

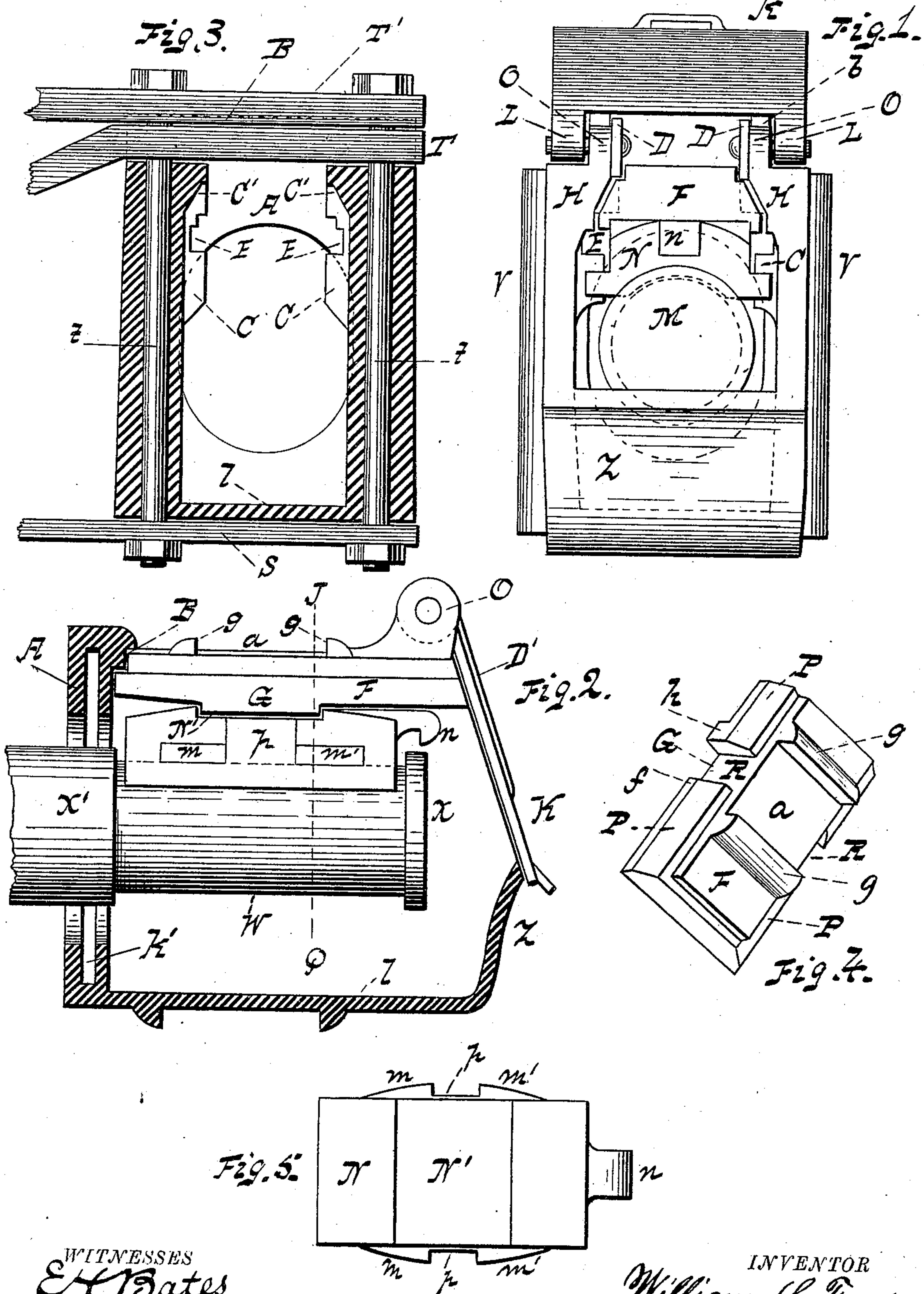
(No Model.)

W. L. TROUP & J. A. C. GERMER.

CAR AXLE BOX.

No. 245,586.

Patented Aug. 9, 1881.



WITNESSES
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UNITED STATES PATENT OFFICE.

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CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 245,586, dated August 9, 1881.

Application filed June 13, 1881. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM L. TROUP and JOHN A. C. GERMER, both of Harrisburg, county of Dauphin, and State of Pennsylvania, have invented a new and useful Car-Journal Box and Casing, of which the following is a specification.

Our invention relates to any common form of cars for railways, and its features are, first, a peculiar sectional journal-box casing provided with removable pillow-piece in the top opening thereof, securely kept to its place of duty by certain interlocking parts and by stress from the car-journal, all so coacting that the said pillow-piece and the journal box or bearing—the only loose parts—can be removed only after jacking up the car-truck; second, certain peculiarly-notched vertical ledges in the said casing below the contracted opening in its top and certain marginal notches in said pillow-piece, whose body is of form corresponding to said opening, all designed to admit said pillow-piece as a follower into the casing below said opening, and to be properly stopped or guided to find its place when the truck is let down after jacking. We attain these objects by the construction and arrangement of parts as illustrated in the accompanying drawings, in which—

Figure 1 is a front view of our invention. Fig. 2 is a longitudinal vertical section of the casing, showing the removable section thereof, the journal-box, and the journal in perspective. Fig. 3 is a transverse section of the casing, taken at the indicated line J of Fig. 2. Fig. 4 is a perspective view of the removable top of the casing, and Fig. 5 is a top view of the journal-box.

Similar letters refer to similar parts throughout the several views.

The description of our invention will be more intelligible if prefaced with the following reference to the present make of car-journal boxes and the difficulties attending their removal when impaired.

The journal-box casing as now made, closed at its top, allows the damaged journal-box to be removed only by approaches to it at the outer end, after jacking up the truss and car-frame. If the journal-box, as usually occurs, has been hot and spread by wear, it becomes wedged tightly in the casing, and it is impos-

sible to remove it entire, for, though at first made to fill the seat for it loosely, it then, by expansion, sticks tight, and must be chipped to pieces to remove it; and, as it is accessible only at its outer end, the work is slow and detaining. It is therefore the purpose of our improvement to facilitate such work by making it more accessible, the top of the casing being made removable after jacking up the car-truck above its bearings on the journals, thus enabling workmen to insert tools at the open top of the casing to remove therefrom the journal-box. Said parts and the side walls of the casing are provided with certain interlocking lugs, specially designed and arranged to hold the parts securely together, and situated accessibly to be easily chipped off if the said parts cannot be removed otherwise. Ordinarily the journal-box can be removed by our improved construction without chipping. By our arrangement the journal can be better inspected to ascertain what damage may have been done to it from scoring or wear.

Referring to the drawings, A represents the inner end of the casing. M is the oval opening thereof for allowing the car-truck to be jacked up from its bearings on the journals W. K' is a receptacle in said end for insertion of the usual waste-collar.

B is the ledged cross-bar or top of the casing at its rear end, that being the only part joining the walls of the casing at its top, except the hinges of the lid K, the main part of said top being made a removable section, F, constructed and applied as shown, and as hereinafter more fully described, it being held in place by ledges g thereon, which hold against the bar T.

H denotes the side walls of the casing, swelled at V for insertion of bolts t, by which the straps and bars T T' of the truss are attached. At the front end said walls H are peculiarly extended upward, having on them the hinge-lugs O D, by which the branched lid K is pivoted thereto by the extensions L, arranged outside of said lugs O D, thus affording a clear open space between the hinges when the lid is open for sliding outward the removable top F. Said lid is held shut by two friction spring-plates, D', on its back bearing on the knuckles O beside the flanges D thereof. About midway in from their ends said walls H have on their in-

sides vertical ledges C C', with notch E in them, as shown in Fig. 3.

The removable top F and journal-box N (shown in Figs. 4 and 5, respectively) have at the middle of their sides vertical notches corresponding with said vertical ledges C C' of the walls, by which said parts are interlocked or kept in place after insertion, as shown in Figs. 1 and 2. The removable section F is made wider below than above, and has a square tread on its sides, and the upper edges of said walls are made of corresponding bevel and shoulder. Said shoulders are so made that the parts may have a firm hold on each other, and that dust and sand may be excluded from entrance into the casing. Said parts are made part way beveled, as shown, to afford room in the casing to elevate the journal-box therein after said section F has been removed. When all the parts are together in place, as shown in Figs. 1 and 2, part F can be removed only after the casing or sides H H have been raised to allow the lower margins of its sides to be opposite said notches E and the tenon G on its middle beneath it to be free from the transverse seat N' on the journal-box. After removal of section F from the casing the journal-box N can be raised to bring its detents or lugs *m* opposite said notches E, and it can then be passed outward or removed.

When the journal-box has become stuck in the casing, owing to wear and spreading, as frequently happens, it can still be lowered in the casing sufficiently to allow the section F to be removed. It can then be approached both on top and at its outer end to pry it out of the casing; and, if necessary, its rear lugs, *m*—that is, those farthest from the hook *n*—may be chipped off. Said hook *n* is added to handle said box more conveniently.

The section F has the front lugs, *h*, extended beneath the body of the same, that they may serve as stops against the outer sides of ledges C while inserting it, as it is important that said section should certainly find its proper place when the truck is being lowered after jacking.

We are aware that car-axle boxes or casings having a removable slide or lid at the top are

shown in patent of D. H. Dotterer, of August 13, 1867, No. 67,638, and in patent of Robinson and Rusk, of October 28, 1879, No. 220,990; but in the former the slide or top is held against displacement in the direction of the stress solely by the screws which close the door of the casing; and in the latter patent the lid or top is held to its place of duty by two added pieces—a wedge and pin; and in neither patent are the parts held to their places of duty by their form, nor are they combined as a safety arrangement whose displacement is dependent on raising the truck from its bearings, as in our improvement.

What we regard as new and useful, and what we desire to secure by Letters Patent of the United States, is—

1. In combination with each other, a journal-box casing, A B H, constructed with contracted top opening of angular internal tread or seat, and a notched pillow piece or top, F, of form and size corresponding with said opening and tread, applied thereto from beneath, and held to its place of duty by ledges C C' in the casing and by stress from the car-journal W through the interposed journal-box N, substantially as and for the purpose set forth.

2. The casing-walls H, having vertical ledges C C', provided with mid-height notches E in them, in combination with the pillow-piece F, provided with stops *h* at the front edge of the vertical notches in its margin, these conformations serving as interlocking holders and guides for each other, substantially as and for the purposes set forth.

3. The journal-box casing A B H, provided with the removable top F, in combination with lid K, hinged to lugs O on the side walls, and aside of the opening at top of the casing, substantially as and for the purpose set forth.

In testimony that we claim the foregoing we have set our hands and seals hereto this 8th day of June, 1881.

WILLIAM L. TROUP. [L. S.]
JOHN A. C. GERMER. [L. S.]

Attest:

THEOPHILUS WEAVER,
JNO. D. KINNEARD.