

(No Model.)

J. S. ROSENSTEEL.
Nut Lock.

No. 236,092.

Patented Dec. 28, 1880.

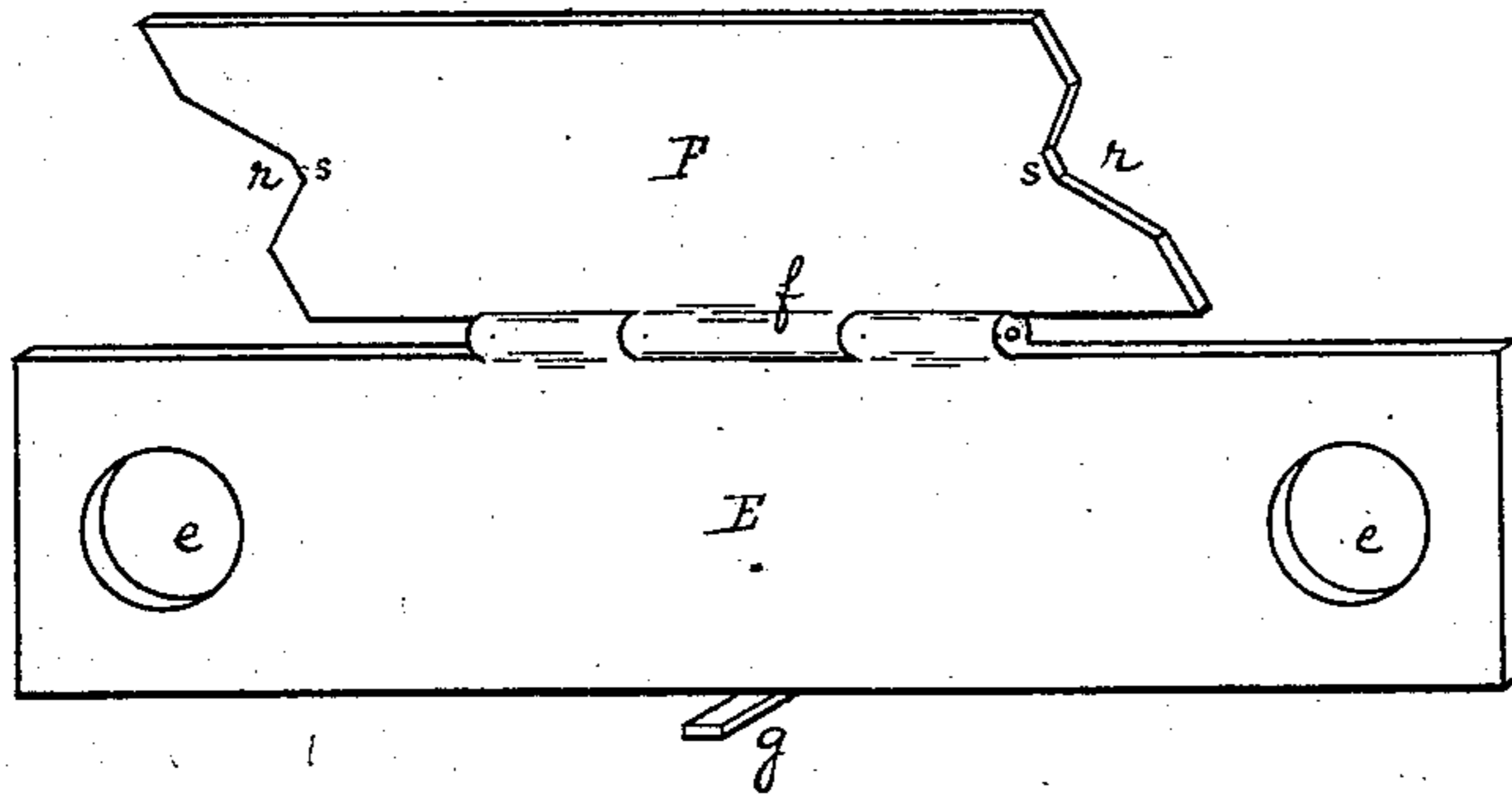


Fig. 1.

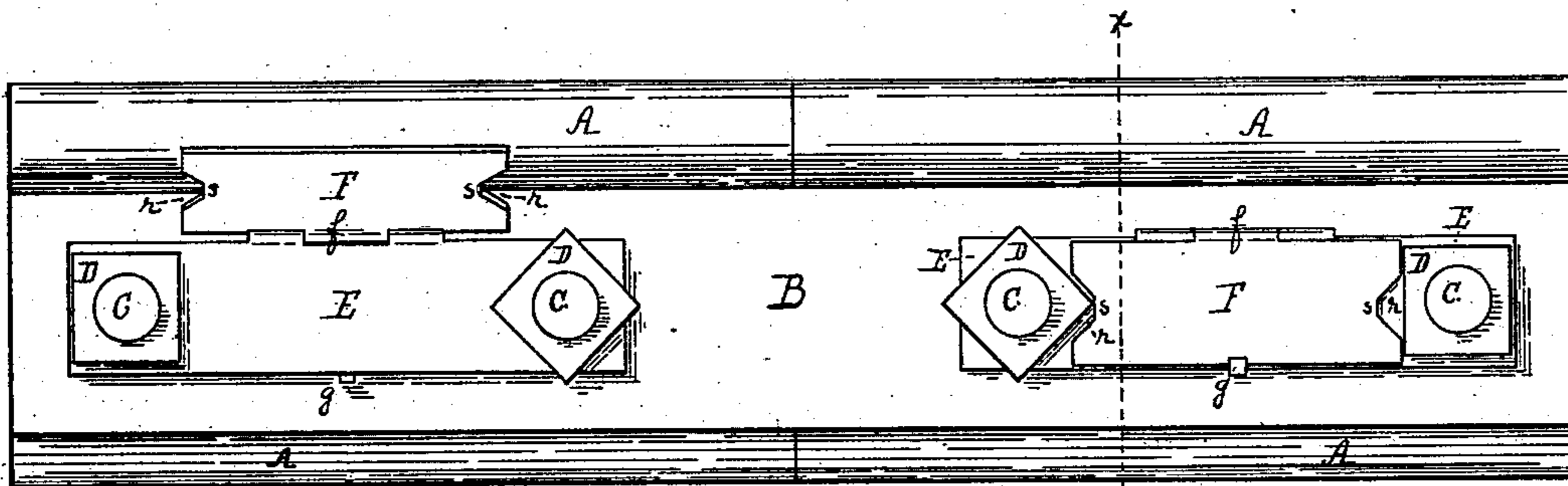


Fig. 2.

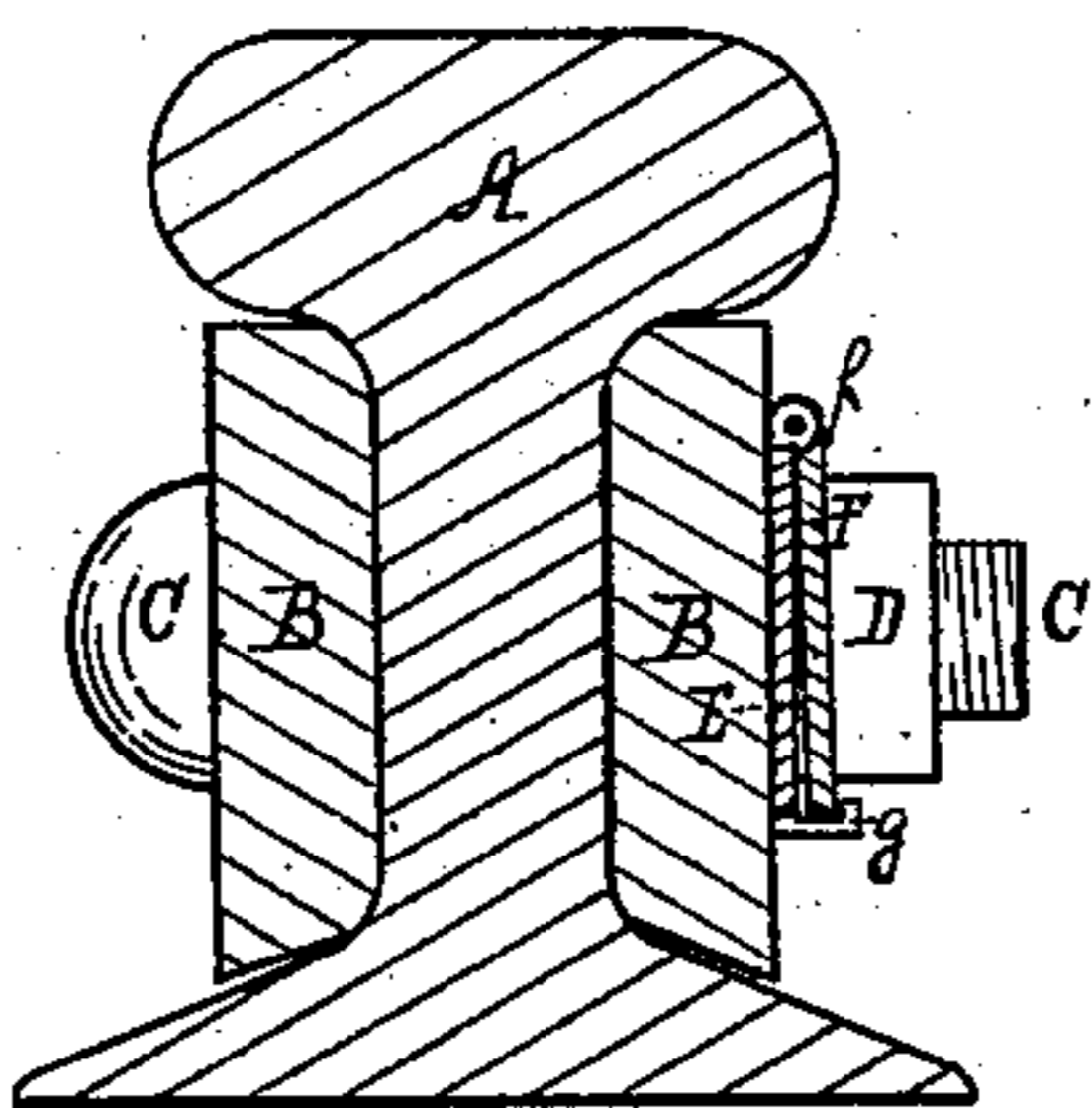


Fig. 3.

Witnesses

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NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 236,092, dated December 28, 1880.

Application filed April 3, 1880. (No model.)

To all whom it may concern:

Be it known that I, JACOB S. ROSENSTEEL, of West Bellevue Borough, in the county of Allegheny and State of Pennsylvania, have
5 invented a new and useful Improvement in Nut-Locks; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a perspective view of my improved nut-lock. Fig. 2 is a side view of the same applied to a rail-joint, and Fig. 3 is a cross-section on the line *xx*, Fig. 2.

15 Like letters of reference indicate like parts in each.

My invention relates to devices for locking or securely fastening the nuts used with bolts on railroads, bridges, machinery, and all other
20 places where the jarring or vibration to which the nut and bolt are subjected is liable to gradually unscrew the nut. The danger arising from this source because of the consequent loosening and weakening or severing and separating of the connection fastened by the bolts
25 and nuts has led many to seek some means of so locking and securely fastening the nuts on the bolts that they will not be unscrewed by the jarring of the machinery or structure
30 of which they form a part.

The object of my invention is to improve the construction of the nut-lock heretofore formed, in which a locking-plate is hinged to
35 a perforated attaching-plate secured below two adjacent nuts, and fits down between the nuts, so as to adapt it more perfectly for use.

It consists in forming in the sides of the hinged locking-plate angular recesses, which are elongated so as to fit down over the nuts
40 when they are turned diagonally to the length of the locking-plate.

To enable others skilled in the art to make and use my invention, I will describe its construction and operation.

45 My invention is illustrated as applied to the joint of two railroad-rails, it being used on bridges, machinery, &c., in practically the same manner.

50 In the drawings, A A are the rails, B the fish-bars, C the bolts, and D the nuts, all of which are of the usual construction, the necks

of the bolts being made oblong to prevent their turning.

My improved locking device is formed of two plates, E F, hinged together at the top *f*.
55 The long plate E has two bolt-holes, *e*, formed therein, one at each end, and is of such length that the bolt-holes *e* will fit over the adjacent bolts C, with which it is to be used. When
60 there is a very long space between the bolts, as is often found in bridges, part of the metal in the center of the plate may be cut away, so as to lighten it and reduce its cost. The locking-plate F is shorter than the bolt-plate E, being of the proper length to fit between
65 the nuts D when said nuts are turned square. In both sides of the locking-plate F are formed the elongated angular recesses *r*, by means of which the nuts are locked by the plate when
70 turned diagonal to its length. As the plates are hinged at the top, and the locking-plate moves on this hinge or pivotal point down between the nuts, it is evident that a common angular recess, which is only as large as the
75 space covered by the nut when turned diagonally, would not permit the plate to fit between the nuts. The recess *r* is therefore elongated, as shown at *s*, so that it will pass over the top of the nut turned diagonally and the upper
80 edge of the recess fit close against the nut, while the lower edge thereof, though not fitting tight, will only permit a slight turn of the nut, when it will come against the edge of the recess and be locked thereby.

On the lower edge of the bolt-plate E is
85 formed the clinching lip or projection *g*, which extends out from the plate beyond the locking-plate F, when it is pressed close to the bolt-plate. The purpose of this projection *g* is to secure the locking-plate between the nuts,
90 which is accomplished by simply bending or clinching the end of the projection over the lower edge of the locking-plate, as shown in Fig. 3, thus preventing the hinged plate from being raised out of its place between the nuts.
95 This is especially desirable in bridges, ships, and on the movable arms and wheels of machinery.

My improved nut-lock is applied in the following manner: After the bolts C are passed
100 through the rails and fish-bars or other parts to be connected, the bolt-plate E is placed

over the bolts, which extend through the holes
e, the hinge *f* of the plates being uppermost.
The nuts D are then screwed tight to place,
being either turned square or diagonally, and
5 the locking-plate F is dropped between them.
When the nuts are turned square the sides
of the plate lock them in that position, and if
they are diagonal they are locked, as above
set forth, in the elongated angular recesses *r*,
10 the points of the angular nuts extending into
said recesses. The locking-plate may then be
secured in place by bending the clinching lip
or projection *g* up over the lower edge of the
plate.
15 In opening the lock to remove the nuts when
the lip *g* is used, the lip, clinched or riveted
over the locking-plate as aforesaid, is bent
down by a blow from a hammer and the lock-
ing-plate lifted from between the nuts, when
20 they can be unscrewed, the locking-plate be-
ing ready for use again at the same or any
other joint or connection.

By my improvement I provide a simple and
efficient nut-lock, which is adapted to lock the
nuts firmly, whether turned diagonal or square, 25
and to secure the locking-plate between them.
It can also be used over and over again, as
its efficiency is not done away with when re-
moved from a joint.

What I claim as my invention, and desire to 30
secure by Letters Patent, is—

In nut-locks composed of a perforated plate,
to be secured under two adjacent nuts, and a
plate hinged thereto, to be adjusted between
said nuts, elongating the notches *r*, as at *s*, 35
substantially as and for the purposes set forth.

In testimony whereof I, the said JACOB S.
ROSENSTEEL, have hereunto set my hand.

JACOB S. ROSENSTEEL.

Witnesses:

F. G. KAY,
JAMES I. KAY.