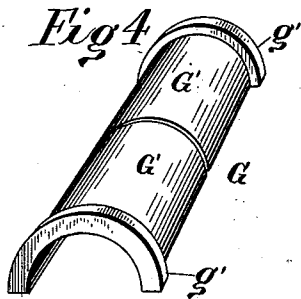
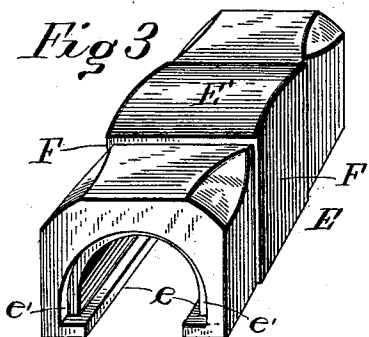
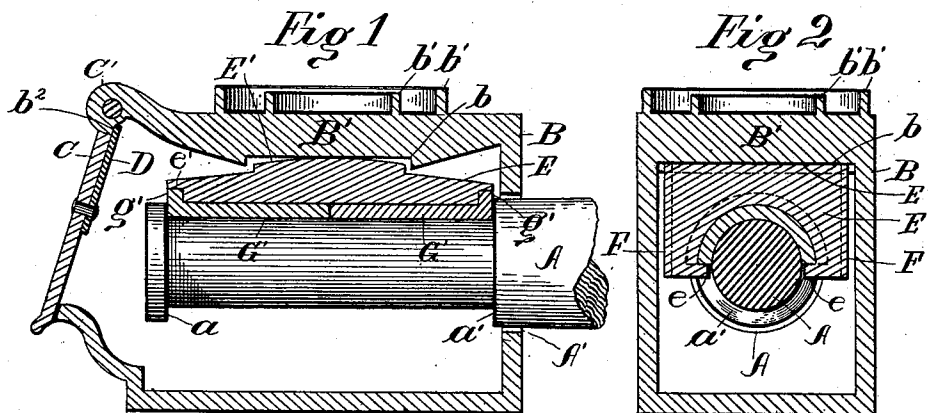


(No Model.)

A. MILLER.
AXLE BOX.

No. 477,768.

Patented June 28, 1892.



Attest;
C. C. Burdine
R. S. Mason

Inventor
Arnold Miller.
per his Jos. H. Hunter
Att'y

UNITED STATES PATENT OFFICE.

ARNOLD MILLER, OF MEDFORD, WISCONSIN.

AXLE-BOX.

SPECIFICATION forming part of Letters Patent No. 477,768, dated June 28, 1892.

Application filed March 4, 1892. Serial No. 423,694. (No model.)

To all whom it may concern:

Be it known that I, ARNOLD MILLER, a citizen of the United States, residing at Medford, in the county of Taylor and State of Wisconsin, have invented certain new and useful Improvements in Axle-Boxes, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to an improvement in axle-boxes; and it consists in the construction and arrangement of parts more fully hereinafter described, and definitely pointed out in the claims.

The object of my invention is to provide an axle-box which will reduce the ordinary amount of friction and wear and at the same time give a strong and durable box which will not be injured by the sudden starting and stopping of the car. This object I attain by the construction illustrated in the accompanying drawings, wherein like letters of reference indicate corresponding parts in the several views, and in which—

Figure 1 is a central longitudinal section through the axle-box. Fig. 2 is a similar transverse section. Fig. 3 is a detail perspective view of the bearing-block, and Fig. 4 is a detail perspective of the bushing for the bearing-block.

In the drawings, A represents the car-axle, having a reduced portion near its end, forming shoulders *a a'*.

B is the axle-box, of the ordinary form, having an aperture *A'* in its rear end, through which the axle projects, the aperture being large enough to allow of the vibration of the axle in the box.

The top *B'* of the box A is formed with a downwardly - curved under face having a transverse recess *b* therein. *b' b'* are suitable flanges arranged on the top *B'* for holding springs (not shown) in place when it is desired to rest the same directly on the axle-box.

To the forward edge of the top *B'* of the axle-box is connected by a suitable hinge *C'* the lid C. The members of the hinge are formed integral with the top and cover, respectively, the portion of the hinge on the top *B'* being formed on its inner side with an inclined flat face *b²*, which is engaged by the free end of a flat spring D, secured at one end to the middle portion of the cover and which

acts to tightly hold the cover to its seat when the same is closed, thus preventing rattling or loosening by the vibration of the box.

E is an arch-shaped bearing-block adapted to fit over the axle, having plate *E'* formed on its top integral therewith, the plate having a curved upper face, which allows a limited amount of rocking. This plate slidingly engages in the recess *b'* of the top *B'*. The lower edges of the block E are formed with the inwardly - extending flanges *e* thereon, and grooves *e'* are formed in the ends of the block, extending around the under face thereof between the flanges *e*.

F are reinforcing-plates on the sides of the block E, which come in contact with the sides of the axle-box when the car is suddenly started or stopped.

G is a brass bushing formed in two sections *G' G'*, which are formed at their outer ends with outwardly-extending flanges *g'*. The two sections of the bushing are slipped into the under side of the bearing-block from opposite sides thereof, the lower edges of the bushing resting against the flanges *e* and the flanges *g' g'* resting in the grooves *e'*. This bushing engages directly with the reduced portion of the car-axle and is held in place by the shoulders *a a'*, which engage the ends thereof.

From the above description it will be seen that when the car is started the usual jar to the axle-box will be dispensed with, as the friction caused by the plate *E'* slidingly engaging in the recess *b* will cause a quick steady movement of the axle-box, the reinforcing-plates preventing any damage to the bearing-block as it comes in contact with the sides of the same. The bearing-plate *E'* is preferably made narrower than the groove or recess *b* to permit of a small amount of longitudinal movement, which prevents damage in going around curves in the track.

I am aware that many minor changes in the construction and arrangement of the parts of my device can be made and substituted for those herein shown and described without in the least departing from the nature and principle of my invention.

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

1. In an axle-box, the combination, with the

axle and top of the box formed with a transverse recess in its under side, of an arch-shaped bearing-block fitting over the axle and having inwardly-extending flanges on its lower edges, a plate on the upper face of the bearing-block having a curved face adapted to slidingly engage in the recess in the top of the box, and a bushing for the under side of the block, resting on the flanges, substantially as described.

2. In an axle-box, the combination, with the axle having a reduced portion near its outer end, forming shoulders, and the top of the axle-box, having a transverse recess in its under side, of an arch-shaped bearing-block fitting over the axle and having grooves formed therein around the under faces of the ends thereof, inwardly-extending flanges at the lower edges of the bearing-block, a plate on

the upper face of the bearing-block having a curved upper face and adapted to slidingly engage in the recess in the top, a bushing for the bearing-block, divided into two sections having outwardly-extending flanges at their outer ends engaging in the grooves at the ends of the bearing-block, the lower edges of the bushing resting against the flanges at the lower edges of the block and held in place by the shoulders on the axle, and reinforcing-blocks on the sides of the bearing-block, substantially as described.

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

ARNOLD MILLER.

Witnesses:

E. H. SCHWEPPE,
ALBERT PRIES.