

(No Model.)

J. SULLIVAN.

WEDGE BOLT FOR LOCOMOTIVES.

No. 261,570.

Patented July 25, 1882.

Fig. 3.

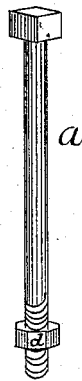


Fig. 4.

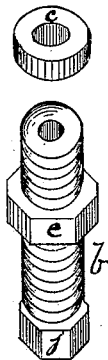


Fig. 1.

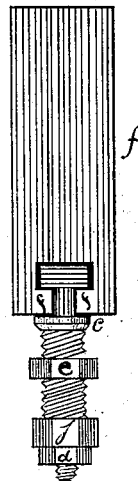
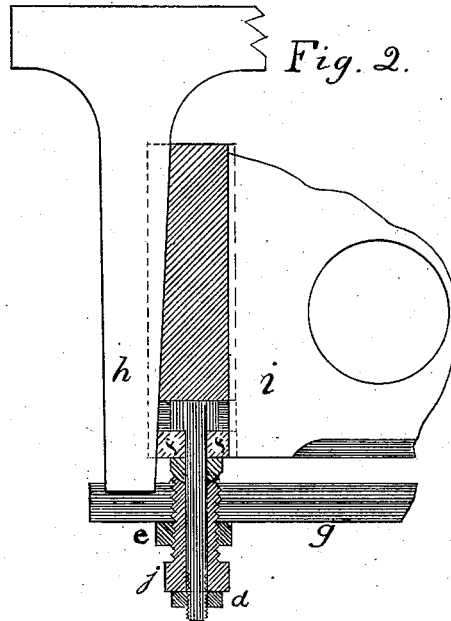


Fig. 2.



Witnesses.

Edgar Denton.

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per H. A. Corell,

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UNITED STATES PATENT OFFICE.

JOHN SULLIVAN, OF ELMIRA, NEW YORK, ASSIGNOR OF TWO-THIRDS TO
LA MOTT AMES AND JOHN E. DOHONEY, BOTH OF SAME PLACE.

WEDGE-BOLT FOR LOCOMOTIVES.

SPECIFICATION forming part of Letters Patent No. 261,570, dated July 25, 1882.

Application filed May 22, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN SULLIVAN, of Elmira, Chemung county, New York, have invented a new and useful Improvement in
5 Wedge-Bolts for Locomotives, of which the following is a specification.

My invention relates to an improvement in driving-box adjustable wedge-bolts for locomotives, in which the bolt passing through a
10 washer and a threaded shell and having a nut at the bottom is rendered adjustable, so as to hold the wedge rigidly in its place.

The objects of my improvements are, first, to hold the adjustable wedge firmly and rigidly in its position and prevent its getting "stuck;"
15 second, to prevent any lost motion, wear, or play between the wedge and the bolt; third, to secure a greater surface-bearing between the wedge and the bolt; and, fourth, to enable it
20 to be readjusted, tightened, and set without removing it from its place. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front view vertical section of
25 the entire bolt and its bearings; Fig. 2, a side view vertical section of the entire bolt and its bearings, showing tapering wedge; Fig. 3, a perspective view of the bolt with the nut; and Fig. 4, a perspective view of the threaded
30 shell, washer, and jam-nut.

Similar letters refer to similar parts throughout the several views.

The bolt *a* consists of a rod having a head at the top which fits into a slot cut through
35 the wedge, as shown in Fig. 1. The rod passes through the washer *c*, thence down through the threaded shell *b*, and is cut at the bottom with threads for the reception of the nut *d*, by which the head of the bolt is drawn firmly
40 down to the lips of the wedge *ff*.

The shell *b* is threaded, as in the ordinary wedge-bolt, and passes up through the brace or binder *g*, and has a six-sided head at the bottom for the wrench and a concave surface
45 at the top to fit the ball-washer *e*, which

washer is convex on its lower side, so as to adjust itself to the concave surface of the shell, and is straight on the upper side, or the side that meets the bottom of the wedge.

The jam-nut *e* acts simply as a protection
50 between the lower edge of the binder and the head of the threaded shell.

In Fig. 2 the binder *g*, the driving-box *i*, and the pedestal-jaw *h* are partly illustrated to show the relation of the bolt to the other
55 parts of the machinery.

Heretofore wedge-bolts have been composed of only one piece, and by reason of the constant working of those parts which come in contact with the wedge they soon become worn,
60 so that there is considerable space or lost motion between the head of the bolt and the lips of the wedge; and if the engine happened to strike a rough place in the track or give a sudden jolt the wedge very frequently would
65 be caught between the box and the pedestal-jaw and jerked up, breaking either the lips of the wedge or the neck of the bolt, and becoming stuck between the pedestal-jaw and the box, and not infrequently breaking the pedestal-jaw itself, and in either event requiring
70 the engine to be sent into the shops for repairs; and in case that nothing was broken by reason of the looseness of the parts, still the engine had frequently to be sent in to have
75 the bolt refitted at considerable trouble, labor, and expense; but by means of my invention the engineer is enabled by a single turn of his wrench to adjust the wedge to any desired
80 position and to tighten the bolt so as to hold the wedge rigidly in its position, thus preventing any lost motion, wear, or play between the head of the bolt and the lips of the wedge; and in case it should become worn he can in
85 an instant tighten the head of the bolt to the wedge far more securely than the old-fashioned bolt ever could be fitted, and it is equally true with regard to square or rounded bolt-heads.

I am aware that prior to my invention 90

wedge-bolts for driving-boxes have been made and used. Therefore I do not claim the invention of the wedge-bolt; but

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

1. The combination, in a wedge-bolt for locomotives, of the bolt *a*, the threaded shell *b*, and the nut *d* at the bottom, all as substantially set forth.
2. In a driving-box adjustable wedge-bolt for locomotives, the combination of a bolt,

washer, threaded shell, and nut at the bottom, by which combination the bolt is rendered adjustable, so as to secure a perfectly tight joint between the head of the bolt and the wedge, and to hold the wedge rigidly in its place, substantially as set forth.

JOHN SULLIVAN.

Witnesses:

H. A. CORELL,
JACOB SCHWARTZ.