(No Model.)

J. H. BLESSING.

REVOLUBLE JOINT FOR SCREW VALVE STEMS.

No. 315,464. Patented Apr. 14, 1885.

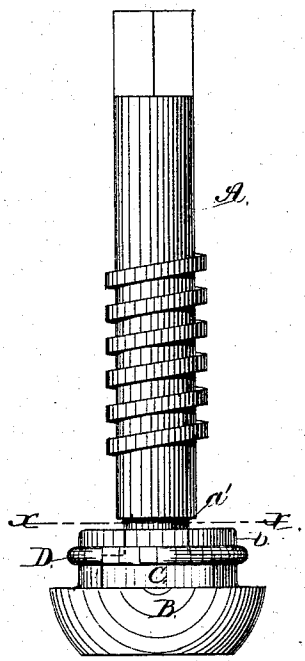


Fig. 1.

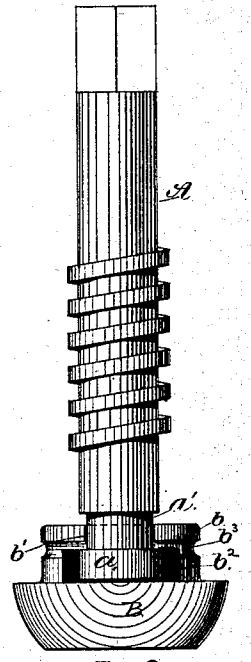


Fig. 2.

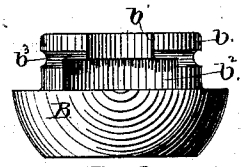


Fig. 5.

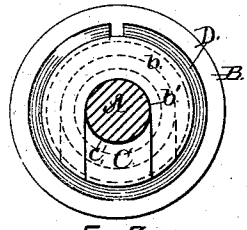


Fig. 3.

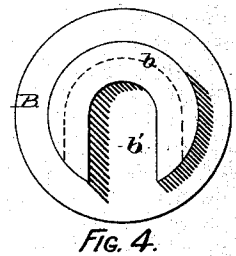


Fig. 4.

Witnesses:

S. B. Brewer.

C. W. Hamlin.

Inventor:

James H. Blessing,

by William N. Low,

Attorney.

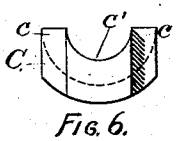


Fig. 6.

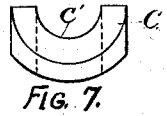


Fig. 7.

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

JAMES H. BLESSING, OF ALBANY, NEW YORK.

REVOLUBLE JOINT FOR SCREW VALVE-STEMS.

SPECIFICATION forming part of Letters Patent No. 315,464, dated April 14, 1885.

Application filed July 1, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. BLESSING, of the city and county of Albany, in the State of New York, have invented new and useful Improvements in Revoluble Joints for Screw Valve-Stems, of which the following is a full and exact description, reference being had to the accompanying drawings, which form part of this specification, and in which—

Figure 1 is a side elevation of the screw-stem and valve connected and secured together; Fig. 2, a like elevation with the filling-in piece and spring-clamp removed; Fig. 3, a horizontal section at the line *x x* of Fig. 1. Figs. 4 and 5 are respectively a plan view and side elevation of the valve; and Figs. 6 and 7, respectively, a plan view and inverted plan view of the filling-in piece.

My invention relates to an improved mode of attaching screw-stems to valves by means of the revoluble joint herein described, so as to permit said stem to receive a rotatory motion without imparting a like motion to the valve; and to this end my invention consists in providing the screw-stem with a projecting circular flange formed on its lower end and adapted to engage in a suitable slotted opening formed in a hub on the upper face of the valve. A filling-in piece which fits into said slotted opening forms a complement for the bearing for the upper surface of the annular flange of the screw-stem, and is retained in place by means of a spring-clamp, as hereinafter fully set forth.

As represented in the drawings, A is the screw-stem, having on its lower end a projecting circular flange, *a*, made concentric to the neck *a'* of said stem. The valve B may be made of any required form and size, and has on its upper face a central hub, *b*, in which the slotted opening *b'* is formed. Said slotted opening has at its inner end a concavity that is concentric to the central axis of the valve, and is fitted to receive the lower end of the screw-stem A. Said opening is cut radially through one side of the hub *b*, and has an undercut enlargement, b^2, which is adapted to receive the flange *a* of the screw-stem. A circumferential groove, b^3, is formed around the hub *b*, for the purpose of receiving a spring-clamp, as hereinafter described. The filling-in piece C is adapted to fit into the slotted opening *b'*, and is provided with tongues *c*, which engage in the enlargement b^2. The concavity *c'* at the inner end of said filling-in piece conforms to and is the complement of the concavity at the inner end of slotted opening *b'*, so that when said filling-in piece is adjusted to its place a circular opening will be formed for receiving the neck and circular flange of the screw-stem A in such manner that the latter can be rotated in said opening with perfect freedom. The outer end of the filling-in piece C conforms in every respect to the circumferential form of the hub *b*. The spring-clamp D is made of wire in the form of a ring having a radial separation at one side and of a suitable size to fit into the groove b^3 in such manner as to retain the filling-in piece C securely in place in the slotted opening *b'* of the valve. When preferred, a binding-wire which has no resilient action may be substituted for said spring-clamp. With this form of revoluble joint the upper face of the flange *a* has an unbroken bearing around its entire surface, the parts being fitted with sufficient freedom to permit the screw-stem to revolve after the valve has touched its seat, without imparting a rotatory motion to the valve, all danger of any abrasive action between the valve and its seat is avoided.

I claim as my invention—

The combination, with a screw-stem, A, provided with a circular flange, *a*, as herein described, of a valve, B, provided with a central hub, *b*, having a slotted opening, *b'*, with an undercut enlargement, b^2, formed in one side of said hub, a filling-in piece, C, adapted to fit into the slotted opening *b'*, and form a complement to the concavity of the inner end of said opening, and a circular clamping device for securing said filling-in piece in the slotted openings *b*, substantially as and for the purpose herein specified.

JAMES H. BLESSING.

Witnesses:

WM. H. LOW,

JOHN W. WHEELOCK.