

Sept. 21, 1926.

1,600,794

L. J. BROWN
RETAINING VALVE ANCHOR

Filed June 10, 1925

2 Sheets-Sheet 1

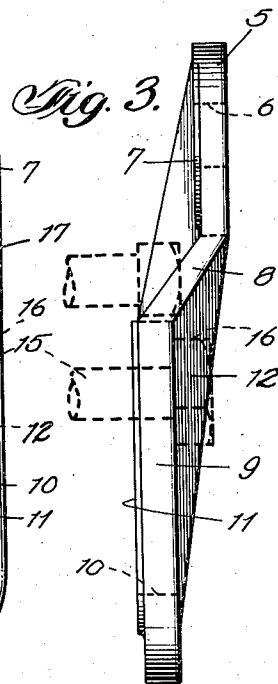
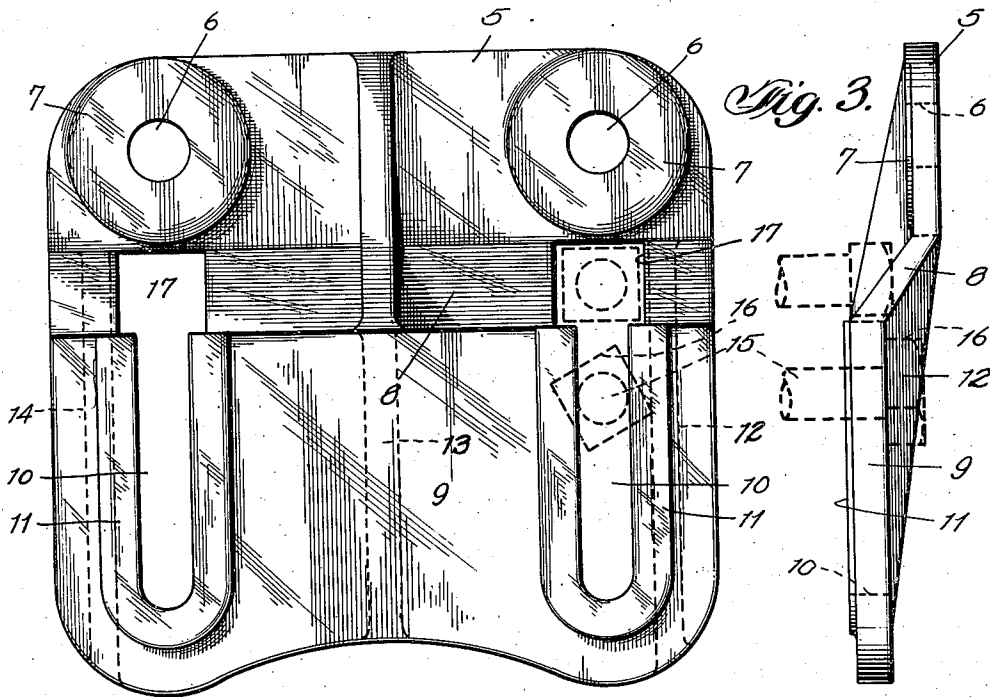
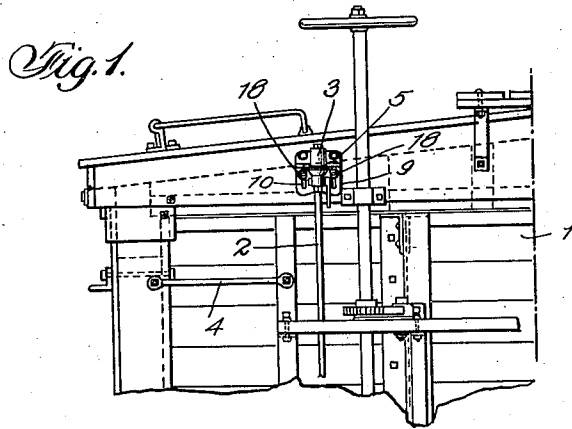


Fig. 2.

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Fig. 4.

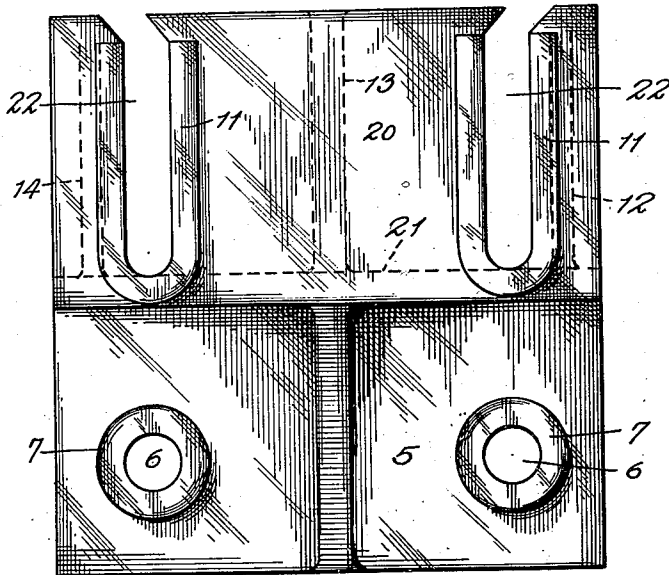


Fig. 5.

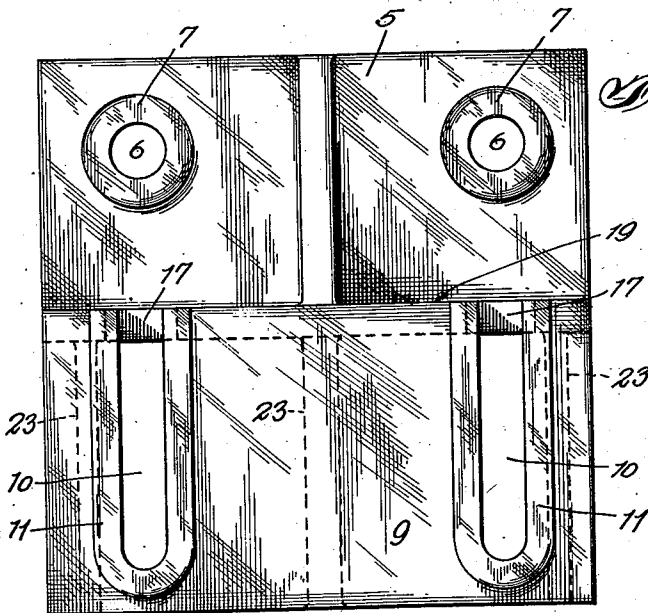
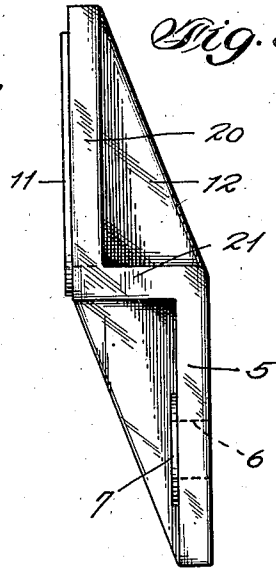
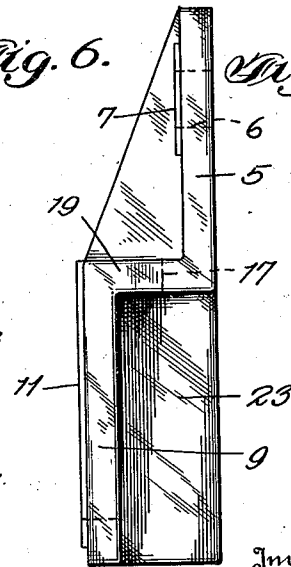


Fig. 6.

Fig. 7.



Inventor

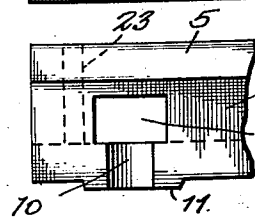


Fig. 8.

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UNITED STATES PATENT OFFICE.

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RETAINING-VALVE ANCHOR.

Application filed June 10, 1925. Serial No. 36,202.

The retaining valve is a necessary part of the air brake system for railroad cars by which trainmen can control cars and trains on grades of varying degrees, its function being to retain a pressure of air in the air brake cylinder while the air in the train line is being replenished from the locomotive.

The rules require that this retaining valve be positioned in a convenient location on the car so that it will be readily accessible to the trainmen.

It has been the custom to secure the retaining valve to the end wall of a car by means of lag screws and bolts in the wooden type of car and by rivets in the steel type of car, but the lag screws due to the weaving of the car in service far quickly become loosened, as do also the bolts and rivets, thus loosening the anchorage of the retaining valve to such an extent that its pipe leading from the air brake system is free to swing like a pendulum thereby reducing the efficiency of the air brake system.

In many instances when the retaining valve becomes loose it is necessary to unload a car for the purpose of permitting a workman to get at the bolts and rivets of the retaining valve inside of the car, thus necessitating in many instances the breaking of the car seal while the car is in transit thereby increasing liability of the railroad for damage and stolen goods, besides which the unloading and loading of a car for this repair is quite an expense.

The object of my invention is to provide an anchor for a retaining valve which is of such construction that it may be secured firmly to a car and permit of the attachment and detachment of the retaining valve to such anchor without necessitating the removal of the load from the car, thereby reducing the expense of repairs of such valves to a minimum and eliminating the necessity of removing the load from the car and breaking the seal of the car while the car is in transit.

In the drawings:

Figure 1 is a fragmentary end view of a railroad car with my invention mounted thereon.

Figure 2 is a front elevation of my improved valve anchor.

Figure 3 is a side elevation of the same.

Figure 4 is a front elevation of another embodiment of my invention.

Figure 5 is a side elevation of the same.

Figure 6 is a front elevation of another embodiment of my invention.

Figure 7 is a side elevation of Figure 6.

Figure 8 is a detail view.

The reference numeral 1 designates a car of any suitable construction and the reference numeral 2 designates a pipe leading from the air brake system of the car underneath the car to a point near the top of the car on the upper end of which is secured the retaining valve 3 in convenient position to be readily accessible for operation from the top of the car, or from the usual ladder 4.

My improved anchor may be of varied construction and I have selected for the purposes of illustrating my invention, in the many views of the drawings, a type of construction that, in casting, will not require a core other than, a green sand core, which will not require a core box and is made in the mold. Some of the constructions which I show may require a separate core in the mold; however, the molding process does not form a part of my invention, my invention residing in the anchor irrespective of its method of molding.

My improved anchor comprises an attaching plate 5 which is formed with a rivet or bolt openings 6 around which I form bosses 7. A shelf 8 integral with the plate 5 extends downwardly and forwardly from the bottom of the plate 5 at the desired angle from the bottom of which shelf an apron 9 depends, the apron and attaching plate 5 being parallel with the apron being slightly in advance of the attaching plate as more clearly shown in the side elevation of the anchor. The apron 9 is provided with elongated slots 10 and bosses 11 extending around said slots on the outer face of the apron thereby rigidifying the apron. Ribs 12, 13 and 14 are cast on the rear face of the anchor and extend from the bottom edge of the attaching plate 5 to the lower edge of the apron 9, the ribs extending vertically and being integral with the plate 5, shelf 8 and apron 9 as clearly shown in the drawings. The ribs 12 and 14, as will be seen

from the drawings, are relatively positioned with reference to the slots 10 in the apron so that they may function as a stop to limit rotation of the bolt 15 by reason of the side edge of the head 16 of the bolt coming in contact with the flanges 12 and 14, as illustrated in the drawings.

The shelf 8 is provided with a bolt opening 17 of such diameter as to permit of the ready insertion of the head 16 of the bolt therethrough so that the bolt may pass through said opening 17 and permit the head 16 to slide downwardly back of the rear face of the apron 9 with one side edge of the head 16 in comparatively close relation to the ribs 12 and 14. In addition to these ribs functioning as stops to prevent the turning of the bolts they also rigidify and strengthen the casting as will be readily understood.

My improved anchor is secured to the car wall by bolts or rivets passed through the openings 6 in the attaching plate, and when the anchor is attached to the car the apron 9 by reason of the shelf 8 is spaced from the face of the car wall. The heads or bolts 15 are then passed through the opening 17 in the shelf and permitted to drop down back of the apron 9, the body of the bolt being positioned in the slots 10. The retaining valve is provided with suitable brackets or lugs 18 having bolt openings therethrough, and through which the bolts 15 pass thereby holding the valve to the anchor. The nuts on bolts 15 are then manipulated until the valve is securely and firmly attached to the anchor. In the manipulation of the nuts on the bolts 15 it is not necessary to place a wrench on the head 16 of the bolt to keep the bolt from revolving, inasmuch as one side edge of the head 16 of the bolt contacts with the rib 12 or 14 and is thereby prevented from turning.

In Figure 4 I have shown another embodiment of my invention which is in material respects of the same construction as above described, the only substantial difference residing in the shelf 19 being at substantially right angles to the attached plate and the apron. In this figure I have shown the ribs or flanges 23 as extending in full width from top to bottom of the apron as distinguished from the tapering flanges 12, 13 and 14 in the other construction.

In Figure 6 I have shown another embodiment of my invention in which the apron 20 extends upwardly from the shelf 21 whereby elongated slots 22 open in the upper edge of the apron 20.

In many instances it has been found that under service conditions the screw threads on the upper end of the retaining valve break, or the pipe breaks at the point where it enters the retaining valve. Under such conditions heretofore it was necessary to replace the retainer valve pipe of the full

length from the union of the valve which is about twenty feet on closed type of cars, and about fifteen feet long on open type of cars. The adjustment provided by the elongated bolt ways or slots of the anchor embodying my invention permit of the retaining valve being dropped or lowered down whereby it may be readily attached to a shortened retainer pipe. By this my invention, the retainer pipe, can be rethreaded and replaced in the retaining valve and this rethreading can be done a number of times within the limits of the length of the bolt ways or slots. It is obviously more economical to rethread the retainer valve pipe, already on the car, than to replace a new pipe.

I am aware that other changes may be made in the details of construction without departing from the scope of the appended claims.

What I claim is:

1. A retaining valve bracket for air brake systems comprising an attaching body adapted to be secured to a car, a shelf on said body and extending outwardly therefrom, and an apron depending from the outer edge of said shelf, and elongated ports through said apron.
2. A retaining valve bracket for air brake systems comprising an attaching body adapted to be secured to a car, a shelf on said body and extending outwardly therefrom, and an apron depending from the outer edge of said shelf, and elongated ports through said apron, and ports in said shelf registering with the ports in the apron.
3. A bracket for the retaining valve of an air brake system, comprising a body adapted to be attached to a car, and an apron extending from and spaced beyond the front face of said body, whereby the apron will be spaced from the car when the bracket is in operative position, and means securing the retaining valve to the said apron.
4. A bracket for the retaining valve of an air brake system, comprising a body having bolt openings therethrough, a shelf extending forwardly from said body, an apron depending from said shelf, bolt ways through the apron, and rigidifying ribs integral with said shelf and apron.
5. A bracket for the retaining valve of an air brake system, comprising a body having bolt openings therethrough, a shelf extending forwardly from said body, an apron depending from said shelf, bolt ways through the apron, and rigidifying ribs integral with said shelf and apron, and bolt ways through said shelf in registry with the said ways of the apron.
6. A bracket for the retaining valve of an air brake system, comprising a body having bolt openings therethrough, a shelf extending forwardly from said body, an apron depending from said shelf, elongated slots

through said apron, and elongated slots through the shelf in registry with and at right angles to the slots of the apron.

7. A bracket for the retaining valve of an air brake system, comprising a body having bolt openings therethrough, a shelf extending forwardly from said body, an apron depending from said shelf, elongated slots through said apron, and elongated slots through the shelf in registry with and at right angles to the slots of the apron, and rigidifying ribs integral with said shelf and apron and adjacent the said slots.

8. A bracket for the retaining valve of an air brake system comprising a body having bolt openings and adapted to be secured to a car, a shelf extending forwardly from the lower edge of said body, an apron depending from the outer edge of said shelf, vertically disposed slots through said apron opening at the top, and slots through said shelf in registry with the slots of the apron.

9. A bracket for the retaining valve of an air brake system comprising a body having bolt openings and adapted to be secured to a car, a shelf extending forwardly from the lower edge of said body, an apron depending from the outer edge of said shelf, vertically disposed slots through said apron opening at the top, and slots through said shelf in registry with the slots of the apron, and rigidifying ribs integral with said shelf and apron, said ribs also functioning to hold the head of a bolt against turning.

10. An air brake retaining valve bracket comprising an attaching body adapted to be secured to a car, a shelf extending outwardly from said body, an apron depending from said shelf, elongated ports through said apron, and ribs on the rear face of said apron adjacent said ports.

11. An air brake retaining valve, comprising an attaching body adapted to be secured to a car, a downwardly extending shelf at the bottom of said body, an apron depending from said shelf, bolt ways

through said shelf and elongated bolt ways in said apron in registry with the ways in the shelf.

12. An air brake retaining valve, comprising an attaching body adapted to be secured to a car, a shelf extending forwardly from said body and an apron extending from said shelf whereby the apron will be spaced from the car when the bracket is in operative position, elongated bolt ways in said apron; said elongated bolt ways permitting the bolts holding the retaining valve to be adjusted to accommodate varying lengths of pipe connecting said valve with the air brake system of the car.

13. A retaining valve bracket comprising a head and a stem depending therefrom, a shelf depending and extending forwardly from said head on each side of said stem, an apron depending from each shelf in a plane parallel to but in advance of the plane of said head, a bolt opening in each shelf, and an elongated slot in each apron in registry therewith.

14. A retaining valve bracket comprising a head and a stem depending therefrom, a shelf depending and extending forwardly from said head on each side of said stem, an apron depending from each shelf in a plane parallel to but in advance of the plane of said head, a bolt opening in each shelf, and an elongated slot in each apron in registry therewith, and a plate connecting each apron with the said stem.

15. A retaining valve bracket comprising a head adapted to be secured to a support, shelves depending and extending forwardly from said head, an apron depending from the forward edge of said shelves, a bolt opening through said shelves, an elongated slot through said aprons in registry with said openings, and a spacing member to space said apron from the support to which the bracket is secured.

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