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D. H. FAIRBANKS.

# APPARATUS FOR COOLING HOT JOURNAL BOXES.

APPLICATION FILED JULY 17, 1905.

Fig. 1.

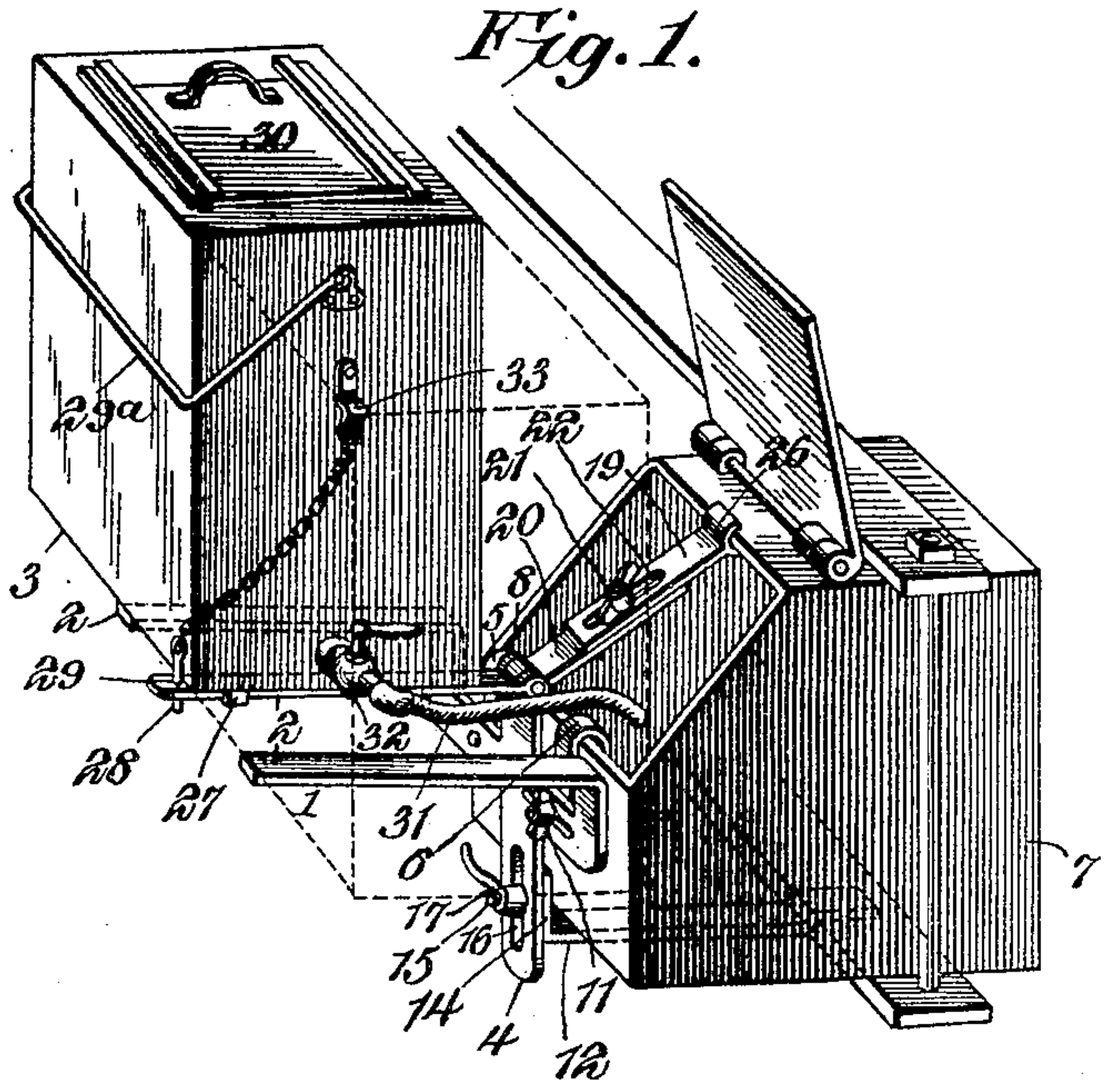
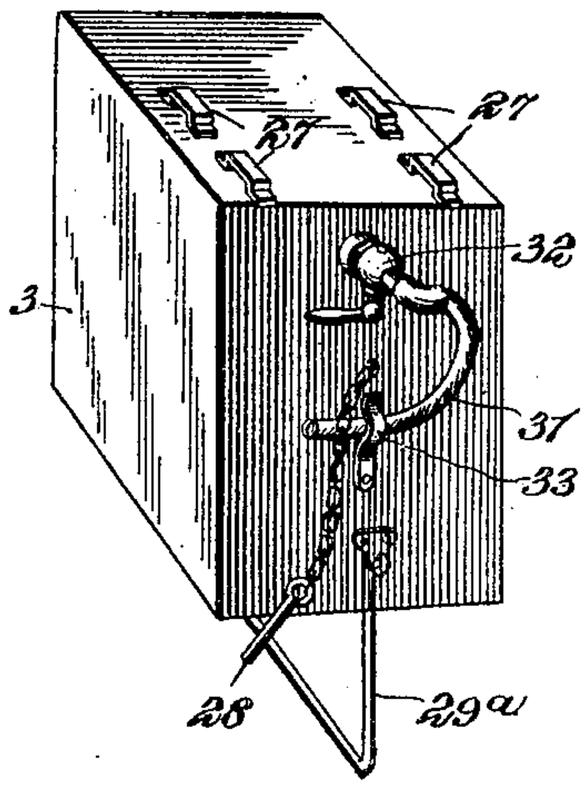



Fig. 3.



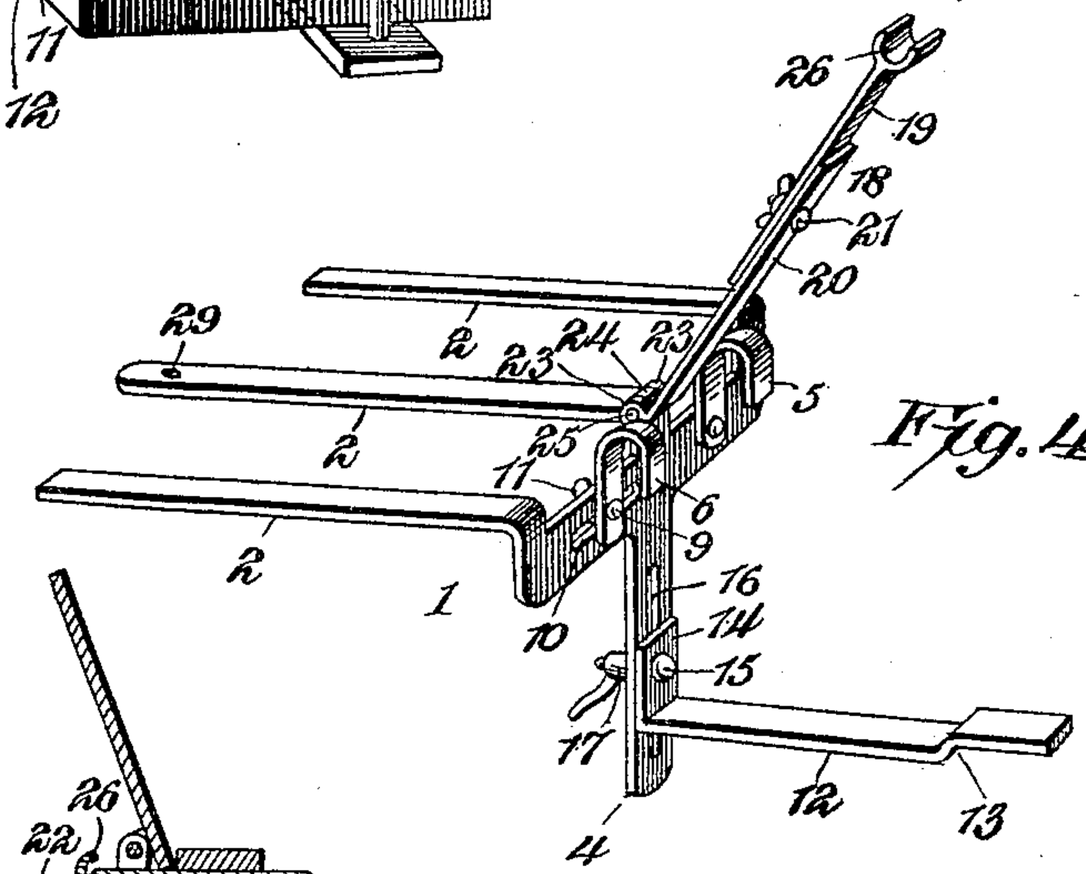
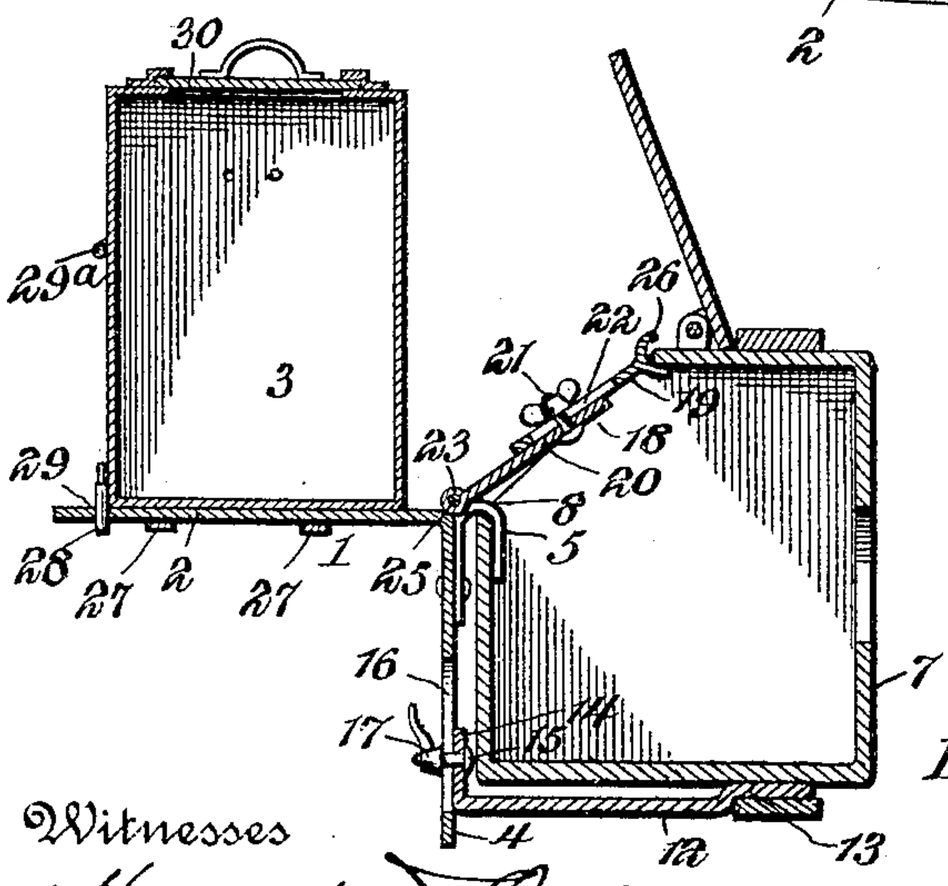




Fig. 4.

Fig. 2.

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# UNITED STATES PATENT OFFICE.

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## APPARATUS FOR COOLING HOT JOURNAL-BOXES.

No. 824,635. Specification of Letters Patent. Patented June 26, 1906.

Application filed July 17, 1905. Serial No. 269,990.

*To all whom it may concern:*

Be it known that I, DAVID H. FAIRBANKS, a citizen of the United States, residing at Jackson, in the county of Madison and State of Tennessee, have invented a new and useful Apparatus for Cooling Hot Journal-Boxes, of which the following is a specification.

The invention relates to improvements in apparatus for cooling hot journal-boxes.

The object of the present invention is to improve the construction of apparatus for cooling hot journal-boxes and to provide a simple and comparatively inexpensive apparatus designed for use on both freight and passenger cars and adapted to be readily applied to a journal-box and capable of cooling the same while the car is in motion.

A further object of the invention is to provide a device of this character adapted when not in use to be stored away within a car in order to avoid disfiguring the same and also to prevent the water used for cooling a journal from being frozen in cold weather.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a cooling apparatus constructed in accordance with this invention and shown applied to a journal-box. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a detail view of the water-tank, the same being inverted. Fig. 4 is a perspective view of the tank-supporting bracket and the upper and lower braces.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a bracket provided with a plurality of horizontal supporting-arms 2, which are adapted to receive a water-tank 3 and which are preferably three in number for a purpose hereinafter explained. The body portion of the bracket is vertical and is provided with a depending arm 4, extending downward from the center of the body portion, as clearly indicated in Fig. 3 of the drawings. The bracket is provided at its body portion with a pair of hooks 5 and 6, which are adapted to engage the upper edge of a journal-box 7 at the opening 8 thereof, whereby the bracket is supported in position, as illustrated in Figs. 1 and 2 of the drawings. The hook 5 is secured to the bracket by a rivet or other suitable fastening device, and the hook 6 is adjustable, being secured to the bracket by means of a bolt 9, piercing the hook and arranged in a slot 10 of the bracket. The bolt is provided with a thumb-nut 11 and is adapted to secure the adjustable hook 6 at different points along the slot 10. By adjusting the hook 6 toward and from the hook 5 the bracket may be secured to journal-boxes of different sizes. The depending arm 4 of the bracket is connected with the truck by means of a lower horizontal brace 12, having its inner end 13 bent, as shown, to form a shoulder for engaging the lower pedestal tie-bar of the truck, as illustrated in Fig. 2 of the drawings; but the inner end of the lower horizontal brace may be engaged with any other portion of the truck and may be constructed in any other desired manner. The outer end of the lower brace is upturned to form a lip or flange 14, which is secured to the arm 4 by a bolt 15, arranged in a vertical slot 16 of the arm and provided with a nut 17, having an extension or handle, by means of which it may be readily turned. The brace 12 is adjustably connected to the bracket to adapt the latter to journal-boxes of different sizes. The bracket is also provided with an upper hinged brace 18, composed of upper and lower sections 19 and 20, adjustably secured together by a bolt 21, which pierces the upper portion of the lower section and which is arranged in a slot 22 of the lower portion of the upper section or member 19 of the brace. The bolt is provided with a thumb-nut, which may be readily adjusted to secure the sections or members 19 and 20 in their adjustment. The lower end of the lower section or member 20 is provided with eyes 23 and is hinged to an eye 24 of the bracket by means of a pintle 25, which permits the brace to be swung inward and outward. The upper end 26 of the upper section or member 19 of the brace is forked or bifurcated to engage the front edge of the top of the journal-box at the opening 8, whereby the hooks of the bracket are positively maintained in engagement with the upper edge of the front wall of the journal-box. By this construction there is no liability of the vibration and jar of a train loosening the supporting-bracket.

The tank is provided at its bottom with

two sets of loops 27, which are adapted to engage the center arm and one of the side arms of the bracket, and the said loops are located at the middle portion and one end of the bottom, so that the tank may be changed from one side of the bracket to the other to reverse it. When the tank is arranged on the bracket, it is located at one side of the center of the journal-box, and when it is reversed it is located at the opposite side of the center of the journal-box. In this manner the tank may be applied to a journal-box without interfering with the use of the iron ladder often arranged at the side of the car. The tank is retained on the supporting-bracket by means of a pin 28 engaging a perforation 29 of the supporting-arm 2 of the bracket and connected with the tank by a short chain to prevent it from becoming lost. The tank, which is provided with a suitable bail 29ª to enable it to be readily carried, has a slidable cover 30; but any other form of closure, such as a screw-cap, may be employed. A flexible tube 31 extends from the bottom of the tank, which is also provided with a cock or faucet 32 for controlling the discharge of water into the journal-box and for preventing the escape of water when the device is not in use. The short flexible discharge tube or pipe is adapted to be readily introduced into the journal-box, and when the apparatus is in position a stream of water of the desired size is discharged on the journal and journal-brass, so that the journal-box will be cooled while a car is in motion, thereby avoiding the delay incident to the stopping of a car for cooling journal-boxes. When the device is not in use, the outer end of the flexible discharge pipe or tube is confined to the adjacent end of the tank by means of a resilient clamp 33, consisting of a strip of resilient material secured at one end to the tank and having its other end free. The engaging portion is curved to conform to the configuration of the pipe or tube and is adapted to securely hold the same.

The apparatus may be conveniently carried within a car, or, if desired, the supporting-bracket or the lower brace thereof may be left on the journal-box; but as the apparatus is readily applied to and removed from a journal-box it is preferable to store it within a car when it is not in use. The bracket affords a firm support for the tank, and a train may be run as rapidly as desired without affecting the apparatus.

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

1. In an apparatus for cooling hot journal-boxes, the combination with a journal-box, of a tank, and means for supporting the tank directly on the journal-box above the bottom thereof and at one side of the opening of the journal-box, the other side of the opening of the journal-box being exposed to afford access to the interior of the latter.

2. An apparatus for cooling hot journal-boxes, comprising a bracket provided with means for mounting it on a journal-box, said bracket having intermediate and side arms, and a tank provided with means for engaging the intermediate and either of the side arms, whereby the tank may be arranged at either side of a journal-box.

3. An apparatus for cooling hot journal-boxes, comprising a bracket having intermediate and side arms, and a tank provided with two sets of loops located respectively at an intermediate portion of the bottom of the tank and at one side of the same and adapted to fit on the intermediate arm and one of the side arms, and means for retaining the loops in engagement with the arms of the bracket.

4. An apparatus for cooling hot journal-boxes, comprising a supporting-bracket provided with means for detachably engaging the edge of a journal-box at the opening thereof, an adjustable brace extending from the bracket for engaging the journal-box to retain the bracket in engagement with the same, and a tank adapted to be supported by the bracket.

5. An apparatus of the class described, comprising a tank-supporting bracket provided with a hook for engaging a journal-box at the edge thereof, and an extensible brace extending from the bracket for locking the hook in engagement with the journal-box.

6. An apparatus for cooling hot journal-boxes, comprising a tank-supporting bracket provided with a hook for detachably engaging a journal-box at the bottom of the opening thereof, and an extensible brace having a forked upper end arranged to engage the journal-box at the top of the opening to retain the hook in engagement with the journal-box.

7. An apparatus for cooling hot journal-boxes, comprising a tank-supporting bracket having a hook for engaging a journal-box at the bottom of the opening thereof, and a brace hinged to the bracket and provided with means for engaging the journal-box at the top of the opening.

8. An apparatus for cooling hot journal-boxes, comprising a tank-supporting bracket having means for detachably engaging a journal-box at the bottom of the opening thereof, and a brace hinged to the bracket and composed of extensible sections, said brace being provided with means for engaging the journal-box at the top of the opening thereof.

9. An apparatus for cooling hot journal-boxes, comprising a tank-supporting bracket having a fixed hook for engaging a journal-box, an adjustable hook mounted on the bracket for engaging the journal-box and adapted to be moved toward and from the

other hook, and means for retaining the hooks in engagement with the journal-box.

10. An apparatus for cooling hot journal-boxes, comprising a tank-supporting bracket having means for engaging a journal-box, and a brace extending from the bottom of the bracket for engaging a portion of a truck.

11. An apparatus for cooling hot journal-boxes, comprising a tank-supporting bracket having means for engaging a journal-box, and a brace adjustably secured to the bottom portion of the bracket and having one end bent to form a shoulder for engaging a portion of a truck.

12. An apparatus for cooling hot journal-boxes, comprising a tank-supporting bracket provided at the top with horizontal tank-supporting arms and having a depending arm, means carried by the bracket for detachably engaging a journal-box, an upper brace for holding the bracket in engagement with a journal-box, and a lower brace extending from the depending arm of the bracket for engagement with a portion of a truck.

13. An apparatus for cooling hot journal-boxes, comprising a bracket provided with means for detachably securing it to a journal-box, a tank mounted on the bracket and provided with a flexible discharge pipe or tube extending from the tank, and means carried by the tank for engaging the outer portion of the discharge pipe or tube when the apparatus is not in use.

14. In an apparatus for cooling hot journal-boxes, the combination with a journal-box, of a tank, a discharge-tube extending from the tank, and means for supporting the tank directly on the journal-box at one side of the center of the same and above the bottom of the journal-box with the tube in close proximity to the opening thereof, said discharge-tube being adapted to extend into the journal-box when the tank is at either side of the center of the same.

15. The combination with a journal-box having a cover, of a tank, and means for supporting the tank at one side of the journal-box and above the bottom thereof, said means engaging the wall of the opening of said box when the cover is open and being detachable therefrom.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

DAVID H. FAIRBANKS.

Witnesses:

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A. V. PATTON.