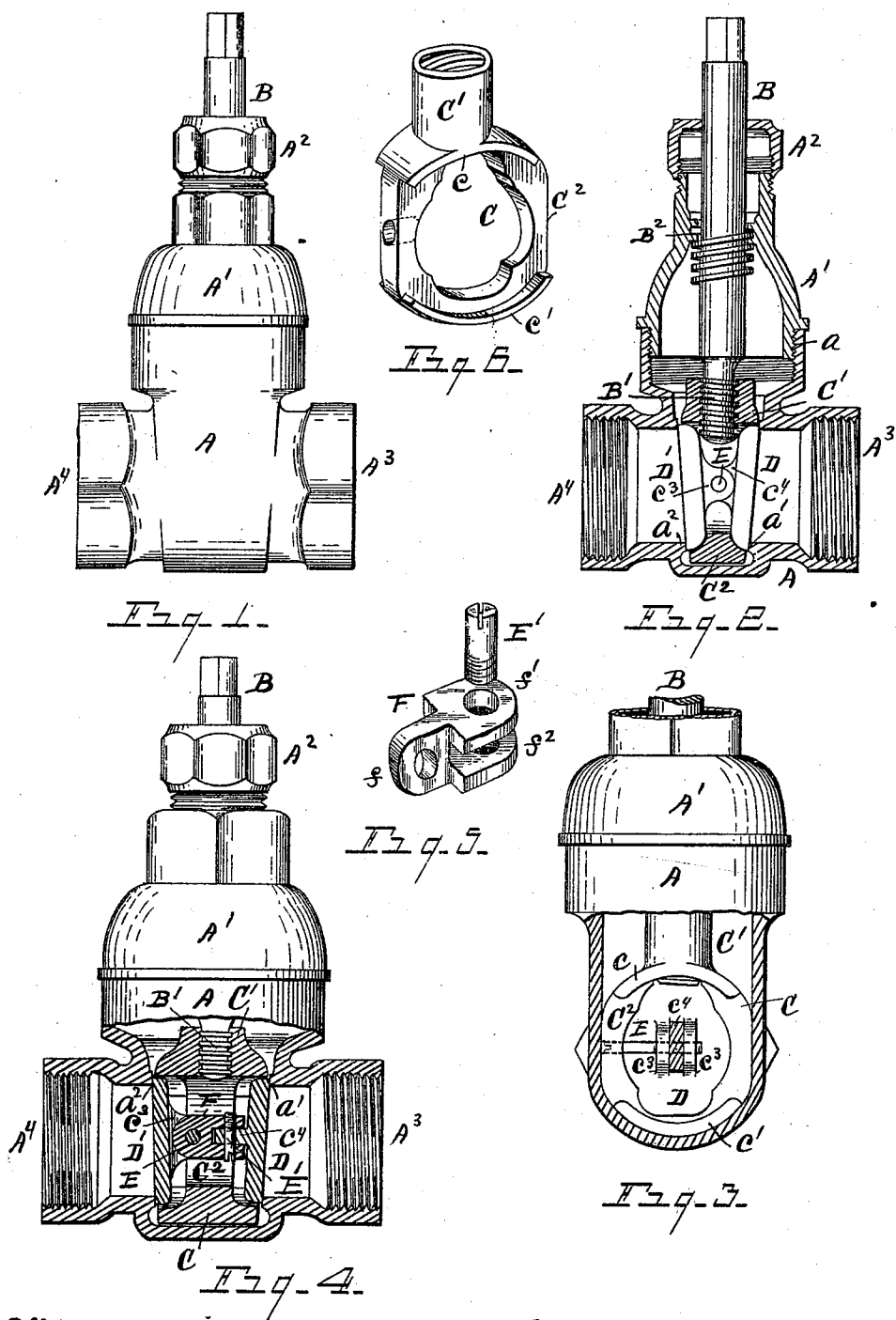


(No Model.)

G. J. GRAEBERT.
STRAIGHTWAY VALVE.

No. 516,200.

Patented Mar. 13, 1894.



Witnesses
O. B. Barnzger
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Inventor
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UNITED STATES PATENT OFFICE.

GUSTAV J. GRAEBERT, OF DETROIT, MICHIGAN, ASSIGNOR OF ONE-HALF TO
JAMES PURDIE, OF SAME PLACE.

STRAIGHTWAY-VALVE.

SPECIFICATION forming part of Letters Patent No. 516,200, dated March 13, 1894.

Application filed May 2, 1893. Serial No. 472,716. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV J. GRAEBERT, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Straightway-Valves; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improvement in straight-way valves, and has for its object a new and useful device of superior simplicity, efficiency and utility, while at the same time it is economical in manufacture and durable.

My invention is designed also to facilitate the operation of the valve, providing for the ready as well as speedy manipulation thereof.

To these ends my invention consists of the devices and appliances, their construction, combination and arrangement as hereinafter specified and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a view in elevation. Fig. 2 is a vertical section through the valve case, showing portions of the valve and the valve stem in elevation. Fig. 3 is a view partly in elevation and partly in section showing the rear of one of the valves. Fig. 4 is a view partly in elevation and partly in vertical section, illustrating a modification of the device. Fig. 5 is a separate view of the intermediate link and connecting screw. Fig. 6 is a separate view of the plunger or head of the valve.

I carry out my invention as follows:

A represents the valve case.

A' is a cap having a screw threaded connection therewith, as shown at "a."

A² is a stuffing box engaged with said cap. The valve case is constructed with inlet and outlet orifices A³ and A⁴, and intermediate valve seats, as at "a'" and "a²," the inner faces of said valve seats taper toward each other at the base thereof.

B denotes a valve stem, projecting through the cap A' and stuffing box A².

C is a plunger or head having a screw threaded connection with the valve stem, the

same being for that purpose constructed with an interiorly threaded stem C' and a rim C², having its two faces beveled or tapered one toward the other in the direction of the base thereof. The rim is constructed at the top and bottom with flanges "c," "c'."

D and D' represent two valve disks to close upon the seats "a'" and "a²." The inner faces of the valve disks have a jointed engagement one with another, and are held in place upon the rim of the plunger or head C. To this end, as shown in Fig. 3, one of the disks may be constructed with ears "c³," and the opposite disk with an ear "c⁴," the ears being perforated, the ear "c⁴" projecting between the ears "c³," and being engaged in such position by a screw E, inserted therethrough and through the rim of the plunger or head, as shown in Fig. 3. It will be perceived that this method of connecting the two valve disks in place upon the two sides of the plunger permits the two disks to rock vertically upon their intermediate jointed connection, so that said disks will close upon a corresponding valve seat, no matter what may be the bevel or taper thereof. In operating the valve thus the disks will seat readily and firmly.

The valve stem B not only has a screw threaded connection with the stem C' of the plunger, as shown at B', but preferably has also a screw threaded engagement with the interior of the cap A', as shown at B². The threads at B' and B² are one a right hand and the other a left hand thread, to facilitate the speedy operation of the valve disks.

As shown in Figs. 2 and 3, the two valve disks have a single intermediate jointed connection, permitting the valve disks to rock in a vertical direction only. I do not, however, limit myself to any specific joint or union of the two valve disks, but contemplate also as coming within the scope of my invention a double or universal intermediate joint.

As shown in Fig. 4, between the ears "c³" on one of the disks, and the ear "c⁴" on the opposite disk, I locate a link F, shown in detail in Fig. 5, having a perforated stem "f" to engage the ears "c³," as by means of the screw E. The opposite end of the link F is

formed with two perforated ears " f' " and " f'' " to engage the ear " a^4 " of the disk D, said ears being held together by a screw E'. By such a construction it is evident the disks
5 may have practically a universal motion or movement.

What I claim as my invention is—

1. In combination a valve case constructed with beveled valve seats, a valve stem, a plunger constructed with a rim provided with top and bottom flanges " c ," " c' ," and having a screw threaded engagement with the valve stem, valve disks engaged with said plunger on opposite sides of said rim between said
10 flanges, said disks having an intermediate engagement with the rim and an intermediate

jointed connection one with the other, substantially as described.

2. In combination, a valve case constructed with valve seats, a valve stem, a plunger constructed with a rim and operated by said
20 valve stem, valve disks carried by said plunger, and a screw engaging said rim and jointly connecting said disks, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.
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GUSTAV J. GRAEBERT.

Witnesses:

N. S. WRIGHT,
JAMES PURDIE.