

No. 827,190.

PATENTED JULY 31, 1906.

T. STEBBINS.
PUPPET VALVE.

APPLICATION FILED JUNE 12, 1905.

Fig. 1.

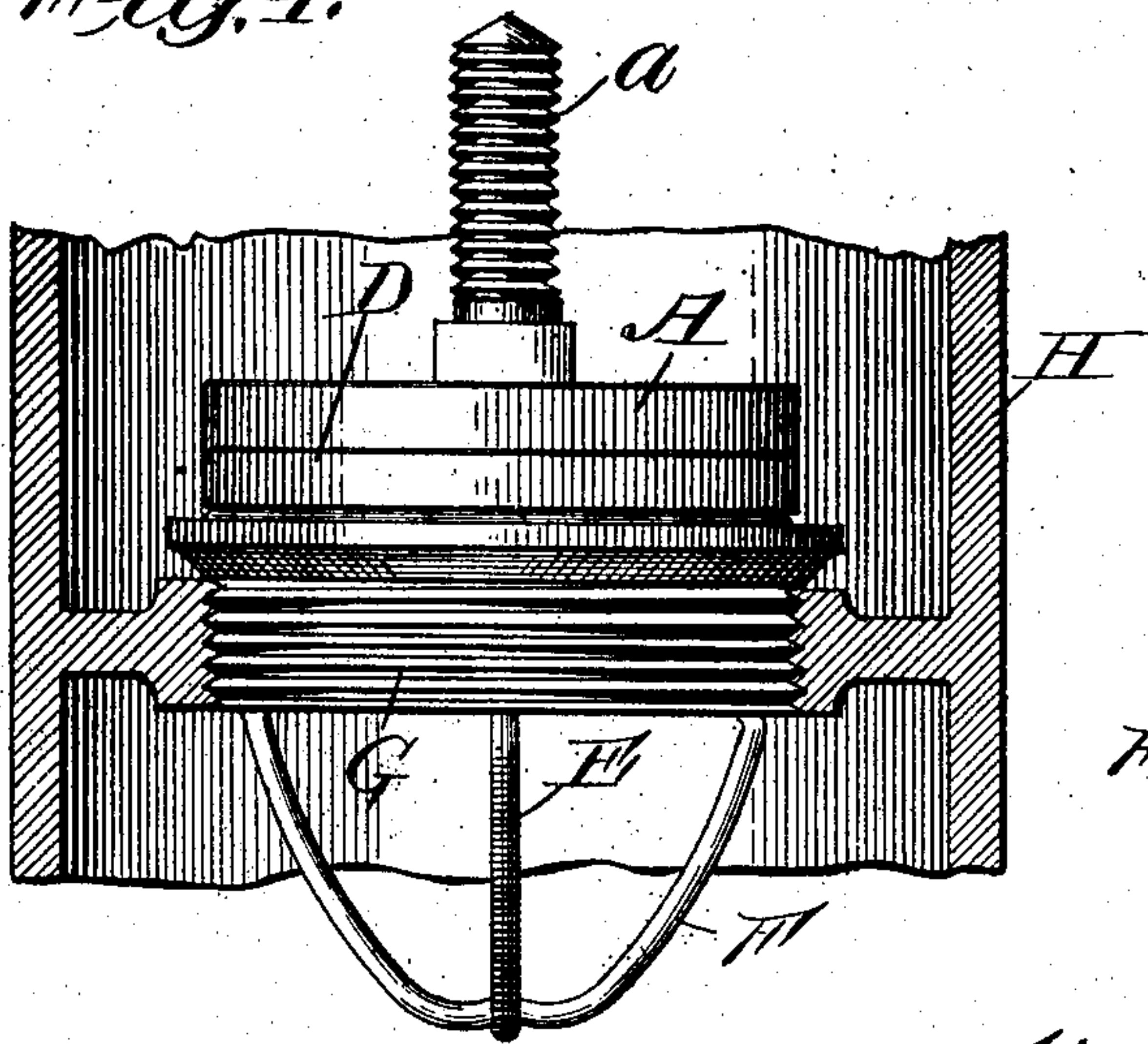


Fig. 2.

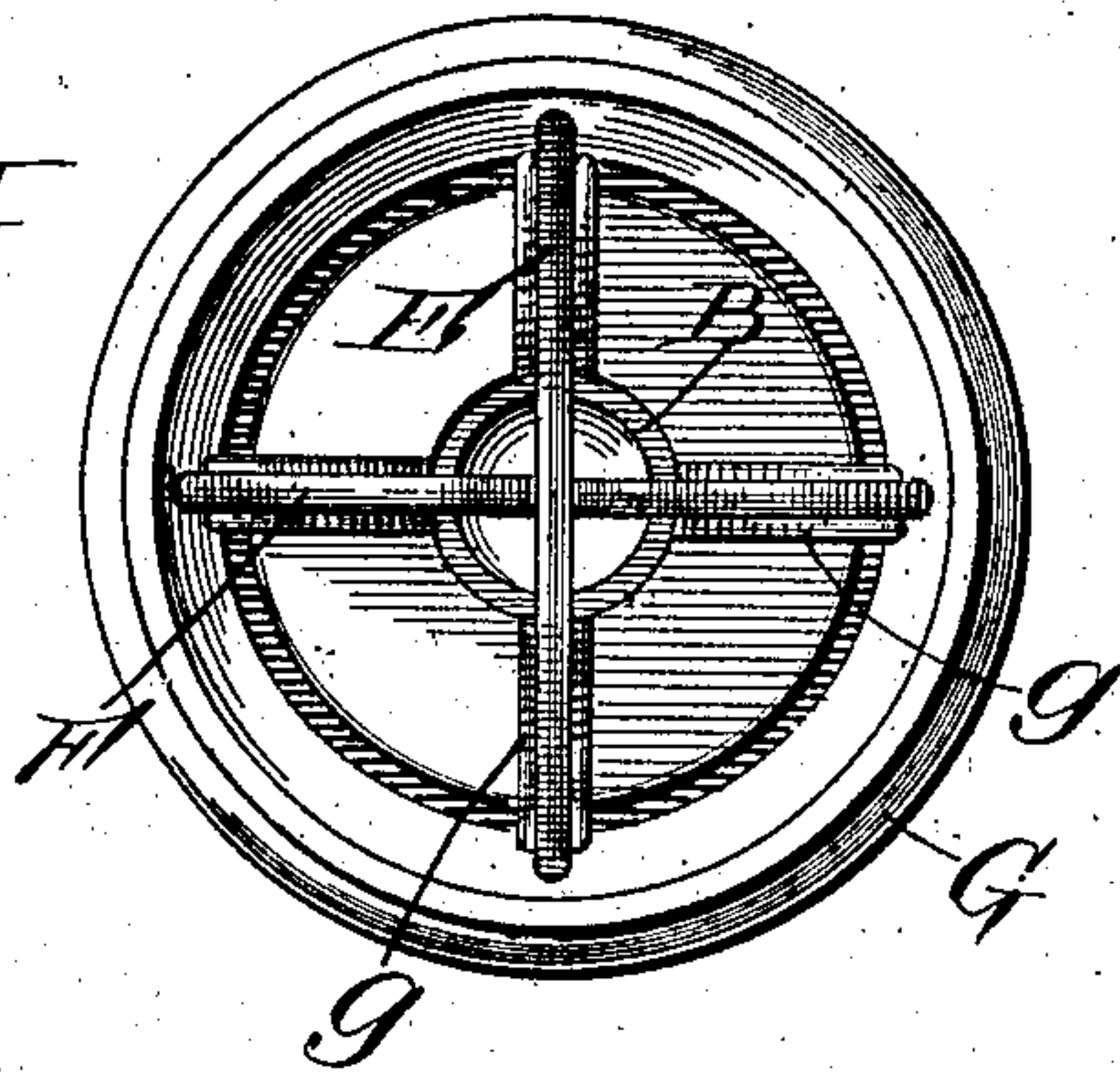


Fig. 4.

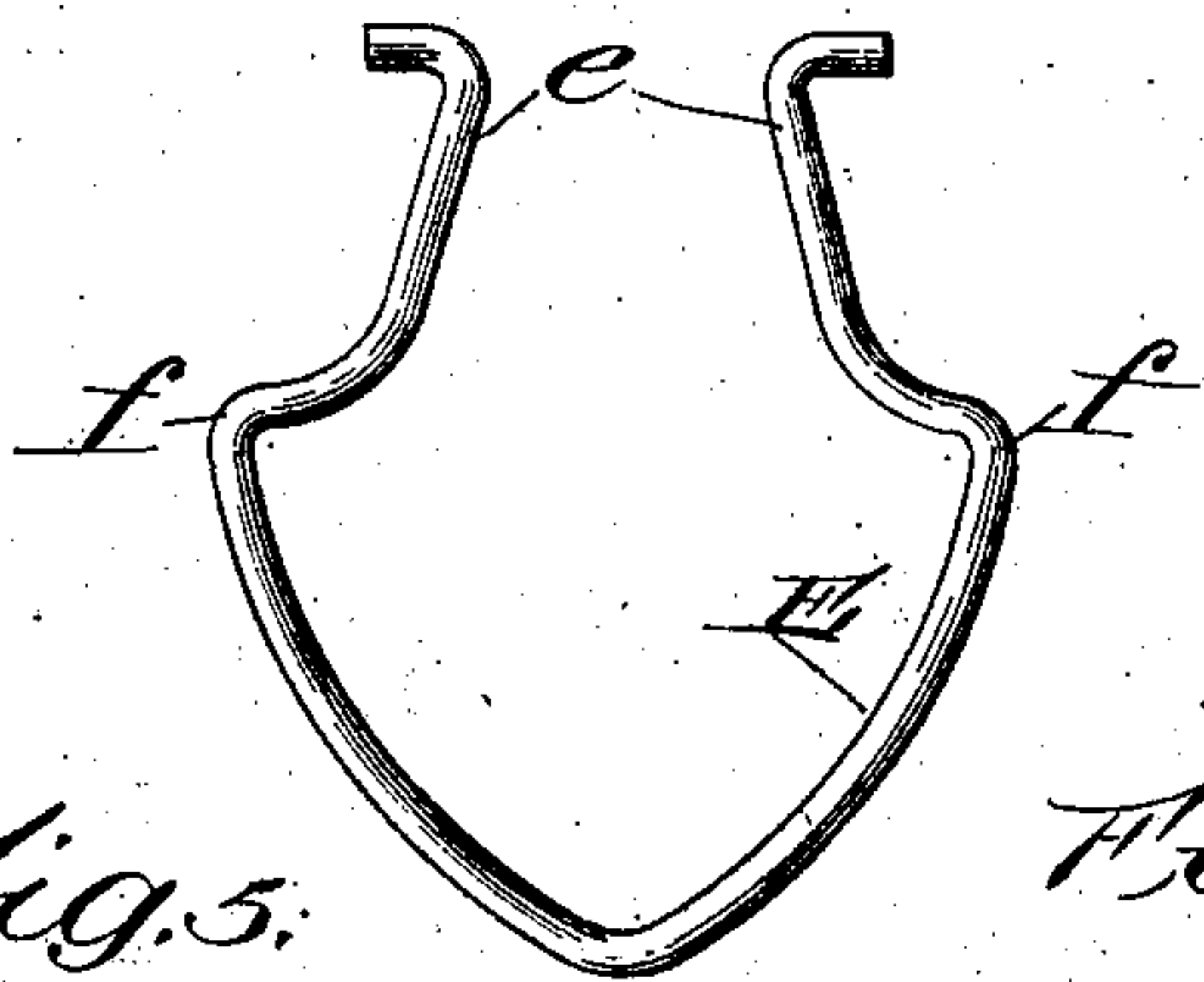


Fig. 3.

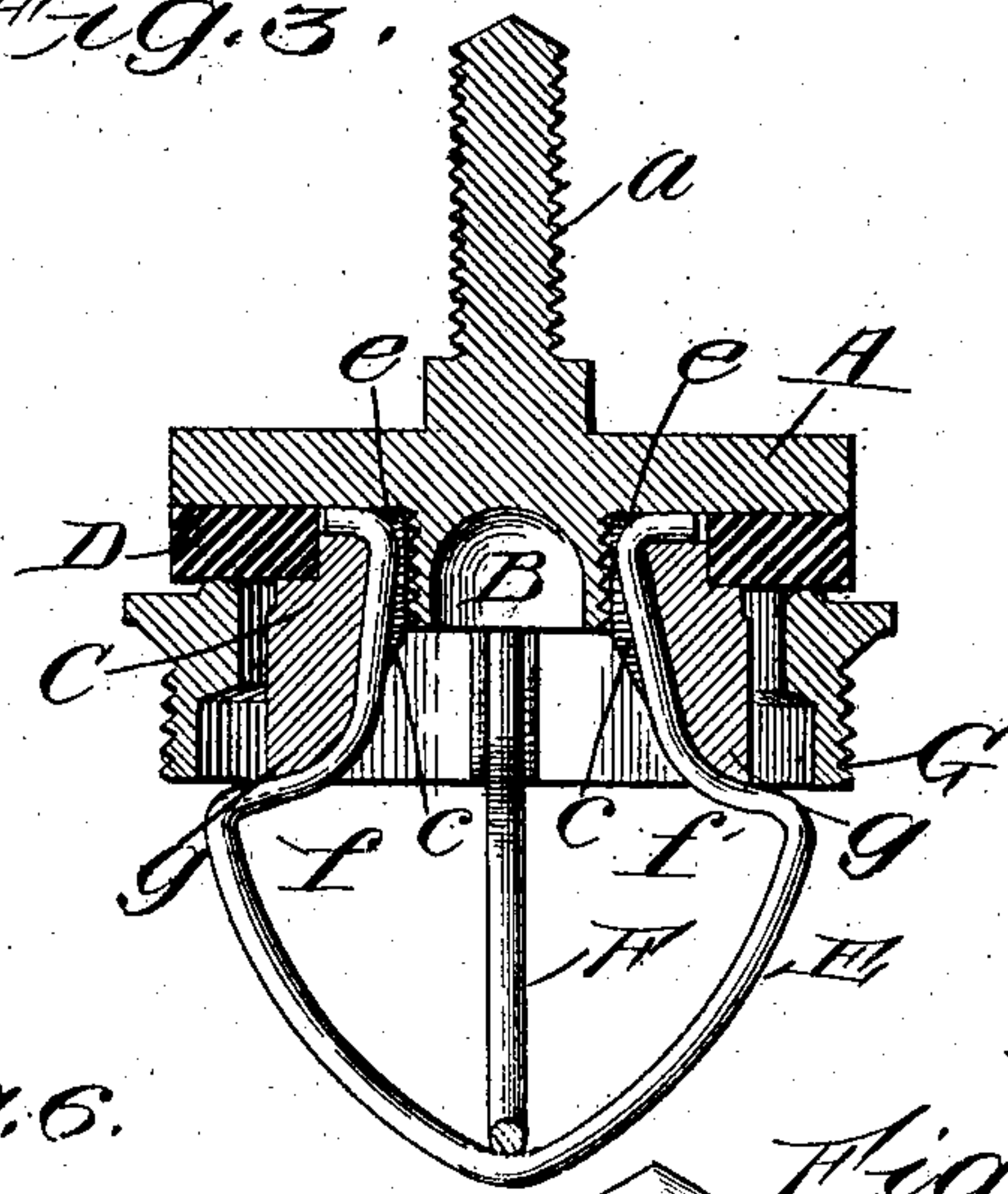


Fig. 5.

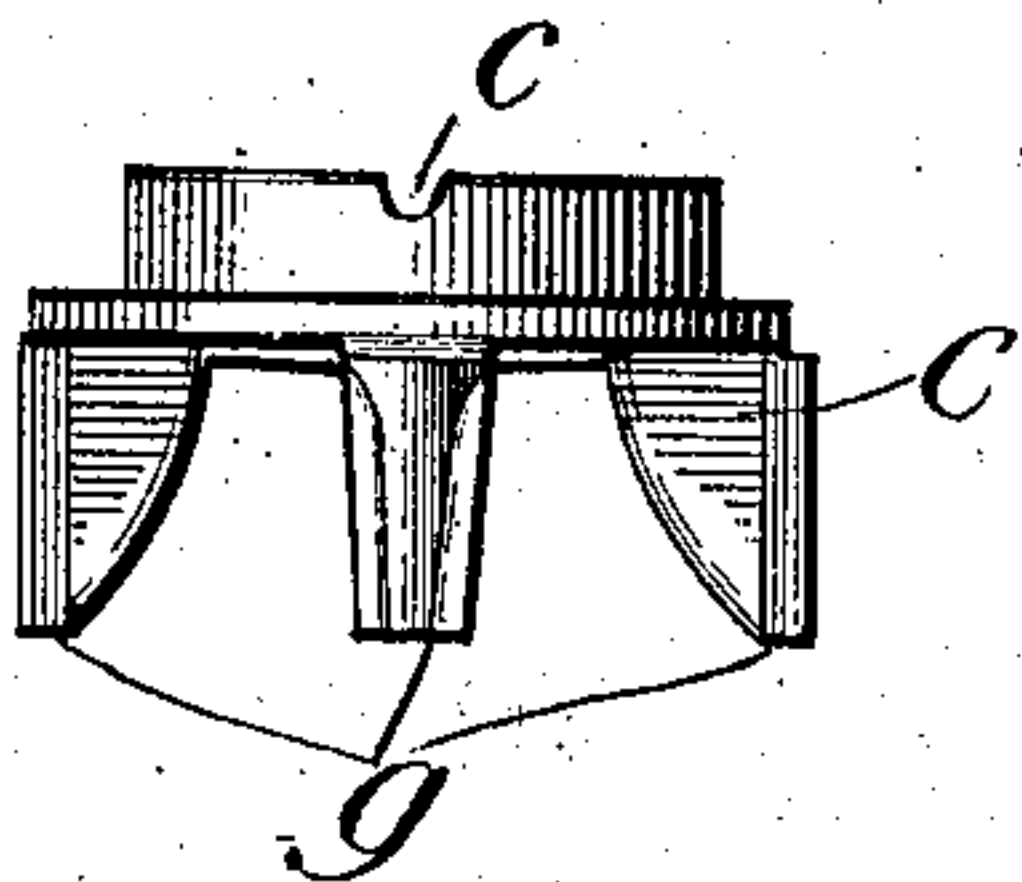


Fig. 6.

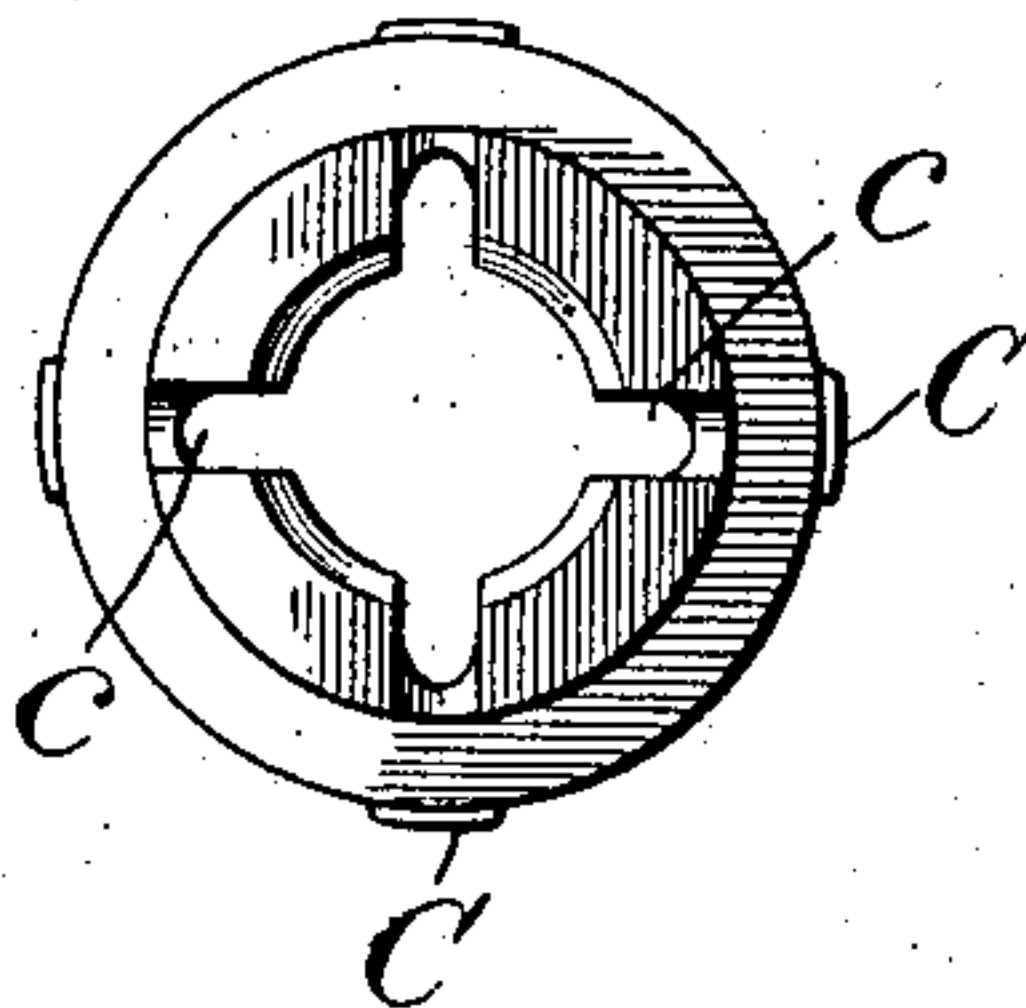
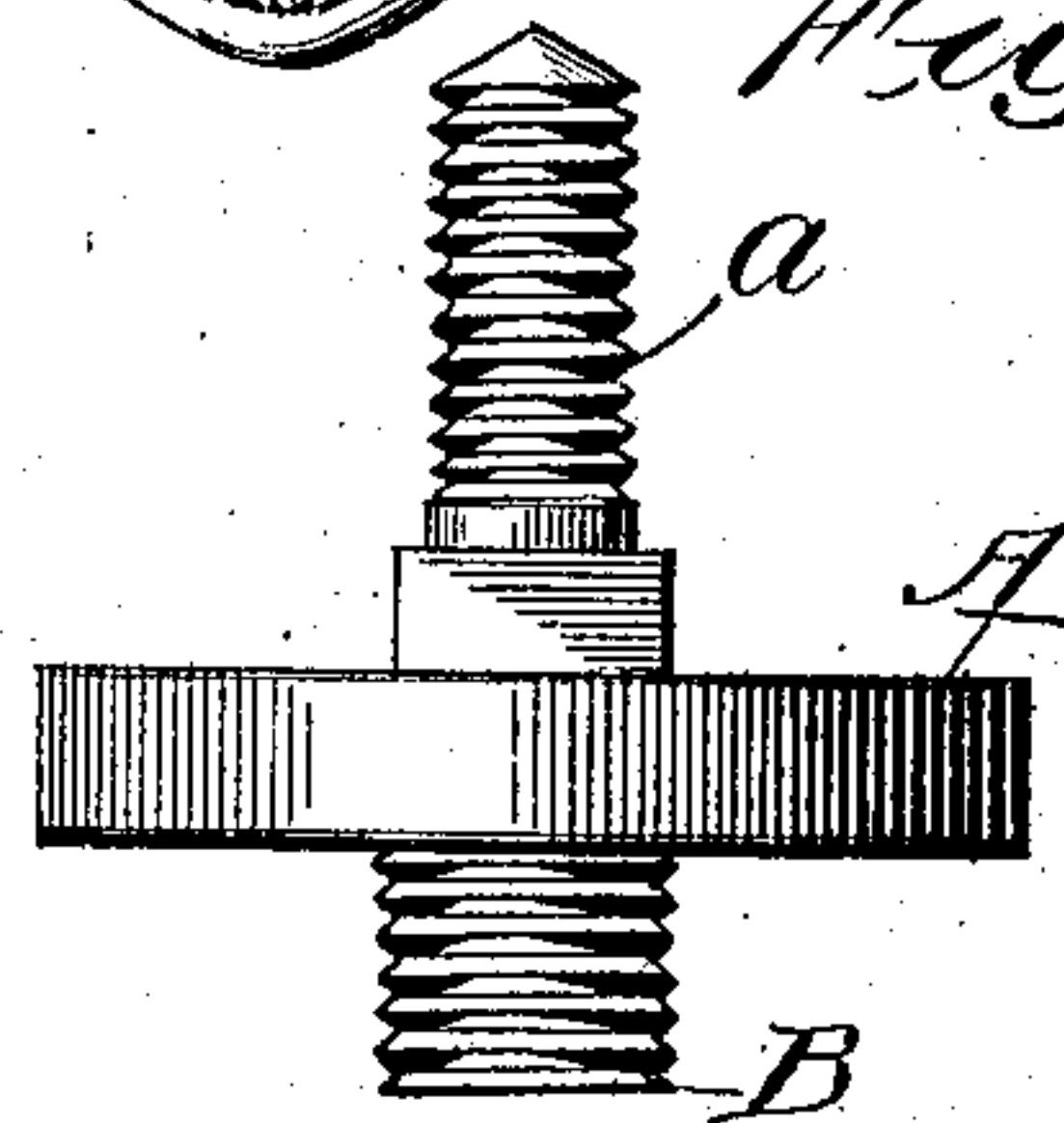


Fig. 7.



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UNITED STATES PATENT OFFICE.

TIMOTHY STEBBINS, OF DAVENPORT, IOWA, ASSIGNOR TO RED JACKET MANUFACTURING COMPANY, OF DAVENPORT, IOWA, A CORPORATION OF IOWA.

PUPPET-VALVE.

No. 827,190.

Specification of Letters Patent.

Patented July 31, 1906.

Application filed June 12, 1905. Serial No. 284,890.

To all whom it may concern:

Be it known that I, TIMOTHY STEBBINS, a citizen of the United States, and a resident of Davenport, in the county of Scott and State of Iowa, have invented certain new and useful Improvements in Puppet-Valves, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

My invention relates to puppet-valves; and its object is to provide means for retaining the same in its seat under normal conditions, which insures the proper action of the valve to open and close the valve-opening and yet permits the removal of the valve from its seat by withdrawing it vertically whenever for repairs or other reason it is desirable to do so. This I accomplish by the means hereinafter fully described and as particularly pointed out in the claims.

In the drawings, Figure 1 is a side view of my invention and valve-seat therefor and pipe, which is in section and to which said invention is applied. Fig. 2 is a plan of the under side of the same removed from the pipe. Fig. 3 is a vertical central section thereof. Fig. 4 is a detail view of one of the spring-yokes used in connection with said valve and removed therefrom. Fig. 5 is a side view of the holder of the valve separate from the other parts of the same. Fig. 6 is a plan view of the same. Fig. 7 is a side view of the top plate of said valve.

The valve shown in the drawings comprises a circular or other suitably-shaped plate A, which forms the back of the valve, and is provided with a screw-threaded stud *a*, projecting upward from the center thereof. Projecting downward from the center of plate A is a short screw-threaded stud B, which is in alinement with and is greater in diameter than stud *a*, which is preferably made hollow or cored, so that the lower edges thereof may be spread outward to assist in locking the yoke-holder C thereto, as will hereinafter more fully appear. This holder comprises a washer-shaped body of less diameter than the opening the valve closes, and its upper portion is stepped to a less diameter to form a seat for the inner edges of the packing-ring D, of rubber or other suitable material, which is clamped between the lower circumferential flange thus formed and the under side of plate A, where said holder is screwed home

upon said stud B as far as it will go. The inner circumference of the body of the holder is provided with four equidistant longitudinal grooves *c c*, the upper ends of which extend radially outward. These grooves *c* form seats for the ends *e e* of the yokes E and F. The lower portions of the yokes conform to the outlines of a heart-shaped figure; but the ends *e* thereof curve inward from the upper angles or shoulders *f f* and then upward in gradually-converging planes in grooves *c*, and their upper extremities are bent radially outward and rest and are confined in the upper portions of said grooves. Yokes E and F are arranged at right angles to each other, and the point of one is given a reverse curve, so as to arch over the point of the other. The ends of each yoke are seated in oppositely-located grooves *c*, and when in the proper position and the holder is screwed home on stud B the latter is prevented from independently working off by spreading the edges of said stud outward in any suitable manner. Between the portion of the ends of the yokes seated in the grooves *c* of the holder and the shoulders *f* of the same the yokes rest in and against the channeled inner side of lugs *g g*, projecting downward from the under side of the holder, so that their channeled inner edges aline with grooves *c*.

This valve is seated in a bushing G, which is screwed into the restricted opening of the well-pipe H at the point therein where the said valve is located, and when forced down into place the yokes spring inward as they pass through the valve-opening in the bushing and then spring outward to their original position again when below the same. The spread of the shoulders of the yokes is such that they catch under the edge of the restricted opening of the bushing, and it takes more than the ordinary lift to remove the valve from its seat. In order to prevent the valve from tipping to one side when in action, the outer edges of lugs *g g* are preferably advanced slightly beyond the circumference of the body of the yoke-holder and are made perpendicular or parallel to the axis of the valve.

What I claim as new is—

1. A puppet-valve comprising a suitable plate having a stud projecting centrally downward therefrom; a centrally-perforated yoke-holder secured thereto; and yokes the

ends of which are secured between said stud and said holder.

2. A puppet-valve comprising a suitable plate having a stud projecting centrally downward therefrom; a yoke-holder secured thereto having a central opening therein which is provided with a series of grooves in its edges substantially parallel to the axis thereof; and yokes the ends of which are seated in said grooves and confined therein by said stud.

3. A puppet-valve comprising a suitable plate having a hollow stud projecting centrally downward therefrom; the lower edges of which are spread; a centrally-perforated yoke-holder secured thereto; and yokes the ends of which are secured between said stud and said holder.

4. A puppet-valve comprising a suitable plate having a hollow stud projecting centrally downward therefrom the lower edges of which are spread; a yoke-holder secured thereto having a central opening therein which is provided with a series of grooves in its edges substantially parallel to the axis thereof; and yokes the ends of which are seated in said grooves and confined therein by said stud.

5. A puppet-valve comprising a suitable plate having a stud projecting centrally downward therefrom; a centrally-perforated yoke-holder secured thereto having its upper portion stepped to a less diameter; a packing seated in said reduced portion and clamped between said holder and plate; and yokes the ends of which are secured between said stud and said holder.

6. A puppet-valve comprising a suitable plate having a stud projecting centrally downward therefrom; a yoke-holder secured thereto having a central opening therein which is provided with a series of grooves in its edges substantially parallel to the axis thereof, and having its upper portion stepped to a less diameter; a packing-ring seated in said reduced portion and clamped between said holder and plate; and yokes the ends of which are seated in said grooves and confined therein by said stud.

7. A puppet-valve comprising a suitable plate having a stud projecting centrally downward therefrom; a centrally-perforated yoke-holder secured thereto; and heart-shaped yokes the ends of which extend inward and upward from the shoulders of the yoke and have their extremities bent outward away from each other and are secured between said stud and said holder.

8. A puppet-valve comprising a suitable plate having a stud projecting centrally downward therefrom; a yoke-holder secured thereto having a central opening therein which is provided with a series of grooves in its edges substantially parallel to the axis thereof; and heart-shaped yokes the ends of

which extend inward and upward from the shoulders of the yoke and have their extremities bent outward away from each other and are seated in said grooves and confined therein by said studs.

9. A puppet-valve comprising a suitable plate having a stud projecting centrally downward therefrom; a centrally-perforated yoke-holder secured thereto having its upper portion stepped to a less diameter; a packing-ring seated in said reduced portion and clamped between said holder and plate; and heart-shaped yokes the ends of which extend inward and upward from the shoulders of the yoke and have their extremities bent outward away from each other and are secured between said stud and said holder.

10. A puppet-valve comprising a suitable plate having a stud projecting centrally downward therefrom; a yoke-holder secured thereto having a central opening therein which is provided with a series of grooves in its edges substantially parallel to the axis thereof, and having its upper portion stepped to a less diameter; a packing-ring seated in said reduced portion and clamped between said holder and plate; and heart-shaped yokes the ends of which extend inward and upward from the shoulders of the yoke and have their extremities bent outward away from each other and are seated in said grooves and confined therein by said stud.

11. A puppet-valve comprising a suitable plate having a stud projecting downward centrally therefrom; a centrally-perforated yoke-holder having a series of lugs projecting downward therefrom the outer edges of which are parallel to the axis of the holder; and yokes the ends of which are secured between said stud and said holder.

12. A puppet-valve comprising a suitable plate having a stud projecting downward centrally therefrom; a centrally-perforated yoke-holder having a series of lugs projecting downward therefrom the outer edges of which are advanced beyond the circumference of and are parallel to the axis of the holder; and yokes the ends of which are secured between said stud and said holder.

13. A puppet-valve comprising a suitable plate having a stud projecting downward centrally therefrom; a centrally-perforated yoke-holder having a series of lugs projecting downward therefrom the outer edges of which are parallel to the axis of the holder and the inner edges of which are channeled; and yokes the ends of which are secured between said stud and said holder.

14. A puppet-valve comprising a suitable plate having a stud projecting downward centrally therefrom; a centrally-perforated yoke-holder having a series of lugs projecting downward therefrom the outer edges of which are advanced beyond the circumference of and are parallel to the axis of the

holder and the inner edges of which are channeled; and yokes the ends of which are secured between said stud and said holder.

15. A puppet-valve comprising a suitable
5 plate having a stud projecting downward centrally therefrom; a yoke-holder secured thereto having a central opening therein which is provided with a series of grooves in its edges substantially parallel to the axis
10 thereof; and having a series of lugs projecting downward therefrom the inner edges of

which are channeled and aline with said grooves; and yokes the ends of which are seated in said grooves and channeled edges, and confined therein by said stud.

In testimony whereof I have hereunto set my hand this 30th day of September, A. D. 1904.

TIMOTHY STEBBINS.

Witnesses:

S. B. LAFFERTY,

FRANK D. THOMASON.