

J. NEIMEYER.
Gun-Wad.

No. 225,412.

Patented Mar. 9, 1880.

Fig. 1

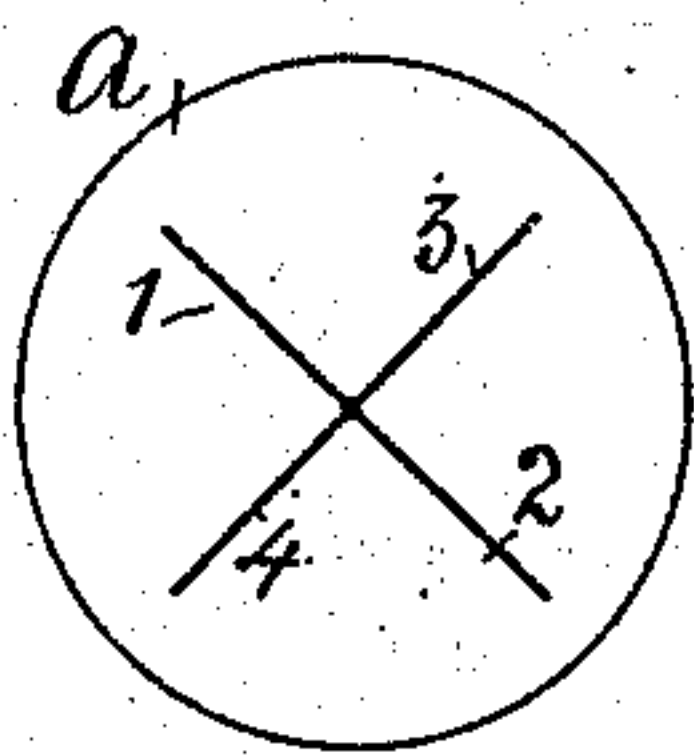


Fig. 2

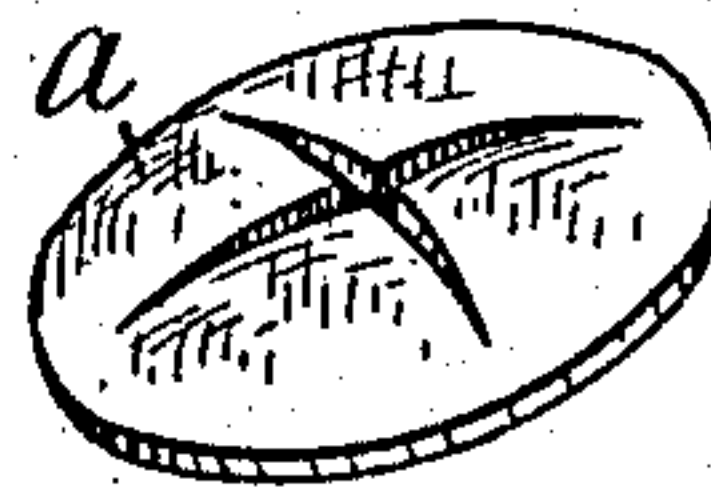


Fig. 3

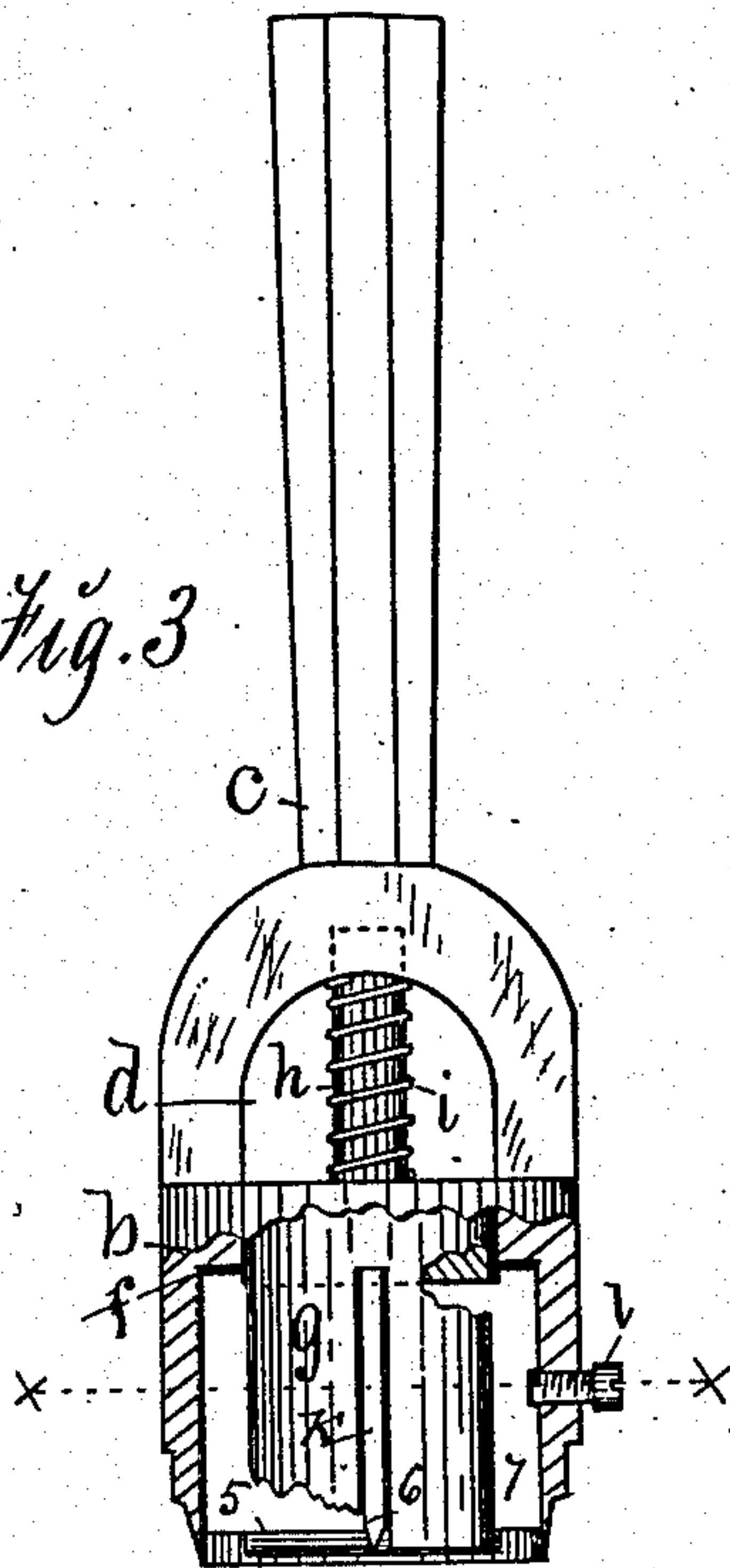
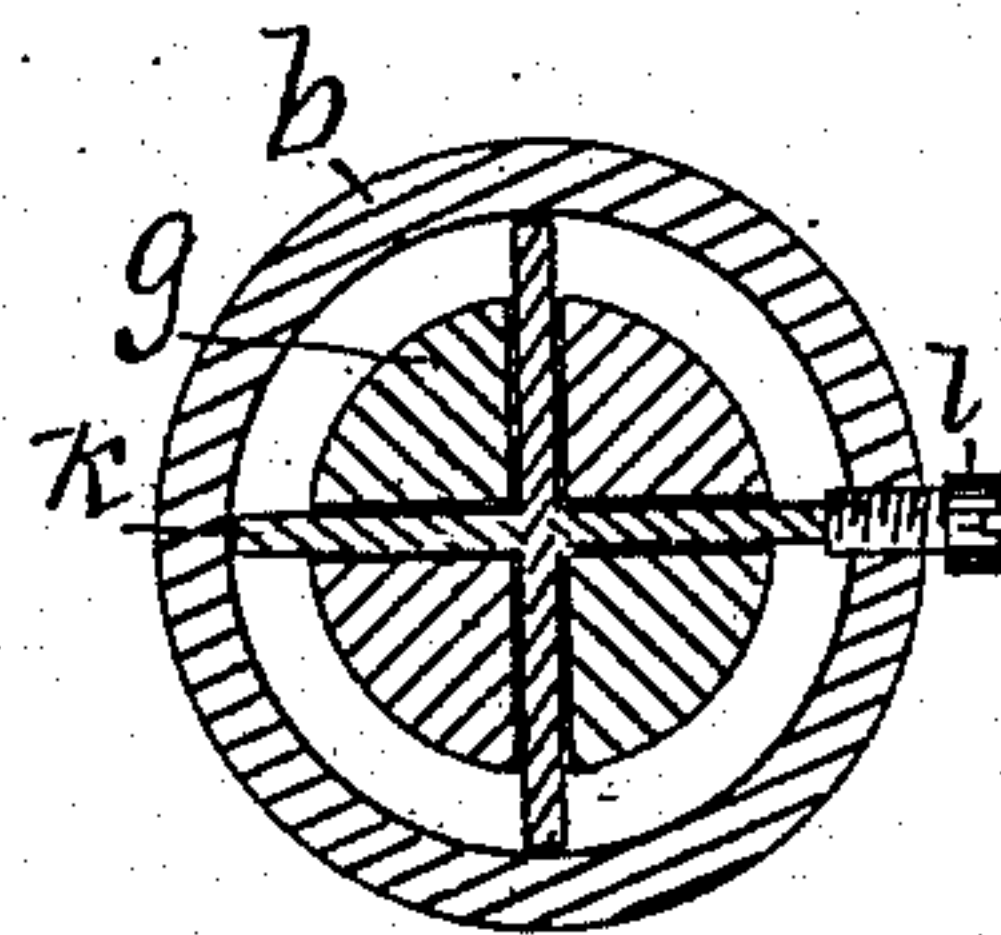


Fig. 4



Witnesses:
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UNITED STATES PATENT OFFICE.

JACOB NEIMEYER, OF ATLANTIC, IOWA.

GUN-WAD.

SPECIFICATION forming part of Letters Patent No. 225,412, dated March 9, 1880.

Application filed January 13, 1880.

To all whom it may concern:

Be it known that I, JACOB NEIMEYER, of Atlantic, in the county of Cass and State of Iowa, have invented an Improved Gun-Wad, of which the following is a specification.

The object of my invention is to provide a gun-wad specially adapted for loading and discharging shot advantageously from a fowling-piece.

Heretofore gun-wads have been made of concavo-convex form in such a manner that when pushed into a gun-barrel or cartridge-shell by means of the square end of a ramrod or plunger they would expand under pressure to fit tightly upon the charge. Flat wads have also had their edges or perimeters scalloped or pinked, so that a wad larger than the bore of the gun or cartridge could be readily crowded in upon the charge to be retained by the elasticity of the compressed serrated or pinked edge of the wad. In both instances the wad leaves the gun intact and impedes the flight of the shot and affects their direction and force.

My invention contemplates compressing and packing a wad tightly upon a charge of shot in a gun-barrel or cartridge-shell in such a manner that it will remain intact until moved by the explosive force of the powder, when it will open in its center and sever into quarter-sections, and allow the charge of shot to virtually fly through the wad without being impeded or misdirected by the fragments of the wad; and I accomplish the purposes by forming a cross-cut or a series of radial incisions in a wad by means of a combined hollow punch and a solid four-bladed cutter, as hereinafter fully set forth.

Figure 1 of my drawings is a top view, showing my complete gun-wad intact. Fig. 2 is a perspective view, showing it bent into concavo-convex form, and the convex side on top, and the radial incisions in its face and center gaping. Fig. 3 is an elevation of my wad-cutting tool, in which part of the hollow punch is removed. Fig. 4 is a transverse section through the line *xx* of Fig. 3.

Jointly considered, these figures clearly illustrate the construction and operation of my complete invention.

a in Figs. 1 and 2 represents a gun-wad of circular form, that may vary in size, as desired, and that may be cut from paper-board, leather,

or any other suitable material. 1 2 3 4 are incisions radiating from the center of the disk.

b in Figs. 3 and 4 is the body of a hollow punch. *c* is the handle, formed integral with the body. *d* is a transverse opening through the lower part of the handle. *f* is an annular shoulder in the head end of the hollow body, through which a plunger passes upward. *g* is the plunger, fitted into the hollow punch. Its stem *h* passes up through the hollow body and into the handle when the tool is operated.

i is a spring coiled around the stem *h*. In its normal condition this spring holds the plunger down and its bottom end flush with the circular cutting-edge of the hollow punch and the edges of the four-bladed knife.

5 6 7 8 are the four blades of the knife *k*, that is cruciform in its cross-section. Corresponding crossed slots are cut into the lower portion of the plunger *g*, to admit the knife in such a manner that the four blades will extend radially from the center of the plunger and complete tool, and project laterally from the plunger and against the wall of the hollow-punch body, so that the top corners of the cruciform knife will engage the annular shoulder *f* in the inside and top of the body *b*, as required, to be moved and operated simultaneously with the hollow punch.

l is a set-screw that passes inward from the outside of the hollow punch to engage a notch in the edge of one of the blades of the cruciform knife to lock the knife and punch together.

In the practical use of my wad-cutting tool thus constructed, its cutting-edges are placed upon the material, and by pressure or percussion forced through the material in the manner that punches are commonly operated. While the hollow punch is thus made to form and sever a wad from the sheet material, the cruciform knife inclosed in the punch will, at the same time and by the same motion of the operation, cut the radial incisions in the center of the wad. The spring that holds down the plunger will also be compressed by the applied force that cuts the wad, and the plunger will ascend to allow the cutting-edges of the cruciform knife to go through the wad as it enters the hollow punch; and when the applied force is relaxed from the spring the spring

force will press down the plunger, and by so doing force the complete wad downward and free it from the punch and knife-blades.

5 The incisions in the wad may vary in number, size, and form, and the cutting-knife, combined with the hollow punch, be shaped accordingly to accomplish the results contemplated in the use of my improved gun-wad.

10 I am aware that incisions have been made in gun-wads from and through the outside edge toward the center, but not to intersect and radiate from the center outward, so as to preserve the edge or rim of the complete wad in-

tact, and to allow the charge of shot to pass through the center of the wad.

I claim as my invention—

As an improved article of manufacture, a gun-wad having incisions radiating from its center, substantially as and for the purposes set forth.

JACOB ^{his} X NEIMEYER.
mark.

Witnesses:

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JOHN H. SCOTT.