

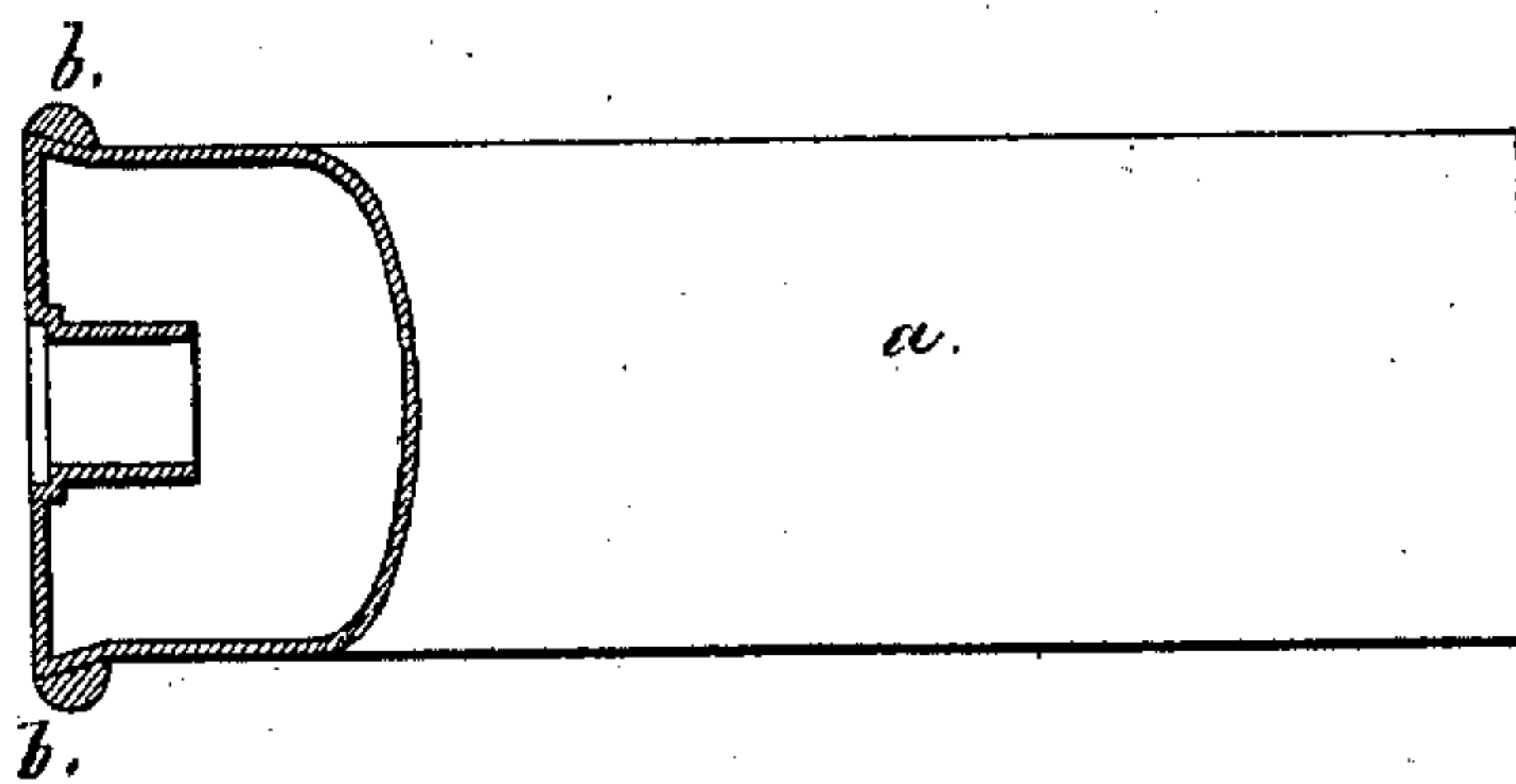
I. M. MILBANK.

Improvement in Cartridges for Fire-Arms.

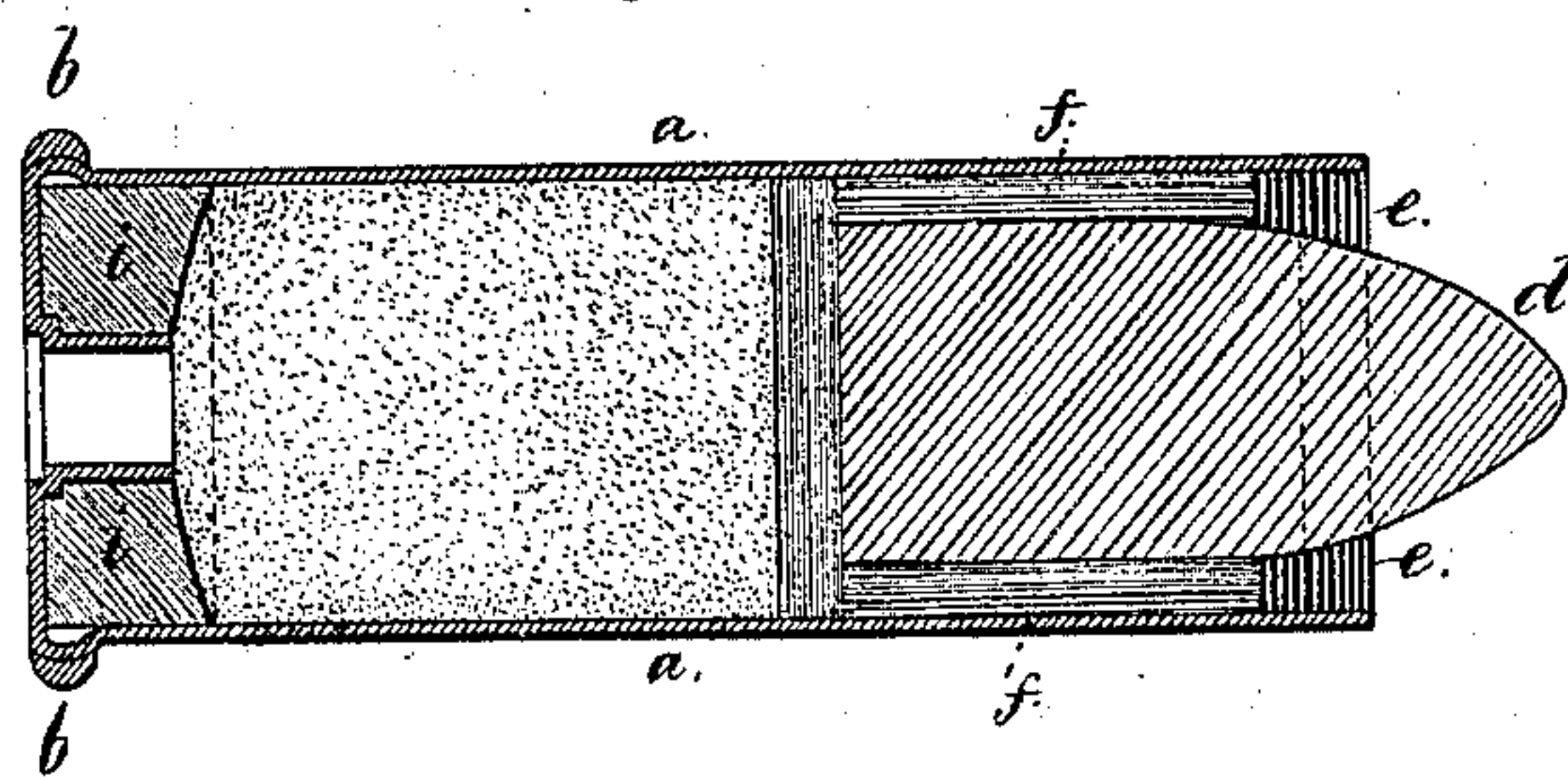
No. 131,016.

Patented Sep. 3, 1872.

*Fig. 2.*



*Fig. 1.*



Witnesses

Chas. H. Smith

Geo. A. Malver

Isaac M. Milbank,

Lemuel M. Serrell

Attys.

# UNITED STATES PATENT OFFICE.

· ISAAC M. MILBANK, OF GREENFIELD HILL, CONNECTICUT.

## IMPROVEMENT IN CARTRIDGES FOR FIRE-ARMS.

Specification forming part of Letters Patent No. **131,016**, dated September 3, 1872; antedated August 28, 1872.

*To all whom it may concern:*

Be it known that I, ISAAC M. MILBANK, of Greenfield Hill, in the county of Fairfield and State of Connecticut, have invented and made an Improvement in Cartridges for Fire-Arms; and the following is declared to be a correct description thereof.

In the manufacture of metallic cartridges it has heretofore been usual to make a flange around the base by a fold of the sheet metal. This is liable to crack and break, especially when fired with rapid powder. Separate metallic disks have been employed, and I have heretofore invented and made use of a ring soldered to the sheet-metal case near the angle of the cylinder and base, as in Letters Patent allowed to me February 6, 1872.

My present invention, as distinguished from those before employed, consists in a metallic ring applied around the cylindrical sheet-metal case contiguous to the base, and retained by a swell in the sheet metal, so as to render soldering unnecessary, and strengthen the case around the rear end, and furnish the means for drawing the cartridge-case out of the fire-arm.

In the drawing, Figure 1 is a longitudinal section of a cartridge complete, and Fig. 2 is a section of the case and ring in a slightly-different shape.

The cartridge-case *a* is made in the ordinary manner, but instead of the flange usually provided the ring *b* is slipped over the cylindrical portion of the case around the base and secured by spreading the metal into the concave or conical interior of the ring. This is effected by flattening the usual convex base after the ring has been applied around the cylinder, the ring *b*, as shown in Fig. 2, with a conical interior, and in Fig. 1 as concave or of a crescent shape sectionally. These different shapes of ring will all be secured by swelling or crimping the sheet metal. This can be done at the time the sheet metal of the base of the cartridge-case is flattened. The figures of the drawing are enlarged in size. The ball *d* is contained in a wooden cylinder, *f*, that is inserted within the sheet metal or other cartridge-case, and at the end of the wooden cylinder and around the point of the ball there are flat rings, *e*, of paper or similar material, saturated with tallow or other lubricating material, and these rings serve to lu-

bricate the barrel and lessen the friction of the cylinder and ball as they are projected.

If desired, a base of wood, paper-pulp, or other similar material may be introduced within the cartridge-case, and secured by the use of silicate of soda or soluble glass, as shown at *i*, Fig. 1.

If the wooden cylinder *f* is introduced entirely within the sheet-metal case *a* so that the end of such cylinder is below the edge of the case the lubricating-rings *e* can be inserted therein, or the space filled with beeswax or similar lubricating material; and I remark that I have discovered that when the wooden cylinder is entered entirely within the sheet-metal case the ball is more accurate in its flight, because the cartridge-case becomes a guide, as the ball and cylinder are ejected, to cause the wooden cylinder to enter the rifle-grooves with uniformity; besides this, the sheet-metal case being of a length to inclose the wooden cylinder entirely or nearly so, extends almost to the rear end of the rifling-grooves; hence there is not any opportunity for the wooden cylinder to move laterally in the chamber of the gun previously to entering said rifling-grooves, and the wad fitting the cartridge-case tightly prevents the gases extending forward and reaching the wooden cylinder; hence it is important that the cartridge-case should be as long as the chamber of the gun to prevent the gases passing by the wad and acting on the wooden cylinder as it leaves the cartridge-case and enters the rifling-grooves.

I claim as my invention—

1. The metallic cartridge-case in which the flange thereof is formed by a metallic ring of larger interior diameter than the case, secured around the cylindrical portion of the case, over the bend in the metal adjacent to the base, by the metal of the body of the case being spread into the conical or concave interior of the said ring, as set forth.

2. The rings *e*, saturated with lubricating material, in combination with the wooden cylinder and ball, as and for the purposes specified.

Signed by me this 20th day of October, A. D. 1871.

Witnesses:

I. M. MILBANK.

HAROLD SERRELL,

GEO. T. PINCKNEY.