

(No Model.)

J. W. DENNIS.
RETAINER FOR GUN WADS.

No. 295,234.

Patented Mar. 18, 1884.

Fig. 1.

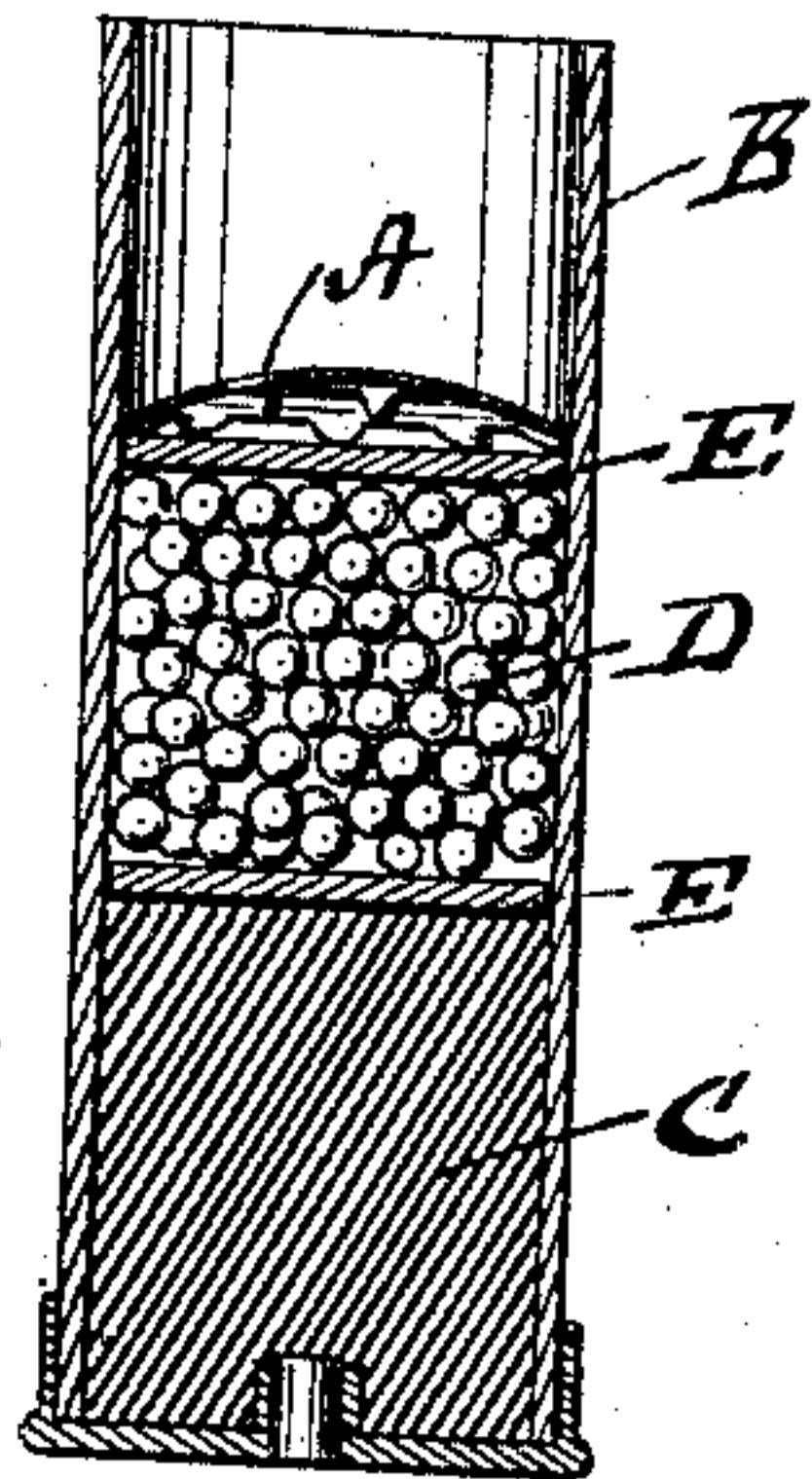


Fig. 2.

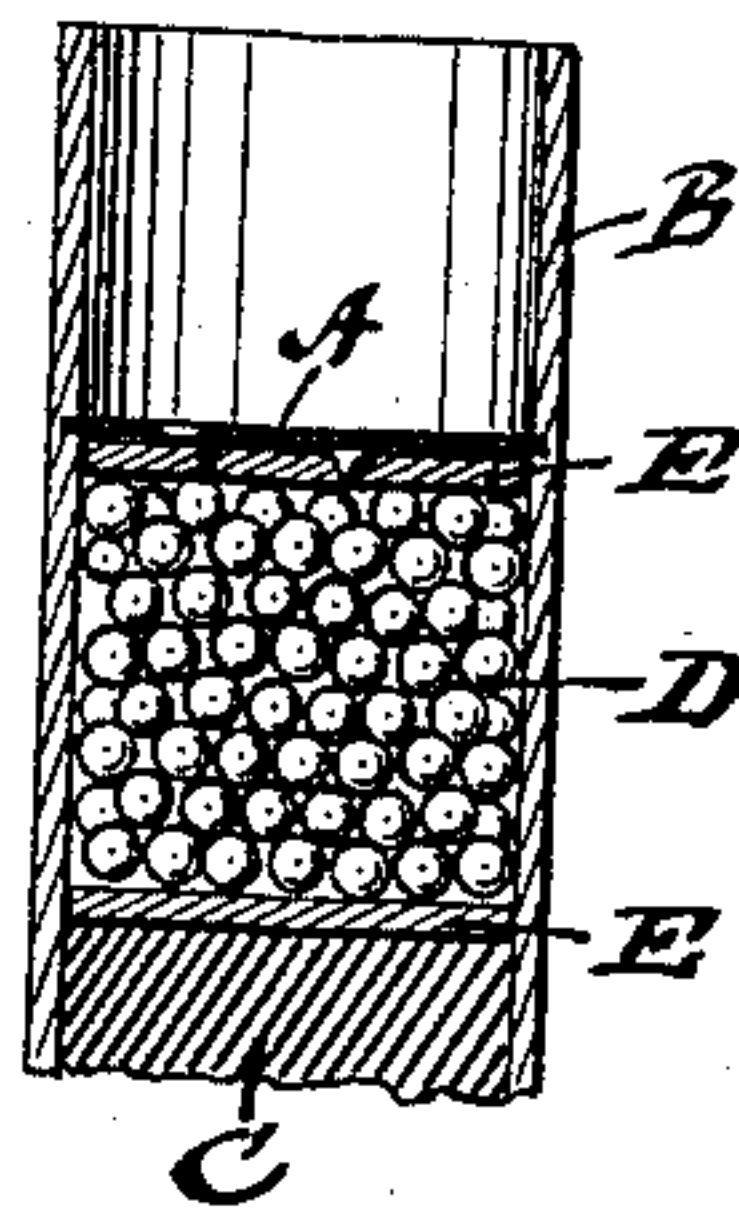


Fig. 3.

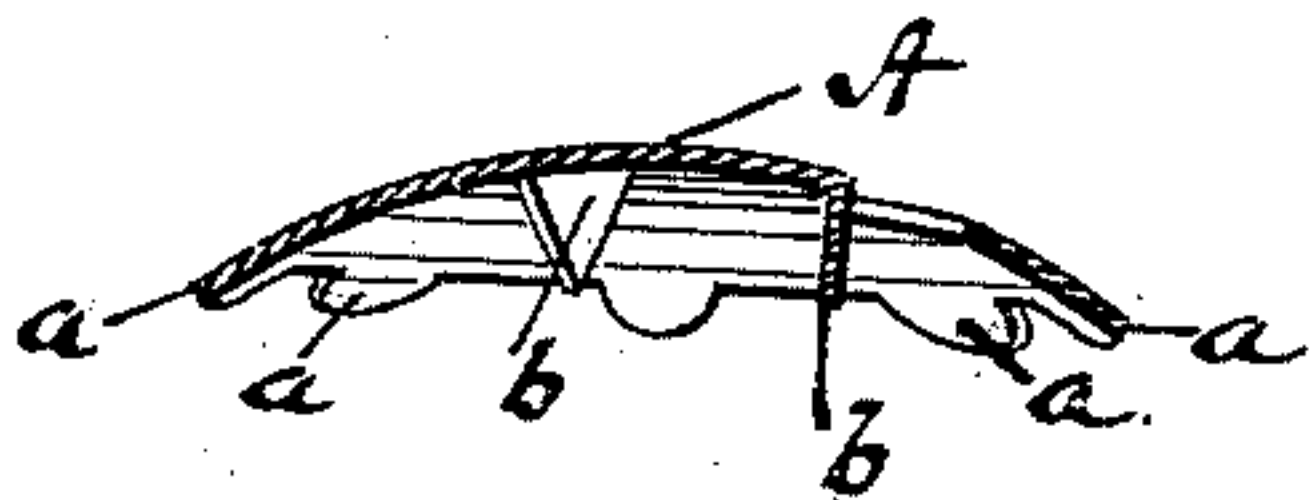


Fig. 4.

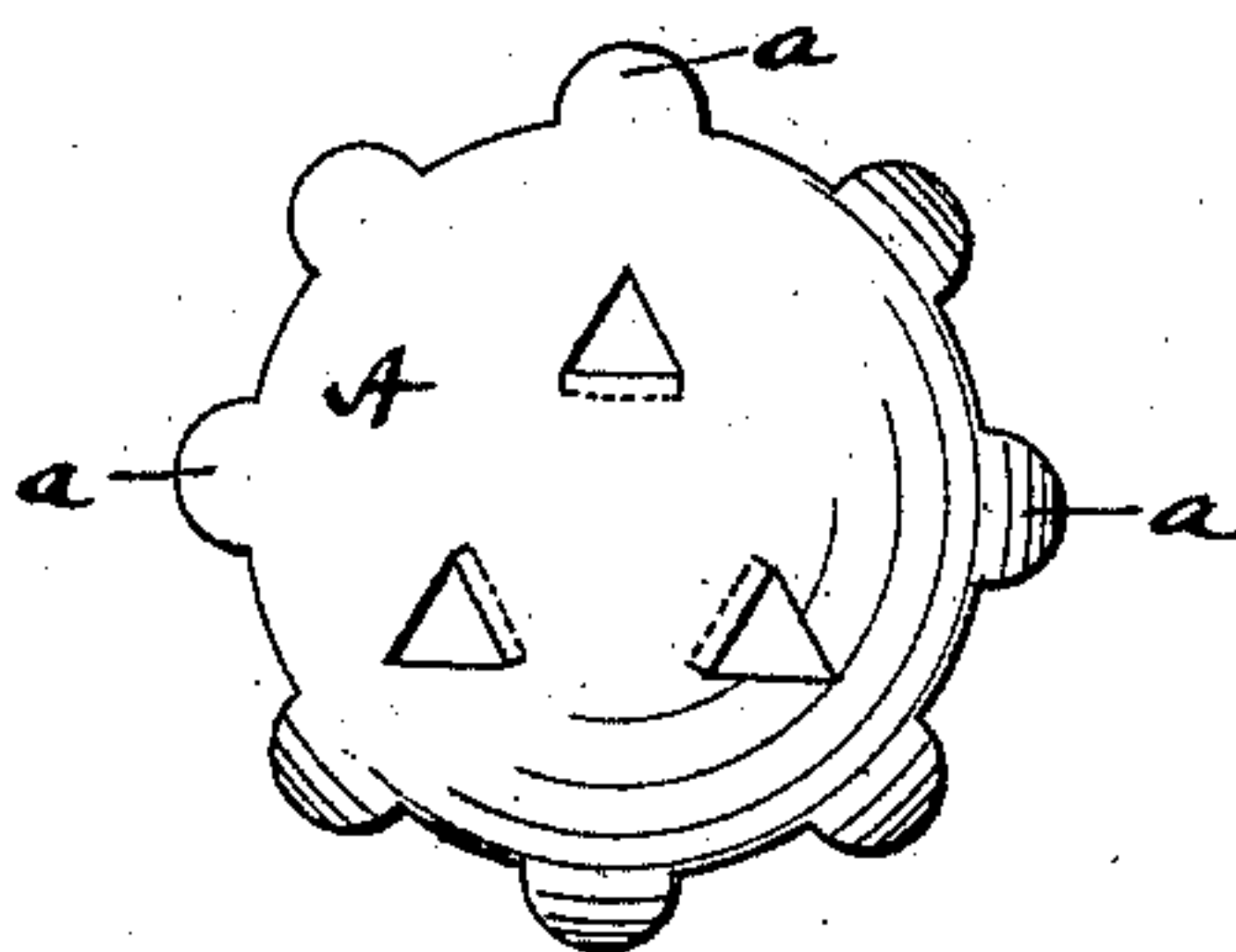


Fig. 5.

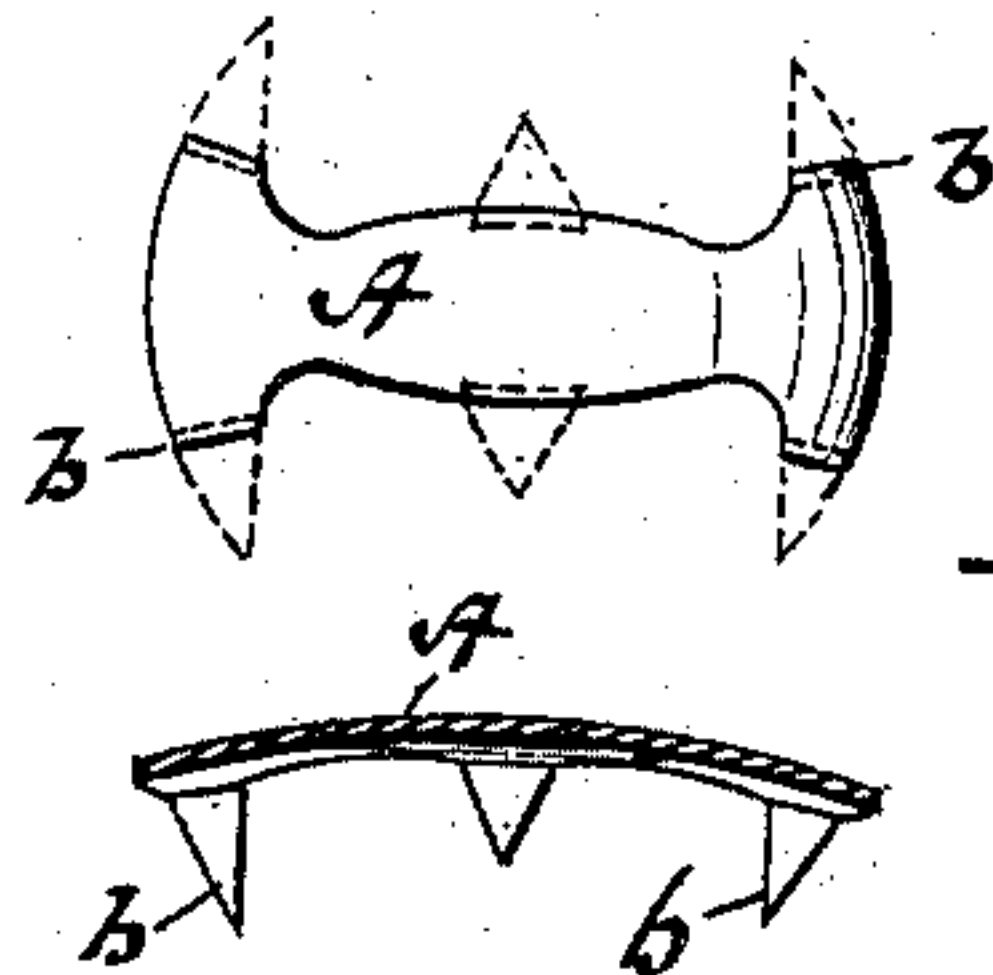
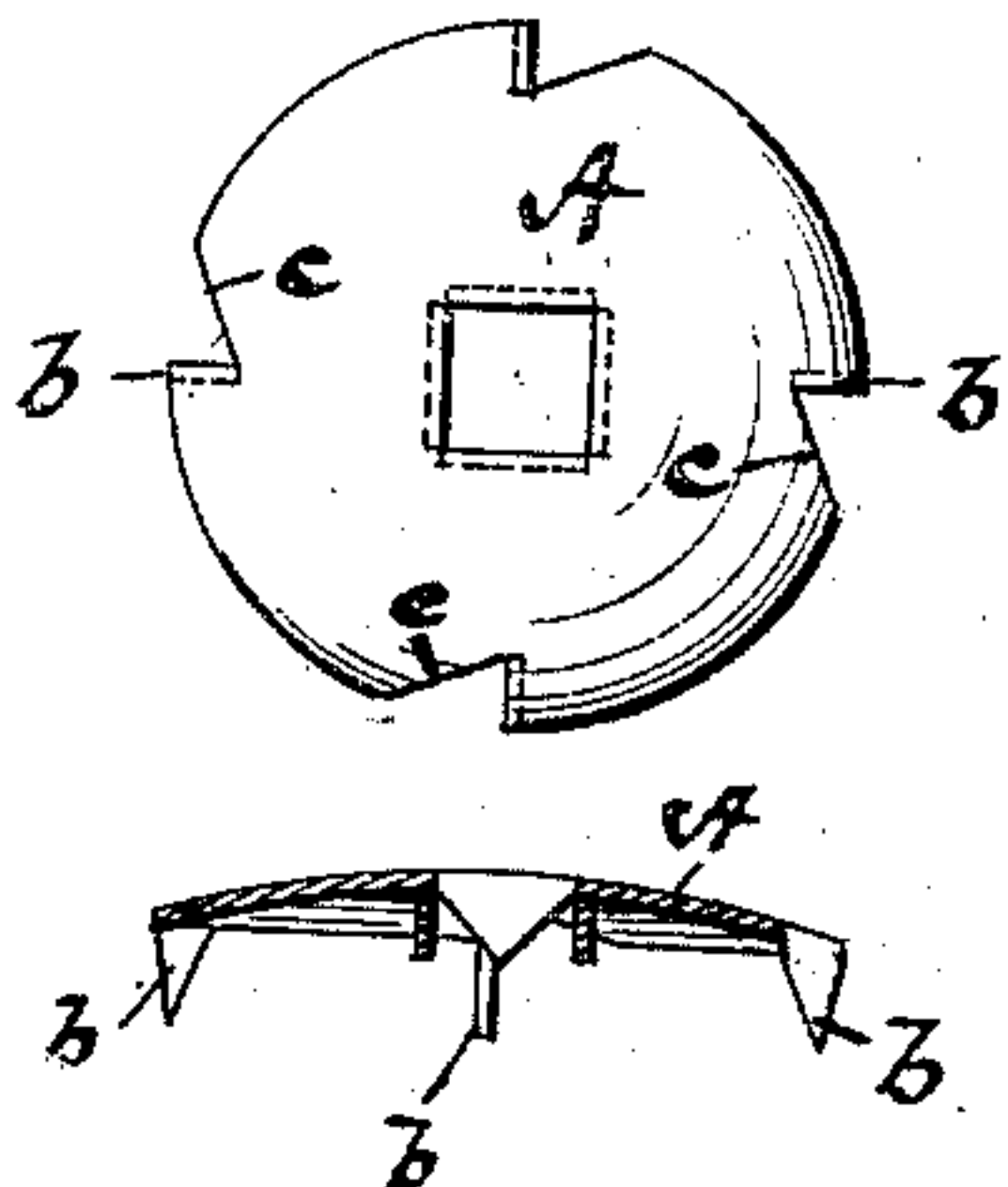


Fig. 6.

Attest.
Carl Spengel
S. Osborne

Inventor
James W. Dennis
by Kenneth A. Atty.

UNITED STATES PATENT OFFICE.

JAMES W. DENNIS, OF CINCINNATI, OHIO, ASSIGNOR OF ONE-HALF TO
WILLIAM HAMILTON, OF SAME PLACE.

RETAINER FOR GUN-WADS.

SPECIFICATION forming part of Letters Patent No. 295,234, dated March 18, 1884.

Application filed October 8, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES W. DENNIS, a citizen of the United States, residing at Cincinnati, Hamilton county, Ohio, have invented new and useful Improvements in Gun-Wads, of which the following is a specification.

My invention relates to devices for retaining gun-wads in position when used in securing the loading in paper or sheet-metal "cartridge-shells." In loading such shells for use, wads of pasteboard are ordinarily employed to separate the powder from the shot, and as an exterior wall holding the entire charge in position. It has been found that the jarring of transportation, and especially the jar caused by firing an adjacent barrel, as in the case of double-barreled weapons, very frequently displaces one or both the wads in the remaining cartridge, and by thus disarranging the load destroys the accuracy of the succeeding shot. As a means of overcoming this difficulty, a wad or washer of thin sheet metal, with radial projections and concave in form, is inserted in the shell above the outer wad, and by flattening the same against the outer wad the radial projections are forced horizontally outward into the material of the shell, to form a holding-catch; but in practice this device has been found in many cases ineffective, and, moreover, can only be used with a paper shell, whereas metal shells are largely used.

The object of my invention is to remedy these difficulties, and provide a holding device which shall be efficient and adapted at the same time to either paper or metal shells; and it consists in a concave or arched metallic wad-holder, which may or may not be provided with radial spurs projecting beyond its proper periphery, but which is provided with spurs projecting downwardly, so that in flattening and expanding it against the paper wad such points will sink into and engage the paper wad securely to the metal holders, and when constructed for and used with metallic shells such downwardly-projecting tongues may be wedged and expanded against the previously-roughened surface of the metal shell, at the same time being secured firmly to the paper wad. The result in any case is, that the metal holding device is anchored firmly to and

becomes part of the paper wad throughout its entire surface, and is thereby rendered much stronger and stiffer, and its own action rendered more efficient; besides which the projecting tongues being arranged to penetrate the paper wad at or near its periphery tend to expand the latter and secure it more firmly in position against the surrounding shell.

In carrying out my invention, I do not confine myself to any particular form of metallic holding-wad, which may therefore be circular, star-shaped, polygonal, or square, or a simple cross bar or bars with arc-shaped or pointed extremities, provided it be arched or concave to expand in flattening, and provided with one or more tongues projecting downwardly under the concave side, adapted to penetrate the paper wad, and thereby secure the two together.

In the drawings herewith, illustrating my invention, Figure 1 is an axial section of a loaded cartridge-shell, with the concave holding device placed in position, ready to be flattened. Fig. 2 is a similar section, showing the holding device flattened, and the downwardly-projecting points embedded in the paper wad. Figs. 3 and 4 are cross-section and plan views, respectively, of a circular holding device with radial projections and concentrically-arranged holding-tongues, being the device exhibited in Figs. 1 and 2; and Figs. 5 and 6 are plan views with sections of modified forms of holding-wads, embodying substantially similar principles of construction.

In the drawings, the holding device is designated by the letter A. B is the cartridge-shell, C the charge of powder, D the charge of shot, and E E the ordinary paper or felt wads, the arrangement being familiar, and clearly shown in Fig. 1. The concave metallic holding-wad A being placed as there shown, and flattened by a plunger of suitable form, the spurs *a*, extending radially beyond the circular periphery of the metal disk, are projected outward by the general enlargement of the circumference in the flattening process against or into the inclosing-wall of the shell. At the same time the downwardly-projecting tongues *b* are forced into the material of the wad and held firmly therein, securing the disk A to the wad over its entire surface. It is obvious that

the holding-power of the radially-projecting points *a* is thereby much increased, and the fact is abundantly demonstrated by experience that the charge is securely retained in place against accidental displacement from any cause. The downwardly-projecting points *b* are most conveniently formed by making an angular cut through the metal disk and turning down the tongue thus formed. These cuts may be made in any desired position or relation to each other to give the tongues the desired relation, as shown in the various figures of the drawings. It is not absolutely necessary that the metal holding device should be of disk form, or be provided with radially-projecting points at the circumference. A simple cross-bar may be used, as exhibited in Fig. 6, widened at the extremities in arc form, to fit and engage by radial pressure against the internal wall of the shell when flattened, as before described.

Where metallic shells are used, it is necessary, first, that the interior wall of the shell should be roughened—for example, by slight circular corrugations produced by rotating therein a plunger provided with cutting-points arranged to project beyond its exterior surface. The holding device in this case is provided with a series of downwardly-projecting tongues arranged at its perimeter. These may be made to present their flat sides or thin edges to the shell, as desired. In the first case the disk is formed with radially-projecting tongues, which are thus turned downward, and upon forcing the disk to its place the tongues intervene and wedge themselves between the paper wad and the metallic shell. In the second case, as shown in Fig. 5, the disk is made circular, and a series of tangential

cuts, *c*, made inward from the perimeter, and the tongues thus turned downward in radial planes. In pressing the holding device so formed to its seat, the tongues cut through the material of the paper wad, and present their edges to the metallic shell. Instead of sheet metal, round or flat wire may be employed in the construction of my improved wad-holder, either bent to a form approximating the outline of Fig. 6, or arranged as a "spider," with two wires crossing, and connected at the center, suitably arched, and provided with one or more downwardly-projecting spurs of similar material.

I claim and desire to secure by Letters Patent—

1. A metal cartridge-wad holder concave or arched, and expansible by flattening with one or more downwardly-projecting spurs at or within its peripheral boundary, adapted to be forced into or around the wad in the flattening process, to secure the metal holder to the wad, and the latter within the shell, substantially as set forth.

2. As a new article of manufacture, an arched or concave sheet-metal wad-holder having spurs or projections upon its under surface, formed by cutting and turning down the metal within the peripheral boundary, and adapted to sink into or around the paper or felt wad in the flattening process, to engage and hold the parts in place, substantially as set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JAMES W. DENNIS.

Witnesses:

S. OSBORNE,
C. SHAPPELL.