

(No Model.)

J. A. SIMPSON.
NUT LOCK.

No. 252,530.

Patented Jan. 17, 1882.

Fig. 1.

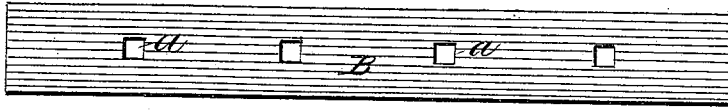


Fig. 2.



Fig. 3.

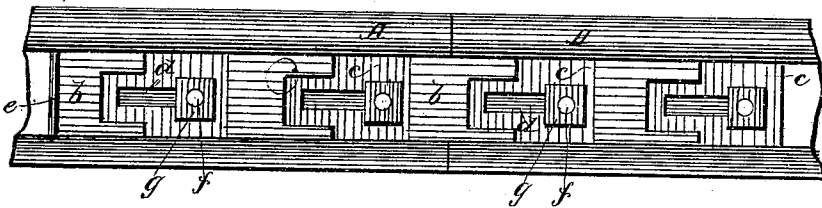


Fig. 4.

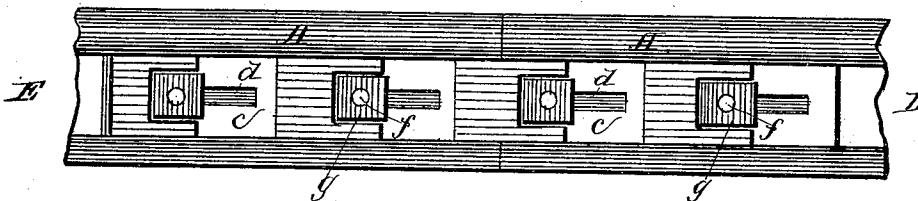


Fig. 5.

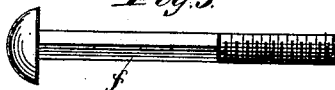


Fig. 6.

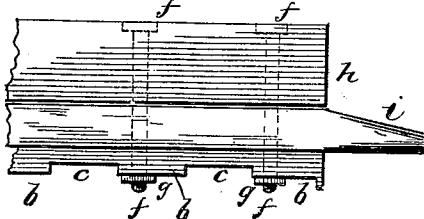
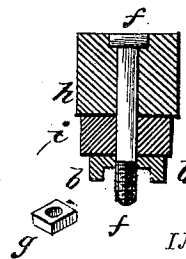


Fig. 7.



WITNESSES

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NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 252,530, dated January 17, 1882.

Application filed June 17, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. SIMPSON, a citizen of the United States, residing at Saddle Creek, in the county of Anderson and State of South Carolina, have invented certain new and useful Improvements in the Combined Fish-Bar and Top-Fastener; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to nut-fasteners; and it consists in the novel construction of bars or plates of iron or other metal in such a manner that while acting as stay or tie bars they will prevent the screw-nuts from turning on the threads of the stay-bolts, and at the same time also prevent the bolts from turning in the bar.

My invention is designed to prevent bolts and nuts from turning and becoming loose—may be applied to buggies, carriages, wagons, and all kinds of vehicles or machinery, wherever a run of two or more bolts and screw-nuts may be found; but particularly is it designed to secure the stay-bolts and nuts which are used to secure the tie-bars and T-rails on railways, in tying said rails together as they lie abutting each other on the track; and is described as follows:

Figure 1 represents a face view of a bar or plate of metal having four square holes through it at equal distances apart. These square holes *a* pass through it perpendicularly in relation to its flat sides, and are designed to admit bolts, which should be made square and to fit said holes. There may be any number of these holes, and they may be made of any size desired.

Fig. 2 represents a face view of bar *C*, which is also made of iron or other metal, and of any length, breadth, or thickness required, and is provided with recesses *c*, which are sunk from one-fourth to one-half an inch deep in the face of the same, leaving the square elevations *b*, which elevations are, however, minus one side of the square, and which I shall, for the purposes of

description, call "nut-embracers." This bar is also provided with slots or oblong rectangular holes. These holes or slots are made the same distance apart as the holes are in bar *B*, and are the same width, but about four times as long, and their edges are cut square, not rounding, and perpendicular in relation to the flat side of the bar. One end of this bar is turned up to form a head, *e*.

Fig. 3 represents a side view of two railway T-rails abutting each other and tied together by my combined fish-bar and nut-fastener. In this figure *A A* represent the two T-rails; *C*, the bar, as shown in Fig. 2, having nut-embracers *b*, recesses *c*, slots *d*, and head *e*, bar *B* being on the other side of the rails, immediately opposite bar *C*. *f* represents bolts having a square body or shank from its head to its threads, as seen in Fig. 5, which bolts are passed through holes *a* in bar *B*, then through holes or slots in T-rails *A A*, then through slots *d* in bar *C*. *g* represents nuts screwed on the threads of bolts *f* until the tie-bars *B* and *C* firmly clasp rails *A A*. When thus secured bar *C* is driven from *E*, Fig. 4, in the direction of *D* until nuts *g* are firmly embraced between the arms of nut-embracers *d*, as shown in Fig. 4. Thus secured there is no chance for the bolts to turn in the bars nor for the nuts to turn on the bolts; and, if thought necessary, the bar or plate *C* may be secured more firmly in place by a brace being screwed on the threads of one of the bolts at one end, and the other end braced against the near end of the next square elevation *b*; or the brace may have a hook on the free end to be fastened in a staple in bar *C*, or it may be secured in place by a spike, screw, or any suitable device for that purpose. As I claim nothing new for any such device, I deem it unnecessary to further describe them. In practice it will be found that when the nuts are screwed down tight they will be sufficient to keep the bar *C* from sliding back from its proper position. To remove a rail, drive bar *C* back from *D* in the direction of *E*, Fig. 4, and it assumes the position seen in Fig. 3. Then the nuts may be unscrewed and the tie-bars *B C* taken off.

Fig. 6 is a side view of the rear bolster and axle of a wagon bolted together by means of

bolts and nuts constructed according to the directions in these specifications, with my bolt and nut locking plate securing the same.

Fig. 7 is a transverse sectional view of Fig. 6, showing the bolt as its square shank passes through the round holes in the bolster and axle and half through my bolt and nut locking plate C, and its threads extending into recess *d*, ready to receive the nut.

10 The bolts *f*, Fig. 5, are made square from their heads up to their threads, so that they cannot turn in holes *a*, bar B, nor in slots *d*, bar C. Thus it will be seen that bar C prevents both the bolts from turning in their places

15 and the nuts from turning on the threads of the bolts. When there is a need for using two bars, as in tying rails on a railway-track, the bolts need only be squared a short distance from their heads; but when only bar C is used,

20 as shown in Figs. 6 and 7, the bolt should be squared up to its threads, and the square part should be long enough to extend one-eighth or one-fourth of an inch into slot *d*.

I am aware that heretofore a combined fish-plate and nut-locking device has been constructed with the bolts square near their heads and inserted into a plate having square holes to keep the bolts from turning, and with recesses in or ears on the other plate to keep the

30 nuts from turning.

I am also aware that heretofore a fish-plate has been constructed with slots running lengthwise the plate, and of less width than the nuts or bolt-heads, and having its surface channeled, recessed, or re-enforced, so as to lock the nuts

35 or bolts when the plate is moved lengthwise; and I do not claim such a device as either of these, as they take two plates to prevent both the bolts and nuts from turning, whereas in

40 my invention, when the bolts and plate are constructed as above described in my specification, the plate C performs the double function of preventing at the same time both the bolts and nuts from turning.

45 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a combined fish-bar and nut-locking

plate having recesses, nut-embracers, or nut-locking ears, head *e*, and rectangular slot *d*, 50 running lengthwise of the plate, with its sides parallel, straight, and perpendicular to the face of the plate, and adapted to embrace and hold from turning the square shank of a bolt constructed substantially as shown and described. 55

2. In a combined fish-bar and nut-locking device, in combination with the rails A and plate B, bolt and nut locking plate C, having head *e*, nut-embracers *b*, recesses *c*, and rectangular slot *d*, running lengthwise the plate, 60 with its sides parallel, straight, and perpendicular to the face of the plate, with bolt *f*, having its shank square from its head to its threads, passing horizontally through plate B and rails A, with its square shank passing half 65 the thickness of plate C into said rectangular slot *d*, and its threaded end extending beyond the face of the said plate to receive nut *g*, and nut *g*, adapted to fit on the threads of said bolt and between nut-embracers *b*, the whole 70 combined, constructed, and arranged to operate substantially as described, and for the purposes set forth.

3. In a nut-locking device, the combination of bolt and nut locking plate C, having head 75 *e*, nut-embracers *b*, recesses *c*, and rectangular slot *d*, running lengthwise the plate, with its sides parallel, cut straight, and perpendicular to the face of the plate, with bolt *f*, having its shank square from its head to its threads, and 80 adapted to pass through the parts it is designed to bind into rectangular slot *d* half the thickness of plate C, and its threaded end extending beyond the face of said plate, and nut *g*, fitting on the threads of said bolt and between 85 nut-embracers *b*, the whole constructed, combined, and arranged to operate substantially as shown and described, and for the purposes set forth.

In testimony whereof I affix my signature in 90 presence of two witnesses.

JOHN A. SIMPSON.

Witnesses:

GEORGE BROWN,
A. M. DUFFIE.