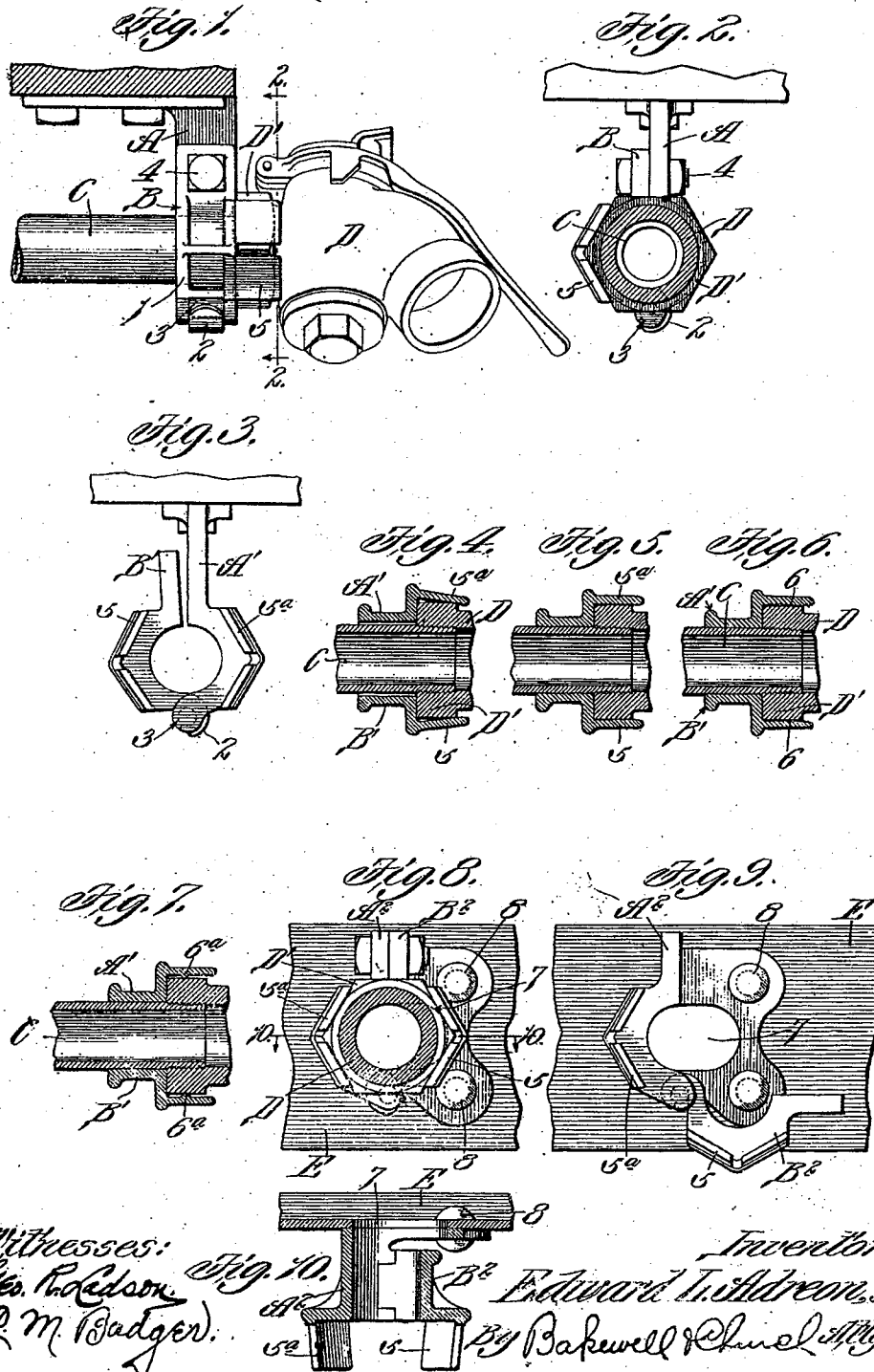


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 COMBINED PIPE CLAMP AND ANGLE COCK HOLDER.
 APPLICATION FILED MAY 21, 1912.

1,064,117.

Patented June 10, 1913.

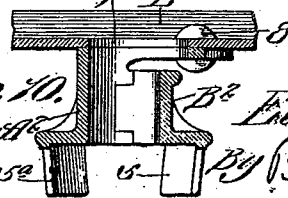


Witnesses:

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Fig. 10.



Inventor,

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UNITED STATES PATENT OFFICE.

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COMBINED PIPE-CLAMP AND ANGLE-COCK HOLDER.

1,064,117.

Specification of Letters Patent.

Patented June 10, 1913.

Application filed May 21, 1912. Serial No. 698,677.

To all whom it may concern:

Be it known that I, EDWARD L. ADREON, Jr., a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Combined Pipe-Clamps and Angle-Cock Holders, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to combined pipe clamp and angle cock holders such as are used on railway cars for holding the train pipe and the angle cock that is mounted on the end of the train pipe.

One object of my invention is to provide a device of the character referred to which is so designed that a positive clamping of both the train pipe and the angle cock is always insured.

Another object is to provide a combined pipe clamp and angle cock holder which is so designed that the angle cock can be screwed onto or off of the train pipe without removing the stationary member or part of the device from the car.

Another object is to provide a combined pipe clamp and angle cock holder that prevents the angle cock from moving longitudinally with relation to the train pipe but which is so designed that it is not necessary to screw the angle cock onto the train pipe a certain distance in order to have the holder cooperate properly with the angle cock.

Another object is to provide a combined pipe clamp and angle cock holder comprising a rigid portion that securely clamps the train pipe and a resilient portion that exerts yielding pressure on the angle cock and thus prevents said cock from turning with relation to the train pipe. And still another object is to provide a combined pipe clamp and angle cock holder that comprises a resilient socket which receives the hexagonal-shaped part of the angle cock and thus prevents said cock from dropping or becoming lost in case it becomes accidentally detached from the train pipe.

Other objects and desirable features of my invention will be hereinafter pointed out.

Figure 1 of the drawings is a side elevational view of a combined pipe clamp and angle cock holder constructed in accordance with my invention; Fig. 2 is a vertical sectional view taken on the line 2—2 of Fig. 1;

Fig. 3 is a front elevational view illustrating another form of my invention; Figs. 4, 5 and 6 are longitudinal sectional views showing how the device grips the pipe and the angle cock when it is arranged in operative position; Fig. 7 is a similar view illustrating another modification of my invention; Fig. 8 is a front elevational view illustrating still another modification; Fig. 9 is a view similar to Fig. 8 showing the movable part of the device open or arranged in an inoperative position; and Fig. 10 is a horizontal sectional view taken on the line 10—10 of Fig. 8.

Referring to Figs. 1 and 2 of the drawings which illustrate one form of my invention. A designates the stationary part or member of the device which is connected in any suitable manner to the car, and B designates the movable part or member of the device. The member B can be connected to the member A in any suitable manner and both of said members are provided with cooperating semi-circular-shaped portions 1 that are adapted to engage the train pipe C and thus securely clamp said pipe in position. In the embodiment of my invention herein shown the member B is provided at its lower end with a hook 2 that cooperates with a pin 3 on the member A to pivotally connect the lower ends of the members A and B together, and the upper ends of said members are detachably connected together by a bolt 4 or other suitable fastening means. In the embodiment of my invention shown in Figs. 1 and 2 the means that prevents the angle cock D from rotating or turning relatively to the train pipe C consists of one or more resilient wings 5 that project forwardly from the front side of the movable member B of the device so as to engage the hexagonal-shaped part D' of the angle cock. Said wings are so designed that they will exert yielding pressure on the hexagonal-shaped part of the angle cock when the movable member B is closed or drawn toward the stationary member A of the device, and they are preferably so proportioned that the outer ends of same terminate beyond the end of the hexagonal-shaped part of the angle cock.

If desired, both the stationary member and the movable member A' and B', respectively, of the device can be provided with forwardly projecting resilient wings or portions 5^a, as shown in Fig. 3, that cooperate

with each other to form a resilient pocket or housing that partially surrounds the hexagonal-shaped part of the angle cock, the wings being inclined inwardly slightly, as shown in Fig. 4, so that the pocket will be of greater diameter at its inner end than at its outer end. The resilient portions 5^a on said members are so proportioned and designed that they will engage the hexagonal-shaped part of the angle cock before the cooperating semi-circular-shaped portions 1 on said members engage the train pipe during the act of closing the movable member B' of the device, as shown in Fig. 4. When the movable member B' is completely closed or drawn into engagement with the stationary member A' the wings or resilient portions 5^a on said members yield slightly and thus permit the cooperating semi-circular-shaped portions on said members to engage the train pipe C, as shown in Fig. 5. Consequently, with a combined pipe clamp and angle cock holder of the character above described a positive clamping of both the train pipe and the angle cock is insured because the portion that engages the angle cock yields sufficiently when the movable member of the clamp is being closed to permit both members of the device to securely clamp the train pipe.

The combined pipe clamp and angle cock holders that were used prior to my invention had rigid portions for engaging both the train pipe and the angle cock and consequently a slight variation in the dimensions of the train pipe or the angle cock often caused the device to clamp the pipe and not the angle cock and vice versa. My improved device, however, overcomes this objectionable feature because there is sufficient elasticity or resiliency in the angle-cock-engaging portion of the device to permit said portion to yield until the cooperating rigid portions of the device firmly clamp the train pipe. Such a device not only prevents the angle cock from turning relatively to the train pipe but it also prevents the angle cock from moving longitudinally or from dropping in case it becomes accidentally detached from the train pipe because the wings or portions 5^a of the device exert yielding pressure on the hexagonal-shaped part of the angle cock. Still another desirable feature of my improved device is that accurate adjustment is not necessary because the device comprises a resilient portion that engages the hexagonal-shaped part of the angle cock irrespective of whether the cock is screwed away back onto the train pipe or located comparatively near the end of the pipe.

If desired, the jaws or wings 5^a of the device may be provided on their inner faces with a plurality of teeth or corrugations 6, as shown in Fig. 6, or a single tooth or rib

6^a, as shown in Fig. 7, that bites into the hexagonal-shaped part D' of the cock or fits in grooves in said part so as to increase the frictional engagement between the device and the angle cock.

If the device is permanently connected to the end sill E of the car, as shown in Figs. 8, 9 and 10, I prefer to provide the stationary member A² of the device with a horizontally disposed elongated slot 7 through which the train pipe passes so as to permit said pipe with the angle cock thereon to be moved laterally or away from the angle-cock-engaging portions 5^a on the stationary member A² and thus permit the angle cock to be screwed onto or off of the train pipe after the movable member B² of the device has been opened up, as shown in Fig. 9, thus overcoming the necessity of removing the fastening devices 8 that secure the stationary member A² to the end sill of the car which are usually rivets.

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

1. An angle-cock-holder provided with resilient means which exerts sufficient frictional pressure on the angle-cock to prevent it from moving longitudinally out of said holder.

2. A combined pipe clamp and angle cock holder having means for clamping a train pipe, and a resilient portion for engaging an angle cock mounted on said pipe.

3. A device of the character described provided with means for attaching it to a car, and a resilient portion for exerting frictional pressure on an angle cock so as to prevent it from moving longitudinally.

4. A combined pipe clamp and angle cock holder comprising cooperating members that are adapted to support a train pipe, and resilient means that is adapted to bear upon an angle cock mounted on said pipe so as to prevent said cock from moving relatively to said pipe.

5. A combined pipe clamp and angle cock holder comprising a pipe clamp and angle-cock-engaging portions which are so designed that the angle-cock-engaging portion will bear upon the angle cock with which it cooperates prior to the engagement of said pipe-clamp-engaging portion with its cooperating pipe.

6. A combined pipe clamp and angle cock holder comprising a stationary member and a cooperating movable member, and an angle-cock-engaging portion on one of said members that is adapted to yield and thus exert great frictional pressure on the angle cock with which it cooperates when the movable member of the device is drawn toward its cooperating stationary member.

7. An angle-cock-holder comprising a pocket that is adapted to receive an angle-

cock and thus hold it in position, said pocket being formed from a number of resilient wings that embrace the head of the cock and exert sufficient frictional pressure on same to prevent the cock from moving longitudinally.

8. A combined pipe clamp and angle cock holder comprising cooperating members that are adapted to engage a train pipe, and resilient devices projecting forwardly from said members and arranged to form a pocket that is adapted to receive the hexagonal-shaped part of an angle cock mounted on said pipe.

9. A combined pipe clamp and angle cock holder comprising a member adapted to be connected to a car and provided with a semi-circular-shaped pipe-engaging portion, a movable member provided with a cooperating semi-circular-shaped pipe-engaging portion, means for securing said members together, and resilient wings projecting forwardly from said members and arranged to securely grip the hexagonal-shaped part of the angle cock.

10. A device of the character described having a resilient angle-cock-engaging portion provided on its inner face with a tooth that is adapted to bite into the angle cock.

11. A combined pipe clamp and angle cock holder provided with resilient wings or jaws that are adapted to engage the hexagonal-shaped part of an angle cock, and teeth or corrugations on the inner faces of said wings for increasing the frictional engagement between said wings and angle cock.

12. A combined pipe clamp and angle cock holder comprising a member adapted to be connected to a car and provided with means for engaging a pipe and an angle cock that is mounted on the pipe, and means for permitting the pipe that passes through said member to be moved laterally so as to carry the angle cock out of engagement with the angle-cock-engaging portion on said member.

13. A combined pipe clamp and angle cock holder comprising a member that is adapted to be connected to a car, means on said member for engaging a pipe and an angle cock that is mounted on said pipe, said member having an opening for receiving the pipe which is of sufficient dimensions to permit the pipe to be moved laterally so as to carry the angle cock out of engagement with the angle-cock-engaging means on said member, and a movable member provided with a cooperating pipe-engaging portion.

14. A combined pipe clamp and angle cock holder comprising a member adapted to be connected to a car and provided with a horizontally disposed elongated opening

for receiving a train pipe, a cooperating movable member, means for securing said members together, cooperating pipe-engaging portions on said members, and resilient means on one of said members for engaging an angle cock that is mounted on said pipe.

15. A device for the purpose described having forwardly projecting angle-cock-engaging portions which terminate beyond the end of the hexagonal-shaped head of an angle-cock but do not lap over same, the inner faces of said portions being inclined longitudinally with relation to the flat faces of the hexagonal-shaped head on the cock so that they will bear upon the front edge of said head and thus prevent the angle-cock from moving longitudinally.

16. A device for the purpose described having angle-cock-engaging portions which terminate beyond the end of the hexagonal-shaped part of an angle cock but do not lap over same, said portions being so shaped that they will exert sufficient pressure on the front edge of the hexagonal-shaped part of the cock to prevent the cock from moving longitudinally.

17. A device for the purpose described having a longitudinally tapered pocket that is adapted to receive the head of an angle-cock, the front end of the pocket being of less diameter than the rear end of the pocket so that the side walls of the pocket will bear on the front edge of the head on the cock and thus prevent the cock from moving longitudinally.

18. A combined pipe clamp and angle cock holder comprising cooperating members that are adapted to engage a train pipe, and inclined devices projecting forwardly from said members and arranged to form an angle-cock-receiving pocket which is of greater diameter at its inner end than at its outer end, so that the side walls of the outer end portion of the pocket will exert sufficient pressure on the front end of the head on the cock to prevent the cock from moving longitudinally.

19. A combined pipe clamp and angle cock holder comprising cooperating members that are adapted to engage a train pipe, and inclined resilient devices projecting forwardly from said members and arranged to form an angle-cock-receiving pocket which is of greater diameter at its inner end than at its outer end.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this seventeenth day of May 1912.

EDWARD L. ADREON, JR.

Witnesses:

WELLS L. CHURCH,
GEORGE BAKWELL.