No. 685,438. Patented Oct. 29, 1901.

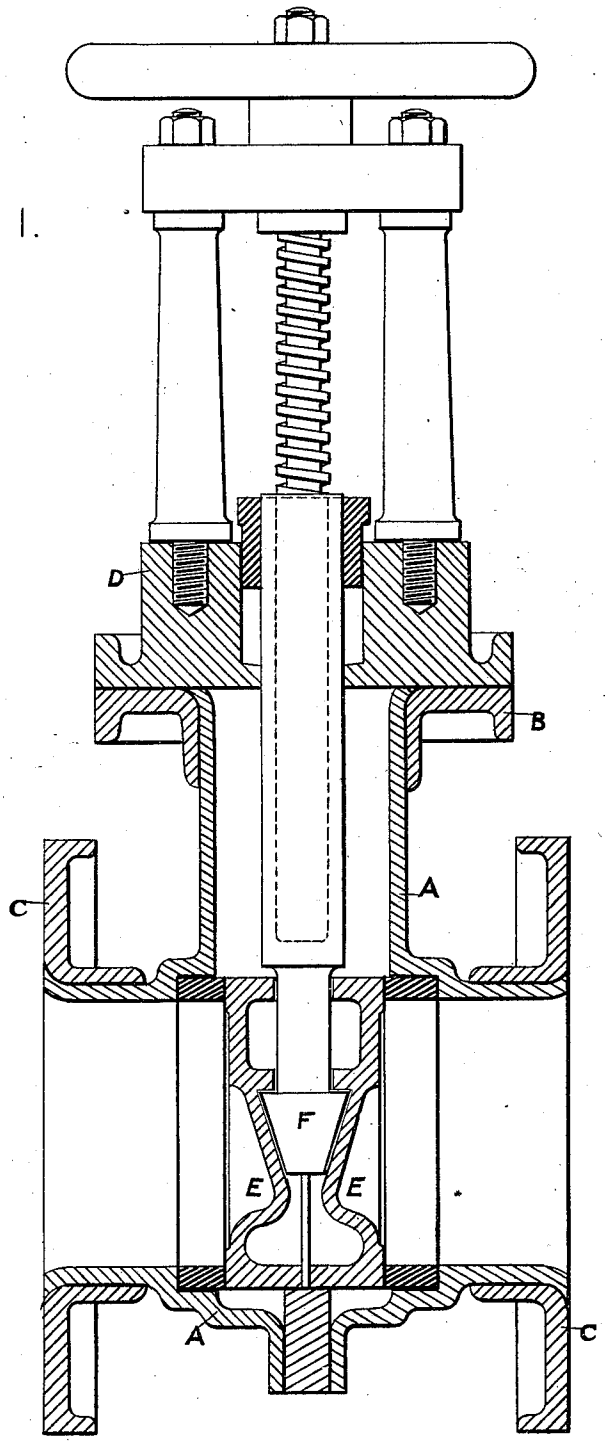
S. WARBURTON.

VALVE.

(Application filed June 3, 1901.)

(No Model.) 4 Sheets—Sheet 1.

FIG. 1.



WITNESSES:

Allan Bennett.
Samuel Jackson.

INVENTOR:

Silvester Warburton

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 685,438. Patented Oct. 29, 1901.

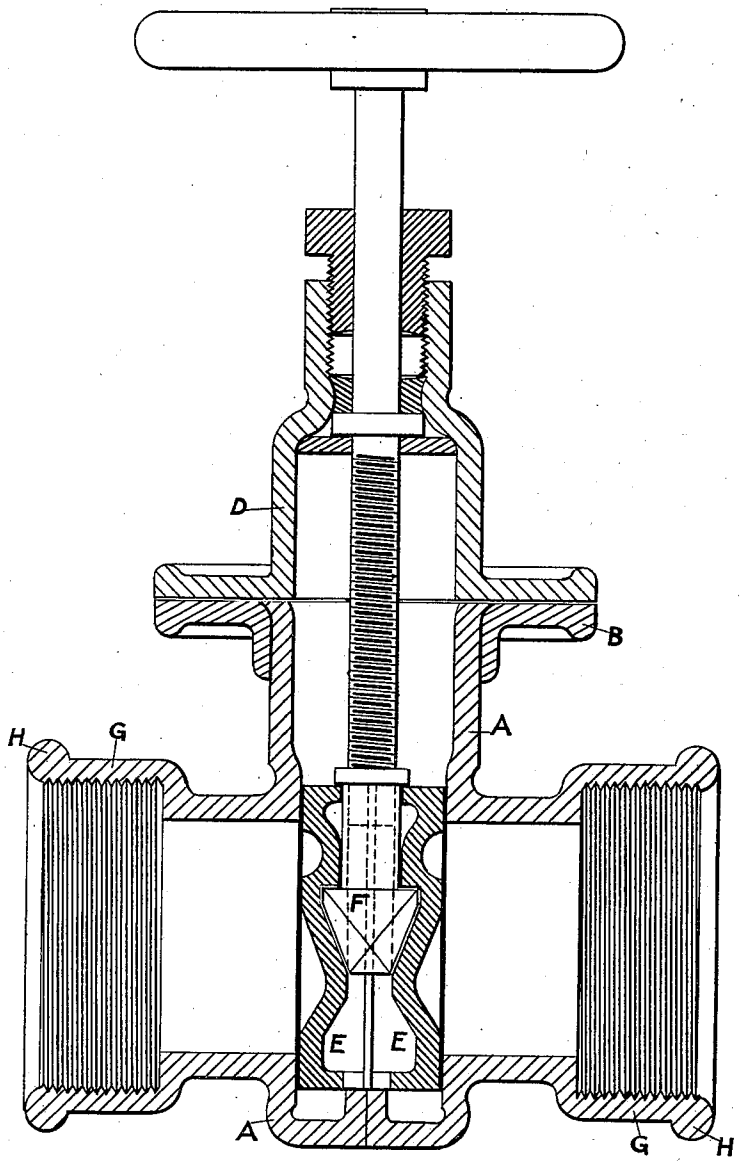
S. WARBURTON.

VALVE.

(Application filed June 3, 1901.)

(No Model.) 4 Sheets—Sheet 2.

FIG. 2.



WITNESSES:

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No. 685,438. Patented Oct. 29, 1901.

S. WARBURTON.

VALVE.

(Application filed June 3, 1901.)

(No Model.) 4 Sheets—Sheet 3.

FIG. 3.

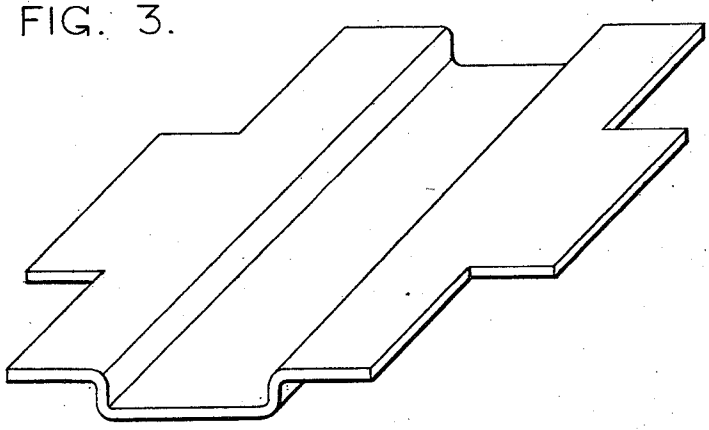


FIG. 4.

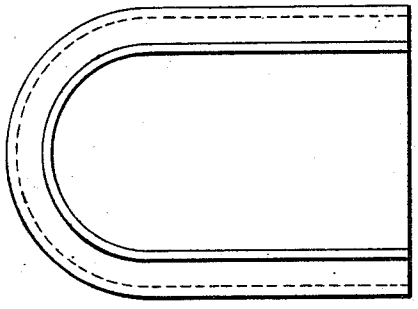


FIG. 5.

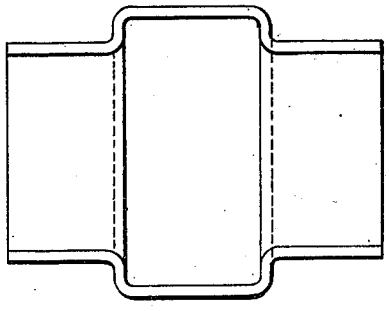


FIG. 6.

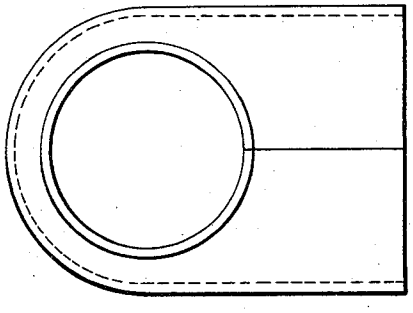
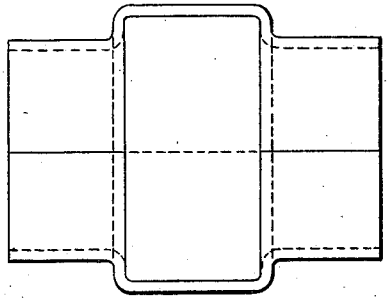


FIG. 7.



WITNESSES:

Allan Bennett.
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INVENTOR:

Silvester Warburton.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 685,438. Patented Oct. 29, 1901.

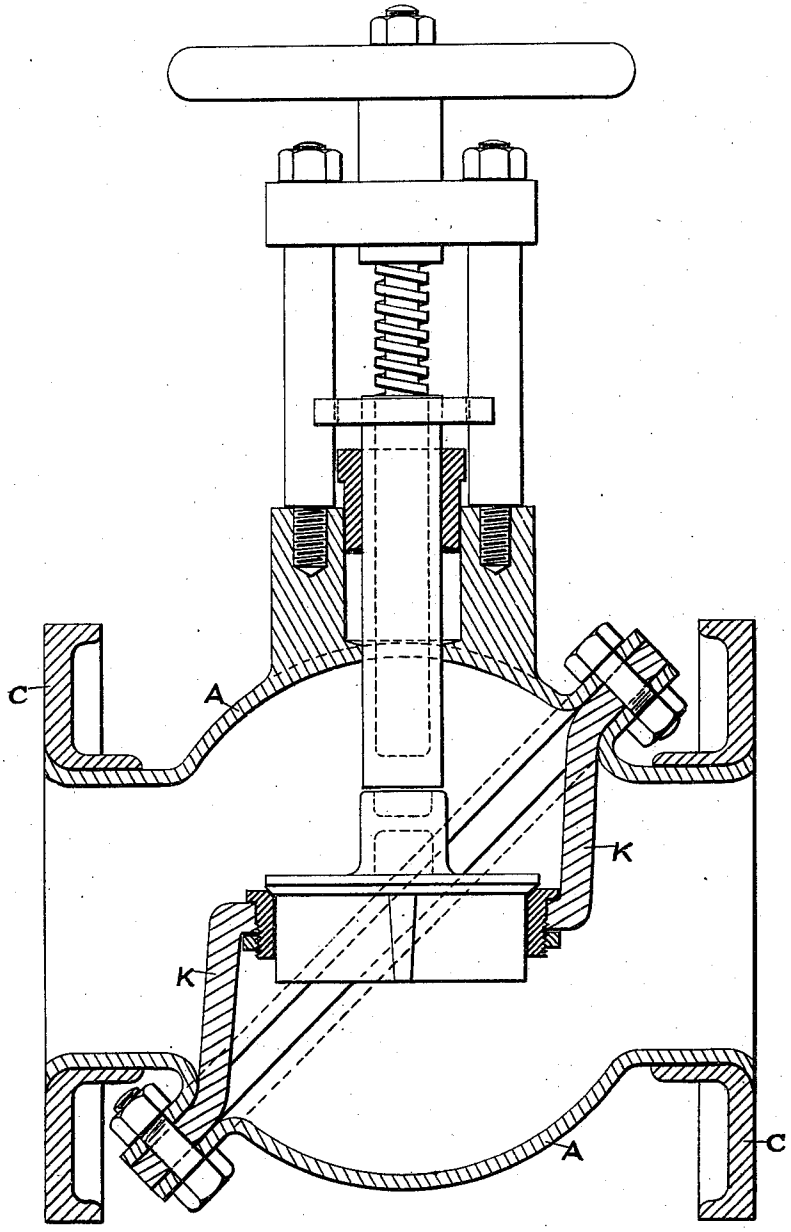
S. WARBURTON.

VALVE.

(Application filed June 3, 1901.)

(No Model.) 4 Sheets—Sheet 4.

FIG. 8.



WITNESSES:

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No. 685,440. Patented Oct. 29, 1901.

A. CAMPBELL.

COTTON HARVESTER.

(Application filed Apr. 15, 1901.)

(No Model.) 9 Sheets—Sheet 1.

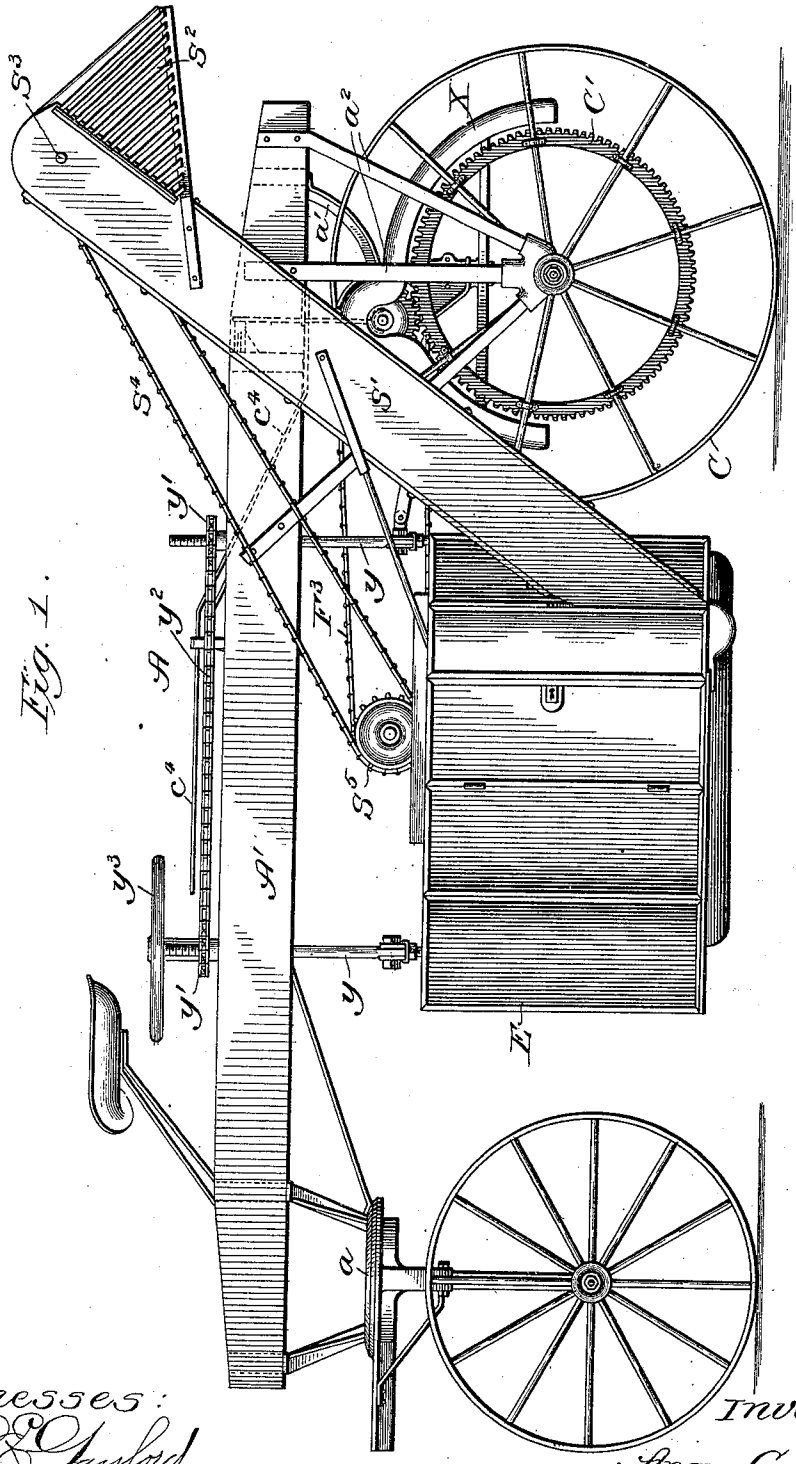


Fig. 1.

Witnesses:
Chas. E. Gaylord,
John Enders, Jr.

Inventor:
Angus Campbell,
By Dyrenforth, Dyrenforth & Lee,
Att'ys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

SILVESTER WARBURTON, OF LEEDS, ENGLAND.

VALVE.

SPECIFICATION forming part of Letters Patent No. 685,438, dated October 29, 1901.

Application filed June 3, 1901. Serial No. 62,897. (No model.)

To all whom it may concern:

Be it known that I, SILVESTER WARBURTON, a subject of the King of Great Britain and Ireland, residing at Leeds, in the county of York, England, have invented new and useful Improvements in Valves, of which the following is a specification.

My invention relates to high-pressure valves, the object being to construct such valves in such a manner as to be lighter and stronger than the valves hitherto used.

According to my invention the valves or certain parts of the valves are stamped or pressed in dies of suitable shapes (or rolled) from sheet or other metals either as a whole or in parts, as required.

My invention is illustrated in the accompanying drawings, in which—

Figures 1 and 2 are sectional elevations showing two forms of full-way steam-valves constructed in accordance with my invention. Figs. 3, 4, 5, 6, and 7 are detail views showing the various stages in the construction of a small valve body or casing in one piece in accordance with my invention, and Fig. 8 is a sectional elevation of a globe-valve constructed in accordance with my invention.

Similar parts are indicated by similar letters of reference throughout the several views.

In making full-way valves, Fig. 1, the body or casing is pressed or stamped in halves or sections A A, and the top flange B and pipe-flanges C C are separately pressed to the required shapes, the several parts being riveted, brazed, or welded in position to form the valve-body as a whole. The top or cover D is also pressed or stamped to a suitable form and may be screwed or otherwise attached to the body. The disks or valves E E are also pressed of a suitable shape for the wedge F or for a spring to bear on their surfaces; or a full-way valve may be made, Fig. 2, by pressing or stamping the body or casing, as before described, but with socket ends in place of pipe-flanges, the socket-enlargements G G and strengthening-beads H H being formed with suitable tools by the spinning process.

In small valves the body or casing instead of being made in sections A A, as before described, may be made in one piece, Figs. 3 to 7, from strips of metal rolled of a suitable section. These strips are cut in lengths and are then stamped to the shape required, Fig. 3. They are then bent, as shown in Figs. 4 and 5, and afterward pressed to form the valve-body, as shown in Figs. 6 and 7. The pipe-flanges C C or the screwed or socket ends G G are then formed separately and attached by riveting, brazing, or welding, or the said rolled strips may be stamped of such a shape as to form in one piece (after being bent and pressed, as before described) a body or casing with socket ends. A top flange B may be fixed as before described or the top of the body or casing may be threaded to receive a screwed cap.

In making globe-valves, Fig. 8, the body or casing is pressed or stamped in halves or sections A A, which are jointed obliquely, as shown, and a suitably-shaped center piece K (stamped for the valve-seat) is inserted and bolted, riveted, or welded in position. The pipe-flanges C C are then also riveted, brazed, or welded to the body or casing, as before described. In this valve by altering the relative positions of the two halves or sections A A an angle-valve may be formed.

In constructing my improved valves all the parts may be made from sheet metals or stampings; but I preferably employ stampings or pressings for certain parts, as hereinbefore described, in combination with castings or forgings. I do not, however, confine myself to the particular shapes or forms of valve shown and described, as my invention is equally applicable to other forms of valve; but

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

1. In a valve, the combination, with a body portion comprising two pressed-metal parts which are separable at the middle part of the valve, each said part having a pipe branch formed integral with it, of means for securing the said parts together, substantially as set forth.

2. In a valve, the combination, with a body portion comprising two pressed-metal parts which are separable at the middle part of the valve, each said part having a pipe branch

formed integral with it, of a valve-seat portion provided with a supporting-plate interposed between the said parts of the body, and means for securing the said parts of the body together and clamping the said plate between them, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SILVESTER WARBURTON.

Witnesses:
ALLAN BENNETT,
SAMUEL JACKSON.