

J. LOGAN & G. E. HART.  
Cartridges.

No. 142,924.

Patented September 16, 1873.

Fig. 1.

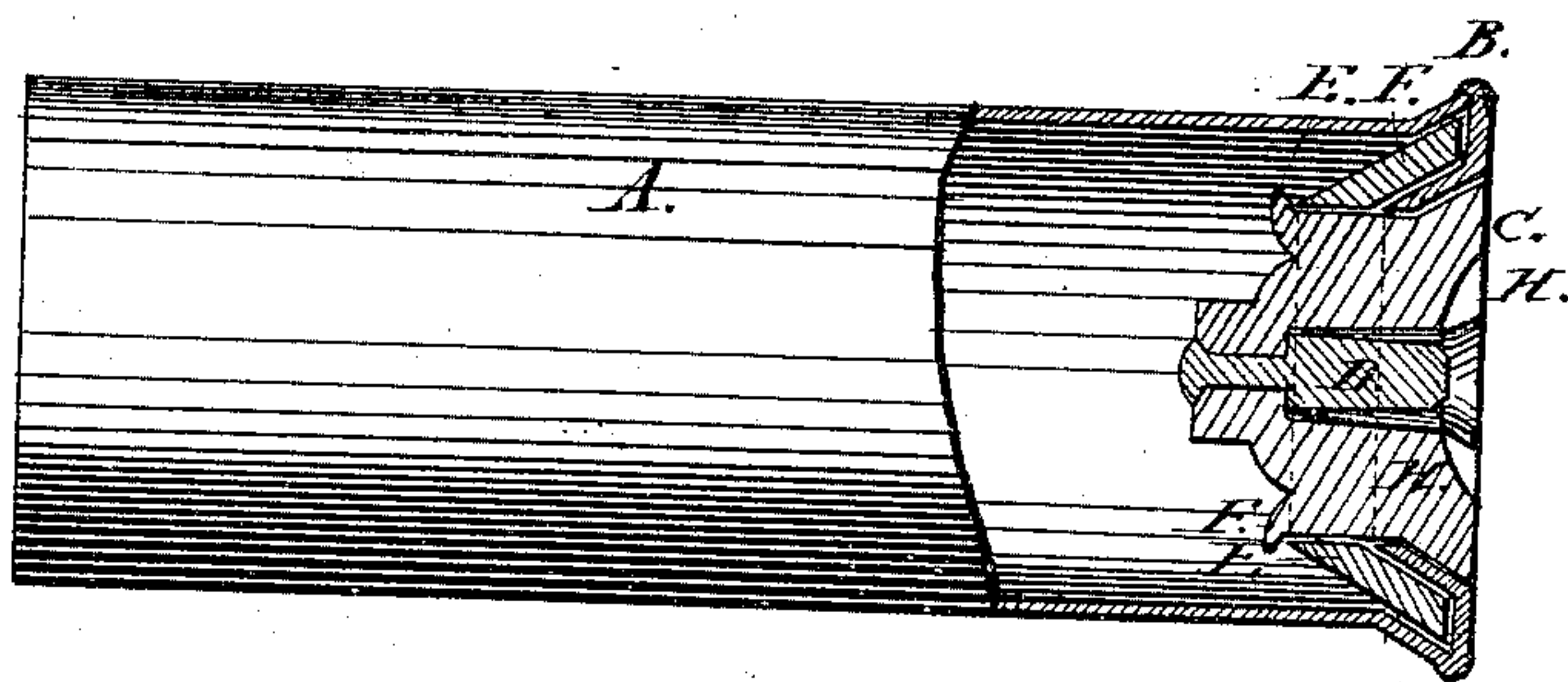
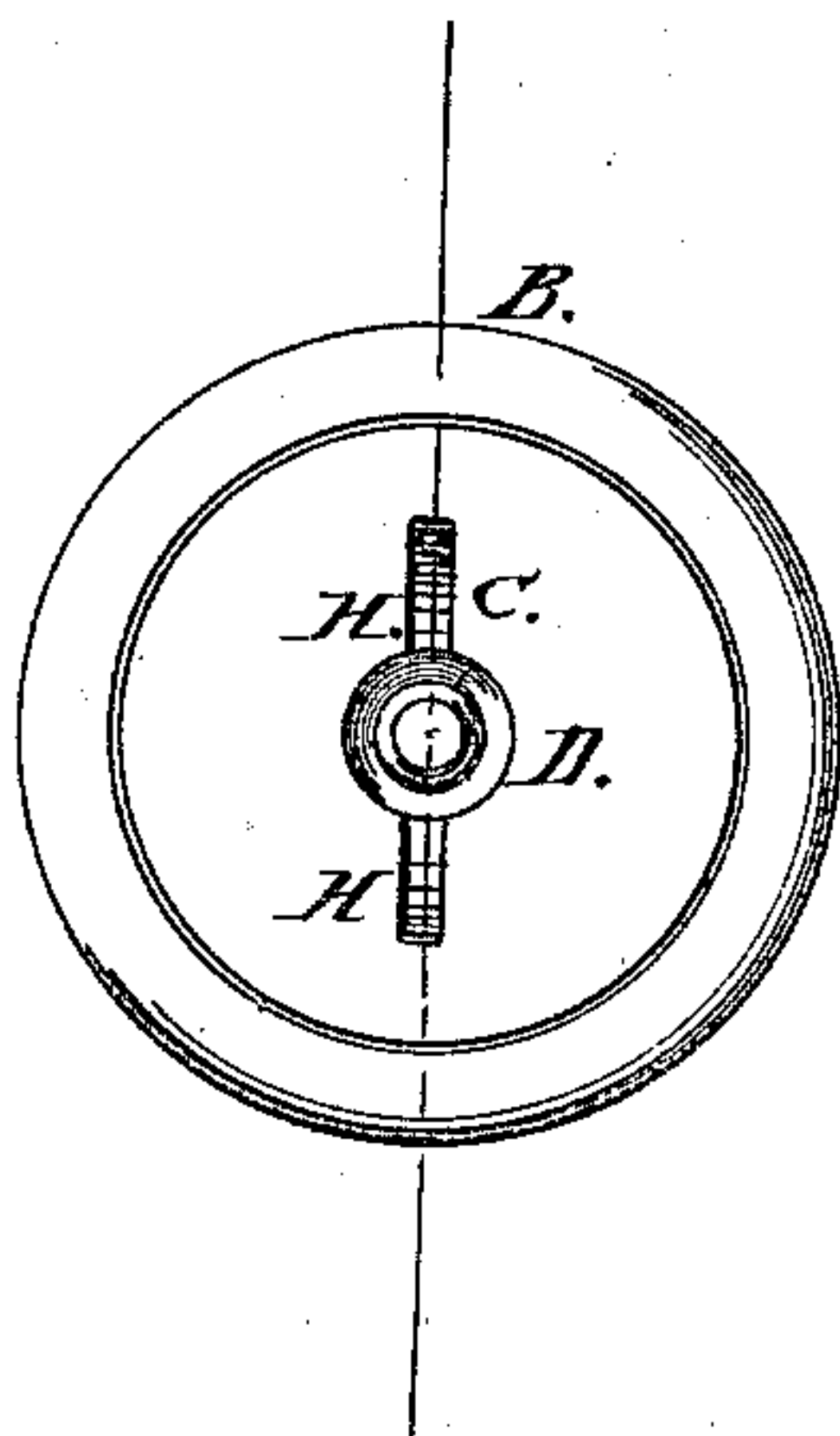


Fig. 2.



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# UNITED STATES PATENT OFFICE.

JOHN LOGAN, OF JERSEY CITY, AND GEORGE E. HART, OF NEWARK, N. J.

## IMPROVEMENT IN CARTRIDGES.

Specification forming part of Letters Patent No. **142,924**, dated September 16, 1873; application filed January 21, 1873.

*To all whom it may concern:*

Be it known that we, JOHN LOGAN, of Jersey City, county of Hudson, in the State of New Jersey, and GEORGE E. HART, of the city of Newark, in the county of Essex and State of New Jersey, have invented new and useful Improvements in Metallic Cartridge-Shells; and we do hereby declare that the following specification, taken in connection with the drawings furnished, is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same.

Our invention relates to improvements in cartridge-shells of the central-fire class, consisting chiefly in the assemblage and method of securing the parts together, as well as the formation of a furrow or recess across the center of the battery-cup, for the admission of an instrument for the purpose of removing the cap from the nipple when loaded or otherwise—a very desirable feature, as it enables the user to remove the cap, defective or otherwise, without removal of parts or unloading the shell.

Referring to the drawings, Figure 1 represents our improved shell with a part of its base cut away, exhibiting a sectional view of its parts. Fig. 2 represents a section of base, end view exhibiting battery-cup, groove, nipple, and slit or fire-passage.

To enable others skilled in the art to make and use our invention, we will describe in detail.

The cylinder part of the shell is made of suitable metal, generally brass, and in the usual manner. Referring to the drawings, it will be seen that the flange part of the shell, at its base, is depressed inwardly, thereby serving the double purpose of a seat for the base piece C, and to be engaged by the ring E within, when the parts are joined by riveting. To attain the greatest strength, the depression of the flange should be about an angle of forty-five degrees, as shown, although an angle varying from the above may be adopted. The base piece C, which is more clearly shown in Fig. 1, may be formed in dies, although it may be cast, and finished in the usual way. In diameter it should be made

to fit exactly the depressed opening or seat at the base of the shell, extending within sufficiently to admit of being riveted, or of turning its edge over the ring E, which is placed in position within. Thus the flange of the shell proper is firmly embraced within the base piece at its center. The battery-cup is formed by drilling, or otherwise, sufficiently to admit of a nipple or anvil, with suitable surrounding space to admit of an ordinary percussion cap. This nipple or anvil may be fixed or movable. Holes or slits extend through the base piece at opposite sides of the nipple from its base, at H, for the passage of fire from the cap to the charge within the shell. A groove or furrow is formed across the center of the battery-cup, of a width and depth suitable for the reception of a suitable instrument for extracting the cap while the shell is loaded or otherwise. (See Figs. 1 and 2, at H.) The ring E may be formed in dies, or otherwise, of dimensions suitable to enter the space between the flange and cylinder within, as shown in Fig. 1, its edge admitting of being closed over by the part of the base piece provided for that purpose. (Shown at F.)

I would remark, when the slits are dispensed with at the base of the nipple a hole may be provided through the latter for the fire-passage.

Having thus set forth our invention, what we claim as new, and desire to secure Letters Patent of the United States for, is—

1. The combination of the cylinder A, breech piece C, ring E, and nipple D, formed and secured together substantially as herein set forth.

2. The breech piece C, provided with a channel through the battery-cup and a nipple, D, in combination with the cylinder A and fastening-ring E, for the purposes specified.

In testimony that we claim the foregoing we have hereunto signed our names and affixed our seals before two subscribing witnesses this the 4th day of January, 1873.

JOHN LOGAN. [L. S.]  
GEO. E. HART. [L. S.]

Witnesses:

JOHN DANE, Jr.,  
MANUEL W. COOKE.