No. 762,295.   PATENTED JUNE 14, 1904.

G. P. FINNIGAN.

NUT LOCK.

APPLICATION FILED SEPT. 22, 1903.

NO MODEL.

Fig. 1.

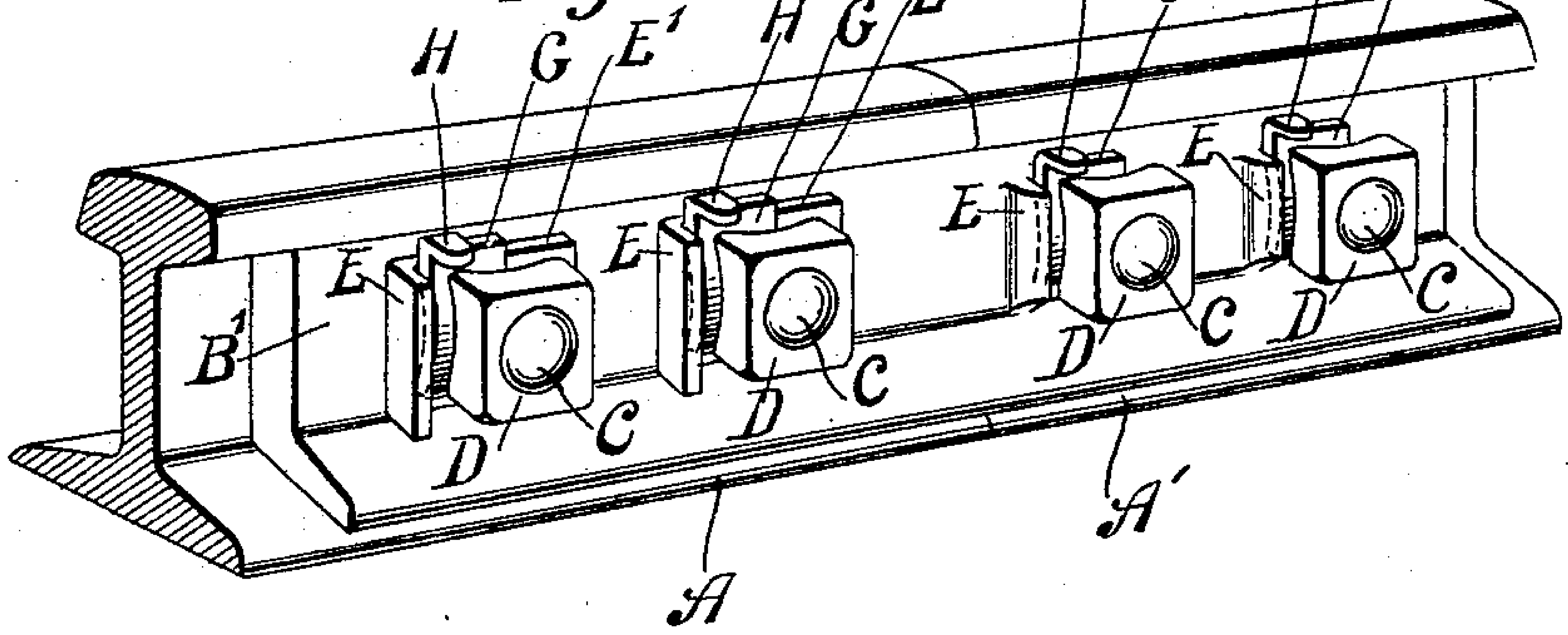


Fig. 2.

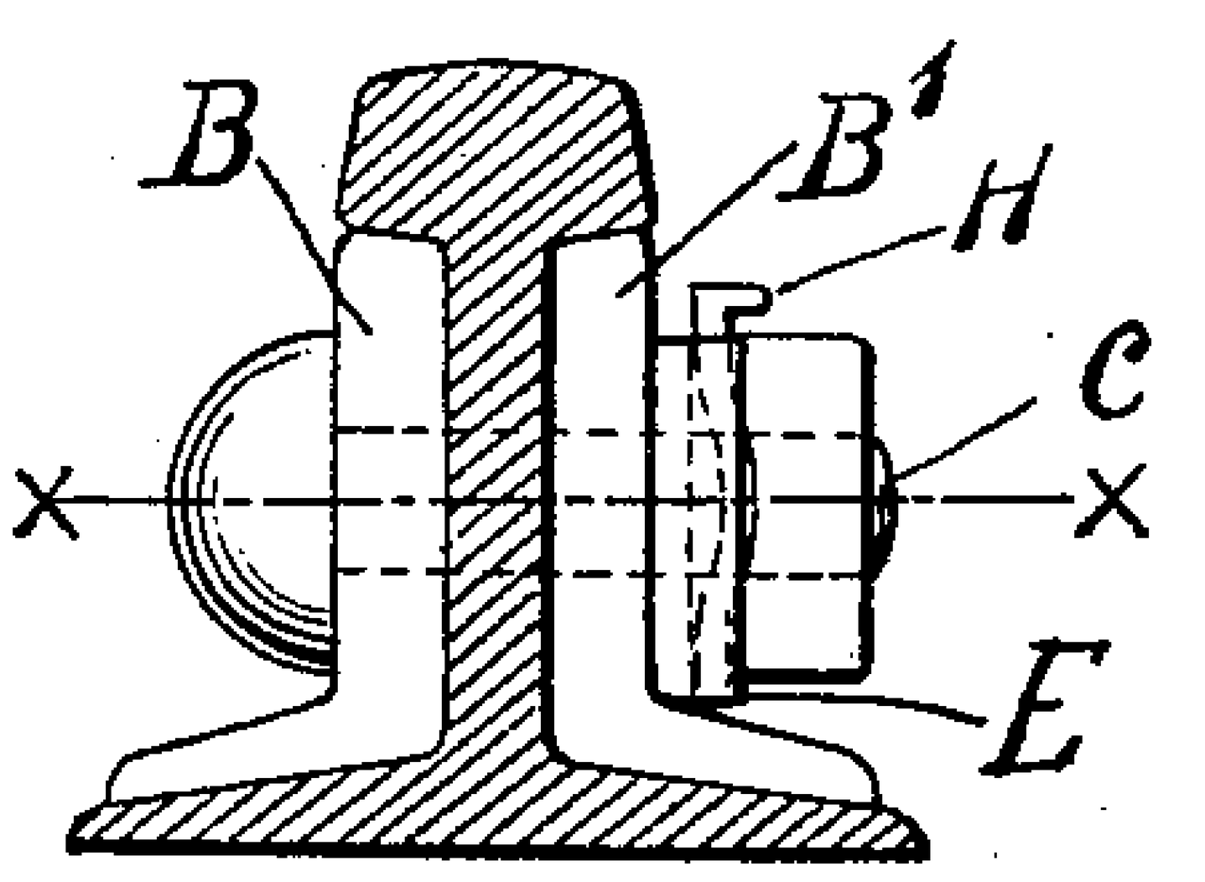


Fig. 3.

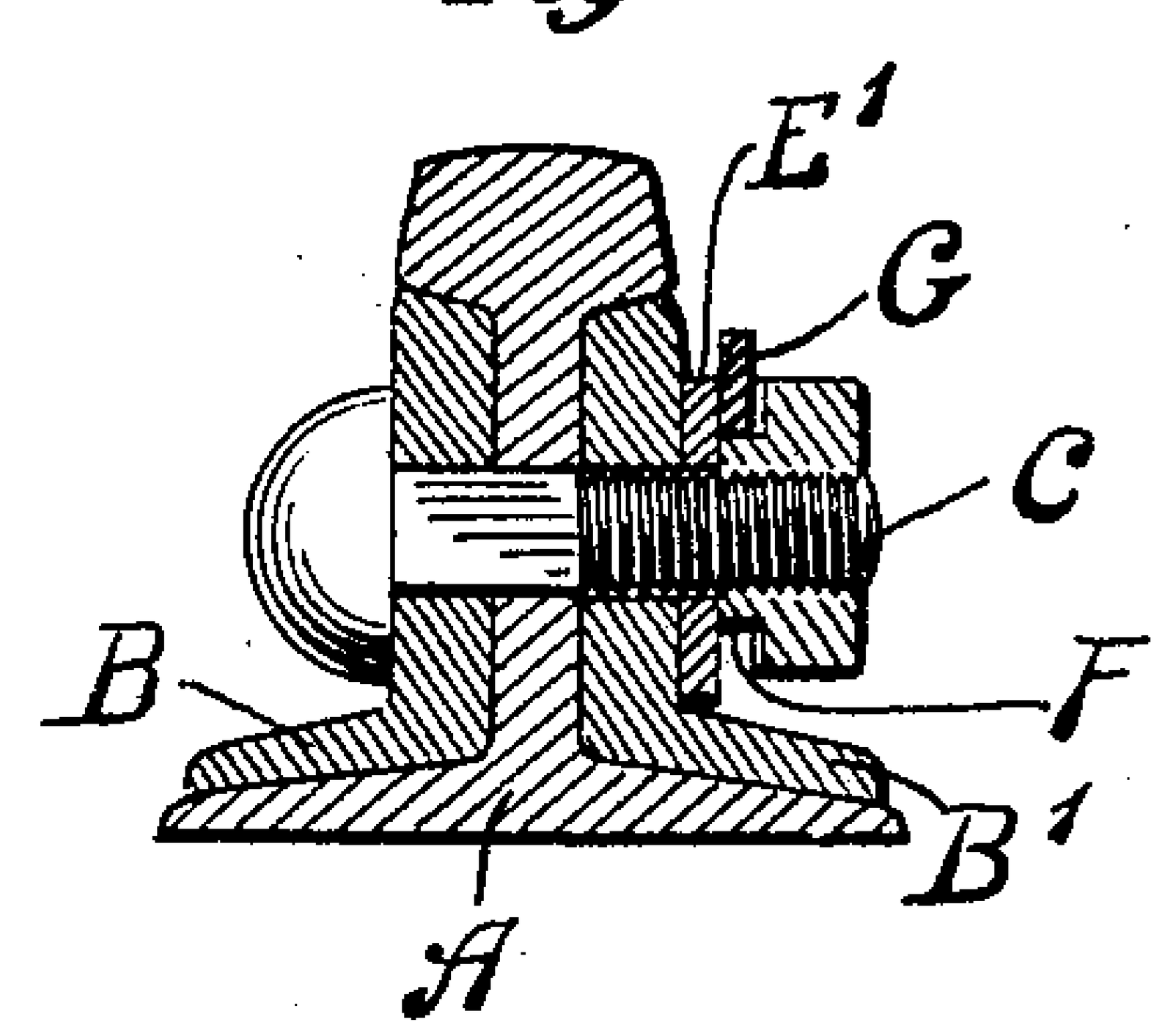
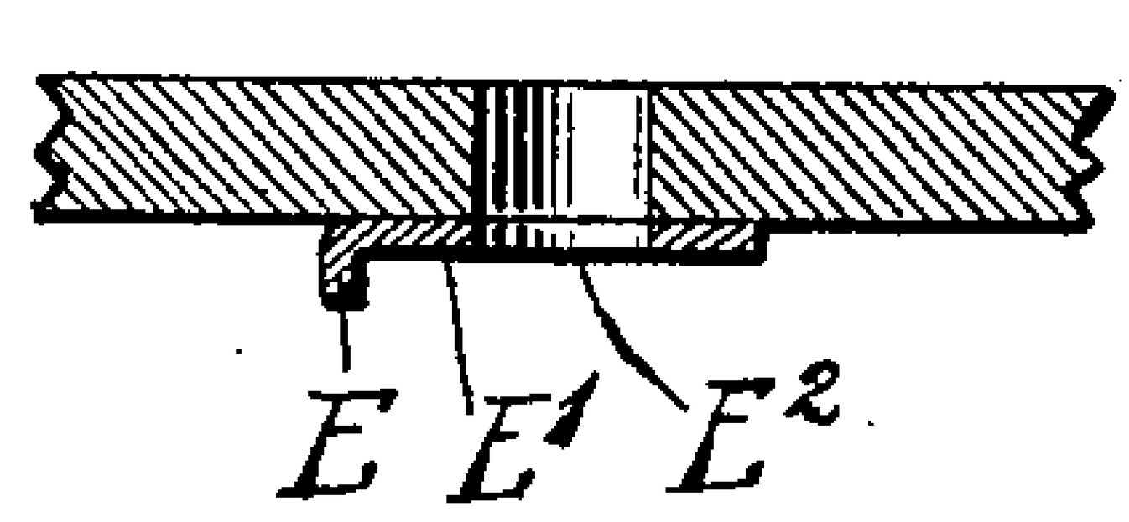
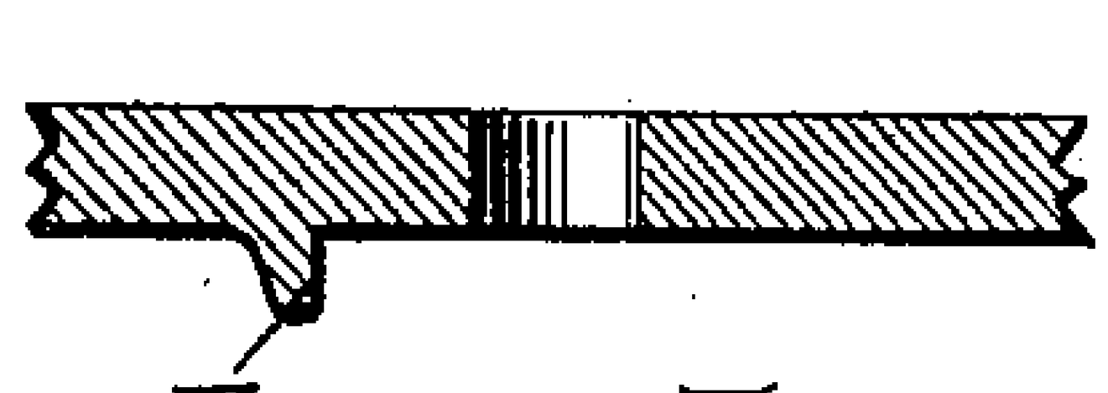


Fig. 4.





E Fig. 7.

Fig. 6.

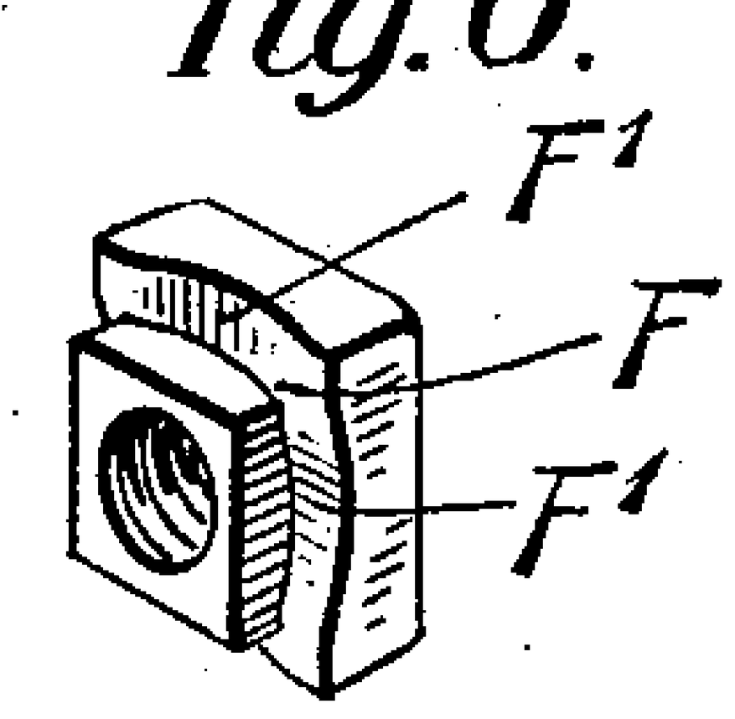
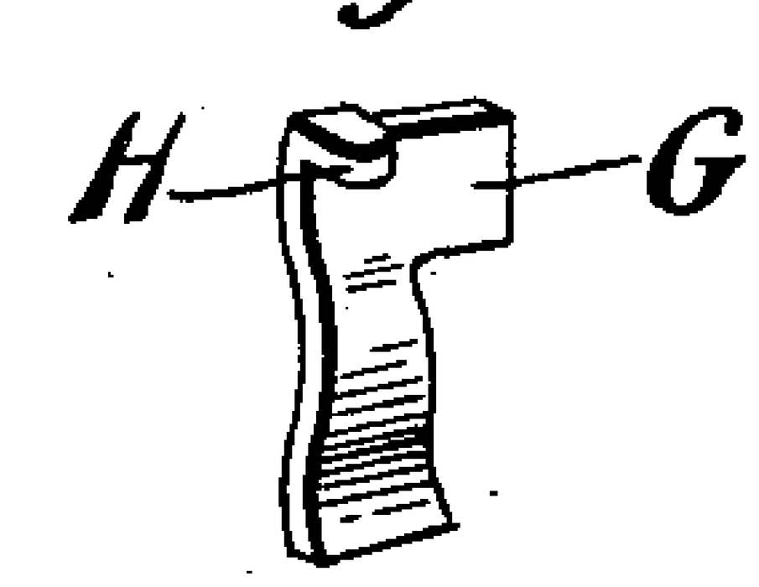


Fig. 5.



Witnesses
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No. 762,295. Patented June 14, 1904.

UNITED STATES PATENT OFFICE.

GEORGE P. FINNIGAN, OF GREENE, NEW YORK.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 762,295, dated June 14, 1904.

Application filed September 22, 1903. Serial No. 174,152. (No model.)

To all whom it may concern:

Be it known that I, GEORGE P. FINNIGAN, a citizen of the United States, residing at Greene, Chenango county, New York, have invented certain new and useful Improvements in Nut-Locks, of which the following is a full, clear, and exact description.

My invention relates to nut-locks, and has for its object to produce a new and improved nut-lock possessing certain advantages over the nut-lock for which I have heretofore made application for Letters Patent, Serial No. 149,455, filed March 25, 1903.

The following is a description of an embodiment of my invention, reference being had to the accompanying drawings, in which—

Figure 1 shows in perspective two rails connected together by bolts having nut-locks embodying my invention. Fig. 2 is a side elevation showing one of the left-hand bolts and nuts. Fig. 3 is a view showing the parts of the same in section on a line through the center of the nut. Fig. 4 is a section of the base-plate on the line *x x*. Fig. 5 is a perspective view of the key. Fig. 6 is a perspective view of the nut. Fig. 7 is a detail.

In the nut-lock of my former application the curved spring portion was placed in the lateral extension of the key located above the nut, and the vertical portion of the key was made dovetailed, so as to prevent its being easily displaced either by design or accident. Moreover, the base-plate was integral with the fish-plate of the track. In my present device I have placed the spring portion in the vertical part of the key, which results in its being much easier to insert the key. I have also made a recess beneath each of the four sides of the nut with which the rounded part of the spring engages. These act to hold the key in position and permit the dovetail to be dispensed with, if desired. The third feature of my improvement enables my nut-lock to be applied to tracks which have already been laid without requiring the substitution of a new fish-plate, and consists in providing a supplemental plate constituting a base-plate in the form of a washer. This base-plate carries a vertical projection and is so proportioned that its lower edge bears against the flange of the fish-plate or rail and is prevented from turning thereby. By this means my nut-lock can be applied to existing tracks with very little additional expense.

Referring to the drawings, A A′ represent two sections of rail. B B′ represent the fish-plates connecting the same.

C C C C represent four bolts passing through the fish-plates.

D D D D represent the nuts upon the bolts.

E E E E are vertical projections having plain faces, so that they can be easily formed. The two right-hand projections are formed directly upon the fish-plate B′, while the two left-hand projections are formed upon supplemental plates E′ E′. These supplemental plates constitute base-plates for the projections E E and are each provided with a hole E^2, through which the bolts C pass. The nuts D are each provided with undercut recesses F, parallel to the inner edges of the nuts, and on each side of the nut there is formed an indentation F′ F′.

G is the key which fits into the recess F and bears against the projection E, so as to prevent the nut D from turning. This key is L-shaped and has its vertical leg provided with a curved spring portion, which is forced beneath the overhanging edge of the nut D and held compressed thereby. The curved portion projects into the indentation F′ and assists in holding the key G in place. It will be evident that the key with the curved portion in the upright leg can be more easily inserted than if the curved portion were in the horizontal leg and that it will be less liable to be displaced, while the indentations in the nut will still further tend to prevent its displacement. It will also be seen that the supplemental plate acting as a base-plate will be prevented from turning by its engagement with the projecting flange of the fish-plate and will furnish an abutment for the key to bear against, the parts coöperating in other re-

spects in the same way in which they do when the vertical projection is made integral with the fish-plate. The key is provided with a projection H, forming a bearing for the tools used in inserting or withdrawing the key.

What I claim is—

1. In an improved nut-lock the combination of a perforated base-plate having a vertical projection, a bolt passing through the perforation, a nut thereon having undercut recesses, and a key having a vertical curved spring portion held compressed by said nut.

2. In an improved nut-lock the combination of a perforated base-plate having a vertical projection, a bolt passing through the perforation, a nut thereon having undercut recesses, and a key having a vertical curved spring portion held compressed by said nut, said nut having indentations in the upper parts of said recesses.

3. In a nut-lock the combination of a perforated fish-plate having a longitudinal flange, a supplemental perforated base-plate engaging with said flange and having a vertical projection formed thereon, a bolt passing through said perforated fish-plate and said base-plate, a nut upon said bolt and having an undercut recess parallel to its inner edge and a key fitting in said undercut recess and bearing against said vertical projection and extending over the top of said nut, the vertical member of said key forming a curved spring and being held compressed by said nut.

4. In a nut-lock the combination of a perforated fish-plate having a longitudinal flange, a supplemental perforated base-plate engaging with said flange and having a vertical projection formed thereon, a bolt passing through said perforated fish-plate and said base-plate, a nut upon said bolt and having an undercut recess parallel to its inner edge and a key fitting in said undercut recess and bearing against said vertical projection and extending over the top of said nut, the vertical member of said key forming a curved spring and being held compressed by said nut and a recess on the under side of said nut in which the curved portion of said spring enters.

5. In an improved nut-lock the combination of a perforated base-plate having a vertical projection, a bolt passing through the perforation, a nut thereon having undercut recesses, and a key having a vertical curved spring portion held compressed by said nut, and a projection H formed on its upper portion.

Signed at Greene, New York, this 19th day of September, 1903.

GEO. P. FINNIGAN.

Witnesses:
JNO. H. STURM,
C. H. GRAVES.