(No Model.)

J. H. BROWN & A. E. SPANGLER.

CRIMPING TOOL.

No. 418,330. Patented Dec. 31, 1889.

Fig. 1.

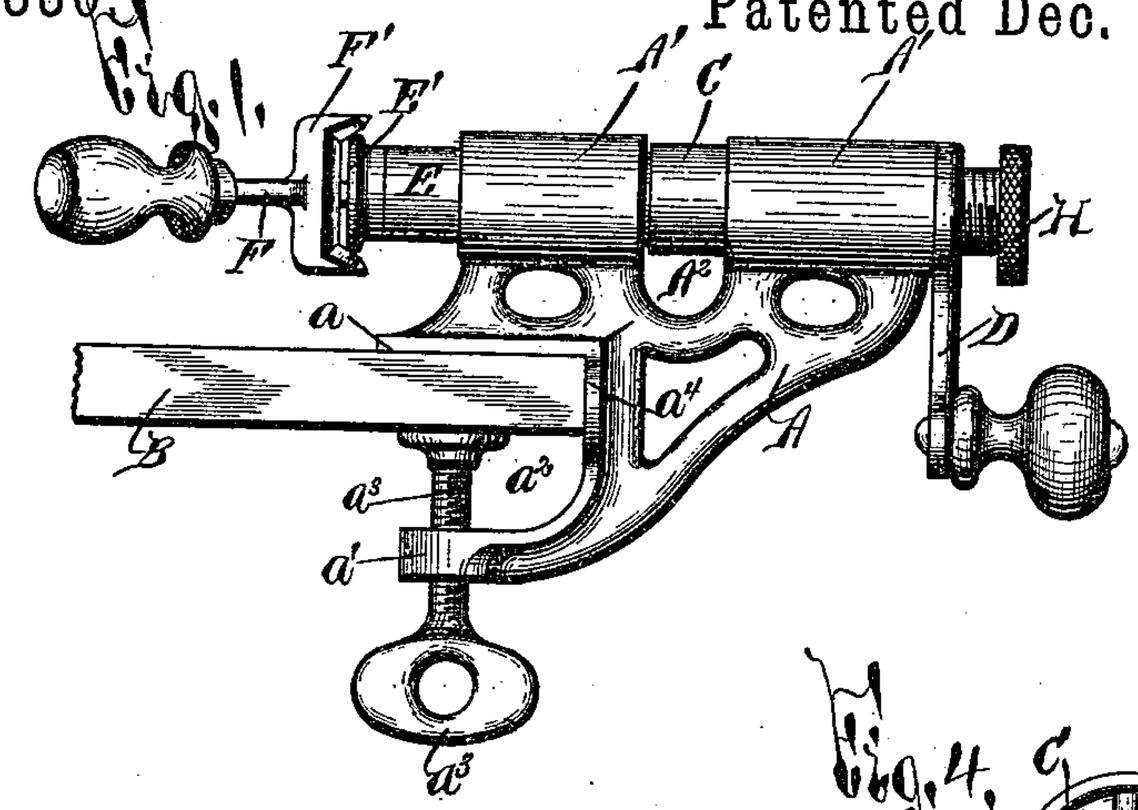


Fig. 4.

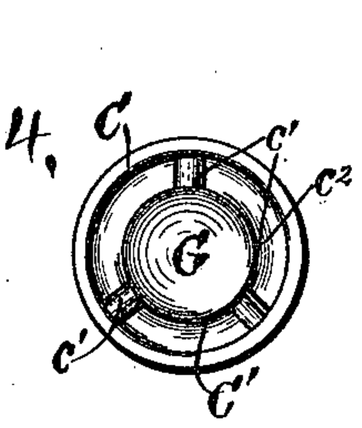


Fig. 2.

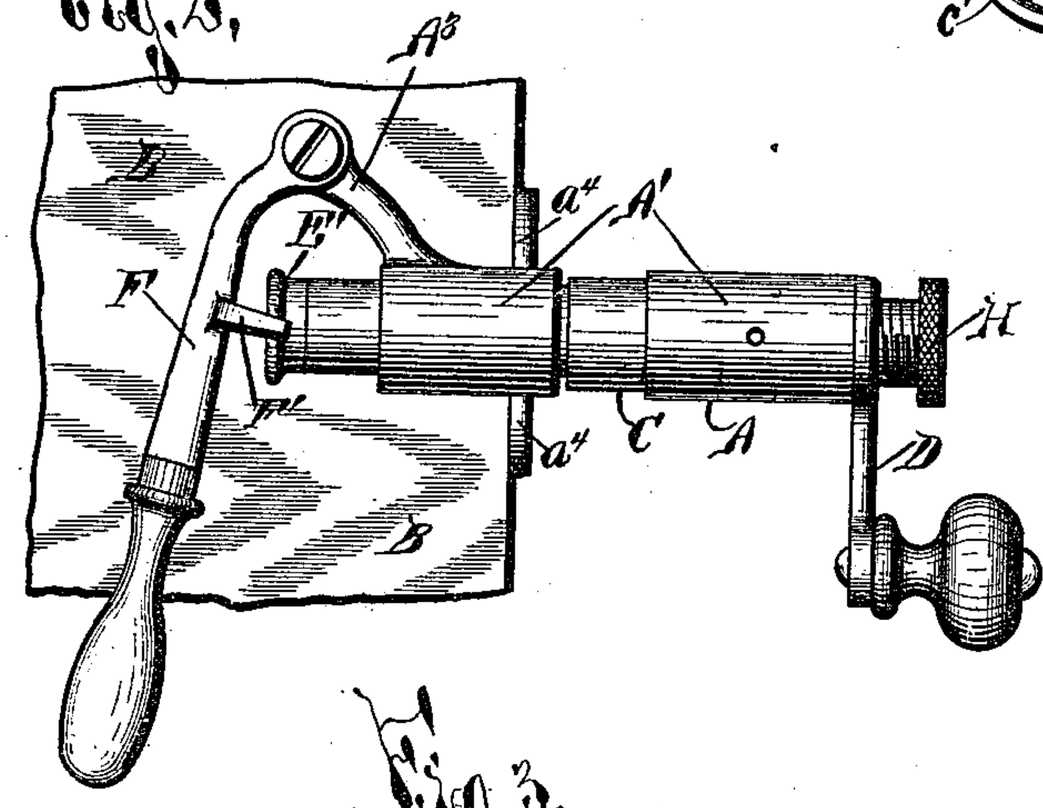
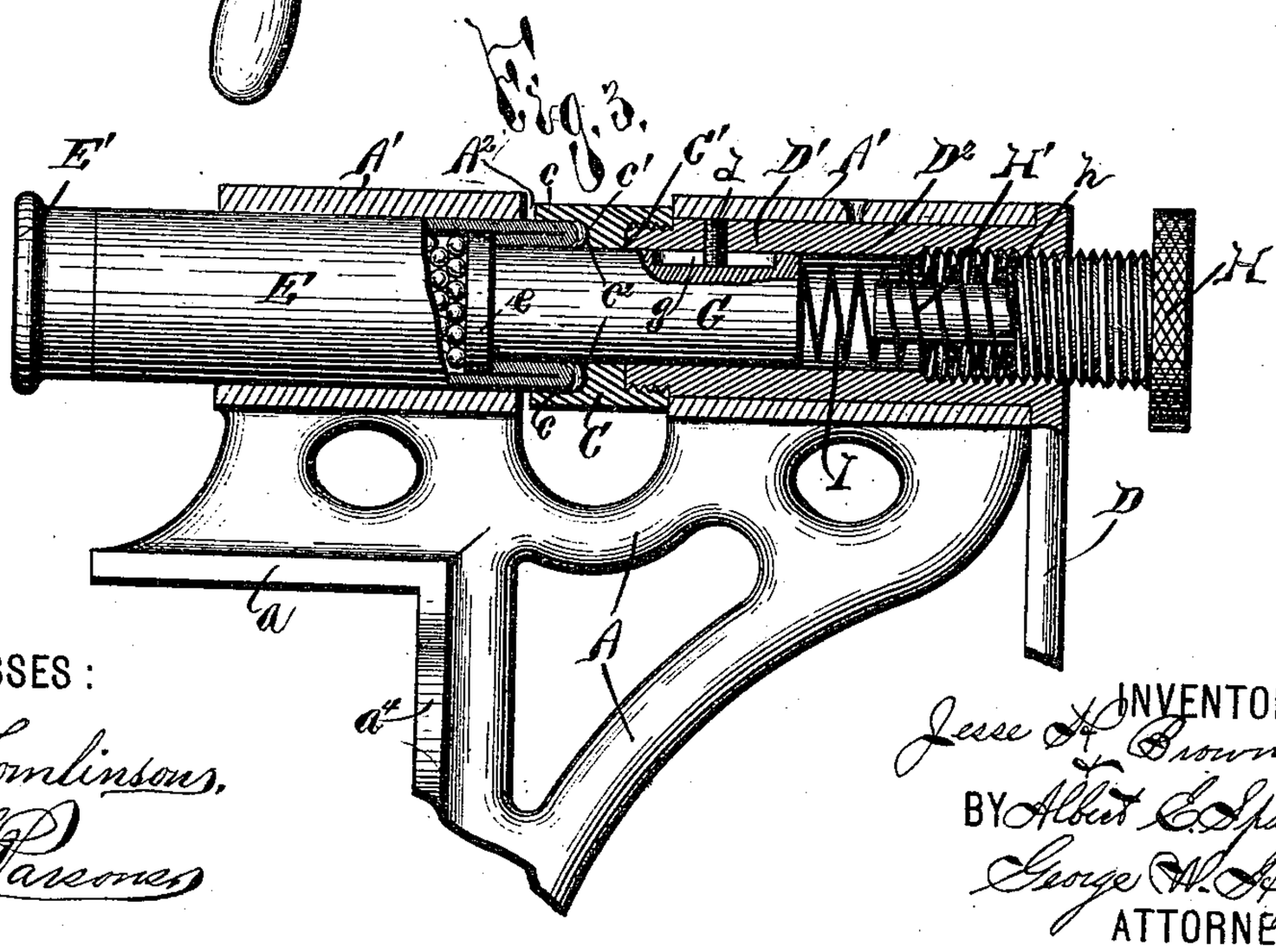


Fig. 3.



WITNESSES:

E. E. Tomlinson.

A. L. Parsons.

INVENTORS

Jesse H. Brown

BY Albert E. Spangler

George W. Ivey

ATTORNEY.

UNITED STATES PATENT OFFICE.

JESSE H. BROWN AND ALBERT E. SPANGLER, OF SYRACUSE, NEW YORK.

CRIMPING-TOOL.

SPECIFICATION forming part of Letters Patent No. 418,330, dated December 31, 1889.

Application filed June 24, 1889. Serial No. 315,367. (No model.)

To all whom it may concern:

Be it known that we, JESSE H. BROWN and ALBERT E. SPANGLER, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Crimping-Tools, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

Our invention relates to an improved crimping-tool which is simple, effective, and more efficient in use than those previously devised; and to this end it consists, essentially, in a suitable supporting-frame which can be readily attached to a table, bench, or other suitable support, a crimping-head having crimpers for turning inward the extremity of the cartridge, and a plunger for tightly abutting against the wad and allowing the cartridge to be turned down to said wad.

It also consists in the detail construction and arrangement of the parts, all as hereinafter more fully described, and pointed out in the claims.

In describing our invention reference is had to the accompanying drawings, forming a part of this specification, in which like letters indicate corresponding parts in all the views.

Figure 1 represents an elevation of our improved crimping-tool secured to a support and with a cartridge shown as having been crimped thereby. Fig. 2 is a top plan view of the parts as illustrated in Fig. 1. Fig. 3 is an enlarged elevation, partly in section, of our improved tool, illustrating clearly the detail construction and arrangement of its parts; and Fig. 4 is a face view of the detached crimping-head and the plunger guided therethrough.

A represents the frame of our improved crimping-tool, having the journal-bearing A′, in one extremity of which the cartridge is supported and in the other the mechanism for the cartridge. The frame A is provided with shoulders a and a', having the open space a^2 between them. When desired to secure the crimping-tool to a suitable support, its edge is inserted into the space a^2, and a screw a^3 bears against the bottom face of said support B, and by forcing the top face against the shoulder a tightly secures the crimping-tool thereto.

In order to further provide for the rigidity of the crimping-frame in its supported position, we provide the ears or projections a^4, which project outwardly from the frame and bear against the edge of the support B.

The crimper C of our tool, which is supported in a space A^2 between the extremities of the journal-bearing A′, preferably consists of a head or hollow disk having the flange c and the internal crimping projections c', extending from the shoulder c^2 at the base of the flange c.

Secured in any desirable manner, and preferably by screw-threads, to the heads C is the hub D′ of the handle or lever D. This lever D, although shown as formed integral with the head D′, may be formed separately therefrom and be secured thereto in any desirable manner. When the handle D is turned, it will be seen that the head C will also be turned. The journal-opening of the bearing A′ and the inner diameter of the head C are substantially of the same diameter as that of the cartridge to be crimped.

Supported upon an arm A^3 of the frame A is the pivoted lever F, provided with projecting arms F′. When the cartridge has been inserted into the journal-opening, this lever is rocked against the cartridge-head E′ and forces the same against the crimping-head C. This head C is rotated at the same time by means of the handle D, and the extremity of the cartridge is thus turned inward or crimped.

The object of crimping cartridges is twofold—to retain the wad in its loaded position, and also to offer a certain resistance against the escape of the wad, and by confining the same cause the powder to be entirely converted into gas, and thus throw the projectile or shot with greater force and certainty. It will thus be understood that in order to secure the best results the crimped extremity of the cartridge should be forced tightly against the wad of the cartridge. Moreover, while it is always advisable to use the same length of shell or cartridge in a gun, it is frequently advisable for different shooting and sizes of shot to change the amount of ammuni-

tion loaded thereinto, thus varying the distance from the extremity of the cartridge to the wad upon the shot. When this distance is small, the ordinary crimping-tool will operate to good advantage to crimp the cartridge; but it will be understood that when the distance is large it will be impossible for the ordinary crimping-tool to fold inward or crimp the cartridge so that the edge thereof shall press tightly against the shot-wad.

In order to insure the perfect crimping and tight abutment of the shot-wad with the edge of the cartridge irrespective of the amount of ammunition in the cartridge, we form the crimping-head with the opening C′, through which is guided the plunger G. By reference to Fig. 3 of the drawings it will be seen that this plunger extends into an opening D^2, provided in the hub D. At the extremity of the opening D^2 we provide the pin or screw H, having the projecting point H′. Mounted on the point H′ and interposed between the shoulder or face *h* of the threaded pin H and the face *g* of the plunger G is a spring I. This spring constantly forces the plunger away from the pin H and tightly against the shot-wad *e* of the cartridge E. It will be understood that the pin H may be screwed inward or outward in order to vary the tension on the spring I. This plunger G is preferably provided with its operating-face concaved in order to have a better bearing against the wad *e*. The plunger G is preferably prevented from escapement from the crimper C. This escapement we have shown as prevented by means of a pin *d*, secured to the hub D′ and projecting into a slotway *g*, formed in the plunger G. The operating extremity of the plunger G is of less diameter than the interior of the cartridge, so as to allow the extremity of the cartridge to be readily crimped or turned inward around the plunger.

It will be observed that when the cartridge is placed in our crimper the spring I will cause the plunger G to tightly abut against the wad *e*, and that as the lever F forces the cartridge toward the head C and causes the extremity thereof to be crimped inward the plunger G will be forced backward against the tension of the spring I. This will allow the cartridge to be crimped in the desired manner irrespective of the load contained therein.

One particular feature of advantage of our crimper is the fact that, as shown in the drawings, it is exceedingly light and may be readily attached to any desirable support. This allows the owner of a gun to crimp his own shells, and the peculiar construction of the crimper allows the shell to be tightly crimped against the wad irrespective of the charge therein. By means of the tightening-screw the crimper can readily be set up at any desired place, and by operating the lever F and rotating the handle D the shell will be readily crimped, and when a sufficient number of cartridges have been crimped the device may be readily taken down and stored away.

Instead of supporting the crimping-head in a space interposed between the two extremities of the journal-bearing A′, it will be understood that by forming one of said extremities of larger diameter than the other the said crimping-head could be supported in said enlarged extremity. It will also be understood that instead of the threaded pin H the face or seat *h* for the abutment of the spring I might be formed directly in the hub D′.

The operation of our invention will be readily perceived from the foregoing, and it will be understood that the parts thereof are exceedingly simple and readily manufactured, and that while the cost of our improved crimper is but slightly more than the ordinary hand crimping device, yet its facility for work is far greater, rendering practicable what has heretofore been impracticable.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a cartridge-crimper, the combination of a frame A′, a revoluble crimping-head supported by said frame, a hub or spindle secured to said head and journaled in said frame A′, a plunger mounted in said head and movable therein, and a spring for forcing said movable plunger against the wad during the crimping of the cartridge, substantially as and for the purpose set forth.

2. In a cartridge-crimper, the combination of a frame A′, a revoluble crimper-head supported by said frame, a hub or spindle secured to said head and journaled in said frame A′, a longitudinal cavity in said frame A′, a plunger revolubly mounted in one extremity of said journal-bearing, a spring mounted in the opposite extremity of said longitudinal cavity and bearing against said plunger for forcing it outward against the wad, a pin or lug provided in said hub, and a slot provided in said sliding plunger for engaging said pin, and means for rotating said hub, substantially as and for the purpose specified.

3. In a cartridge-crimper, the combination of the frame A, having the journal A′, a revoluble crimping-head, a hub or spindle secured to said head and journaled in said bearing A′, a plunger mounted in said head and movable therein, a spring for forcing said movable plunger against the wad during the crimping of the cartridge-shell, a handle or lever for rotating said crimping-head, and a lever F, pivoted to the frame A and movable toward the crimping-head for forcing the cartridge thereagainst, substantially as set forth.

4. In a cartridge-crimper, the combination of a journal-bearing A′, in one extremity of which the cartridge is supported, a crimper-head revolubly mounted adjacent to said cartridge, a hub or spindle secured thereto and journaled in said journal-bearing, a lon-

gitudinal cavity or journal-bearing in said hub, a plunger mounted in one extremity of said latter longitudinal bearing and a spring in the opposite extremity for bearing against said plunger, a pin provided in said hub and engaging a slot provided in said sliding plunger, and means for rotating said hub, substantially as and for the purpose specified.

In testimony whereof we have hereunto signed our names, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 18th day of June, 1889.

JESSE H. BROWN.
ALBERT E. SPANGLER.

Witnesses:
CLARK H. NORTON,
ARTHUR E. PARSONS.