No. 681,285. Patented Aug. 27, 1901.

C. WEHNER, C. MALTNER & F. BANSEN.

STOP VALVE.

(Application filed Nov. 7, 1900.)

(No Model.)

Fig. 1.

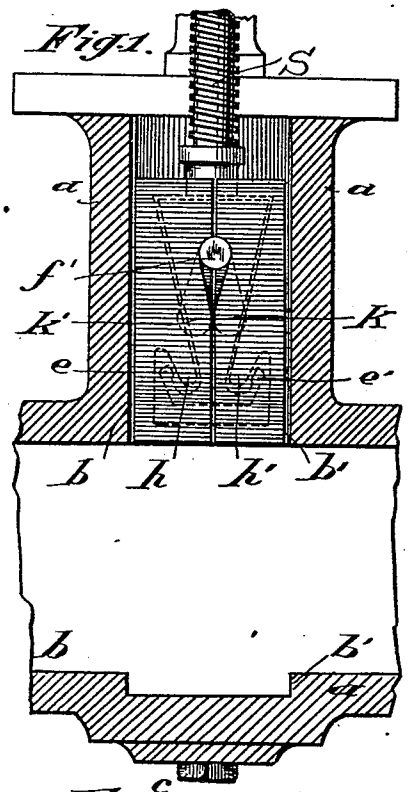


Fig. 2.

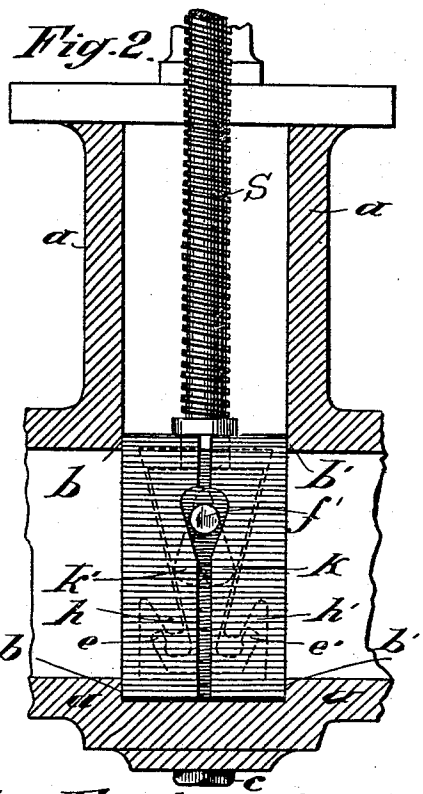


Fig. 3

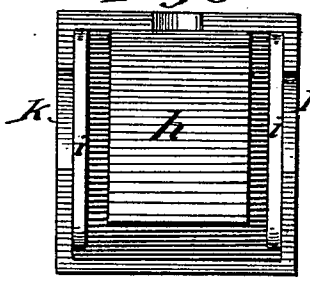


Fig. 4.

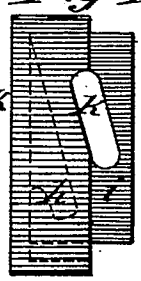


Fig. 4a

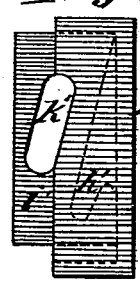


Fig. 3a

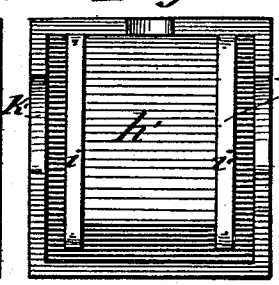


Fig. 5

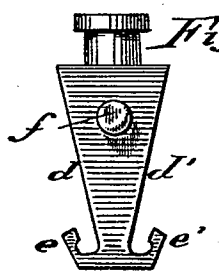
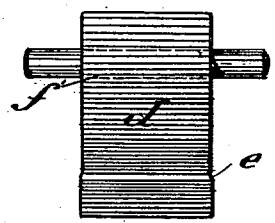


Fig. 5a.



Witnesses:
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UNITED STATES PATENT OFFICE.

CLEMENS WEHNER, CARL MALTNER, AND FRITZ BANSEN, OF LEIPSIC, GERMANY.

STOP-VALVE.

SPECIFICATION forming part of Letters Patent No. 681,285, dated August 27, 1901.

Application filed November 7, 1900. Serial No. 35,763. (No model.)

To all whom it may concern:

Be it known that we, CLEMENS WEHNER, CARL MALTNER, and FRITZ BANSEN, subjects of the Emperor of Germany, and residents of Leipsic, Germany, have invented certain new and useful Improvements in Stop-Valves, of which the following is a specification.

The object of our present invention is to provide a valve which in its open position presents a straight passage to fluid and which in its closed position is absolutely and durably tight.

In order that our invention may be readily understood and carried into practical effect, reference is herein made to the accompanying drawings, in which—

Figure 1 shows the improved valve in its open position. Fig. 2 shows the same in its closed position. Figs. 3, 3ª, 4, and 4ª show the interior arrangement of the jaws. Figs. 5 and 5ª show front and side views of the lower valve-stem extension.

Arranged within the valve-casing *a* are two ground-seatings *b b'*, at the center of which are arranged the passages for fluid. The bottom of the casing is provided with a screw *c*, by the removal of which access will be afforded to the interior of the casing for the purpose of easily removing mud and sediments.

The valve-spindle S is provided at its lower end with an extension, Figs. 5 and 5ª, formed at the right and left hand sides with inclines *d d'*, so that the extension is in the shape of a wedge-block, and with lugs *e e'* at its lower end, curved to the right and left hand sides. The wedge-block-shaped extension is provided at about the center thereof with a hole *f*. To the left and right hand sides of the spindle jaws may be connected, Figs. 3, 3ª, 4, and 4ª, by means of a pin *f'*, inserted into the hole *f*. Said jaws have smooth outer faces of greater diameter than the passages in the seatings *b b'* of the valve-casing. The inner face of each jaw is provided with a downwardly-extending projection *h h'*, the upper and under faces of which are inclined at the same angle as the the inclines *d d'* of the wedge-block-shaped extension, Figs. 5 and 5ª. The inner face of each jaw is further provided with two extensions *i i'*, having slots *k k'*, inclined at the same angle as the projections *h h'*. The extensions *i* of one jaw are farther apart from each other than the extensions *i'* of the other jaw, so that they come side by side when the jaws are in juxtaposition. When the jaws are connected with the extension of the spindle by means of a pin inserted into the hole *f* and through the slots *k k'*, Figs. 1 and 2, the lugs *e e'* engage the inclined under faces of the projections *h h'*, whereby the entering fluid is prevented from untimely forcing apart the jaws when the valve is to be closed.

When the valve is to be closed and when the jaws thereof come in contact with the bottom of the casing, the inclines *d d'*, engaging the inclines of the projections *h h'*, and also the pin inserted in the hole *f* and the slots *k k'* cause the jaws to move apart from each other, while the lugs *e e'* slide on the inclined under faces of *h h'* to hold the jaws in any desired position. The smooth faces of the jaws are firmly pressed against the seatings *b b'* of the valve-casing, whereby perfect tightness is obtained on both sides, Fig. 2. When the valve is to be opened, the withdrawal of the spindle raises the pin extending through the hole *f* and the slots *k k'*, whereby the jaws are first brought together like the branches of a pair of scissors and then withdrawn from the passage by the continued rotation of the spindle, Fig. 1.

Having fully described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a straightway stop-valve, the combination with the valve casing or chamber formed with a valve-seat, of oppositely-disposed valve-disks formed with inclined inner faces approaching each other at their lower ends and terminating in reversely-inclined projections *h h'*, and laterally-extending projections *i i'*, formed with inclined slots, a lifting-wedge between the inclines of the valve-disks formed at its lower end with upwardly-curved lateral extensions to engage the inclined projections *h h'*, a pin *f'* projected through said slots and wedge, and means connected to the wedge to raise and lower the same with the valves, substantially as specified.

2. In a straightway stop-valve, the combi-

nation of a valve-casing formed with a vertical chamber into which the valve lifts, oppositely-disposed valves formed to close the passage through the casing and having inclined inner faces approaching each other at their lower ends, and projections *i i'* formed with inclined slots *h*, *h'*, a lifting and locking wedge disposed between the inclines of the valve-disks and formed with lateral extensions at its lower end to engage the lower ends of the inclined surfaces of the valves, a pin projected through the said slots and wedge, and a threaded valve-stem extending through the vertical chamber and having its lower end connected to the head of the wedge, substantially as specified.

In testimony whereof we have hereunto set our hands in presence of two witnesses.

CLEMENS WEHNER.
CARL MALTNER.
FRITZ BANSEN.

Witnesses:
RUDOLPH FRICKE,
RICH. LOMMATSOCH.