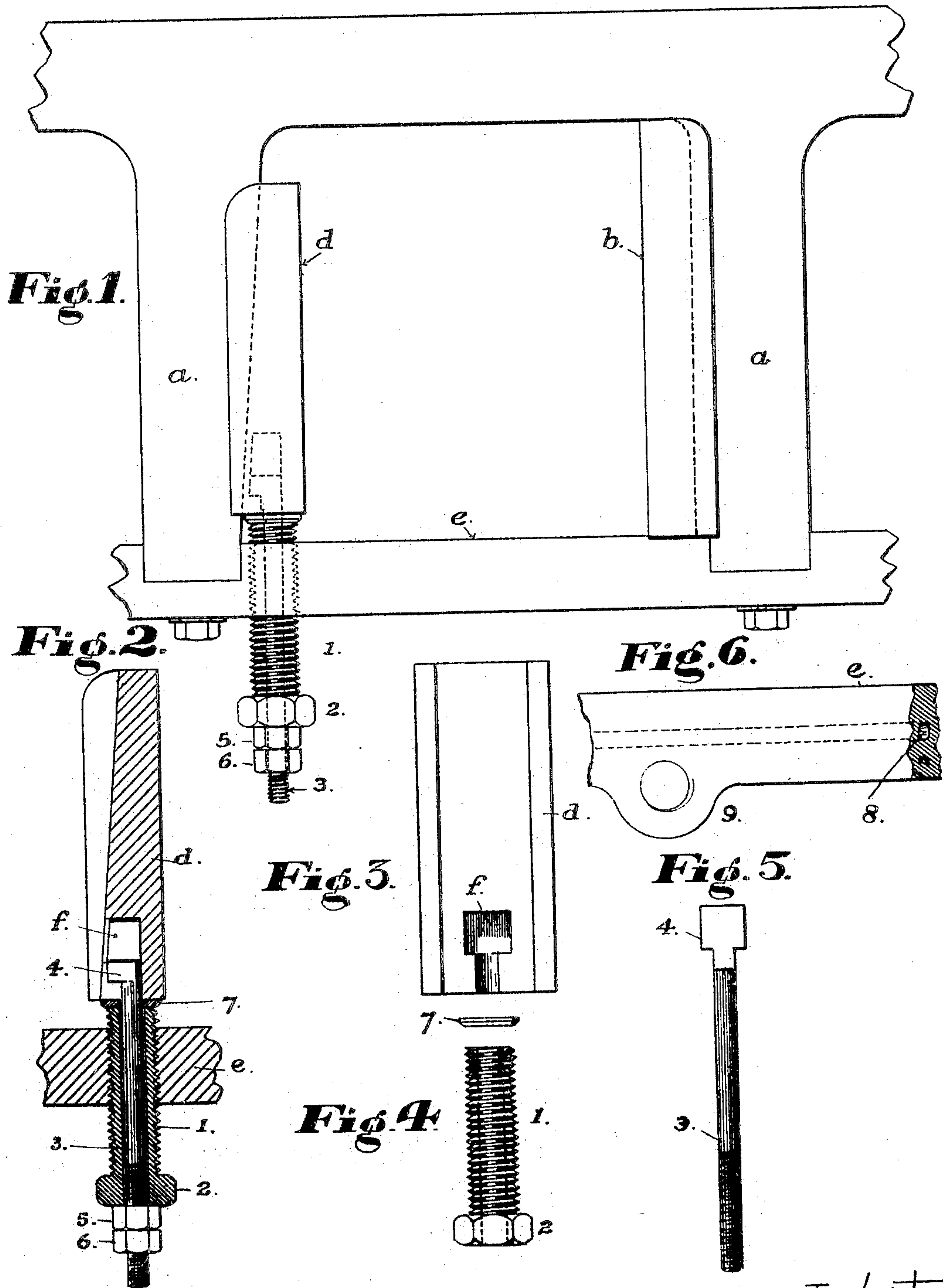


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WEDGE BOLT FOR LOCOMOTIVE FRAME PEDESTALS.

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WITNESSES.

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FRANK P. SHARP, OF SAN FRANCISCO, CALIFORNIA.

WEDGE-BOLT FOR LOCOMOTIVE-FRAME PEDESTALS.

No. 797,618.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK P. SHARP, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Wedge-Bolts for Locomotive-Frame Pedestals, of which the following is a specification.

The object of this invention is to provide for the movable wedge of the driver-box in a locomotive-pedestal and for other situations a wedge-bolt of novel character for adjusting the wedge and for holding it in position after adjustment.

The invention is adapted by its construction to take up play of the parts as they become worn and to be self-locking, so as to prevent the bolt from working loose and the wedge from moving longitudinally up or down with the driver-box. It is designed to afford ready adjustment of the wedge from a point beneath the pedestal where it can be reached and set without difficulty by the workman and to permit the cap or binder of the pedestal to be removed and replaced without drawing down the wedge with the binder or disturbing its adjustment in the pedestal. It is applicable to most forms or constructions of locomotive-engine frames and to other situations or parts where a movable part, like a driver-box wedge, requires to be adjusted and firmly held.

The following description explains the construction of my said bolt or fastening means for a wedge and the manner in which the same is applied for operation, the accompanying drawings representing a portion of the pedestal-frame of a locomotive having my invention applied to it.

Figure 1 is a front elevation of the pedestal-jaws and the wedge and shoe between which the driver-box is confined, showing the movable wedge secured by a wedge-bolt embodying my invention. Fig. 2 is a sectional view of the wedge and the wedge-bolt and a portion of the pedestal-cap through which the bolt works, the section being taken longitudinally through the wedge and the bolt. Figs. 3, 4, and 5 are details of the wedge and the bolt, Fig. 3 being a front view of the wedge, Fig. 4 a view of the threaded tubular member of the bolt, and Fig. 5 a view of the threaded rod that connects the wedge with the tubular member and also locks the last-named part so that it cannot turn. Fig. 6 is a top view of the cap or binder of the pedestal, illustrat-

ing its construction when a tie-rod is used to hold it in place.

A tubular screw-threaded bolt 1, with a central opening extending through it and provided with a polygonal head 2 on one end, is fitted to a threaded socket made in the cap *e* of the pedestal in line with the movable wedge *d*. The lower end of the wedge when that part is in place rests on the end of the bolt 1, so that by turning the bolt in the cap the wedge will be adjusted longitudinally on the jaw *a* of the pedestal in the usual way. Instead of being directly attached to the end of the bolt, however, the wedge is connected with the bolt by a separate piece consisting of a rod 3, provided with an enlarged head 4 to fit a recess *f* in the lower part of the wedge *d* and having a shank somewhat longer than the bolt and of proper diameter to pass easily through the bolt. The lower end of this rod 3 is threaded for nuts 5 6, which are placed after the rod is inserted through the bolt, the threaded portion of the rod extending outside the bolt for that purpose. On placing the head of the rod in the recess in the wedge and screwing up the nuts 5 6 against the head of the bolt the rod acts to draw down the wedge so firmly to a seat against the upper end of the bolt that the wedge will be held rigidly under all forces that tend to move it longitudinally on the jaw. At the same time the bolt itself is compressed between the end of the wedge and the nuts 5 6 so tightly that the bolt cannot turn in its bearing. The rod 3 consequently has the two functions of holding the wedge firmly against the end of the bolt and of locking the bolt in whatever position it may be set to adjust and fix the wedge. Usually the rod 3 is made detachable from the wedge, as seen in Figs. 3 and 5, and a washer 7 is placed between the bolt and the wedge to increase the area of the bearing-surface on the end of the bolt; but instead of being removably attached to the wedge the rod can be a permanent part or member of the wedge. It is better to provide a detachable fastening means for the rod 3 such as I have shown, for the reason that these parts on and about the pedestal of a locomotive are more or less liable to break under the great strains to which they are exposed, and if the rod 3 becomes broken it can be repaired or replaced by a new one when the rod and the wedge are separable. When this fastening is applied to a pedestal

in which the cap or binder *e* is held in place by a long bolt or tie-rod passing longitudinally through it, it will be necessary to place the threaded socket or bearing for the wedge-bolt to one side of the aperture 8 provided for the tie-rod. In that case the thickness of the binder *e* is increased at the part located under the wedge, so as to provide sufficient metal for the walls of the socket on one side of the aperture through which the tie-rod is inserted from the end of the binder, as indicated at 9, Fig. 6.

In addition to its effective holding qualities, that render it practically impossible for the wedge to work loose and slip in the pedestal, this device has the advantage of allowing the cap to be removed from the pedestal without removing or disturbing the wedge where access to the adjacent parts of the locomotive and its driving or running gear is required for repairs. When the bolts that hold the cap *e* in place are removed after the nuts are taken off the threaded end of the rod 3, the bolt will remain in the cap as the latter is separated from the pedestal-jaws, while the rod 3 being attached to the wedge will remain depending from its lower end, and the wedge will retain its position between the jaw of the pedestal and the driver-box. In that position also the rod serves as a guide in the work of replacing the cap, and by bringing the aperture through the tubular bolt under and directly in line with the depending rod 3 the proper position of the cap with reference to the pedestal-jaws is readily determined and the operation of setting the cap in place is facilitated.

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

1. A wedge-bolt having a tubular shank screw-threaded on its circumference, a rod passing through the shank, having an enlarged head on one end and provided with a screw-threaded portion at the opposite end, and nuts on the screw-threaded portion; in combination with a stationary, screw-threaded bearing for the shank of the bolt, and a wedge having a recess for the enlarged head of the rod.

2. The combination, with a movable wedge, of means for adjusting and locking the same, comprising a threaded bolt having a tubular shank, and provided with a head on one end for turning it, a stationary threaded bearing for the shank, a rod on the lower end of the wedge forming a depending member thereof and having a threaded portion at the end op-

posite the wedge, and a nut on said threaded portion bearing on the end of the tubular bolt and operating to draw the wedge to a seat against the end of the bolt.

3. The combination, with a movable wedge, of a bolt having a tubular shank screw-threaded externally, a stationary bearing for the threaded shank, a rod depending downward from the lower end of the wedge and removably fitted to the tubular shank, said rod having a screw-thread on the end portion extending through the said shank, and a nut on the threaded portion outside the tubular shank as a means of drawing the wedge down to a seat on the end of the bolt and of locking the bolt in its bearing.

4. The combination with a movable wedge, of a threaded bolt having an aperture extending longitudinally through it, a rod removably fitted to the aperture and projecting at both ends beyond the bolt, said rod having on one end a head for attaching it to the end of the wedge, and a threaded portion on the opposite end for a nut.

5. The combination, with the wedge of a locomotive-frame pedestal, of means for adjusting and holding the wedge, comprising a threaded bolt having a bearing in the cap of the pedestal and provided with an aperture extending longitudinally through its shank, a head on the end of the bolt for turning it, a rod removably fitted to said aperture through the bolt and projecting at both ends, means for attaching one end of the rod to the wedge, and a screw-thread on the opposite end of the rod having a nut fitted thereto, as a means of drawing the wedge to a seat on the end of the bolt and of compressing the bolt between the wedge and the nut.

6. The combination with a wedge, of an adjusting and locking means, comprising a rod extending from one end of the wedge longitudinally thereof and having a screw-threaded portion at the opposite end, and a threaded bolt having a bearing in a stationary part under the wedge and provided with an aperture extending longitudinally through it to admit the rod, and a nut on the threaded end of the rod beyond the end of the bolt.

In testimony whereof I have hereunto set my name to this specification in the presence of two subscribing witnesses.

FRANK P. SHARP.

Witnesses:

EDWARD E. OSBORN,
M. REGNER.