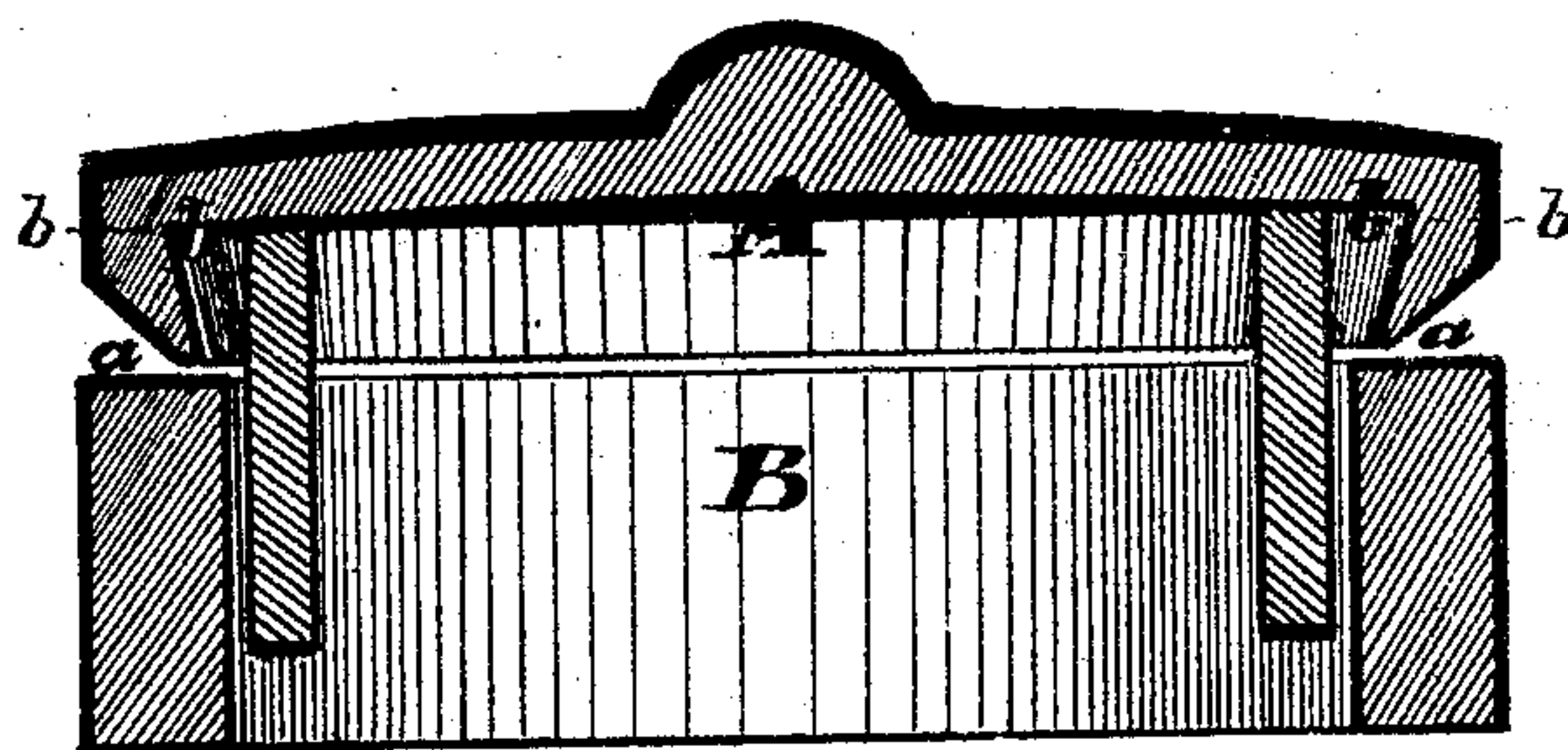


A. F. W. NEYNABER.

Improvement in Safety-Valves.

No. 116,084.

Patented June 20, 1871.



Witnesses:
Jm. Braun
H. H. Wilder

Inventor:
A. F. W. Neynaber.

UNITED STATES PATENT OFFICE.

ADOLPHUS F. W. NEYNABER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN SAFETY-VALVES.

Specification forming part of Letters Patent No. 116,084, dated June 20, 1871; antedated June 17, 1871.

To all whom it may concern:

Be it known that I, ADOLPHUS F. W. NEYNABER, of the city and county of Philadelphia, in the State of Pennsylvania, have invented a certain Improvement in Valves, of which the following is a specification:

My invention relates to the construction of a valve in which, when used as a safety-valve, the difference of pressure in opening and closing is more reduced than in a valve with a flat or V-seat, and with which the liability to stick or to leak is less than with any other stop or safety-valve.

The drawing is a vertical section of my valve in the state when opening.

A is the valve, resting with its face on the surface of B. The face *a* is made so as to have very little more area than the inner area at *a*, having a sharp edge, and giving a seat of only a hair's breadth. The recess from *a* to *b*, as shown, is sufficient for the largest size of a valve. The sharp edge of the seat at *a* makes this valve less liable to stick than a valve with a flat or a V-seat.

A valve with a so-called V-seat will be jammed in by the expansion and contraction of the metal, but my improved valve will not. It often occurs with a V-seat of a stop-valve that, when used for water-connections, a foreign substance is jammed in between the V-seat; whereas with my improved seat it will not occur so

often. A valve with a V-seat or a flat seat will differ to the amount of several pounds of pressure in opening and closing when used with about fifty pounds of pressure; whereas my valve closes nearly at the same pressure at which it opens, the difference between the inner area and area of face *a* being very little. The recess from *a* to *b* gives more play to the escaping steam when the valve opens, and forms the sharp-edge seat, which makes this valve more efficient to close when used as a safety-valve.

Thus it will be seen that a stop or safety-valve having a seat as described above will have less adherence to its rest, and will not be jammed in by expansion and contraction of metal; and the difference of pressure between opening and closing of a safety-valve with a seat, as described above, will be much less than in any other safety-valve ever constructed. To the above-described valve has to be attached the regular lever, with weight or spring when to be used as a safety-valve, or the valve-stem with screw when to be used as a stop-valve.

I claim as my invention—

The construction of valve A, substantially as and for the purpose hereinbefore set forth.

A. F. W. NEYNABER.

Witnesses:

WM. BRAUN,
H. M. WILDER.