

No. 673,032.

Patented Apr. 30, 1901.

D. SERVIS.
NUT LOCK.

(No Model.)

(Application filed June 13, 1900.)

Fig. 1,

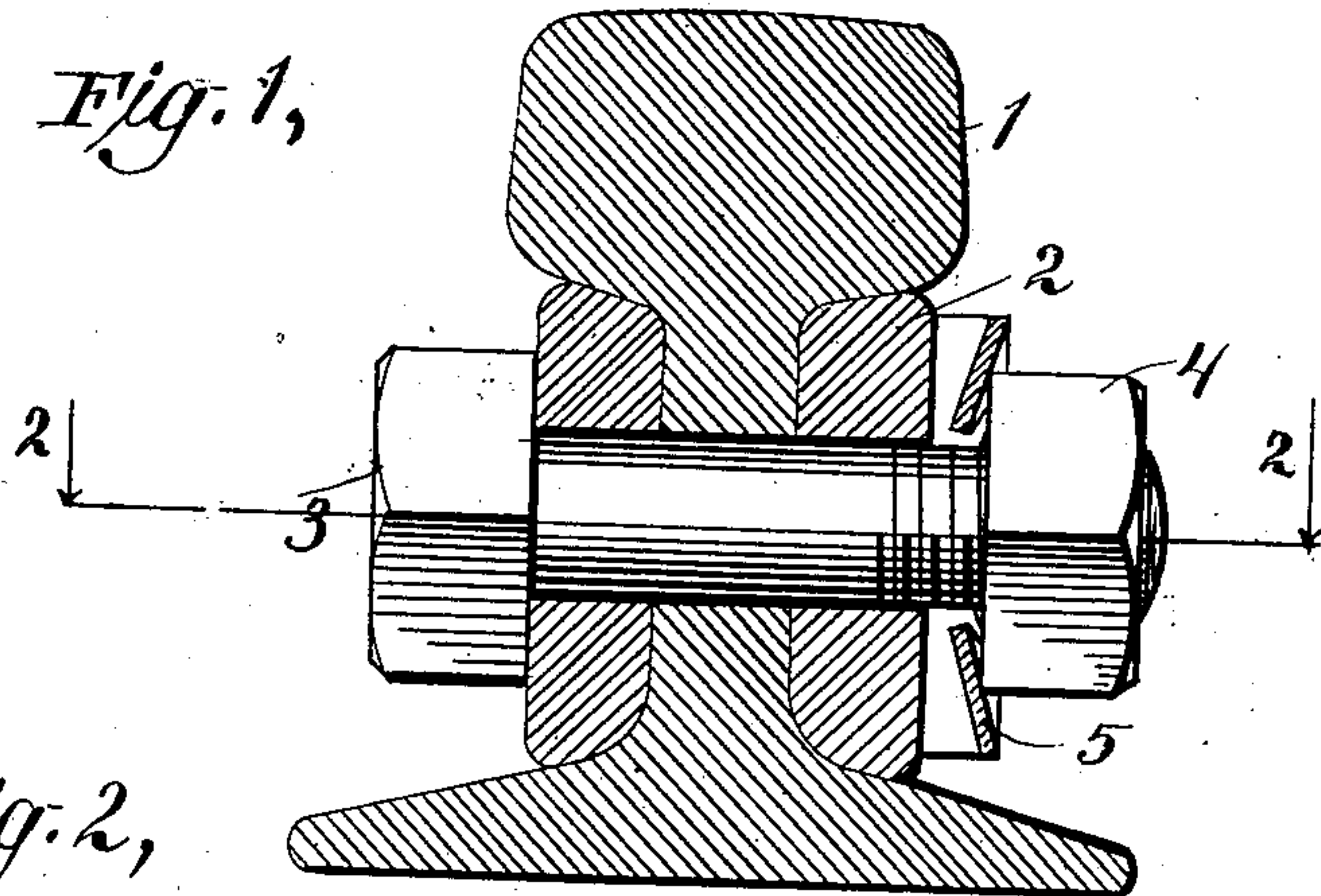


Fig. 2,

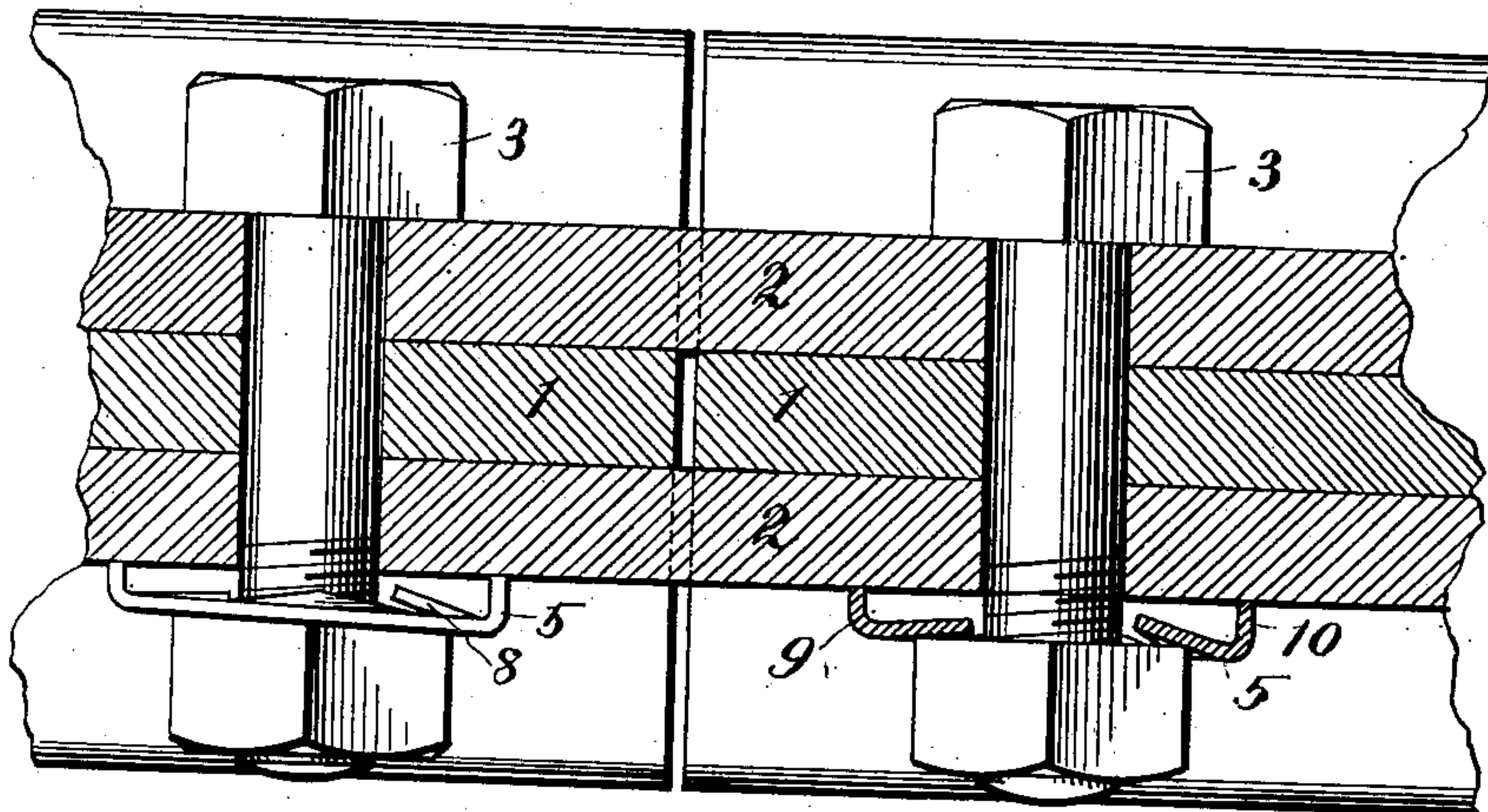


Fig. 3,

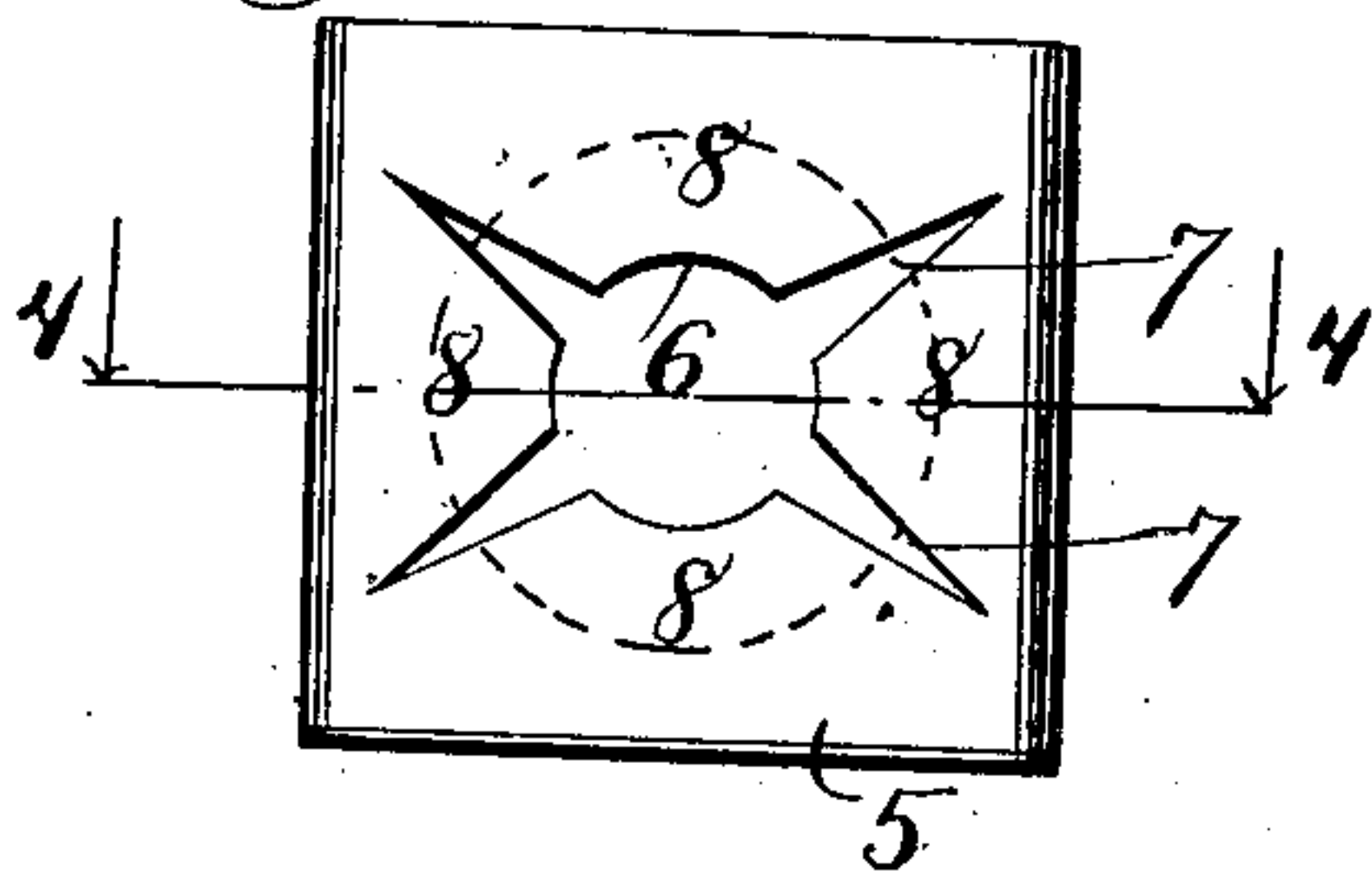
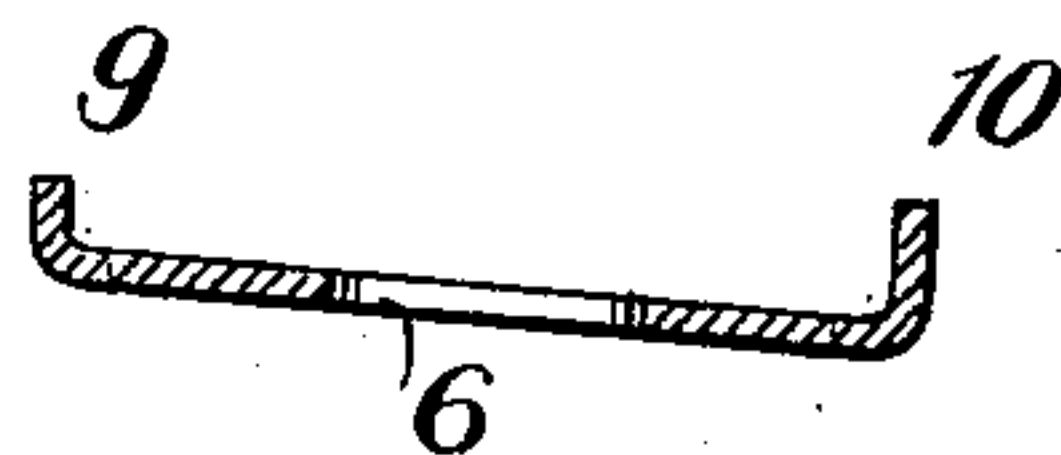


Fig. 4,



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NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 673,032, dated April 30, 1901.

Application filed June 13, 1900. Serial No. 20,122. (No model.)

To all whom it may concern:

Be it known that I, DAVID SERVIS, a citizen of the United States, residing at 100 Convent avenue, borough of Manhattan, city, county, and State of New York, have invented a new and useful Improvement in Nut-Locks, of which the following is a specification.

The present invention relates to nut-locks, and especially to nut-locks which are designed for use in securing contiguous rails in a railroad road-bed construction.

Particularly, the invention resides in a plate or washer-like construction provided with spring-sections in the face of such construction, combined with fulcrum parts for the entire structure, and preferably these fulcrum parts are of unequal size, so as to render the whole structure when in position inclined to the face of the nut with which it coacts.

I am well aware that many inventions have been made in this art and that many nut-locks have been made having spring-sections; but in these structures the sole object which it has been designed to accomplish has been the provision of a strong spring action upon the nut, so as to cause the threads thereof to come into intimate contact or bind upon the threads of the bolt. In my structure this effect is retained; but in addition thereto the construction is such that any tendency of the nut to move is met not only by the same force which holds it in position, but by an increased force, so that any movement of the nut can only be effected by its overcoming a spring-pressure additionally to that which normally keeps it in place.

In the drawings accompanying the present application I have shown a construction embodying the features of my invention.

Referring to said drawings, Figure 1 is a view, partly in central vertical section and partly in side elevation, of a rail-joint provided with my nut-lock attachment. Fig. 2 is a view taken along line 2 2 of Fig. 1, showing the bolt and nuts in full. Fig. 3 is a plan view of the nut-lock device. Fig. 4 is a view of the nut-lock device in section, the section being taken along line 4 4 of Fig. 3.

Like numerals of reference refer to like

parts throughout the several views of the drawings.

In said drawings, 1 designates the rail; 2, the fish-plates; 3, the bolt; 4, the nut, and 5 the nut-lock. This nut-lock is provided with a central aperture 6 of suitable size to permit of the passage of the bolt with which it is used. From this opening slots 7 are provided, which extend beyond the line of travel of the corners of the nut, these slots separating the face of the nut-lock into spring-sections 8. There may be any desired number of such spring-sections; but preferably I use four, as shown in the construction illustrated in the drawings.

In addition to the foregoing features I provide the lock with two inwardly-turned flanges 9 and 10. In the drawings the flange 9 is shown as shorter than the flange 10, this being the preferable construction. It will be apparent, however, that the main feature of the invention would be present in a construction in which both flanges were of the same length, the making of one flange shorter than the other inclining the surface of the spring-sections, so as to tend to incline the nut and jam or bind the threads thereof in intimate contact with the threads of the bolt, this effect being produced by the excess of pressure upon one side of the nut over the other. It will be understood, of course, that the nut-lock is to be placed in position relatively to the bolt and nut in such manner that its inclination is opposite to the inclination of the pitch of the threads.

In the drawings I have shown the slots 7 extending from the bolt-hole to a point beyond the path or circle of travel of the corners of the nut when the same is being screwed to position. This is the essential feature of the invention. By making the slots thus extend beyond the line of travel of the corners of the nut and providing the face of the nut-lock with the inwardly-turned flanges, an entirely new result is obtained. This new result arises from the fact that each of the spring-sections as a whole, when the nut lies with its corners in the slots, presents a higher plane to the revolution of the nut—that is, when the corners of the nut lie in the slots

the edges of the spring-sections adjacent to the corners are in a higher plane than said corners, and consequently offer a resistance to any force tending to loosen or unscrew the
5 nut.

What is claimed as new is—

1. A nut-lock, the same comprising a structure provided with a face having flat spring-sections, said spring-sections being separated
10 from each other by slots extending from a bolt-opening to a point beyond the path of travel of the corners of the nut, and one or more flanges extending angularly from the rear face of the spring-sections, and located
15 beyond the outer end of said slots, said flanges being adapted to abut against the device to be secured to give a spring-fulcrum to the entire face of the structure, substantially as specified.

20 2. A nut-lock, the same comprising a struc-

ture provided with a face having flat spring-sections, said spring-sections being separated from each other by slots extending from a bolt-opening to a point beyond the path of travel of the corners of the nut, and flanges, 25 one of said flanges being longer than the other, extending angularly from the rear face of the spring-sections, and located beyond the outer end of said slots, said flanges being adapted to abut against the device to be se- 30 cured to give a spring-fulcrum to the entire face of the structure, substantially as specified.

In witness whereof I have hereunto set my hand in the presence of two subscribing wit- 35 nesses.

DAVID SERVIS.

Witnesses:

ERNEST HOPKINSON,
IDA M. SHELLEY.