

E. A. LOWE.
VALVE.

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1,017,434.

Patented Feb. 13, 1912.

Fig 1

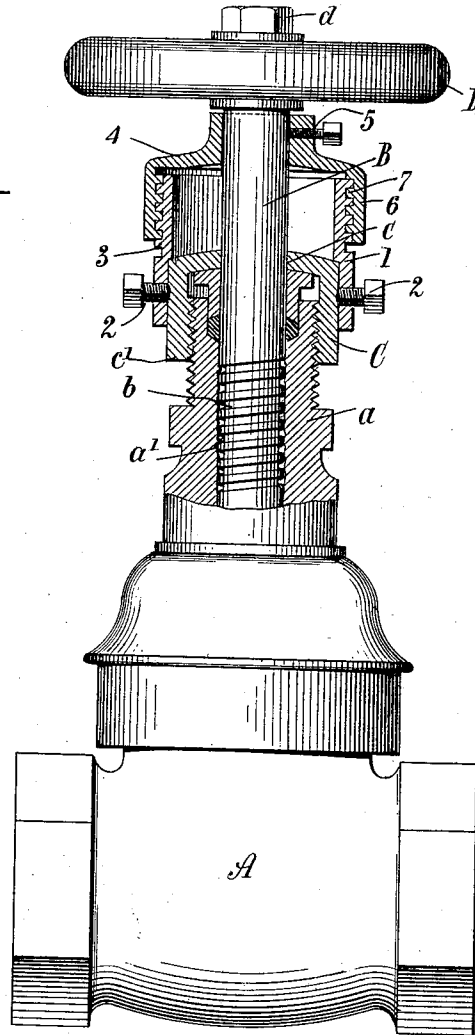
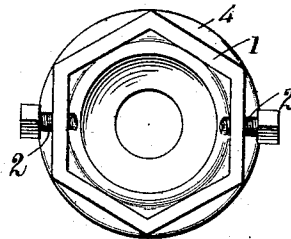


Fig 2



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ELLSWORTH ADELBERT LOWE, OF SOUTH LEE, NEW HAMPSHIRE.

VALVE.

1,017,434.

Specification of Letters Patent.

Patented Feb. 13, 1912.

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To all whom it may concern:

Be it known that I, ELLSWORTH A. LOWE, a citizen of the United States, and a resident of South Lee, in the county of Strafford and State of New Hampshire, have invented a new and Improved Valve, of which the following is a full, clear, and exact description.

As is well known to those skilled in this art, the constant opening and closing of the port in a valve provided with a threaded valve stem, will in time cause the mating threads between the stem and its casing to become worn; and particularly is this true in the case of a so-called globe valve where the closing of the valve is accomplished by the forcing of the valve head with considerable pressure against its seat, and this pressure places considerable strain on the threaded connection between the valve stem and its casing. In time, this wearing of the threads will result in a stripping of one or both of the threads, rendering the valve practically useless.

The object of the present invention is to produce an attachment for valves of the globe valve type whereby in the event of the partial destruction of the threaded connection between the valve stem and its casing, a supplementary or auxiliary threaded connection is provided which will insure the proper and desired operation of the valve stem and its head, and prolong the life of the valve.

To the above ends, the invention consists of the attachment for valves which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings constituting a part of this specification, in which similar characters of reference denote corresponding parts in all the views and in which—

Figure 1 shows a front elevation of a valve, parts being shown in vertical section, and illustrating the attachment constituting the present invention. Fig. 2 shows an under plan view of the attachment.

In the drawing A indicates a valve of the well known globe type having the upwardly extending casing *a*. The valve stem B passes through the casing *a*, and is provided with a screw thread *b* which originally has a threaded engagement with a mating thread *a'* upon the interior of the casing *a*, but which latter thread, as the apparatus is illustrated in the drawing, is shown as stripped

or worn out. The valve stem B passes through an aperture *c* in a bonnet C, which bonnet is connected to the casing *a* by the mating screw threads *c'*. At its upper end the valve stem B is provided with a hand wheel D which is detachably secured there- to by a nut *d*.

The parts as described are constructed, organized and arranged in a manner common to the globe valves of the prior art, and in and of themselves, constitute no part of the present invention, it being understood that the lower end of the stem B is provided with a suitable head (not shown) arranged to have a close engagement with a valve seat (not shown).

It is of course understood that when the threaded connection between the valve stem and its casing is destroyed, the valve is practically useless. In order to prolong the life of the valve under such conditions, I provide a sleeve 1, which is arranged to be detachably connected to the bonnet C of the valve casing A, as by means of the set screws 2 which pass through threaded apertures in the sleeve 1 and engage the surface of the bonnet C. This sleeve 1 is of course of a shape to fit the external formation of the bonnet C, and inasmuch as valve bonnets are ordinarily made polygonal in cross section and generally hexagonal, the lower end of the sleeve 1 will be hexagonal as shown in Fig. 2. At its upper end the sleeve 1 is substantially cylindrical and is provided with a screw thread 3. Coöperating with the sleeve 1 is a cap 4 which is arranged to be detachably connected as by means of a set screw 5 to the valve stem B, and the cap 4 is provided with a cylindrical flange 6 arranged to receive the threaded cylindrical portion of the sleeve 1, and is provided upon its inner surface with a screw thread 7 mating with the screw thread 3.

Whenever the threaded connection between the valve stem B and the casing *a* becomes stripped, the hand wheel D may be removed from the valve stem B, and the sleeve 1 secured to the bonnet C. Thereupon the cap 4 is fitted to the stem B and threaded to the upper end of the sleeve 1, after which the set screw 5 is tightened so as to cause the cap 4 to travel with the valve stem B. Thereupon the hand wheel D is replaced, and upon being turned causes a turning of the stem B together with the cap 4, and the threaded connection between the cap 4 and

the sleeve 3 causes the valve stem to be raised and lowered to operate the valve.

While I have in the accompanying drawing and foregoing specification described my attachment as having a screw threaded connection comprising an external thread on the sleeve 1, and an internal thread on the cap 4, it is of course understood that the device may be constructed with an internal thread on the sleeve 1 and an external thread on the cap 4 without departing from the spirit and scope of my invention.

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

1. In a valve, a sleeve, means to detachably secure the sleeve to the bonnet of the

valve, a cap, means to detachably secure the cap to the valve stem, and a threaded connection between the sleeve and cap. 20

2. In a valve, a sleeve, means to detachably secure the sleeve to the bonnet of the valve, a screw thread upon the outer side of said sleeve, a cap, means to detachably secure the cap to the valve stem, and a screw thread upon the inner side of the cap mating with the screw threads on the sleeve. 25

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

ELLSWORTH ADELBERT LOWE.

Witnesses:

EDWIN F. BENNETT,

WALTER E. DARRES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."