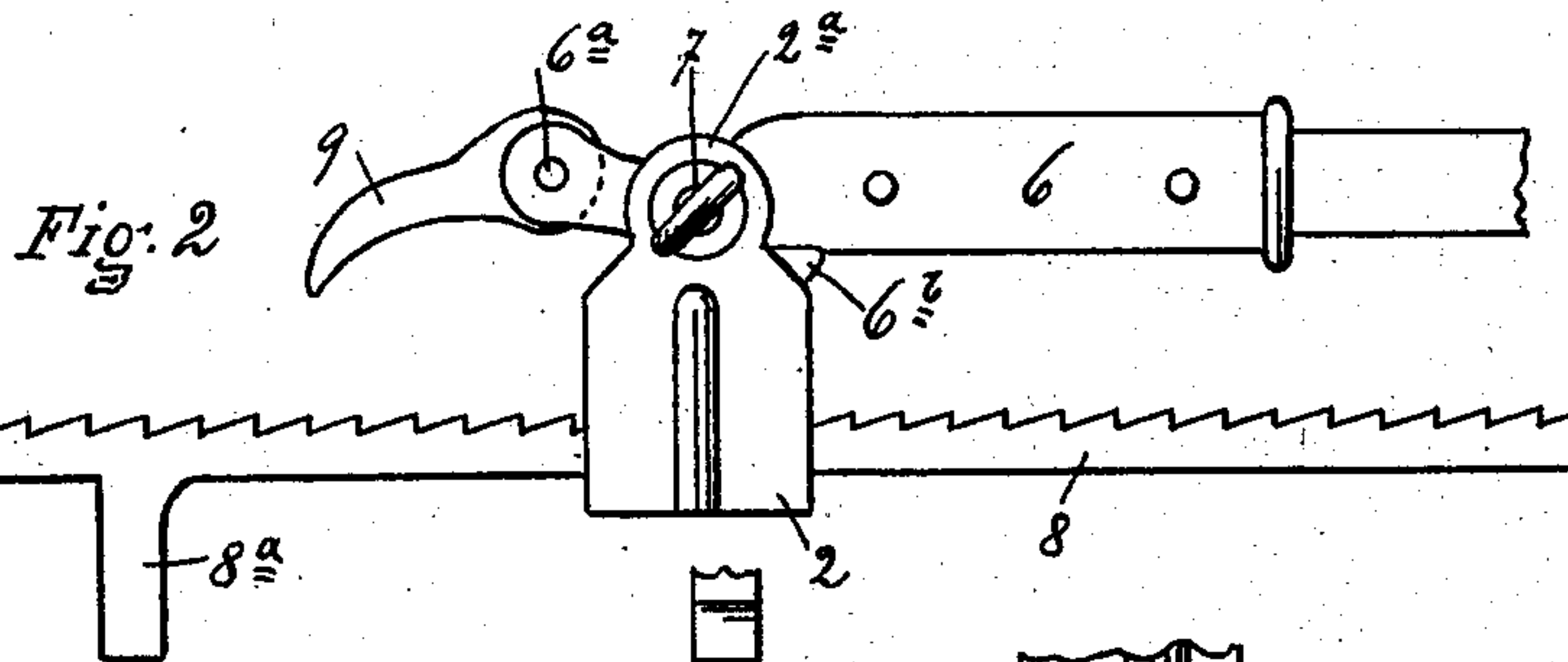


Fig. 2.

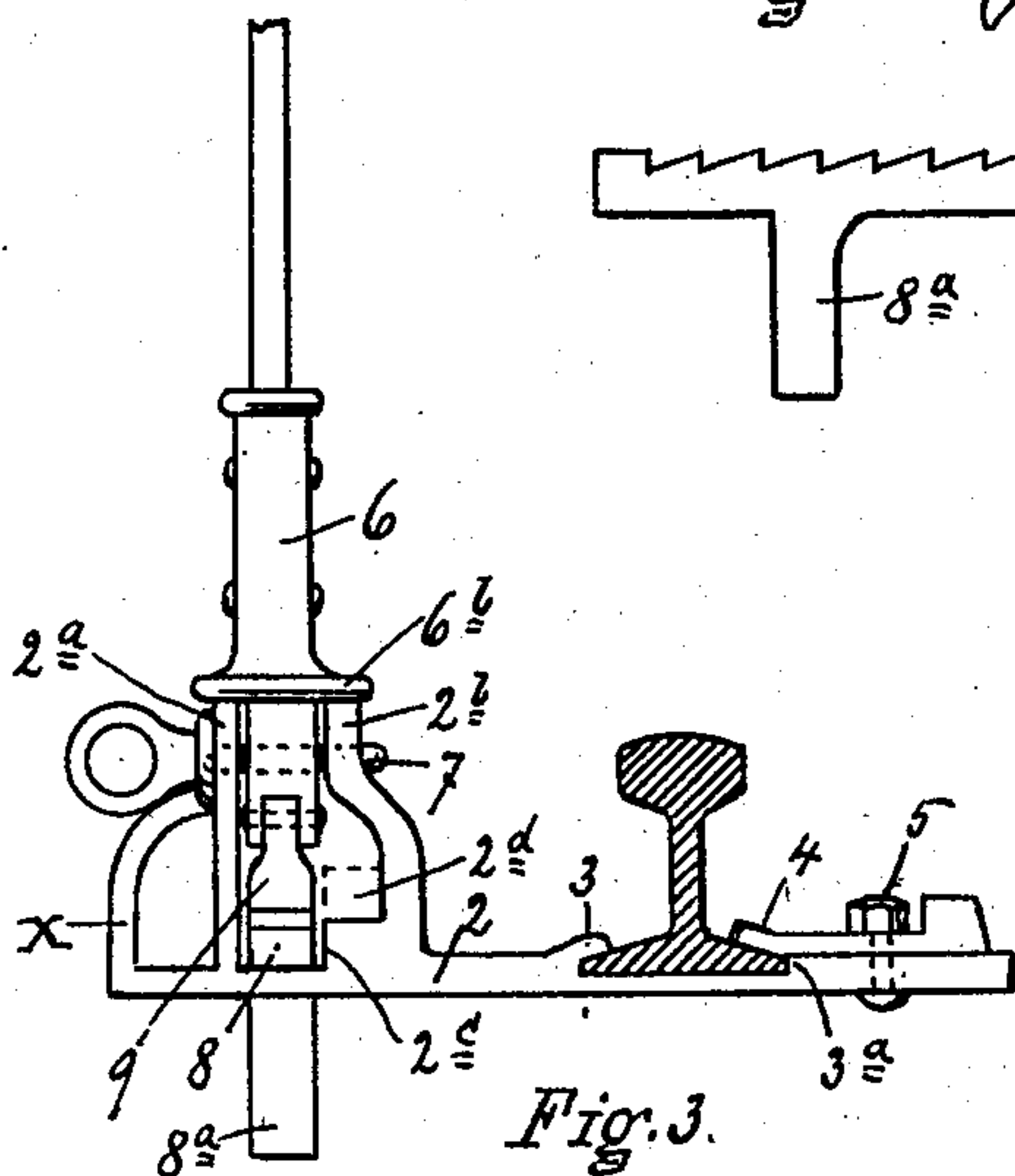
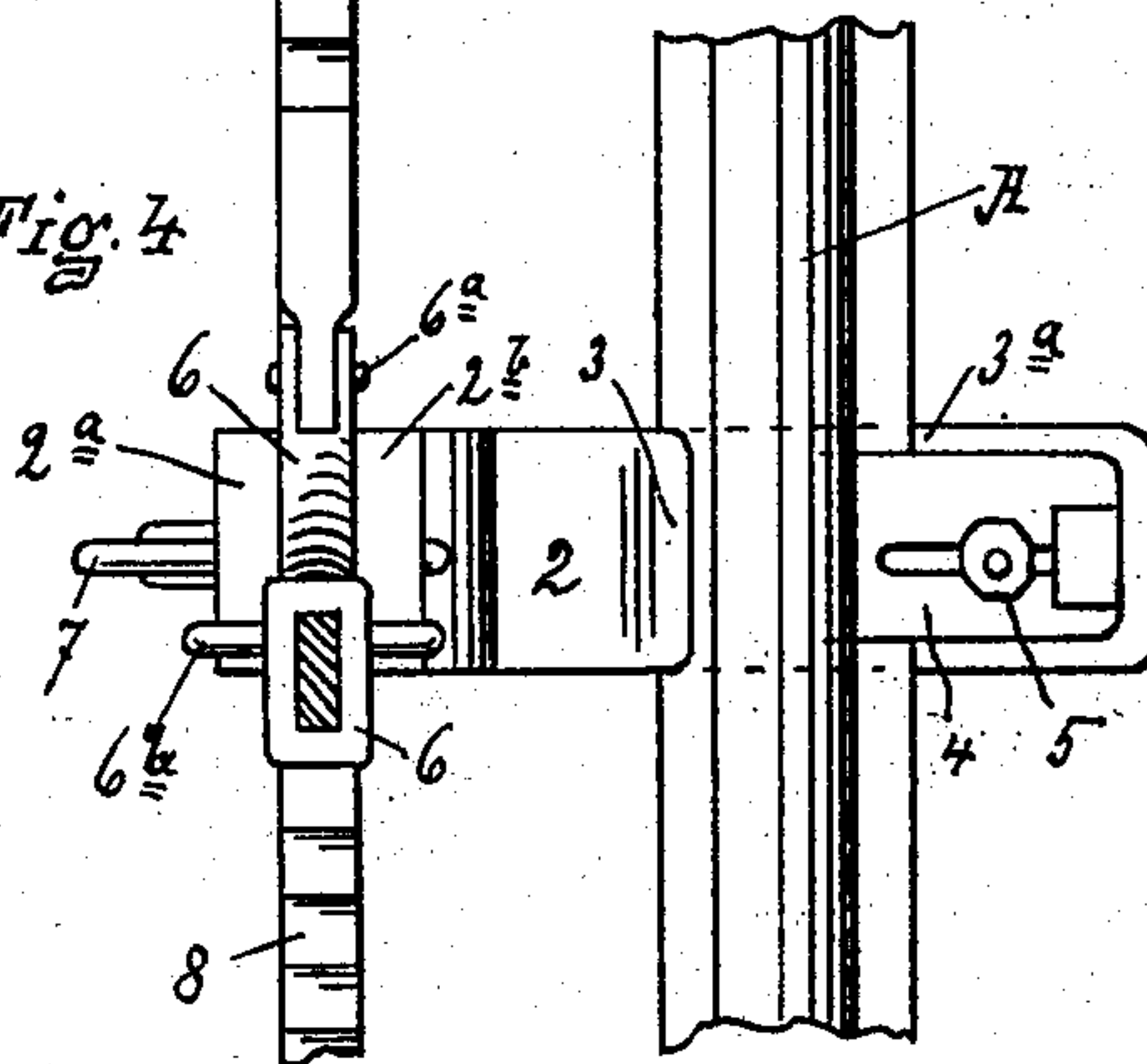


Fig. 3.

Fig. 4.



WITNESSES
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JEREMIAH MURRAY AND WILLIAM W. HAVRE, OF UTICA, NEW YORK; SAID
HAVRE ASSIGNOR, BY MESNE ASSIGNMENTS, TO SAID MURRAY.

TIE-SPACING JACK.

SPECIFICATION forming part of Letters Patent No. 720,603, dated February 17, 1903.

Application filed October 6, 1902. Serial No. 126,048. (No model.)

To all whom it may concern:

Be it known that we, JEREMIAH MURRAY and WILLIAM W. HAVRE, of Utica, in the county of Oneida and State of New York, have
5 invented certain new and useful Improvements in Tie-Spacing Jacks; and we do hereby declare that the following is a full, clear, and exact description of the invention, which
10 it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form part of this specification.

The object of our invention is to provide a
15 convenient jack or machine for spacing ties of a railway and for turning and straightening them so that they will lie properly at right angles with the rail whenever they work out of position, as is frequently the case.

20 Figure 1 shows a perspective view of the device applied to a section of rail mounted on three ties. Fig. 2 is a side elevation of the machine with the lever down and the dog thrown out. Fig. 3 shows an end elevation
25 of the machine in connection with a cross-section of the rail. Fig. 4 shows a plan view of the machine with the outer ends of the rack broken off, in connection with a section of the rail.

30 Referring to the reference letters and figures in a more particular description, A indicates the rail, and B the ties on which it is mounted.

The jack consists of a base or body 2, extending through under the base of the rail,
35 and a shoulder 3^a, adapted to engage the inner edge of the flange of the rail. Mounted on the inner projecting end of the base is a sliding key-plate 4, secured to the base by a
40 bolt 5 and when driven toward the rail adapted to override the base-flange and secure the jack firmly to the rail. When driven or moved in the opposite direction, it is released, so that the jack can be readily removed. The
45 base projects to some distance outside of the rail and supports the lever 6, mounted on the removable pin 7 in the ears 2^a 2^b. The rack-bar 8 is received in the groove 2^c in the body, where it is free to slide lengthwise. The
50 rack-bar is provided adjacent to one end with a downwardly-extending projection 8^a, adapt-

ed to engage the side of the tie to be moved or shifted. On the upper side the rack 8 is provided with teeth adapted to be engaged by the pawl 9, mounted on the lever 6, to
55 which it is pivoted on the pivot 6^a. The lever 6 is provided with a cross-bar 6^b, adapted to strike on shoulders on the body and limit the swinging movement of the lever in substantially a horizontal position, as shown in
60 Fig. 2. In addition to the groove 2^c, in which the rack-bar 8 is adapted to run, the body is provided with a recess 2^d, into which the bar can be carried and turned on its side. A handle *x* may be provided on the jack, by
65 means of which it may be readily handled.

In operation the jack is secured to the rail as described, and when so secured, with the lever turned down in the position shown in
70 Fig. 2, will in no wise interfere with trains passing over the track. When the dog 9 is thrown out, the bar can be readily slid through the jack to adapt it to operate on any of the ties within reach; and to enable the projection 8^a to pass the ties the bar is thrown
75 out of the groove 2^c, in which it would ordinarily run onto its side in the recess 2^d. This brings the projection 8^a into a plane so that it will readily pass over the tops of the ties, including a tie having a position close to the
80 body. It will be readily understood that by operating the lever 6 to and fro over the pivot 7 the rack-bar can be moved with a great deal of power, forcing the tie into the desired
85 position.

The device, as shown, is intended for use on free ties without shifting the position of the jack on the rail. Of course the rack-bar may be lengthened, and thereby the implement adapted for use on a greater number of
90 ties, without shifting the position of the jack on the rail. By removing the pin 7 the lever and pawl can be reversed, likewise the rack-bar, so that it can be used in either direction.

What we claim as new, and desire to secure
95 by Letters Patent, is—

1. In a tie-spacing jack, the combination of a body having means to secure it to the rail and projecting laterally from the rail, a bar having means to engage a tie mounted in the
100 projecting portion of said body and extending parallel with the rail, and means for forcibly

moving said bar with reference to said body, substantially as set forth.

2. In a tie-spacing jack, the combination of a body, means for securing it to the rail, said
5 body projecting sidewise from the plane of the rail, a bar having means for engaging a tie, and means mounted on the body for forcibly moving said bar, substantially as set forth.

10 3. The combination in a tie-spacing jack of a body having means for securing it to the base of the rail and projecting laterally from the rail, a rack-bar mounted in the project-
15 ing end of said body parallel with the rail and having means for engaging a tie, and a lever and pawl engaging with and for operating the rack-bar, substantially as set forth.

4. The combination in a tie-spacing jack of a body having means of securing the same to
20 the rail and projecting laterally therefrom, a rack-bar slidably mounted in the projecting end of said body and extending parallel with the rail, and having means for engaging with the tie of a lever mounted in the body and
25 adapted to operate the rack-bar, substantially as set forth.

5. The combination in a tie-spacing jack, of a body having means for securing the same to the rail, and projecting laterally from the rail, a rack-bar slidably mounted in the outer
30 end of the body having a fixed projection adapted to engage a tie and reversible in the body to throw said projection out of engaging position with a tie, and a lever mounted in the body for forcibly moving the rack-bar, 35 substantially as set forth.

6. In a tie-spacing jack, the combination of a body having means for securing it to a rail and projecting laterally from the rail, mechanism mounted on said projecting portion of
40 body for applying power in a direction parallel with the rail for the movement of a tie and means for connecting said power mechanism with a tie, substantially as set forth.

In witness whereof we have affixed our sig- 45
natures, in presence of two witnesses, this
29th day of September, 1902.

JEREMIAH MURRAY.
WM. W. HAVRE.

Witnesses:

S. I. DE VINÉ,
S. R. BROWN.