

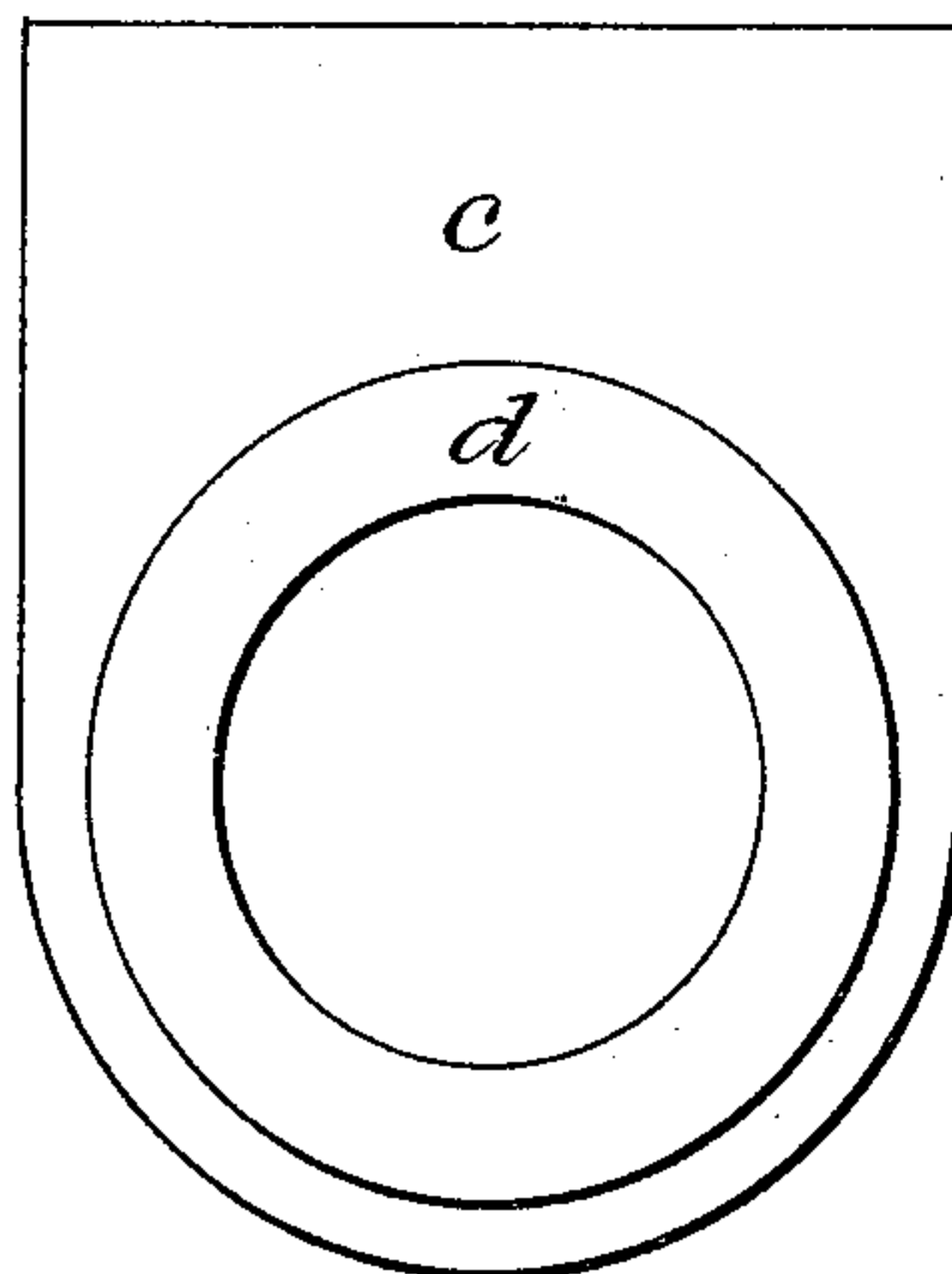
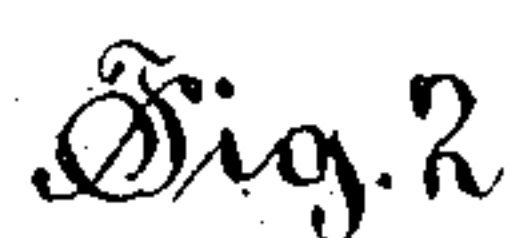
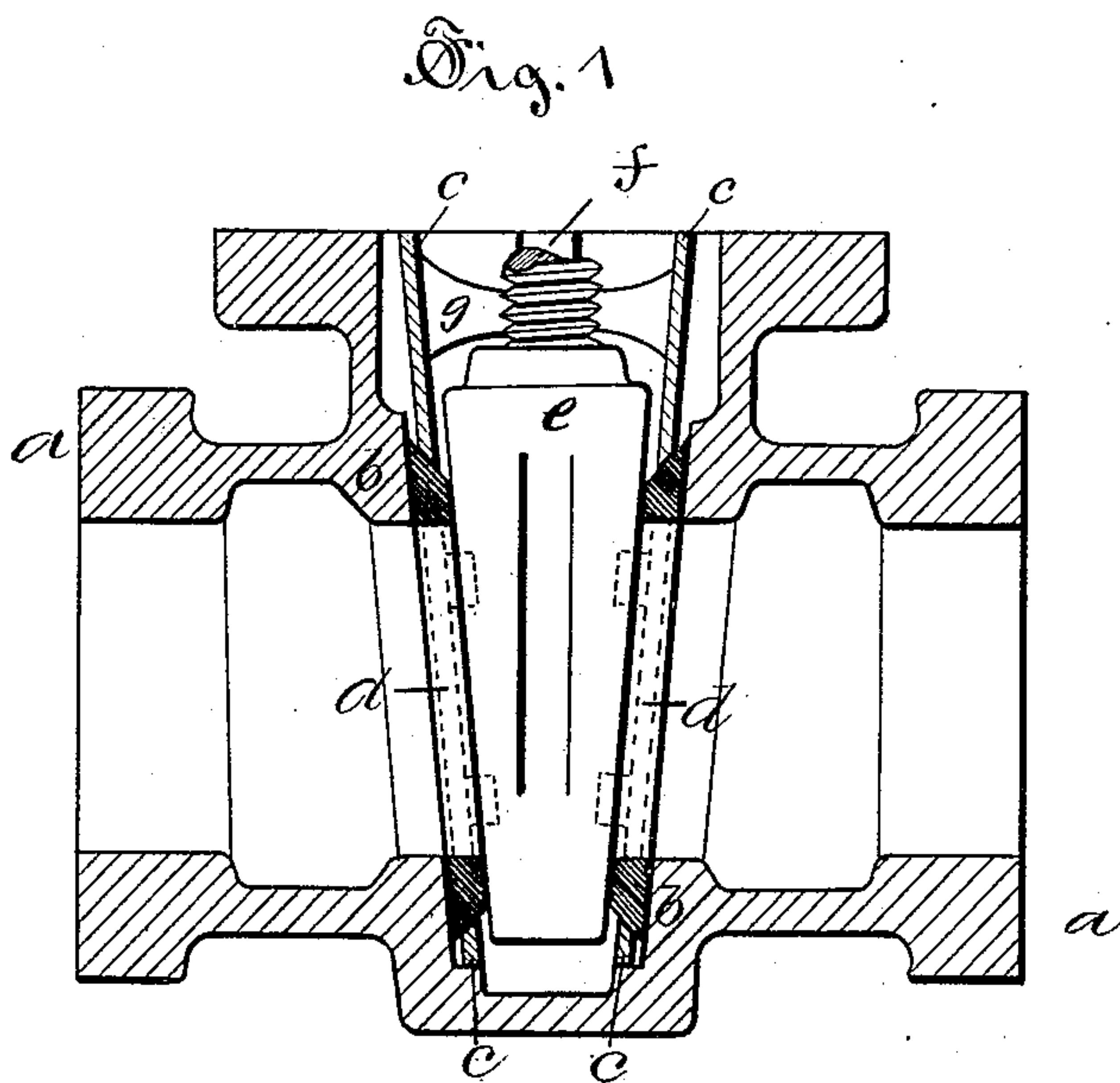
(No Model.)

R. N. PRATT.

VALVE.

No. 397,751.

Patented Feb. 12, 1889.



Witnesses:

Albert H. Walker.

Albert W. Roberts

Inventor,

Rufus M. Pratt, by

Harry P. Williams.

Attorney.

UNITED STATES PATENT OFFICE.

RUFUS N. PRATT, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE PRATT
& CADY COMPANY, OF SAME PLACE.

VALVE.

SPECIFICATION forming part of Letters Patent No. 397,751, dated February 12, 1889.

Application filed July 7, 1888. Serial No. 279,334. (No model.)

To all whom it may concern:

Be it known that I, RUFUS N. PRATT, of Hartford, Connecticut, have invented a certain new and useful Improvement in Valves, of which the following is a specification.

My improvement relates to the valve described and claimed in United States Letters Patent granted to Jonathan C. Meloon April 6, 1875.

The object of the improvement is to provide renewable seats for the said valve which shall make tight joints between the wedge and body, which are cheaper and more durable, easily renewable, and which obviate the necessity of grinding the parts to a perfect fit, thus simplifying the construction and reducing the cost of the valve and the expense of keeping it tight, at the same time increasing its durability and efficiency; and the improvement consists in providing a valve of said class with renewable seats, each of which consists of a thin metallic plate supporting a non-metallic ring that is thicker than the plate.

Referring to the drawings, Figure 1 is a view in central vertical longitudinal section of the body of the valve with my renewable seats in place. Fig. 2 is a view in central section of one of the renewable seats. Fig. 3 is a face view of the same.

In the above views, *a* represents the body of the valve, which is of common form and construction, with the inclined seat-faces *b*.

c denotes the ring-holder, of which there are two, one lying against each of the seat-faces *b* on the body and loosely held there by lugs formed on the body or by setting into a groove formed in the body. Openings are made through these ring-holders somewhat larger than the port-openings of the valve, the walls of which openings are beveled outward, and in these openings are loosely placed the elastic valve-rings *d*, which are rings formed, preferably, of fibrous asbestos and rubber gum intimately mixed and partially vulcanized under heat and pressure in molds, which forms an inexpensive and durable elastic ring that will fit the opening in the ring-holders without specially grinding the parts to a fit. The asbestos in this case takes the

wear of the parts, while the elasticity of the gum which binds the asbestos allows it to crush out and tightly pack the joints. These rings *d* are somewhat thicker than the ring-holders and lie loosely against the seat-faces *b* on the body and project inward to bear against the smooth faces of the wedge-shaped gate *e* when the latter is forced down to close the ports, which is done by any ordinary means. The faces of the gate are formed on about the same angle as the seat-faces *b* on the body; but neither of them is required to be ground to a perfect fit or be exactly on the same angle as is required and set out in the above-mentioned Meloon patent, as the gate makes a joint with the elastic rings, which in turn seat themselves against the seat-faces *b* on the body, and, being loosely held in the holders *c* and having beveled edges that conform to the beveled edges of the walls of the opening in the holder, are permitted a slight sliding motion and adjust themselves to any difference of angle of the parts, while the elasticity of the rings allows for any unevenness of the parts.

The ring-holders *c* are thin pieces of metal rolled or stamped to shape, and, as they take no part in forming the joint, are not required to be ground, as are the disks of the before-mentioned Meloon device.

When one of my seats becomes worn, all that is necessary is to remove the holder and substitute a new ring for the worn one, which rings are of cheap construction, and as they do not require special fitting or grinding to fit the parts the change can be made immediately and without delay that would be required in grinding the parts described in the said Meloon patent, which delay is undesirable and inconvenient, many times requiring an establishment to shut down for some considerable time, while with my seats the valve may be resealed without delay.

If it is desired, instead of setting the ring-holders back of lugs formed on the body of the valve, wings *g* may be bent from the edges of the holders at right angles, which abut against the sides of the gate-guide *f* to keep the seat-holders in place.

I am aware that it is not new to loosely sup-

55

60

65

70

75

80

85

90

95

100

port a ring between the seat-faces on the body of a valve and its gate, and such I do not broadly claim.

I claim as my invention—

- 5 In combination with the herein-described valve, thin metallic plates, each provided with an opening larger than the port-opening in the body, the walls of said opening being bev-

eled outwardly, and a non-metallic ring thicker than the plate loosely placed in the opening, so substantially as described.

RUFUS N. PRATT.

Witnesses:

HATTIE G. PRATT,
HARRY R. WILLIAMS.