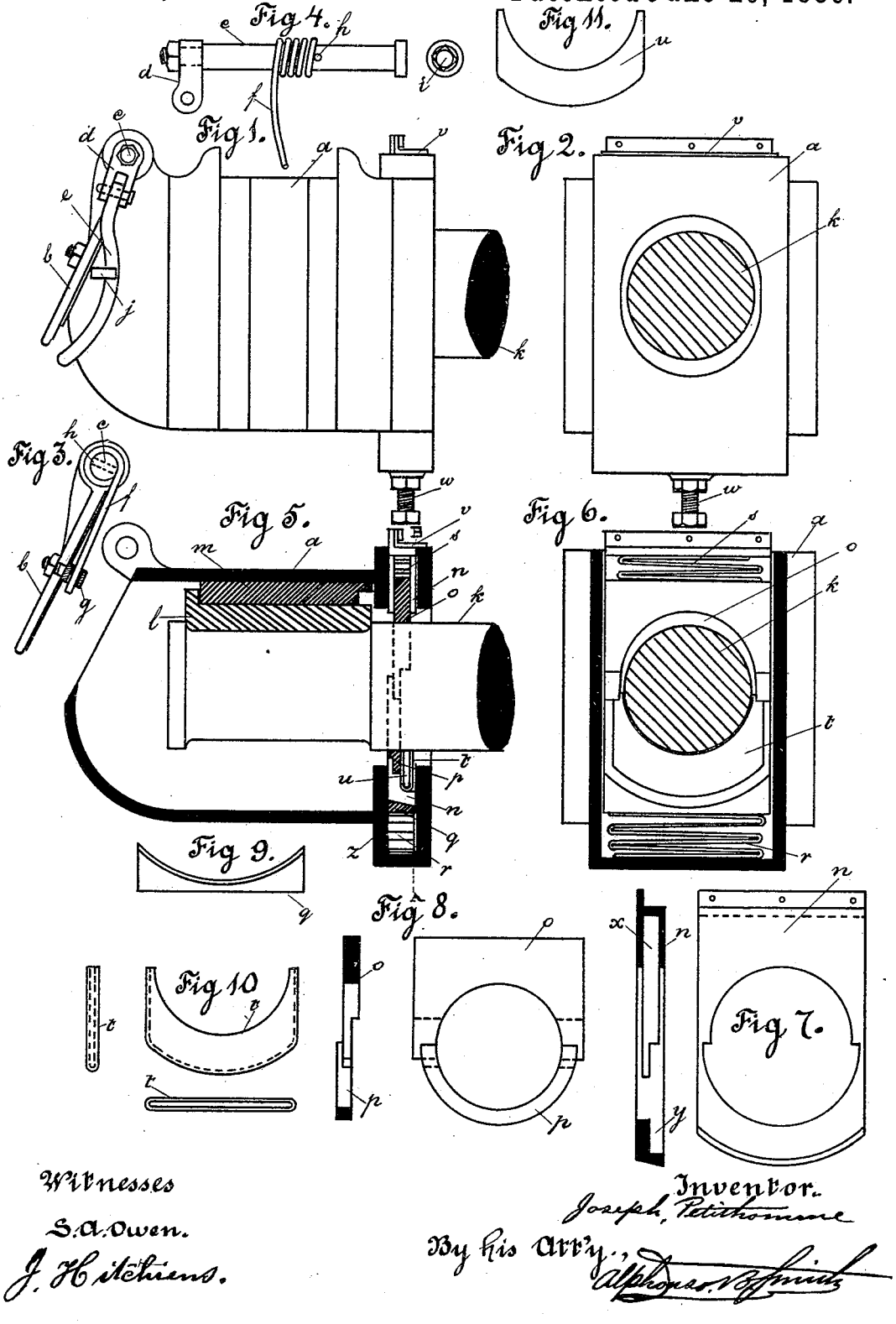
(No Model.)

J. PETITHOMME.

CAR AXLE BOX.

No. 344,401. Patented June 29, 1886.



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JOSEPH PETITHOMME, OF SACRAMENTO, CALIFORNIA.

CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 344,401, dated June 29, 1886.

Application filed January 5, 1886. Serial No. 187,644. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH PETITHOMME, a resident of Sacramento, in the county of Sacramento and State of California, have invented a new and useful Oil-Tight and Dust-Proof Journal-Box; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings.

My invention relates to means for providing a journal-box for railway-cars, which will effectually hold oil and exclude dust and grit.

The following description fully explains the nature of my said invention and the manner in which I proceed to construct, apply, and use the same, the accompanying drawings being referred to by figures and letters.

Figure 1 represents elevation of the journal-box, showing the axle broken off and the spring arrangement for the lid. Fig. 2 represents elevation of the same, as seen from the right hand of Fig. 1. Fig. 3 represents a section of the lid, showing the coiled spring and attachment. Fig. 4 gives two views of the hinge-bolt and coiled spring with the upper part of the hinged lock-lever Fig. 5 represents a section through the middle of the journal-box. Fig. 6 represents a cross-section of the journal-box. Fig. 7 gives two views of the sliding casing containing the brass padding. Fig. 8 gives two views of the upper movable brass padding and the lower stationary brass padding. Fig. 9 represents elevation of the intermediate piece between the sliding casing and the lower spring. Fig. 10 gives three views of the combination-washer. Fig. 11 is a view of the brass plate in washer.

In Fig. 1, *a*, the journal-box; *b*, lid of same; *c*, hinge-bolt on lid; *d*, upper part of hinged lock-lever for lid; *e*, arm of lever; *j*, catch for lever, and *v* leather-packing covering on upper part of sliding casing.

In Fig. 2, *a*, the journal-box; *k*, axle; *v*, leather packing to sliding casing, and *w* set-screw on lower end of journal-box.

In Fig. 3, *b*, lid of journal-box; *c*, hinged bolt on same; *f*, coiled spring attached to bolt; *g*, eyebolt for attaching lower end of coiled spring to hinge-bolt.

In Fig. 4, *c*, the hinge-bolt on lid; *d*, upper part of hinged lock-lever; *f*, coiled spring, and *h* attachment of same to hinge-bolt, and *i* square end of hinge-bolt where the lock-lever is attached.

In Fig. 5, *a* the journal-box; *k*, axle; *l*, brasses; *m*, filling piece in brasses; *n*, sliding casing for padding; *o*, upper movable brass padding; *p*, lower stationary brass padding; *q*, intermediate piece; *r*, lower spring attached to intermediate piece; *s*, upper spring over movable brass padding; *t*, combination-washer, and *u* brass plate in same; *v*, leather packing on upper end of sliding casing, and *z* slot in journal-box for sliding casing.

In Fig. 6, *a*, the journal-box; *k*, axle; *o*, upper brass padding; *r*, lower spring; *s*, upper spring, and *t* combination-washer.

In Fig. 7, *u*, the sliding casing; *x*, slot for brass padding to work in, and *y* recess or slot for the combination-washer.

In Fig. 8, *o*, upper brass padding; *p*, lower brass padding, and *v* leather packing on upper end of sliding casing.

In Fig. 9, *q*, the intermediate piece between sliding casing and lower spring.

In Figs. 10, 11, *t*, the combination-washer, and *u* the brass plate in same.

In constructing a journal-box which will hold the lubricating-oil and exclude all dust and grit, a sliding casing, *n*, is provided which slides into a recess or slot, *z*, in the upper inner end of the journal-box *a*. The casing fits around the axle *k*, and has a slot, *x*, for the insertion of the upper spring, *s*, and the upper movable brass padding, *o*, the ends of which work in the lower extension of the slot. At the upper end of the sliding casing there is a leather packing, *v*, held to the casing by a strip of metal, which is riveted. In a slot on the lower end of the inner side of the casing is the stationary brass padding *p*, the upper inner edges of which are cut in for the movement of the lower edges of the upper brass padding. A combination-washer, *t*, fits into a recess or slot, *y*, in the lower end of the outside of the casing, and is composed of a crescent-shaped leather pouch in which there is a brass or metallic plate, *u*. An intermediate piece, *q*, conforms in shape to the lower end of the casing and fits against it, and to this piece the lower spring, *r*, is riveted. The combination-washer is kept in position against the axle by the action of the spring *r*, the spring being held against the intermediate

piece, which fits to the casing by a set-screw, *w*, by which the washer is adjusted. A lid, *b*, is attached to a lug on the top of the outer end of the journal-box by a hinge-bolt, *e*, which passes also through a lug on each side of the lid, the end of the bolt being held by a nut, *i*. On the threaded end of the bolt the head of the lock-lever *d* is attached, between the square shoulders of which the head of the lever enters, and is held by a pin. The arm *e* of the lever when the lid is closed is held by a catch, *j*, on the edge of the journal-box. Under the lid one end of a coiled spring, *f*, is held to the hinge-bolt *e* by a screw, and after coiling around the bolt the other end passes through the eye of a bolt, which goes through the lid and is held by a screw. The under side of the lid is covered with a leather packing over which a metal plate is placed.

The operation of my device is as follows: The arrangement of the spring *s* over the upper brass padding keeps the padding in contact with the axle, and the spring *r*, under the sliding casing, causes continuous contact of the stationary padding *p* and the combination-washer *t* with the axle at its lower half-circle. The springs in use do not effect the perfect and continuous contact between the axle and the washer which is produced by my device. Lost motion caused by the wear of the parts is prevented by the action of the set-screw *w*, which works against the lower end of the sliding casing and adjusts the combination-washer to the axle. By this arrangement the oil is retained in the box and the journal is kept in good condition.

By the arrangement of the lid *b* having a hinge-bolt, *e*, to which is attached a coiled spring, *f*, and the lock-lever *d*, and catch *j*, a perfect dust-tight cover is secured. The arm *e* of the lever is held in the catch on the journal-box, and the lid is pressed down during the jolting of the car by the tension of the coiled spring.

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

1. The combination-washer *t*, with brass plate *u*, and the adjusting set-screw *w*, in combination with the intermediate piece, *q*, sliding casing *n*, upper movable brass padding, *o*, lower stationary brass padding, *p*, lower spring, *r*, and upper spring, *s*, substantially as described and set forth.

2. In a lid for a journal-box, the hinge-bolt *d*, having coiled spring *f* attached, in combination with the lock-lever *d*, lever-arm *e*, and catch *j*, substantially as described.

3. In an oil-tight and dust-proof journal-box for railway-cars, the combination of washer *t*, and brass plate *u*, adjusting set-screw *w*, intermediate piece, *q*, sliding casing *n*, upper movable brass padding, *o*, lower stationary brass padding, *p*, lower spring, *r*, upper spring, *s*, with the lid *b*, hinge-bolt *e*, having coiled spring *f* attached, lock-lever *d*, lever-arm *e*, and catch *j*, substantially as described, and for the purpose herein set forth.

In witness whereof I have hereunto set my hand and seal.

JOSEPH PETITHOMME. [L. S.]

Witnesses:

A. B. SMITH,

THEO. V. STOCKTON.