E. H. Tracy

Stop Cock,

No. 12,007, Patented Nov. 28, 1854.

Fig: 1

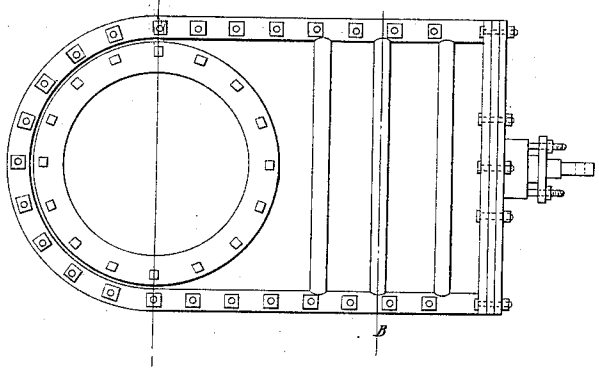


Fig: 2

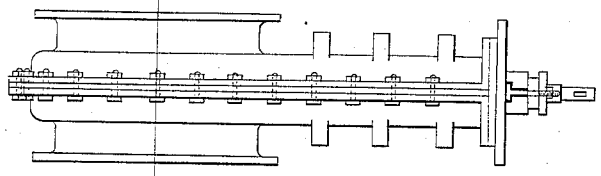


Fig: 5

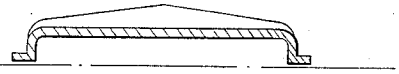


Fig: 3

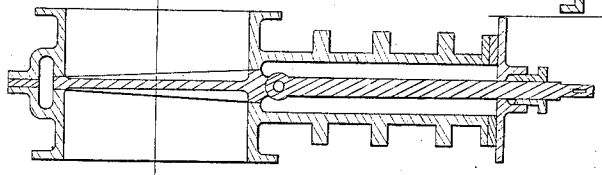
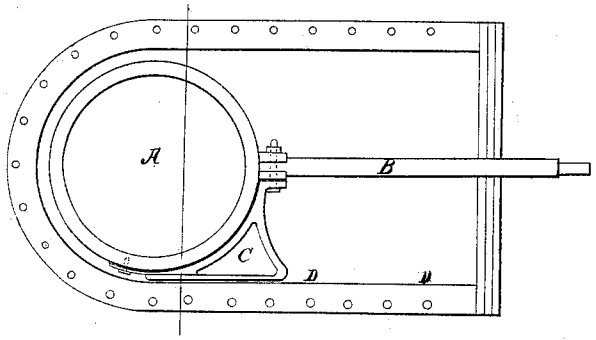


Fig: 4



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UNITED STATES PATENT OFFICE.

EDWARD H. TRACY, OF NEW YORK, N. Y.

INCLINED SLIDING VALVE.

Specification of Letters Patent No. 12,007, dated November 28 ,1854.

To all whom it may concern:

Be it known that I, EDWARD H. TRACY, of the city and county of New York, in the State of New York, have invented a new and useful Improvement in Stop Cocks or Valves, and the following is a full, clear, and exact description of said invention and of the manner of constructing and using the same, reference being had to the annexed drawings, Figures 1, 2, 3, 4, and 5.

My improvement consists in attaching to the lower side of the valve of a stop cock a shoe adapted to sliding on the bottom of the inside of the case of the stop cock, so that the stop cock may be placed in a horizontal or inclined position and its action may be horizontal or inclined, and yet the valve will always shut in its proper plane. The stop cock may be constructed in any form of a sliding valve stop cock, and the shoe may be fastened on the side of the valve or may constitute an enlargement of the valve itself in the form of such shoe.

Figure 1 is a side elevation of the outside of the stop cock. Fig. 2 is an outside view of the stop cock when seen from above. Fig. 3 is a longitudinal section of the stop cock. Fig. 4 is the stop cock with one side of the case removed. Fig. 5 represents a bracket of the case.

The circular valve A (Fig. 4,) is standing closed; it is to be opened by means of the stem B. The shoe C, is fastened to the side of the valve, and as the valve opens and shuts the shoe slides on the bottom of the case D—D.

The valve is usually of the form and size of the cross section of the pipe to which it is applied; and the rim of the valve is usually thickest where it joins the stem and thinnest at the opposite side, giving to its cross section the wedge form (seen in Fig. 3,) most favorable to the action of the valve in opening and closing.

The entire machine, including the case, the valve, the shoe, the stem, and the appendages, is constructed of iron or other metal or material as may be convenient. The shoe must be in a form adapted to sliding along the bottom of the case, and the case prepared for the operation of the shoe; and the shoe must be of sufficient weight to hold down the valve, make it steady and govern its movements when in action. The stop cock thus constructed may be placed and set in a horizontal or inclined position, and used in that position for any size of pipes. Among other uses, it is applicable to aqueduct pipes of the largest calibers, and will work with certainty and regularity in such pipes when charged with a heavy pressure and rapid current of water. Such pipes varying from four inches to three feet in diameter are often used under paved streets. In pipes of large or medium size the ordinary stop cocks cannot be worked in a horizontal or inclined position with regularity, certainty or safety.

My improvement admits of laying the pipes nearer the surface of the ground, than is practicable where the ordinary stop cock of vertical action is used; thereby saving the deeper laying of pipes, and the difficulty of reaching and examining pipes and working stop cocks at greater depths. The ordinary stop cock requires an upright case and stem, reaching above the top of the pipe the height of a diameter of the pipe or more, which entire case and stem must be below the surface of the ground or street for convenience and safety.

My improved stop cock is less liable to casual closing or irregular closing, than the vertically acting stop cock; and the casual or sudden closing of a pipe charged with a heavy pressure and rapid current of water causes destructive reactions, and such occurrences are not unusual in large aqueducts where the vertical stop cock is used.

What I claim as my own invention, and desire to secure by Letters Patent, is—

The shoe attached to, or constituting an enlargement of, the side of the valve, adapted to sliding on the inside of the case, and admitting of a horizontal or inclined position and action of the stop cock.

EDW. H. TRACY.

Witnesses:

W. HOWARD WAIT,

CHEER TRACY.