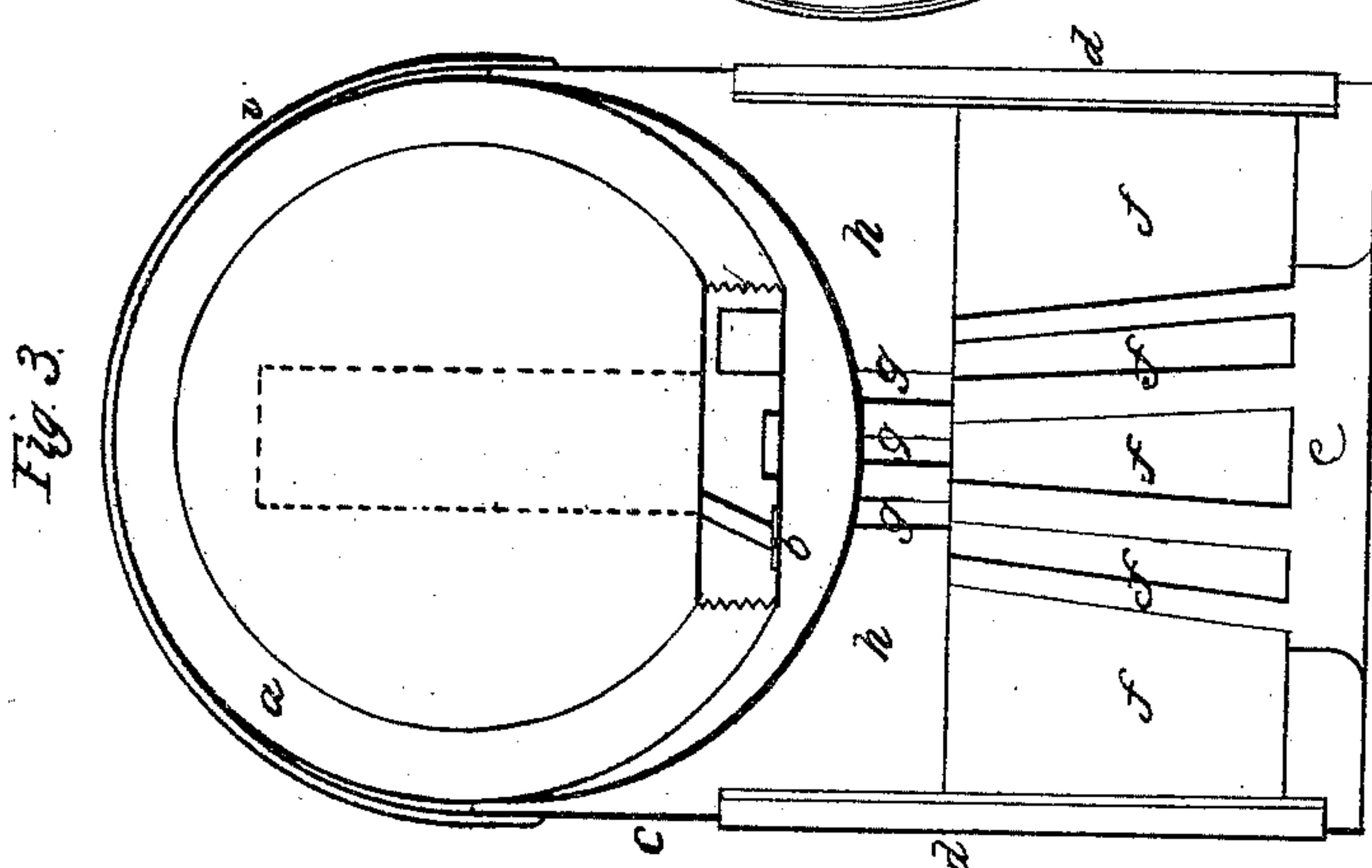
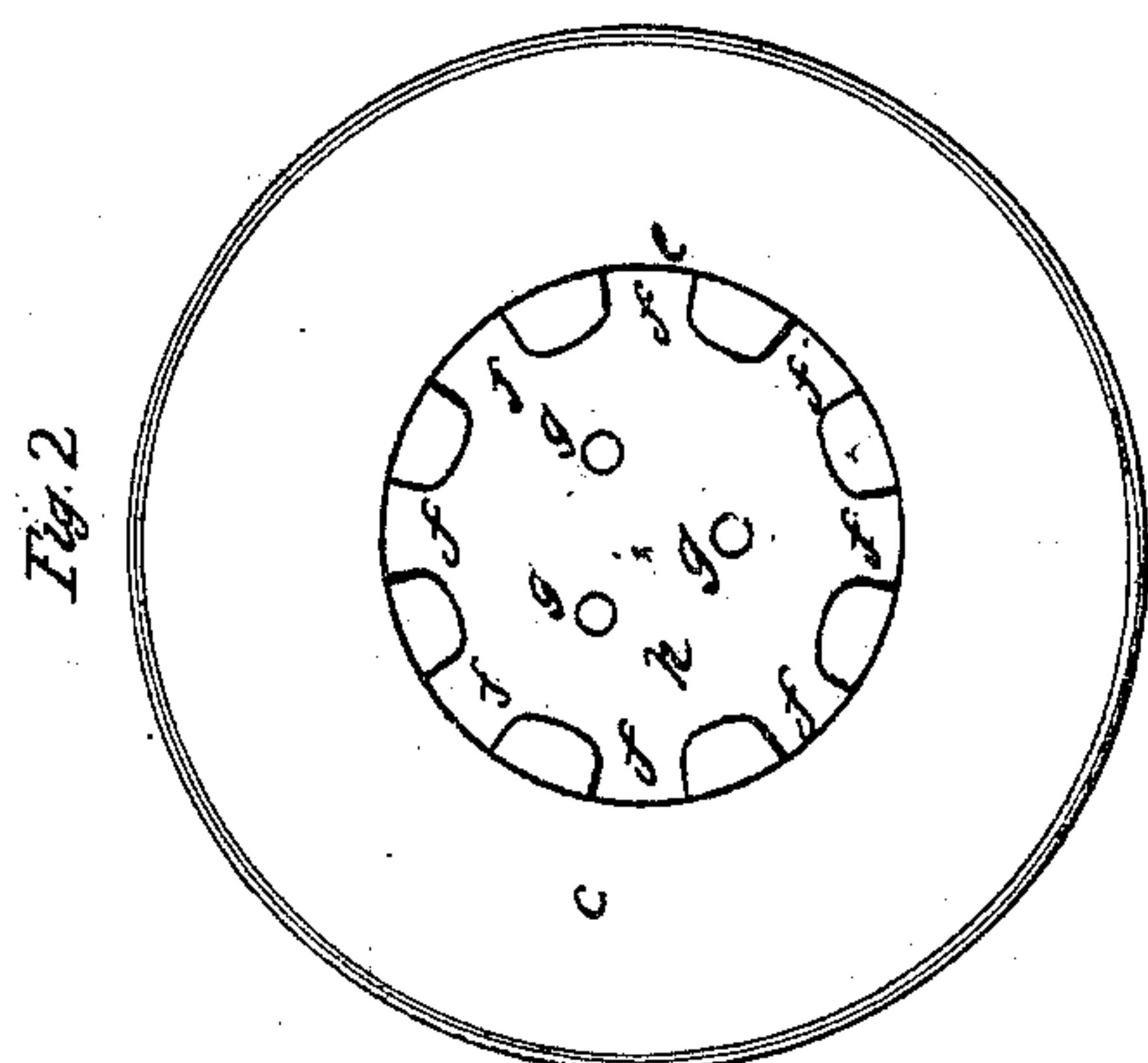
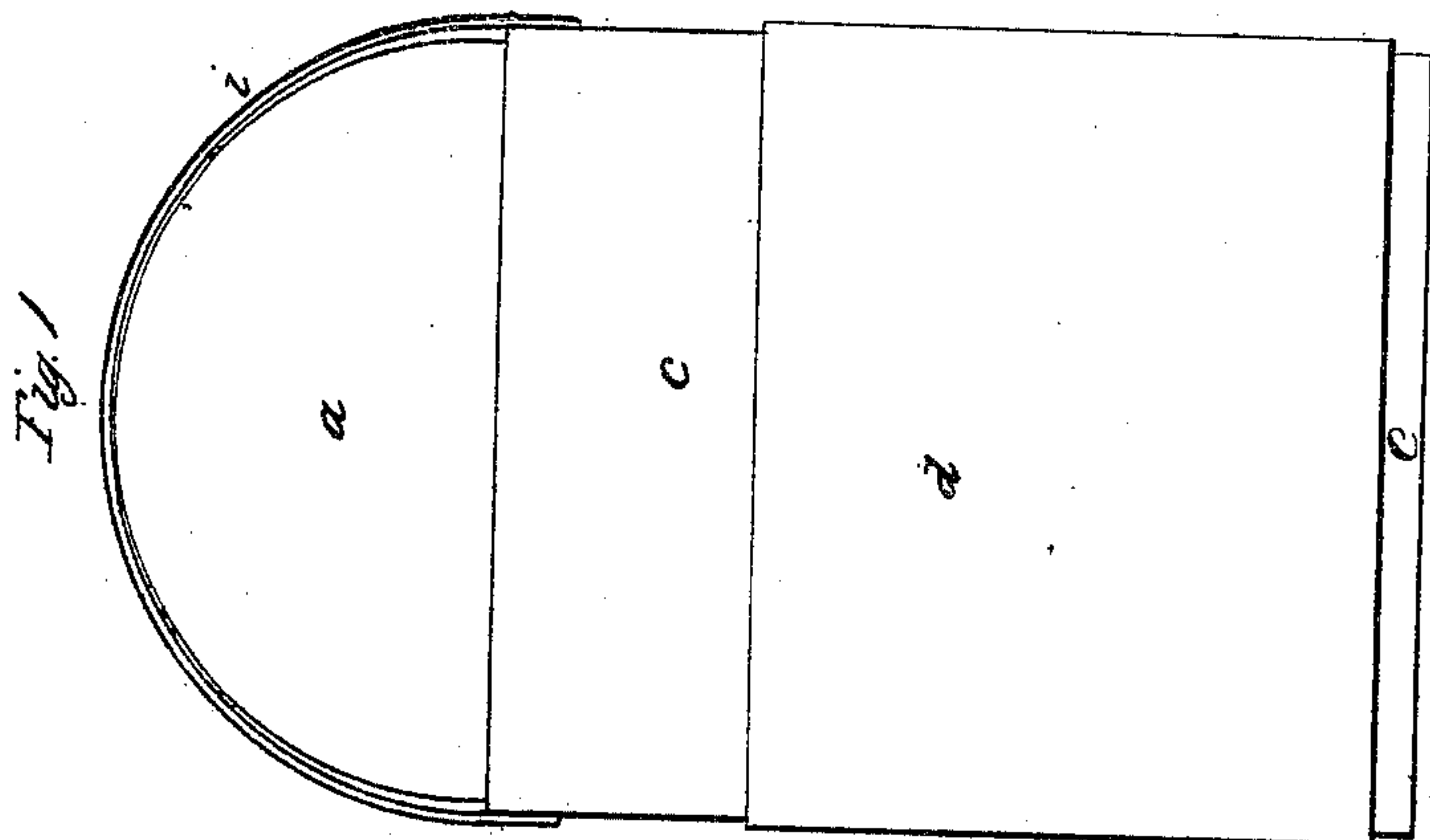


C. T. JAMES.
Projectile.

No. 34,965.

Patented Apr. 15, 1862.



Witnesses:

A. de la Haye
Wm H. Pinckney

Inventor.

C. T. James

UNITED STATES PATENT OFFICE.

CHARLES T. JAMES, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN SABOTS FOR EXPLOSIVE SHELLS.

Specification forming part of Letters Patent No. **34,965**, dated April 15, 1862.

To all whom it may concern:

Be it known that I, CHARLES T. JAMES, of Providence, in the State of Rhode Island, have invented a new and useful Improvement in Projectiles; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation, Fig. 2 an elevation of the rear end, and Fig. 3 a longitudinal section.

The same letters indicate like parts in all the figures.

My said invention relates to an improvement by which shells, as heretofore made of a spherical form and with a fuse which is ignited by the explosion of the charge of powder by which they are fired, can be discharged from rifled cannon and a rotary motion imparted to them. For this purpose I make a projectile with packing to be expanded outward against the bore of the gun, and into the grooves thereof by the force of the gases evolved by the firing of the charge. The forward end thereof is made with a concavity to receive the spherical shell with its fuse, and with a hinged bail or equivalent means for securing the shell in the said concavity, and the said concavity is made to communicate by a suitable hole or holes passing through to the rear end with the charge of powder in the gun, so that when fired it shall ignite the fuse of the shell at the same time that the packing is expanded into the grooves of the gun to impart the rotary motion so essential to accuracy of shooting.

In the accompanying drawings, *a* represents a spherical shell, of the usual construction, with a fuse *b*, and inserted in a cavity in the forward end of what may be termed the "case" *c*. The form of the bottom of this cavity is such as to leave sufficient space for the fuse *b*. The case is cylindrical and formed with a broad groove on its periphery for the reception of an expansible packing ring or hoop *d* on the plan described in Letters Patent granted to me and bearing date the 26th

day of February, 1856, or constructed in any other suitable manner. The rear end of this case is hollow, as at *e*, and there are ducts or passages *f* extending to the inner periphery of the packing ring or hoop *d*, so that the force of the discharge may act on the inside thereof to expand it against the bore of the cannon and into the rifled grooves thereof, to impart the required rotary motion to the case and by the case to the shell in the forward end.

Holes *g* are made through the partition *h*, which separates the cavity for the shell from the hollow part *e* at the rear end, so that the fire of the charge may pass through to ignite the fuse of the shell by the act of firing.

The forward end of the case is provided with a hinged bail *i* to secure the shell in the cavity of the case, and I prefer to make the cavity so that it shall hug the periphery of the shell and the bail so tight, when turned over the shell, that when the case is rotated by the grooves of the gun it shall impart such motion to the shell; but other and equivalent modes of holding the shell in the cavity may be substituted.

Although I prefer the above-described mode of making the case with expansible packing, I do not wish to be understood as limiting my claim thereto, as other and equivalent packing may be substituted.

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

A case for firing spherical shells, which case is formed with a cavity in the forward end for receiving and holding the shell, and provided with expansible packing on its periphery to be expanded by the force of the discharge, in combination with a hole or holes or equivalent passage through from the cavity for the shell to and through the rear end, all substantially as and for the purpose described.

CHAS. T. JAMES.

Witnesses:

A. DE LACY,
WM. H. BISHOP.