

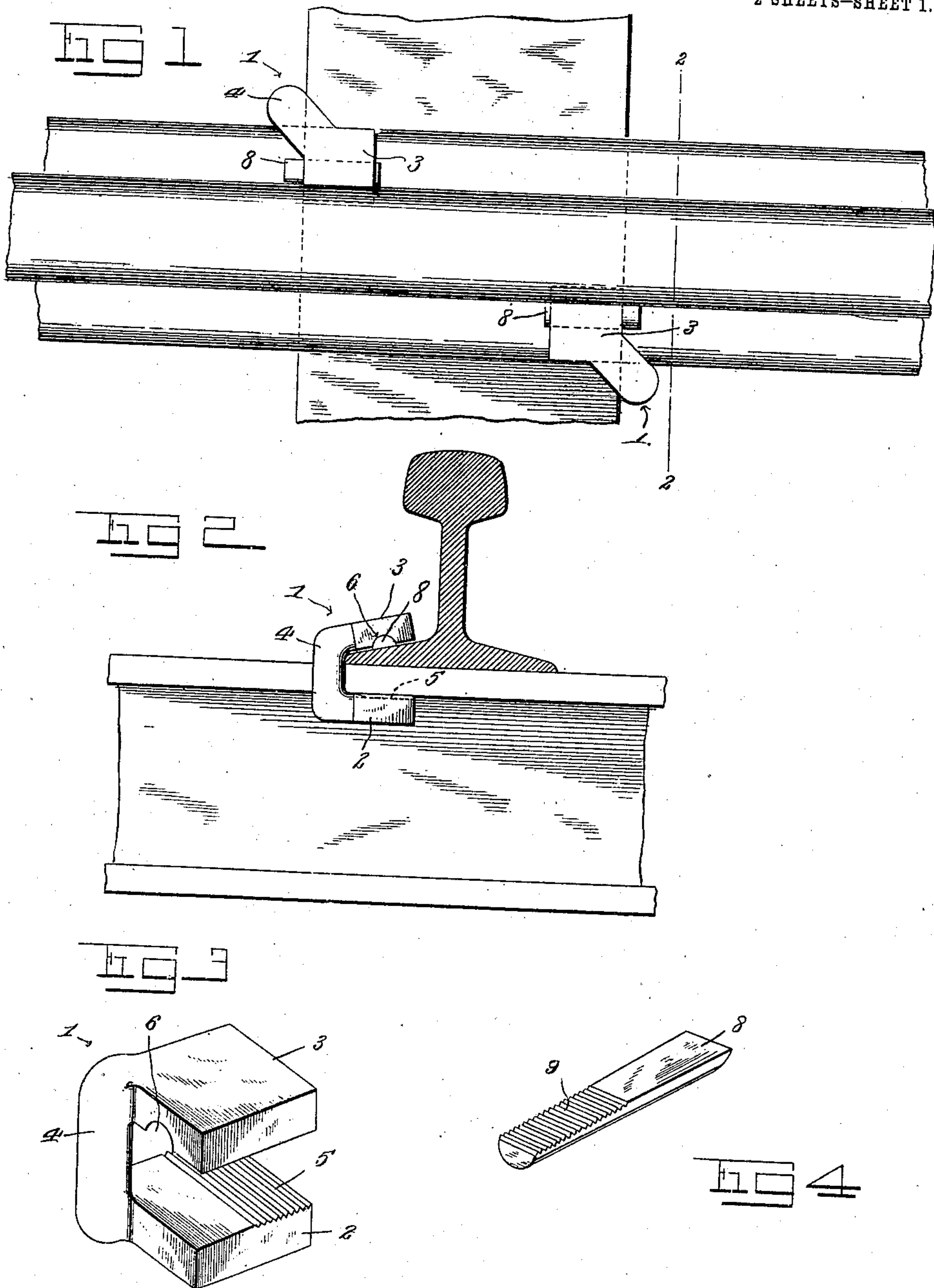
A. B. MOON & W. E. LAURENCE.
RAIL FASTENING MEANS.

APPLICATION FILED SEPT. 17, 1910.

995,891.

Patented June 20, 1911.

2 SHEETS—SHEET 1.



Witnesses

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Frank B. Hoffman

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Adam B. Moon,

William E. Laurence

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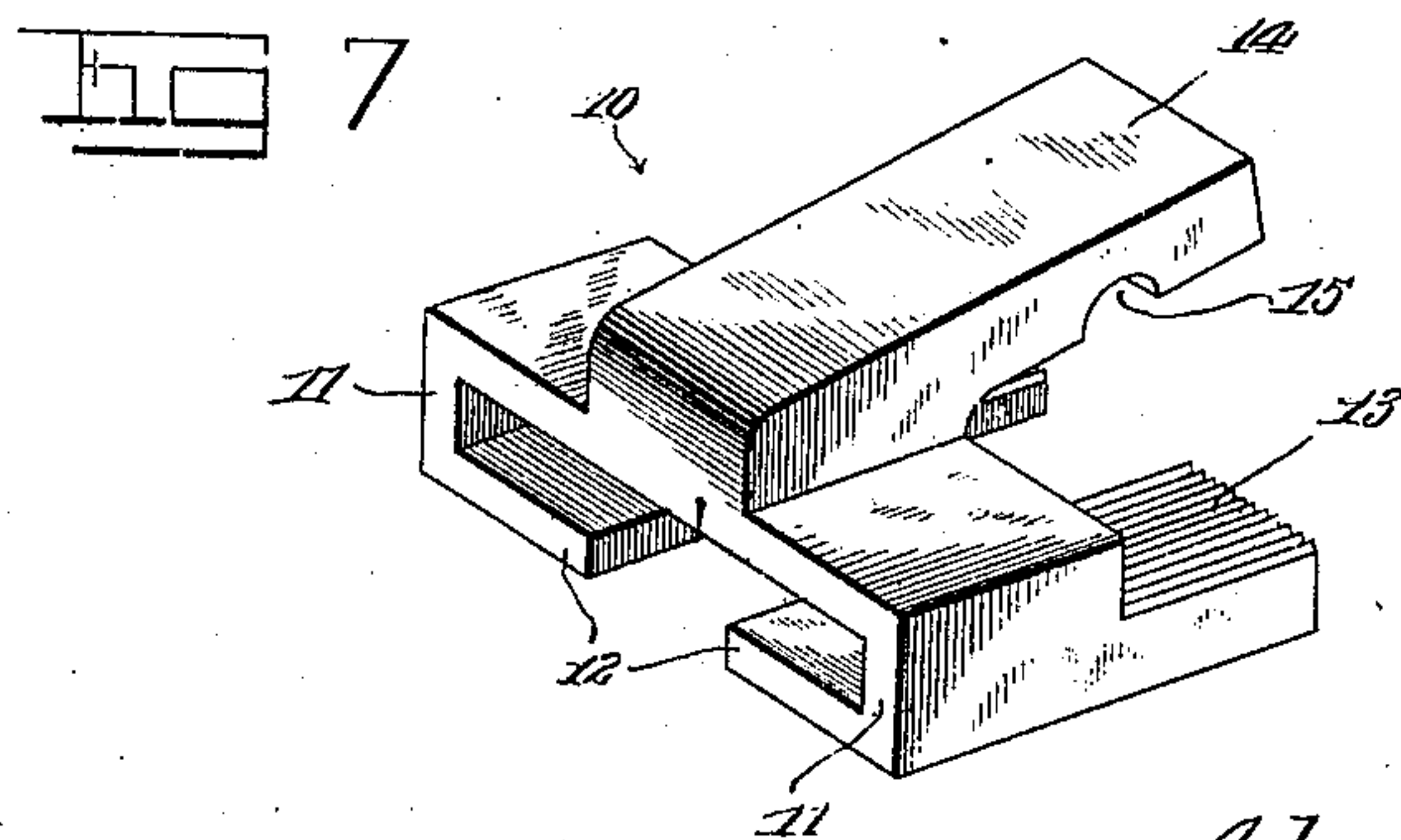
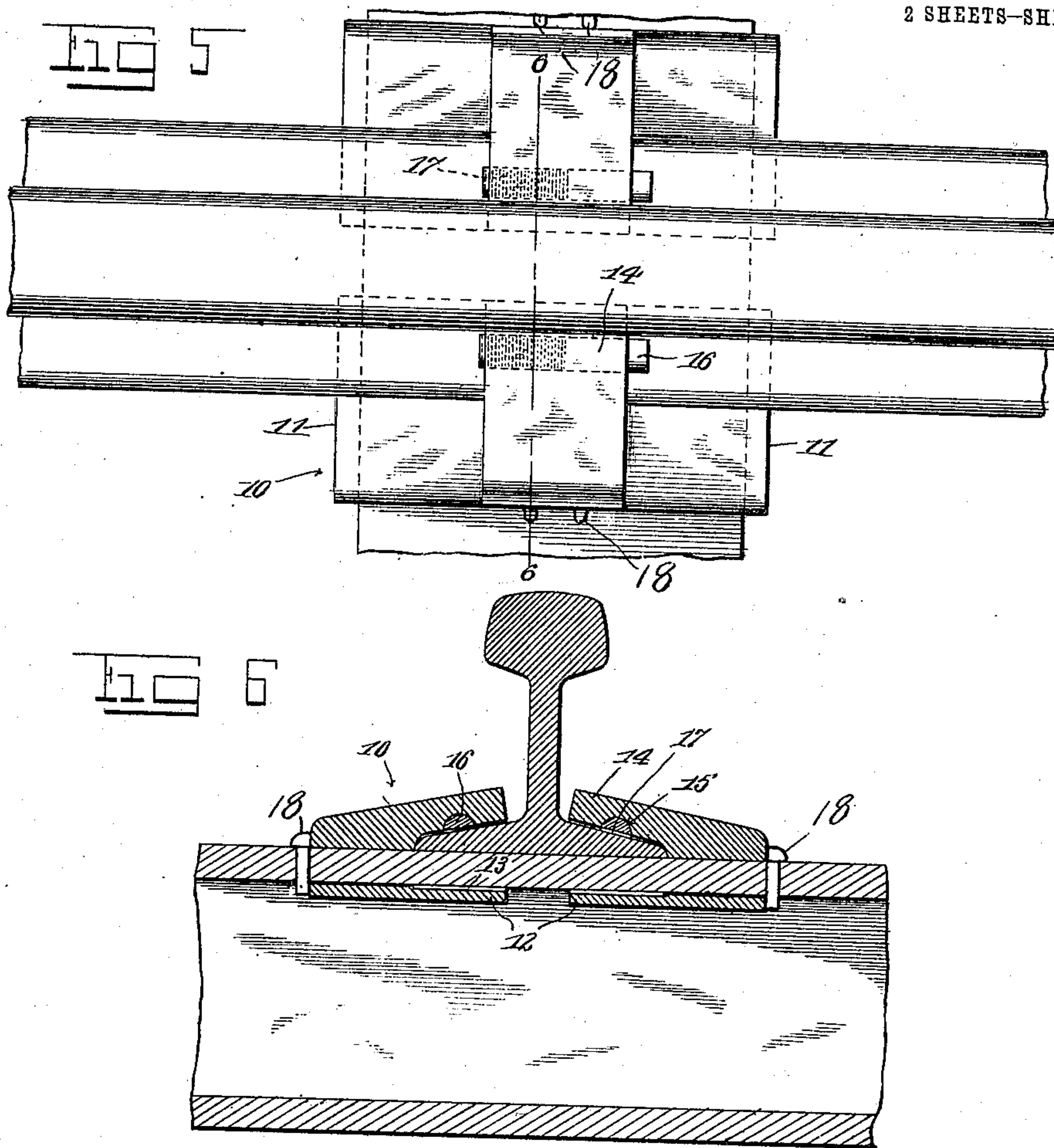
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UNITED STATES PATENT OFFICE.

ADAM B. MOON AND WILLIAM E. LAURENCE, OF MERCER, PENNSYLVANIA.

RAIL-FASTENING MEANS.

995,891.

Specification of Letters Patent. Patented June 20, 1911.

Application filed September 17, 1910. Serial No. 582,495.

To all whom it may concern:

Be it known that we, ADAM B. MOON and WILLIAM E. LAURENCE, citizens of the United States; residing at Mercer, in the county of Mercer and State of Pennsylvania, have invented new and useful Improvements in Rail-Fastening Means, of which the following is a specification.

This invention relates to rail fastening means and more particularly to a clamp for securing the rail base to a steel tie.

The principal object of the invention is the provision of a device of the above stated character which will effectively secure the rails to a steel tie, without the use of bolts and nuts, against displacement or spreading.

Another object of the invention is the provision of a rail fastening device including a clamp comprising upper and lower plates or jaws connected together by a loop which is integral therewith and a key for locking or clamping the rail flange and the flange of the steel tie together between the jaws of the device.

With these and other objects in view, as will appear as the description proceeds, the invention comprises the various novel features of construction and arrangement of parts which will be more fully described and set forth with particularity in the appended claims.

In the accompanying drawings which illustrate one embodiment of the invention, Figure 1 is a fragmentary plan view showing the device in applied position. Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1. Fig. 3 is a detail perspective view of the clamp. Fig. 4 is a perspective view of the locking key. Fig. 5 is a plan view of a modified form of the invention in applied position. Fig. 6 is a sectional view taken on the line 6—6 of Fig. 5, and Fig. 7 is a perspective view of the clamp.

Similar reference characters are employed to designate corresponding parts throughout the several views.

The invention relates more particularly to a clamp which is adapted to securely hold the rails to a metal tie and, it is to be understood that two or more clamps are to be used and arranged diagonally opposite one another at the point of intersection of the rail base with the tie.

In the preferred form of the invention, the clamp 1 consists of substantially square

upper and lower plates or jaws 2 and 3 which are connected together by a loop 4, the said loop being integral with the opposed ends of the upper and lower plates. The upper active face of the lower plate is provided with serrations 5 that are parallel with one edge of the plate 2 and which normally extend in a direction parallel to the length of the tie. The lower active face of the upper plate 3 is provided with a slightly wedge-shaped groove 6 which extends across the face of the plate 3 and in a direction at right angles to the serrations 5 of the plate 2. It is to be understood that the opening between the plates is slightly tapered and of less width than the thickness of the rail base flange and the flange of the metal tie so that when the clamp is wedged into position, it will more effectively bind the rail flange to the tie flange. After the clamp is in position a locking key 8 having serrations 9 on the under active face thereof is driven into the groove 6 thus causing the serrations 9 of the key and 5 of the lower plate 2 to bite firmly into the rail flange and the under face of the upper tie flange.

By reference to Figs. 5, 6, and 7 there will be seen a slightly modified form of the clamp which consists of a body member 10 having downwardly extending portions 11 at its ends which are bent to provide inwardly extending jaws or arms 12. Each of the jaws 12 extends inwardly at right angles to the body member 10 and is provided with serrations 13 on the inner active face thereof which are adapted to underlie the tie flange. A rail base flange engaging element 14 extends inwardly from the center of the upper part of the body member 10 and has a slightly tapered groove 15 near the end in the active face thereof. After the clamp has been slipped over the end of the metal tie into engagement with the base flange of the rail, a key 16 having serrations 17 on the active face of one end is inserted and driven in the groove to effectively clamp the rail base and tie flanges together between the jaws of the clamp.

From the foregoing description, taken in connection with the accompanying drawings, the advantages of construction and of the method of operation will be readily apparent to those skilled in the art to which the invention relates, and while we have described the principle of operation of the in-

vention, together with the device which we now consider to be the best embodiment thereof, we desire to have it understood that the device shown is merely illustrative and
5 that such changes may be made, when desired, as are within the scope of the claims.

If desired locking pins 18 may be used which pass through apertures in the tie flange directly in the rear of the clamps to
10 prevent accidental displacement of the clamps.

What we claim as new is:—

1. A rail fastening device comprising substantially square upper and lower plates
15 connected together, said upper plate provided with a groove in the active face thereof and serrations in the active face of the lower plate, said serrations extending in a plane at right angles to that of the groove,

and a key for locking engagement with the 20 groove and the rail base.

2. A rail fastening device comprising upper and lower plates connected together, one of said plates provided with a groove in the active face thereof and the other provided 25 with serrations in the active face thereof, said serrations extending in a plane at right angles to that of the groove, and a key for locking engagement with the groove to lock
30 the rail base to the tie.

In testimony whereof we affix our signatures in presence of two witnesses.

ADAM B. MOON.

WILLIAM E. LAURENCE.

Witnesses:

CLARA A. LAURENCE.

C. G. HARSHAW.

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