C. H. WILLIAMS.

SAFETY DEVICE.

APPLICATION FILED APR. 11, 1910.

980,721. Patented Jan. 3, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

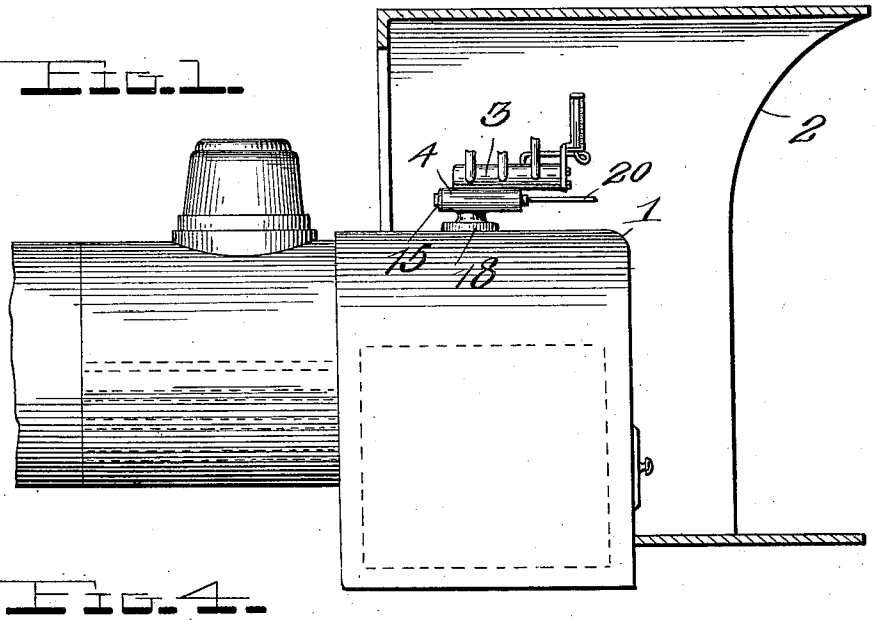


Fig. 4.

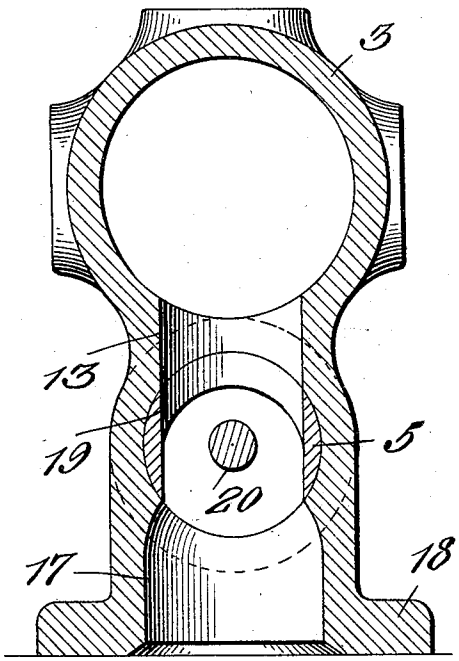
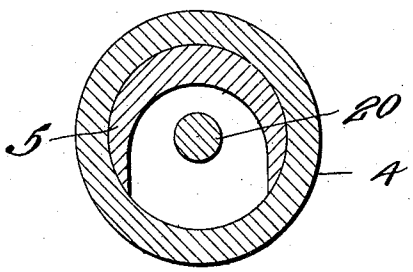


Fig. 5.



Witnesses

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2 SHEETS—SHEET 2.

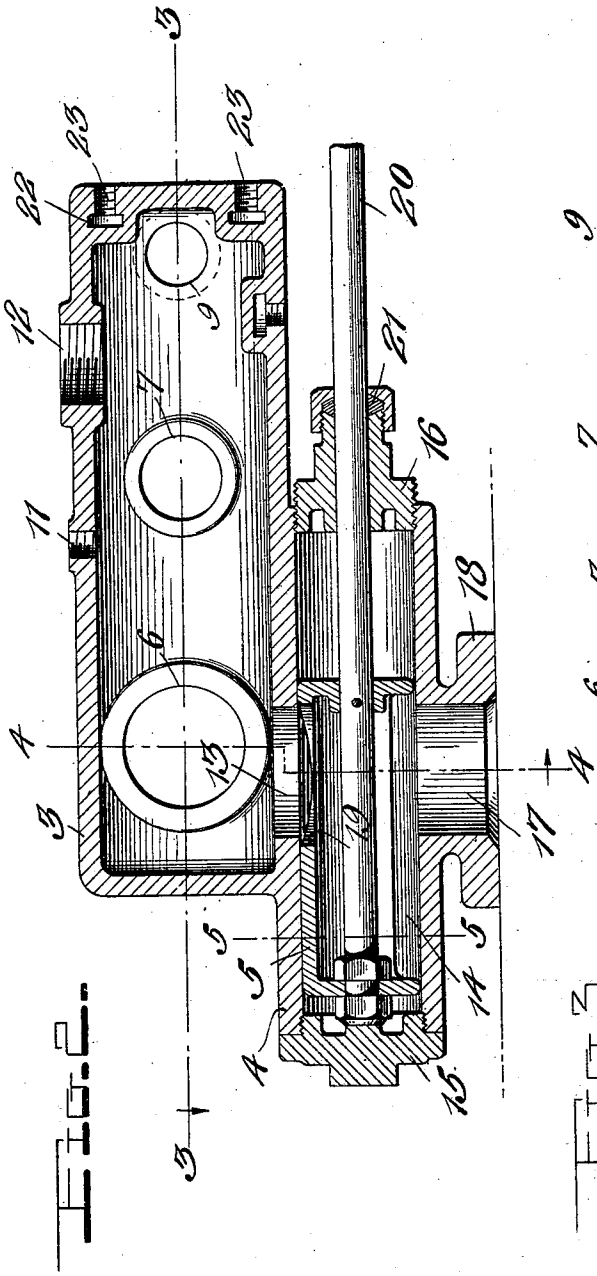

FIG. 2.

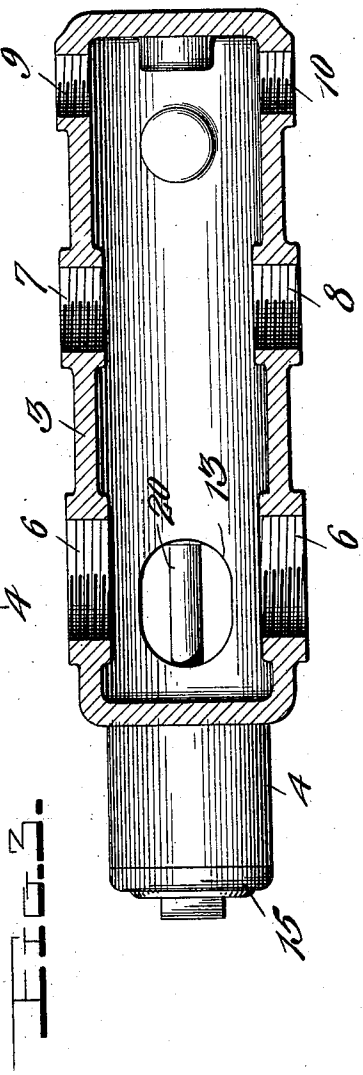

FIG. 1.

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UNITED STATES PATENT OFFICE.

CHARLES H. WILLIAMS, OF SPRINGFIELD, MISSOURI.

SAFETY DEVICE.

980,721. Specification of Letters Patent. **Patented Jan. 3, 1911.**

Application filed April 11, 1910. Serial No. 554,681.

To all whom it may concern:

Be it known that I, CHARLES H. WILLIAMS, a citizen of the United States, residing at Springfield, in the county of Greene and State of Missouri, have invented certain new and useful Improvements in Safety Devices, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in safety devices for use on the boilers of engines or locomotives and it consists in an improved valve arranged between the boiler and the fountain from which latter the steam is distributed to the various parts of an engine or locomotive by means of pipes.

The object of the invention is to provide a simple and practical device of this character which is an integral part of the fountain and by means of which the supply of steam from the boiler to the various parts of the locomotive may be instantly cut off in cases where repairs must be made or in the event of accidents or wrecks, thus avoiding the scalding of persons riding in the engine cab or on the engine and greatly reducing loss of life and injury to those whose duties require them to ride on an engine.

With the above and other objects in view, the invention consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a detail view, partly in elevation and partly in section showing a portion of a locomotive boiler and the cab, my invention being arranged on top of the portion of the boiler within the cab and beneath the fountain; Fig. 2 is a vertical longitudinal section through the improved fountain and its controlling valve; and Figs. 3, 4 and 5 are detail sectional views taken respectively on the planes indicated by the lines 3—3, 4—4 and 5—5 in Fig. 2.

Referring more particularly to the drawings 1 denotes the top of the rear portion of the boiler of a locomotive or engine which is arranged within the cab 2 and on top of which is arranged my improved fountain and controlling valve therefor.

The fountain body is indicated by the numeral 3 and it is arranged above and integral with a casing 4 containing a controlling valve 5. Said fountain body 3 is of elongated tubular shape and has the usual openings for the steam supply pipes leading to the various parts of the locomotive or engine. As illustrated, the fountain has on opposite sides of its forward portion openings 6 for the pipes of the injector, at opposite sides of its intermediate portion openings 7 and 8 for the pipes of the air pump and the steam heating system, at opposite sides of its rear portion openings 9, 10 for the pipes of the lubricator and blower, at the center of its top an opening 11 for the pipe of the steam gage, at the rear portion of its top an opening 12 for the pipe of the headlight and at the bottom of its forward portion a vertically extending valve opening 13 which communicates with the valve casing 4 and is controlled by the valve 5.

The valve casing 4 is, as above mentioned, formed integral with the fountain body 3 at its bottom, the device being cast in a single piece, and said casing is of cylindrical shape and has a cylindrical bore 14, the opposite ends of which are open and closed by removable screw caps or plugs 15, 16. The valve opening 13 is disposed at the top of the bore 14 and opposite said opening at the bottom of the casing 4 is a steam passage 17 which communicates with the steam space in the boiler and extends through a flanged attaching base 18 formed integral with the casing 4. The valve 5 is of hollow cylindrical shape and open on its bottom side from end to end and in its top adjacent its rear end is an opening 19 adapted to be moved into and out of register with the opening 13 in the fountain body. The valve 5 is slid back and forth in the casing 4 by reciprocating a valve stem 20 which slides through the rear cap 16 and a packing gland 21 thereon and which extends through and is secured in the two ends or heads of the valve, as clearly shown in Fig. 2. Any suitable means may be provided for actuating the valve rod or stem 20 and it will be noted that it is disposed within convenient reach of the engineer in the cab of the locomotive. When the valve is in its forward position shown in Fig. 2 the fountain will be in communication with the boiler and by simply shifting the valve rearwardly the solid top portion of said valve will cover the steam in the valve opening 13 of the fountain and thereby cut off the supply of steam to all parts of the locomotive.

Cast in the rear end of the fountain body 3 are sockets or openings 22 to receive the

bracket arms of the usual gage or indicator, threaded openings 23 being also provided and communicating with the openings or sockets 22 for the reception of said screws.

From the foregoing it will be seen that the invention provides an exceedingly simple and practical device, the use of which will save a great deal of time in making repairs and also insure a greater degree of safety to the engineer and other persons riding on the engine.

This device may be applied to the dome of a locomotive or an engine, or under the old style fountains of a locomotive or an engine in a separate case, as well as the manner in which it has been illustrated in the accompanying drawing.

Having thus described the invention what is claimed is:

The combination of a fountain body having openings to receive distributing pipes, a cylindrical valve casing cast integral with the fountain body, and having open ends, and inlet and outlet openings arranged in transverse alinement at opposite points of the casing intermediate the ends of the latter, said outlet opening communicating with the fountain body, and said inlet opening being formed in an attaching base integral with the casing, screw plugs closing the open ends of the valve casing, one of the latter having a longitudinal bore, and carrying a packing gland, a valve stem slidable through said bore and gland, and having a screw threaded end arranged within the casing, a hollow cylindrical valve to reciprocate with the casing and having closed ends formed with longitudinally alined openings to receive the valve stem, said valve also having one side open from end to end, to communicate with the inlet opening of the casing, and the opposing side of said valve being closed and formed adjacent one of its ends with a valve opening adapted to be moved into and out of register with said outlet or discharge opening of the casing, and nuts on the threaded end of the valve stem on opposite sides of one end of the valve, substantially as shown and described.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

CHARLES H. WILLIAMS.

Witnesses:
F. L. BYNUM,
W. T. CURTIS.