No. 666,154. Patented Jan. 15, 1901.

E. T. REED.

WATER GLASS SHIELD.

(Application filed May 17, 1900.)

(No Model.)

Fig 1

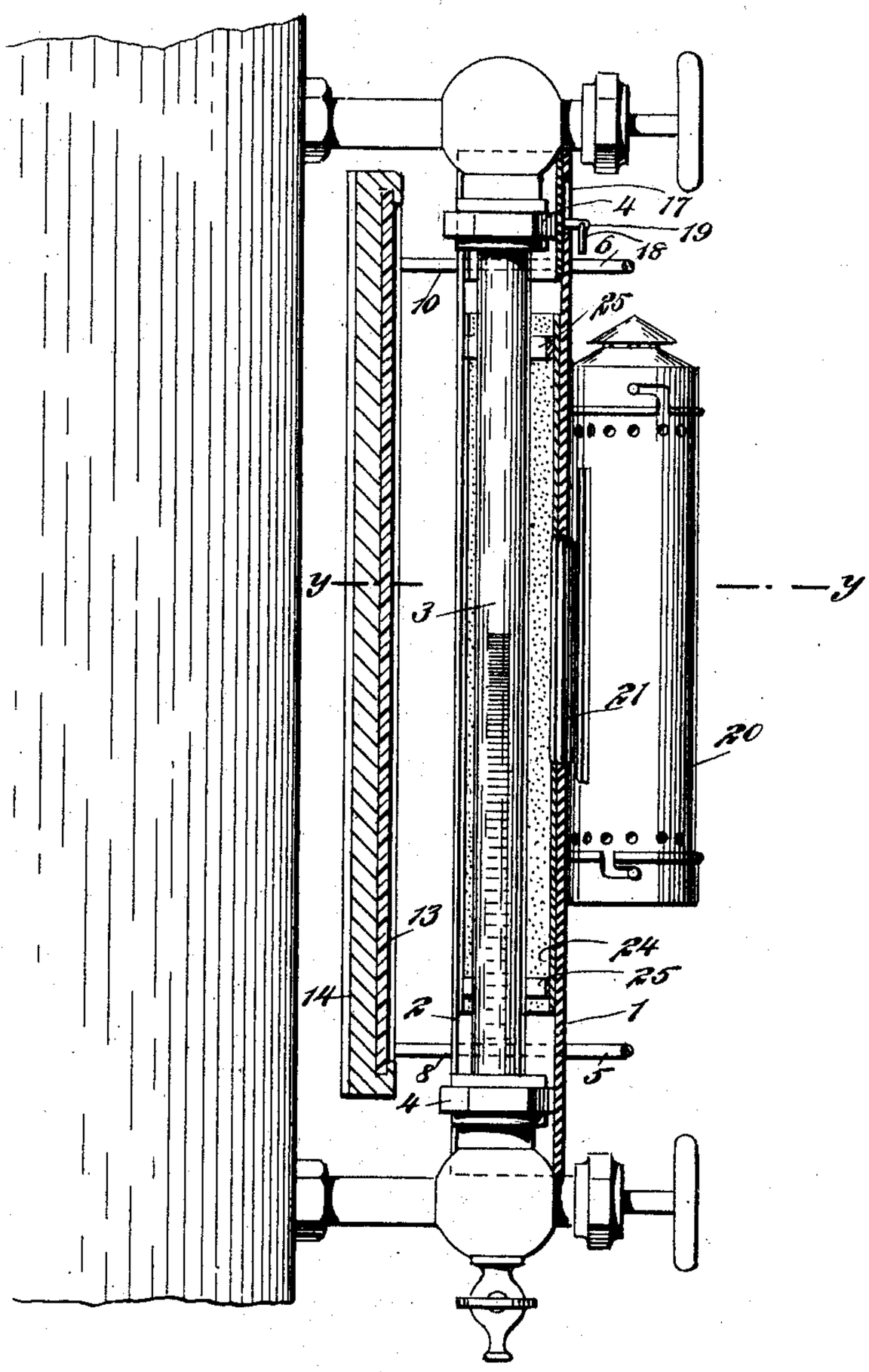
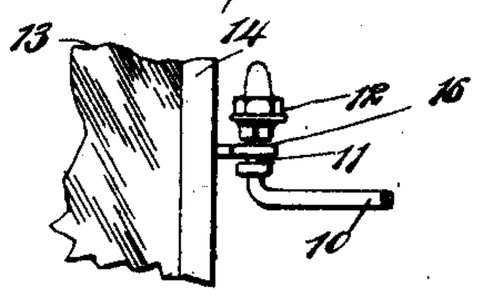


Fig 3



WITNESSES:

H. Walker

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Fig 2

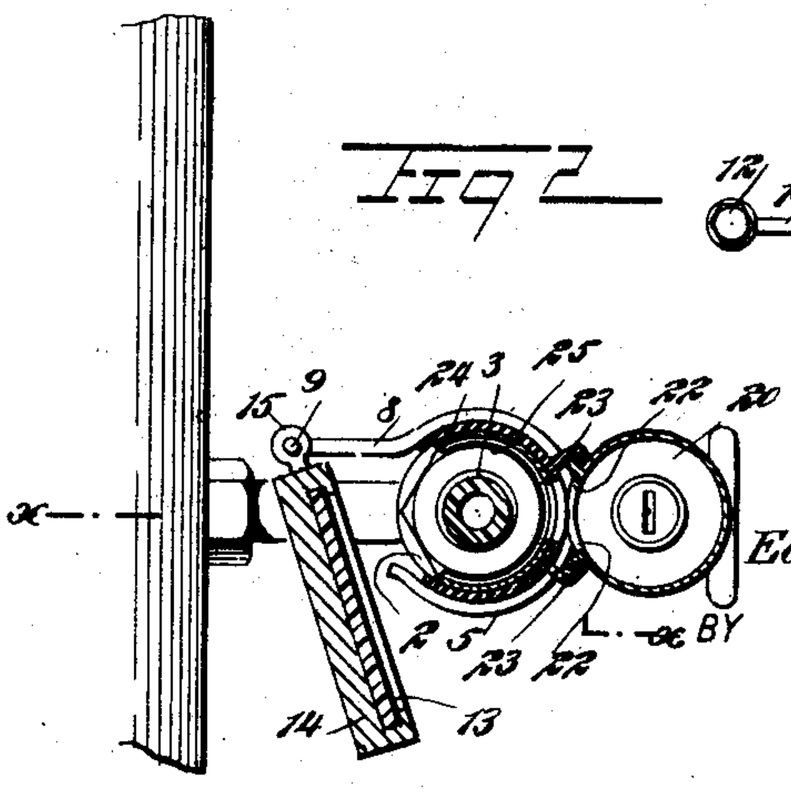
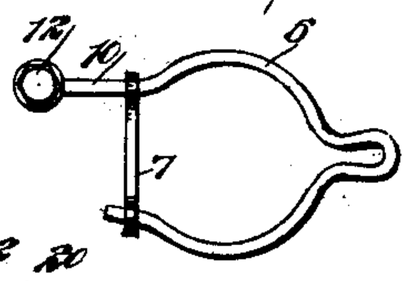


Fig 4



INVENTOR

Edward T. Reed.

ATTORNEYS

UNITED STATES PATENT OFFICE.

EDWARD T. REED, OF PORT JERVIS, NEW YORK.

WATER-GLASS SHIELD.

SPECIFICATION forming part of Letters Patent No. 666,154, dated January 15, 1901.

Application filed May 17, 1900. Serial No. 17,057. (No model.)

To all whom it may concern:

Be it known that I, EDWARD T. REED, a citizen of the United States, and a resident of Port Jervis, in the county of Orange and State of New York, have invented a new and Improved Water-Glass Shield, of which the following is a full, clear, and exact description.

This invention relates to improvements in shields for water or gage glasses, particularly high-pressure glasses in locomotive-engines; and the object is to provide a shield that may be readily adjusted and attached to any water glass or gage, so as to prevent the engineer or other person from coming in contact with the glass and also to protect a person from the danger of flying glass and steam or hot water should the glass burst, as sometimes happens, and, further, to protect the glass from cold blasts of air or water and from breakage by careless handling of tools employed by workmen in making repairs in a locomotive-cab.

I will describe a water-glass shield embodying my invention, and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a vertical section substantially on the line *x x* of Fig. 2 of a shield embodying my invention. Fig. 2 is a section on the line *y y* of Fig. 1. Fig. 3 is a detail showing a means for supporting a reflector employed, and Fig. 4 shows one of the clamping devices employed.

The shield comprises a metal plate 1, bent substantially to cylindrical form, but having a longitudinal opening 2 at one side. This shield is designed to engage around a water-glass 3—that is, around the front and sides thereof—and it is shown as engaged with the gasket-nuts 4 of the water-glass. As a further means of securing the shield in place I employ spring clamping-yokes 5 and 6, which are forced around the shield, as indicated in the drawings, and to hold the clamping devices securely in position a latch-bar 7 may be employed to engage with the opposite members of each clamping device.

The lower clamping device 5 has at one side a forward projection or arm 8, from which a pintle 9 extends upward, and the upper clamping device 6 has a forwardly-extended arm 10, provided with an upwardly-extended pintle 11, provided with a screw-thread, with which a fastening or clamping nut 12 is to be engaged.

Arranged between the water-glass and the boiler is a reflector consisting of a mirror 13, arranged in a suitable frame 14, and this frame 14 is mounted adjustably on the arms 8 and 10. As here shown, the frame has eyes 15 and 16, engaging, respectively, with the pintles 9 and 11. This mirror is designed to receive the reflection of the water-glass, so that the level of the water may be observed by the engineer at any desired point, as it is obvious that the reflecting-glass may be placed at any desired angle and so clamped by the nut 12. The lower pintle 9 may be slightly tapered, if desired, so as to provide for any wear that may take place between the pintles and eyes, insuring at all times a practically close connection.

In order to accommodate the shield to different lengths of water-glasses, I may provide it at one end with a telescopic section 17, which may be moved in or out relatively to the main portion of the shield. This telescopic section 17 will be held as adjusted by its engagement with the gasket-nut. For convenience in moving the section 17 I provide it with a finger-piece 19, which projects out through a slot in the portion 1 of the shield and has a ring 18 attached to it, so as to swing, as clearly indicated in Fig. 1.

Removably connected to the front side of the shield 1 is a lamp 20 of any suitable construction. The light from this lamp is reflected through an opening 21 in the front side of the shield 1, and consequently this light will illuminate the tube, causing it to be clearly shown in the glass 13. The body of the lamp may be provided at the opposite sides of its front opening with flanges 22 for engaging in slideways 23, formed on the shield 1. This lamp may only be required at night. Therefore in the day-time it may be removed, and a suitable plate or door will be engaged with the slideways 23.

I design to employ a reflecting-surface with-

in the shield 1. This reflecting-surface consists of a sheet of white or similar paper 24, held in place against the inner side of the shield by means of spring-plates 25. Preferably this reflecting device 24 will be of asbestos, so as to prevent a radiation of heat from the shield to the glass.

It will be seen that a device embodying my invention is very simple in construction and may be readily attached to and as readily detached from a water-gage, and this will be found convenient, because if the device is the private property of the engineer he may desire to remove it when leaving his engine.

While I have shown the device in connection with the water-gage of a locomotive-boiler, it is to be understood that it may be used in connection with water-glasses of stationary or marine boilers, and it may also be employed as a protection against the bursting of glass lubricators.

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

1. A water-glass shield adapted to partially surround a water-glass and to engage with the gasket-nuts thereof, clamping-yokes for engaging around the shield, and a mirror mounted to swing on said yokes, substantially as specified.

2. A water-glass shield, adapted to partially surround a water-glass and to engage with the gasket-nuts thereof, clamping-yokes for engaging around the shield, each of said clamping-yokes having a projected arm terminating in an upwardly-extended pintle, a clamping-nut on one of said pintles, and a mirror mounted to swing on said pintles, substantially as specified.

3. A water-glass shield, comprising a sheet of metal bent to substantially cylindrical form and having an opening at one side, a lamp adapted for connection with the shield and for throwing light through said opening, an asbestos lining or reflector for the shield, spring-clips for holding said asbestos in place, and a reflecting-glass adapted to be placed between the shield and a boiler, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWARD T. REED.

Witnesses:

CORNELIUS E. CUDDEBACK,

SAMUEL M. CUDDEBACK.