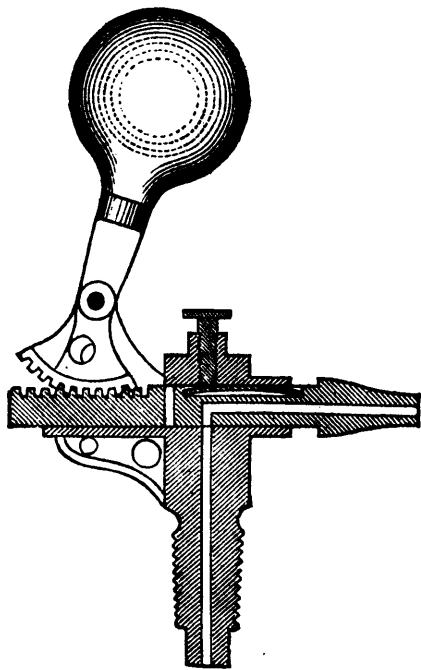


THE BROOKLYN SUSPENSION BRIDGE.—THE FLOOR BEAMS FROM BELOW.—(SEE PAGE 196.)



FAIRBAIRN'S IMPROVED GAUGE COCK.

THE FAIRBAIRN GAUGE COCK.

The gauge cock for steam boilers shown in half section in the annexed engraving, is a very simple and practical device, embodying certain radical changes in its construction which give it special merits worthy the attention of steam users. It is readily opened, and is self-closing; no packing is required about it anywhere, and it can be cleaned out while steam is in the boiler, without burning the hands or face. This last feature is a very important one, as there is nearly always more or less deposit or sediment in the water used in steam boilers, and the gauge cocks are very liable to get stopped up, thereby cutting off the means of ascertaining the height of the water in the boiler, and, in fact, becoming a source of danger.

In the Fairbairn gauge cock the danger from this source is overcome by a very simple and effective process. All that is necessary to be done in such an emergency is to give the little thumb-screw three or four turns, releasing the spring, which allows the handle to be raised high enough to bring the upper hole in the piston down opposite the connection to the boiler and even with the thumb-screw, which has a hole through it, thus making a direct connection to the boiler. A wire can then be pushed clear through into the boiler, and after the passage is cleared the handle can be dropped down, cutting off all escape of steam, the screw-thumb can be turned up, and all is perfect again.

The construction of the apparatus is shown very well by the cut. The ball seen on the right is of cast-iron, and may be placed directly in front or at the side, as may be preferred. The body of the gauge and the piston are made of brass or bronze, to avoid abrasion. The piston slides up or down by a movement of the ball, and except the latter is lifted by the hand, the cock is positively closed. Lifting the ball throws the pipe down and connects directly with the water in the boiler, allowing it to discharge at the bottom, and the water cannot fly out all about it in the face of the operator. The illustration shows the ball partially raised, and the connection with the water in the boiler is open. This gauge has been in use several years on both stationary and marine boilers, with entire satisfaction.

Parties wishing further information respecting this device are invited to communicate with the manufacturers, the New England Gauge Co., 13 Doane street, Boston, Mass.