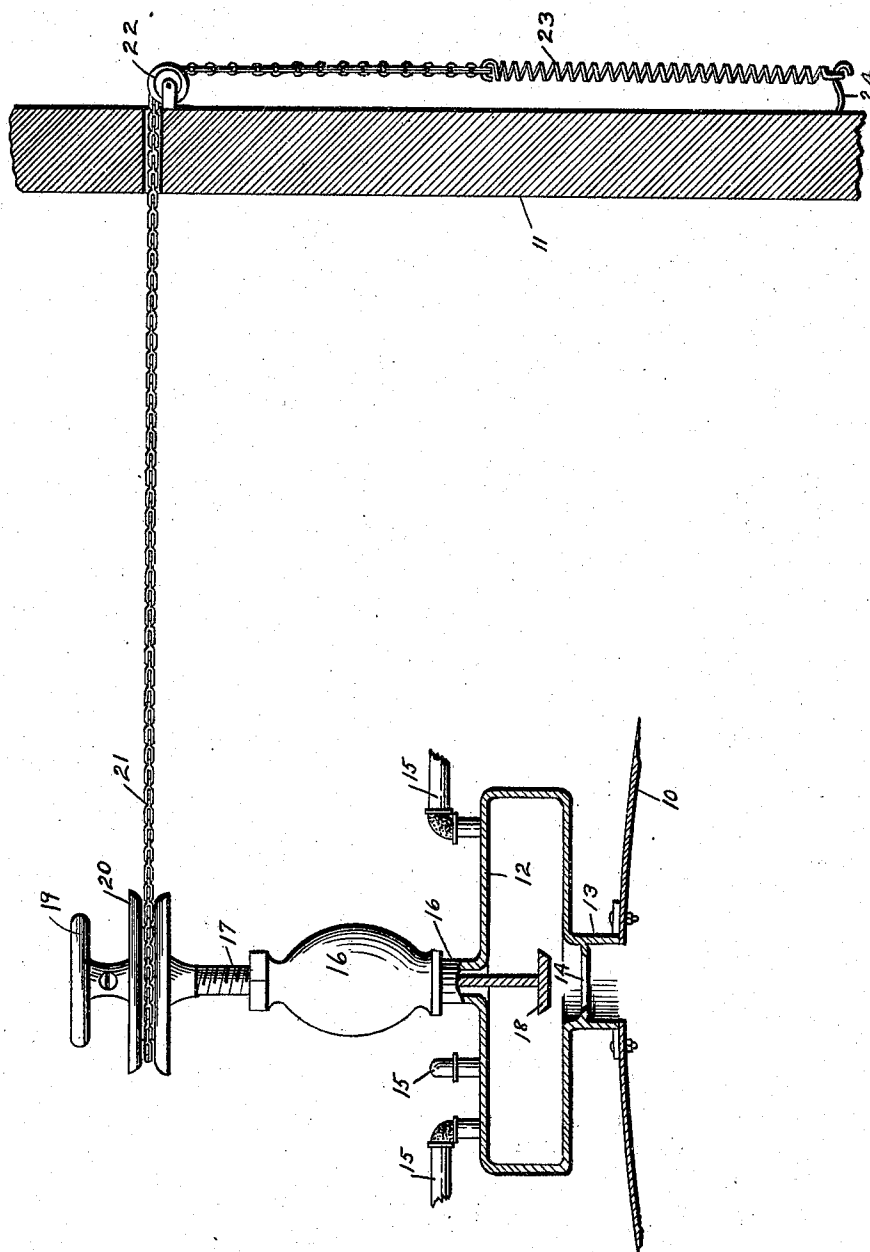


No. 847,870.

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F. YOUNG.
STEAM BOILER VALVE.
APPLICATION FILED NOV. 28, 1906.



Witnesses.
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UNITED STATES PATENT OFFICE.

FRANK YOUNG, OF CRESTON, IOWA.

STEAM-BOILER VALVE.

No. 847,870.

Specification of Letters Patent.

Patented March 19, 1907.

Application filed November 26, 1906. Serial No. 345,035.

To all whom it may concern:

Be it known that I, FRANK YOUNG, a citizen of the United States, residing at Creston, in the county of Union and State of Iowa, have invented a certain new and useful Steam-Boiler Valve, of which the following is a specification.

The object of my invention is broadly to provide for the safety of engineers and firemen in boiler-rooms.

More specifically, it is my object to provide a valve-casing to communicate with a steam-boiler of such nature that all of the various steam-pipes communicating with the boiler may be attached to said valve-casing and to provide said casing with a valve-disk which when closed against its seat will shut off the steam-supply through all of the steam-pipes at the same time and to provide means for manually operating this valve either by grasping the valve-stem and turning it in the ordinary way or by pulling upon a chain or cable connected with the valve-stem and extended to a point outside of the boiler-room, so that in the event of the breakage of any of the steam-pipes an operator outside of the boiler-room may cut off the steam-supply to all of the steam-pipes.

My invention consists in the construction of the valve and valve-casing and in the arrangement and combination therewith of the means for operating the valve from a point distant to the valve-stem, whereby the objects contemplated are attained, as hereinafter more fully set forth, and pointed out in my claim.

The accompanying drawings illustrate a portion of a boiler in section with my improved valve applied thereto, partly in section and partly in elevation.

The reference-numeral 10 is used to indicate the portion of the steam-boiler shown.

11 indicates one of the walls of the room in which the boiler is contained.

The valve-casing comprises an enlarged chamber 12, having a neck 13 communicating with the boiler. Formed in this neck is a valve-seat 14, and communicating with the chamber 12 is a number of steam-pipes 15. Above the chamber 12 is a chamber 16, in which the valve-stem 17 is mounted. On the lower end of the valve-stem is a valve-disk 18, and the upper portion of the valve-stem is screw-threaded and seated in a part of

the extension 16. By this arrangement the valve may be raised or lowered relative to the valve-seat by turning the valve-stem in the ordinary way. On top of the valve-stem is a hand-disk 19, fixed to the stem, and a grooved pulley 20, also fixed to the stem below the hand-wheel. Fixed to and wound upon the pulley is a chain 21, which chain is wound upon the pulley in such direction that when the chain is pulled upon the pulley will be rotated in a direction to move the valve toward its seat. This chain is extended to a point exterior to the wall of the boiler-room and is preferably passed over a pulley 22 and has attached to its lower end a contractible coil-spring 23, the other end of which is attached to a hook 24. This spring is designed for taking up the slack in the chain, so as to hold it in position in the grooved pulley, but is not intended to prevent the valve from being opened by the operator's hand; nor is it strong enough to close the valve by means of its own resiliency.

In practical use the valve-disk 18 is normally placed in position above the valve-seat, so that steam may pass direct from the boiler to the supply-pipes 15. If for any reason it is desired to cut all of the supply-pipes at the same time, the operator may grasp the hand-disks and turn the valve-stem as required to seat the valve. In the event that any of the steam-pipes within the furnace-room should break and the room should become filled with live steam to such an extent as to endanger the lives of persons therein an operator on the outside of the room may grasp the chain 21 and pull it and cause the valve-disk 18 to close against its seat, thus shutting off the supply of steam in any of the pipes 15.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States therefor, is—

The combination of a valve-casing having a narrow neck to communicate with the steam-boiler, a valve-seat formed in said narrow neck and an enlarged chamber above the valve-seat, a number of steam-pipes communicating with the enlarged chamber, a valve-stem screwed to the casing above the enlarged chamber and having a valve thereon in one position standing within the enlarged chamber and in another position standing on the valve-seat, a disk having an annular

groove therein fixed to the valve-stem above
the casing, a hand-disk fixed to the valve-
stem above the grooved disk, a chain fixed to
the grooved disk and wound upon it and a
5 contractible coil-spring attached to the chain
and to a stationary support, said spring being
of sufficient resiliency to hold the chain taut

and in the grooved disk but not of sufficient
resiliency to turn a valve-stem within the
casing.

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Witnesses:

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