(No Model.)

A. W. TICE.

CARTRIDGE CRIMPING PUNCH.

No. 301,179. Patented July 1, 1884.

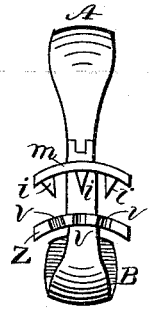

Fig.2.

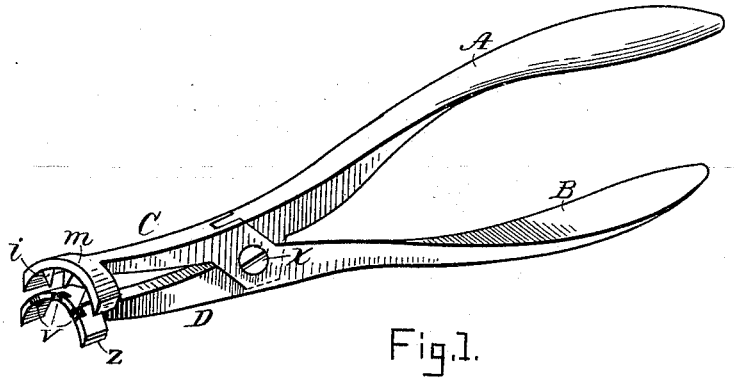

Fig.1.

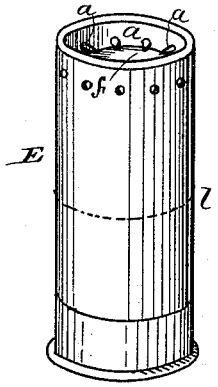

Fig.3.

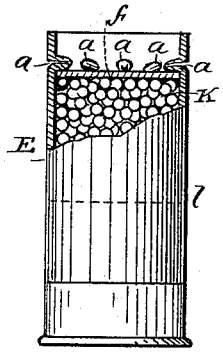

Fig.4.

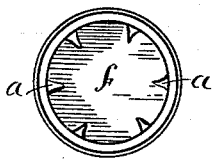

Fig.5.

Witnesses.
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UNITED STATES PATENT OFFICE.

ARTHUR WM. TICE, OF BOSTON, MASSACHUSETTS.

CARTRIDGE-CRIMPING PUNCH.

SPECIFICATION forming part of Letters Patent No. 301,179, dated July 1, 1884.

Application filed May 14, 1884. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR WILLIAM TICE, of Boston, in the county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in Punches, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is an enlarged isometrical perspective view of my improved punch; Fig. 2, an end elevation of the same; Fig. 3, an enlarged perspective view of a cartridge which has its wad secured in position by the punch; Fig. 4, a side elevation of the cartridge shown in Fig. 3, the upper portion being represented in vertical longitudinal section; and Fig. 5, a top view of the same.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to an implement designed for use in securing or fastening the wads of paper cartridges in position above the charge in the body of the cartridge; and it consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a more effective device of this character is produced than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation, its extreme simplicity rendering an elaborate description unnecessary.

In the drawings, A B represent the handles of the punch, and C D the jaws. The handles are pivoted at *x* by means of an ordinary pinchers or plier joint, and otherwise constructed in substantially the same manner in which lasting-pinchers, pliers, conductors' punches, and similar implements are constructed, except as hereinafter described. The upper jaw, C, is provided at its outer end with a transversely-arranged laterally-curved segment or arched lip, *m*, provided on its under side with a series of downwardly-projecting pointed teeth or dentals, *i*, adapted to enter corresponding series of notches or openings in the edge of a laterally curved or arched lip, *z*, attached to the outer end of the lower jaw, D, the lips *m z* being alike in curvature, and also forming arcs of a circle which correspond nearly in circumference with the circumference of the cartridge.

In the use of my improvement the cartridge is loaded and the wad *f* rammed down onto the charge in the usual manner. The lip *z* of the punch is then inserted in the top of the body or shell E and pressed down upon the wad, the lip *m* being applied to the outside of the shell, after which the jaws C D are forced together by compressing the handles A B, thereby causing the teeth *i* to penetrate the shell just above the wad *f*, and force a series of nipples or projections, *a*, corresponding with the number of the teeth *i*, inwardly over the wad, and secure it in position in a manner which will be readily obvious without a more explicit description. After one series of holes have been punched in the shell, the jaws are moved around into a new position and another punched, until the entire periphery of the body of the cartridge has been traversed. By securing the wad *f* in the shell of the cartridge, as described, the explosive action of the powder is augmented, or its force increased to a considerable extent. The wad is also prevented from accidentally escaping or working upwardly in the body or shell E, and thereby forming an air-space above the lower wad, *l*, or shot K.

The teeth *i* may be made in any suitable form, and may be long enough to perforate the shell, or merely long enough to exteriorly indent it sufficiently to form nipples or projections on its interior, as preferred.

It is essential that the openings *v* should be at the extreme outer end of the lower jaw, so that the projections *a* may be formed in close proximity to the wad, the teeth *i* also entering said openings at or near the outer end of the lower jaw for a like reason. One or more teeth may be used in the punch, although I deem three preferable. It is also essential that the lips or ends of the jaws should be curved to correspond with the contour of the cartridge in cross-section.

Having thus explained my invention, what I claim is—

1. A punch having two pivoted handles and

two jaws, one of said jaws being provided with an arched or laterally-curved segment or lip having an inwardly-projecting tooth or teeth, and the other with an arched or laterally-curved segment or lip having a corresponding opening or openings in its outer end for receiving said tooth or teeth when the jaws are closed, substantially as set forth.

2. The improved punch herein described, the same consisting of the handles A B, jointed at *x*, jaws C D, lip *m*, provided with the teeth *i*, and lip *z*, provided with the openings, constructed and arranged to operate substantially as specified.

ARTHUR WM. TICE.

Witnesses:
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