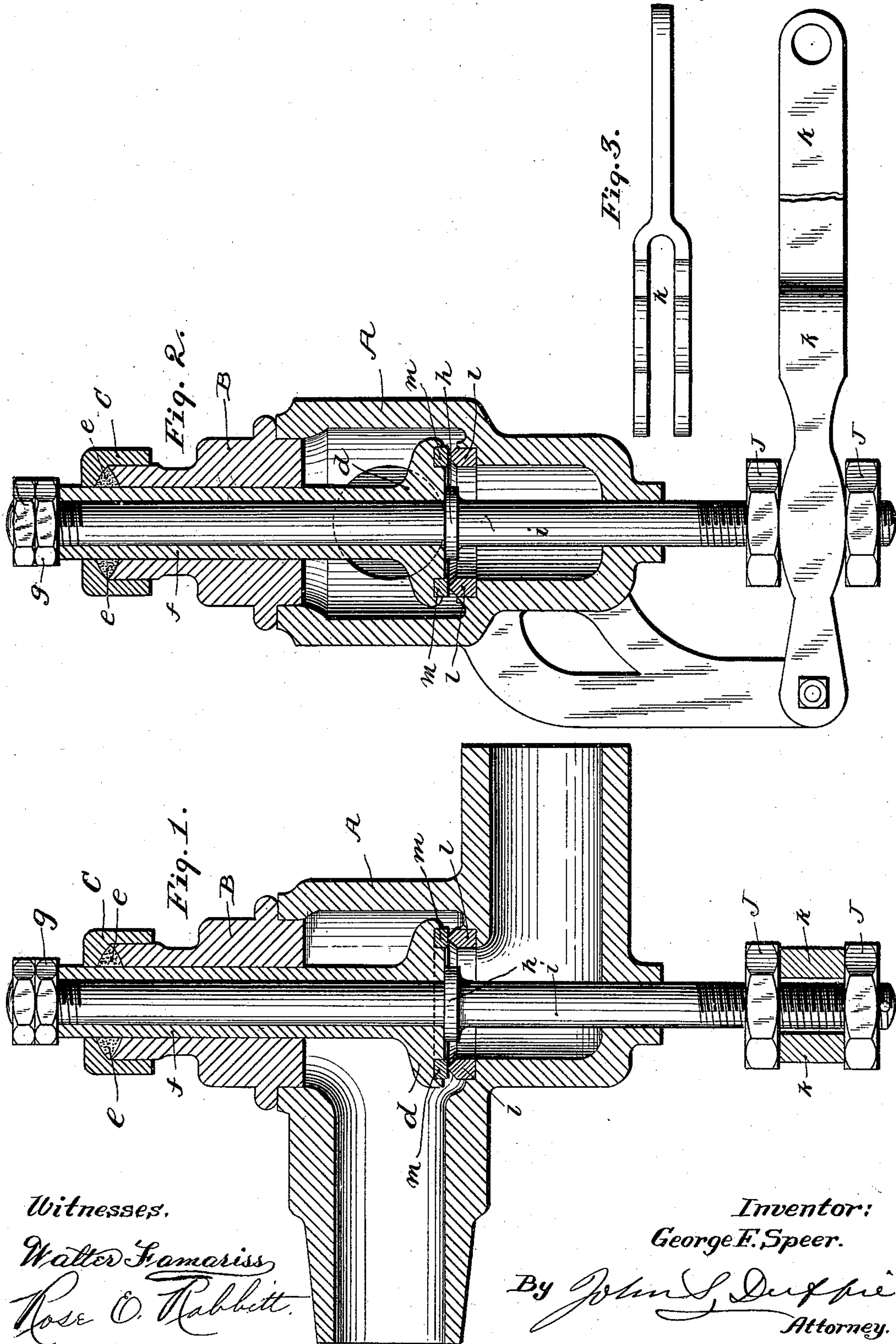


(No Model.)

G. F. SPEER.
VALVE.

No. 543,274.

Patented July 23, 1895.



Witnesses,

Walter Fomariss
Rose O. Rabbitt.

Inventor:
George F. Speer.

By John L. Duffie
Attorney.

UNITED STATES PATENT OFFICE.

GEORGE F. SPEER, OF TYLER, TEXAS.

VALVE.

SPECIFICATION forming part of Letters Patent No. 543,274, dated July 23, 1895.

Application filed June 18, 1894. Renewed May 27, 1895. Serial No. 550,871. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. SPEER, a citizen of the United States, residing at Tyler, in the county of Smith and State of Texas, have invented certain new and useful Improvements in Valves; and I do hereby 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.

My invention has relation to valves; and it consists of a new valve and new valve-seat constructed substantially as shown in the accompanying drawings, in which—

Figure 1 is a side elevation of the valve, partly in section, showing my valve and valve-seat in section. Fig. 2 is an edge view of the valve, partly in section, showing my valve and valve-seat in section, also the lever and lever-rest. Fig. 3 is an edge view of the lever.

My invention is described as follows:

A represents the shell of the valve; B, the guide and cap; C, the stuffing-box nut; *d*, the valve proper; *e*, the stuffing. *f* is the neck of the valve running up through the guide and cap B, stuffing-box nut C, and against the lower face of the stem-nut *g*, which nut holds the valve down solidly against the upper face of the shoulder *h* of said valve-stem. Said valve-stem *i* extends entirely through the valve body and has on its lower end nuts *j j* to regulate the pitch of the valve-lever *k*.

In the shell A is my tempered-steel or other hard-metal gable-shaped valve-seat *l*, and in the lower face of the valve is my removable soft contact-ring *m*, which may be made of brass or other material, in which the edge of my tempered-steel or other hard-metal gable-shaped seat may cut a water-tight fit.

The features of my invention which I claim as new and novel are: My tempered-steel or other hard-metal gable-shaped seat *l*, that can be removed and replaced when it begins to become in bad order; the brass ring *m* in valve-face, which can also be removed and replaced when worn out, the valve proper *d* being in one piece and hollow, permitting valve-stem *i* to go through valve and having outside connections, and forming steady guide for the valve, and obviating the necessity of

any inside wearing parts of shell to guide valve to seat and prevent it from cocking, the valve-joint being made by the brass ring *m* being pushed hard down on the tempered-steel seat, causing an impression of seat to be cut in the brass ring of valve, the face of the seat being on line of bottom of inlet to valve, which forms virtually a straightway valve.

By the seat being of tempered steel or other hardened material, joint is not made by two perfect faces in contact, but by hardened seat cutting in the softer ring in valve.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the shell A, provided with the usual water-inlet and water outlet, and perforation for the valve stem to work through; tempered steel or other hard material gable-shaped seat *l*, fitted into said shell; valve stem *i*, adapted to work up and down through said shell and provided with shoulder *h*; valve *d*, provided with a hollow neck passing up through guide and cap B; soft contact ring *m*, fitted in the face of the valve *d*, and adapted to come in contact with the edge of the gable-shaped seat *l*; guide and cap B, fitting on the upper part of said shell; stuffing-box nut C, fitting on the upper end of said guide and cap; and stem nut *g*, working against the upper end of the neck *f*, and holding the valve *d*, firmly and securely against the upper face of the shoulder *h*, substantially as shown and described and for the purposes set forth.

2. In a valve, substantially as shown and described, the valve *d*, provided with a hollow neck *f*, adapted to work up and down through the guide B, and stuffing-box nut C; rod *i*, running through said valve *d*, and holding said valve firmly between its shoulder *h*, and nut *g*, substantially as shown and described and for the purposes set forth.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE F. SPEER.

Witnesses:

AUGUSTUS F. REESE,
JAY H. ALSTEIN.