(No Model.)

J. ORCUTT.

CARTRIDGE PRIMING PIN.

No. 474,607. Patented May 10, 1892.

Fig. 1.

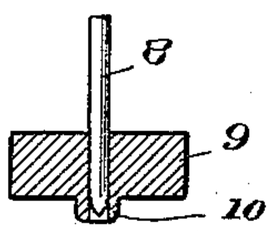
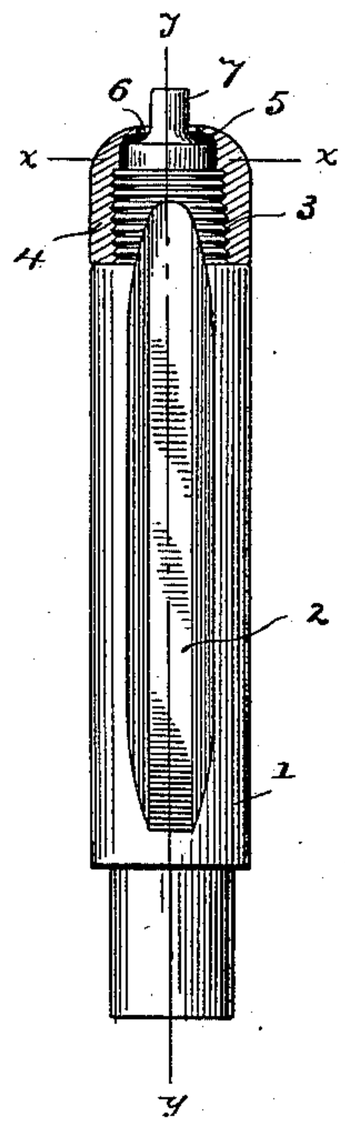


Fig. 3.



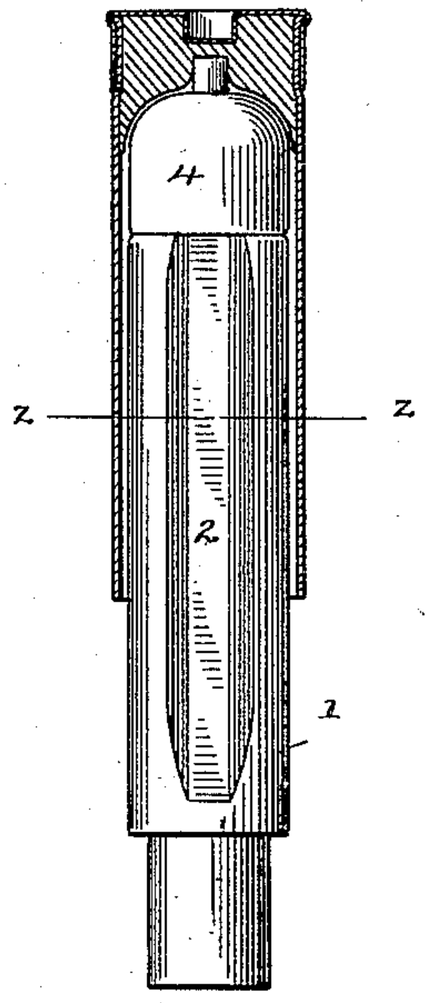


Fig. 2.

Fig. 4.

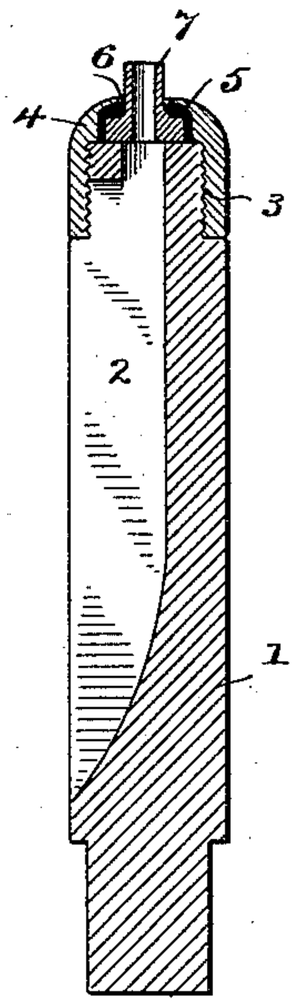


Fig. 5.

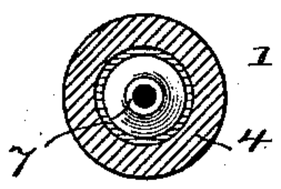
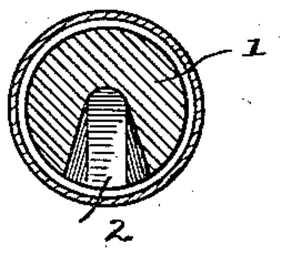


Fig. 6.



WITNESSES

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UNITED STATES PATENT OFFICE.

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CARTRIDGE-PRIMING PIN.

SPECIFICATION forming part of Letters Patent No. 474,607, dated May 10, 1892.

Application filed February 8, 1892. Serial No. 420,719. (No model.)

To all whom it may concern:

Be it known that I, JEROME ORCUTT, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Cartridge-Priming Pins; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object to produce what are known in the art as "priming-pins," for use upon cartridge-priming machines. It is of course well understood that in the manufacture of paper cartridge-shells, after the wads have been placed in the bases of the shells and the heads set thereon, they are ready for the insertion of the primers in the pockets in the heads. The first operation in what is called "priming" is the punching of an opening through the wad in the base of the shell, and the second operation, the insertion of the primer in the pocket, these operations being performed by any suitable automatic machine, and the pins upon which the shells are placed being ordinarily carried by a rotating dial. As it is impossible, as well as unnecessary, in machines working at a high speed to secure such accuracy in centering and holding the shells as to insure that the punch for punching the hole through the wad and the primer-carrier (not shown in the drawings) shall always register with the center of the pocket in the cartridge-head, I have devised priming-pins for use upon this class of machines having movable tubular heads, which receive the punch, which passes through the wad, and which support the pocket when the primer is inserted therein.

In the accompanying drawings, forming part of this specification, Figure 1 is an elevation of my novel priming-pin complete, the cartridge-shell, wad, and head appearing in section, the punch for punching the opening through the wad being in elevation and the guide therefor in section, the punch and guide being in the act of moving downward; Fig. 2, a similar view showing the punch and guide at the end of the downward movement; Fig. 3, an elevation of the pin, the cap being in section; Fig. 4, a longitudinal section on the line *y y* in Fig. 2; Fig. 5, a transverse section on the line *x x* in Fig. 3, and Fig. 6 is a transverse section on the line *z z* in Fig. 1.

1 denotes the body of the pin, which is provided with an opening 2 in one side, through which the material punched from the wad may drop out, and at its upper end with a screw-thread 3.

4 denotes a cap having an internal recess 5, the lower end of which is screw-threaded to engage thread 3. At the upper end of the cap is an opening 6.

7 denotes the tubular head, the base of which lies within recess 5 and rests upon the upper end of the body, the upper end of the head projecting upward through opening 6 in the cap, said opening being sufficiently large to allow movement of the head in any direction, the base, however, being larger than the opening, so that it cannot become detached from the body of the pin. It will be noticed in Figs. 1 and 2 that the shell fits loosely upon the pin, but that the upper end of the head engages the wad closely.

The operation of punching an opening through the wad will be clearly understood from Fig. 1, in connection with Fig. 2. 8 denotes the punch, which moves in a guide 9, having a teat 10 on its lower face, which engages the primer pocket in the cartridge-head.

In use the guide and punch descend together, substantially as in Fig. 1, teat 10 engaging the pocket in the cartridge-head, as in Fig. 2. By making the tubular head 7 movable in the top of the pin I insure the perfect engagement of the teat with the pocket in the head without marring the head in the slightest. Suppose, for example, that when the guide and punch descend the teat does not register accurately with the pocket in the cartridge-head, if the head of the pin is fixed the cartridge-head is sure to be marred, and if the punch does not register with the opening in the head, by which it is guided after passing through the wad, it is frequently either broken or sprung; but by providing a movable tubular head I insure that the instant the teat comes in engagement with the pocket in the cartridge-head the cartridge will shift upon the pin so as to preserve the alignment

of the punch and head perfectly; and in the next operation, when the primer is inserted, it is equally important that the alignment should be preserved, so as to do away with the danger of marring the primer and not infrequently of exploding it, it being understood of course that the primers must fit the pockets with the utmost accuracy, so as to prevent leakage of gas in firing, it being necessary to avoid even scratching the side of the pocket.

Having thus described my invention, I claim—

1. A cartridge-priming pin consisting of a body, a cap engaging the body and having a central recess and an opening in the top, and a tubular head in said recess, the base of which rests upon the body, the upper end thereof extending through the opening in the cap, substantially as described.

2. A cartridge-priming pin having an opening in one side and threaded at its upper end, a cap threaded to engage the body and having an internal recess and an opening in its top, and a movable head having an opening through it adapted to register with the opening in the body, the base of said head resting upon the top of the body and the upper end thereof extending through the opening in the cap, so that in use the cartridge may be shifted upon the pin so that a descending punch must necessarily register with the movable head.

In testimony whereof I affix my signature in presence of two witnesses.

JEROME ORCUTT.

Witnesses:
GEO. B. THORPE,
SAML. T. HOUGHTON.