(No Model.)

J. H. BARLOW.

PAPER CARTRIDGE CRIMPER.

No. 566,126. Patented Aug. 18, 1896.

Fig. 1.

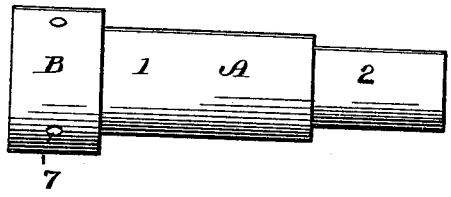


Fig. 2.

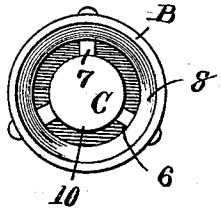


Fig. 3.

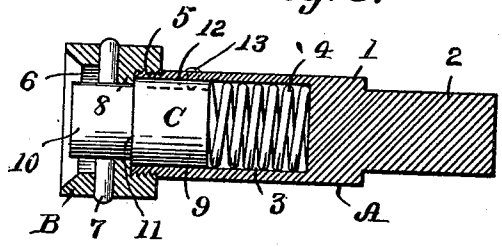


Fig. 5.

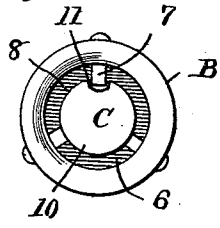


Fig. 4.

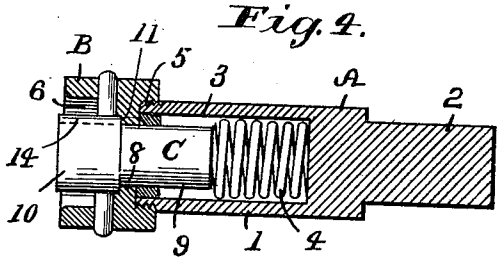


Fig. 6.

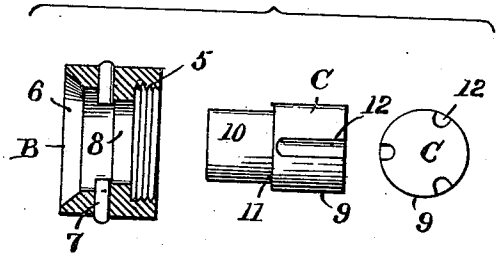
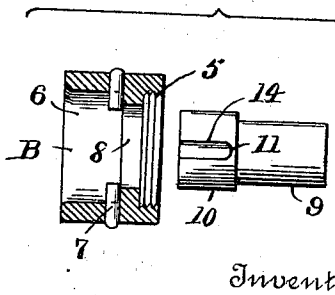


Fig. 7.



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UNITED STATES PATENT OFFICE.

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PAPER-CARTRIDGE CRIMPER.

SPECIFICATION forming part of Letters Patent No. 566,126, dated August 18, 1896.

Application filed January 15, 1896. Serial No. 575,583. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. BARLOW, a citizen of the United States, and a resident of New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Paper-Cartridge Crimpers, of which the following is a specification.

My invention relates to new and useful improvements in paper-cartridge crimpers, and particularly to that class of implements designed to turn over inward the end of the shell, and to tightly iron such turned-over portion firmly against the inner walls of the shell and at the same time press the end of the turned-over portion firmly against the wadding, thus preventing it from spreading over the surface of the wad and weakening the resistance against the action of the explosive force, which would impair the velocity of the shot.

It is the object of my invention to provide a crimper that can be used upon a lathe or any suitable crimping-tool which has a bore of a proper diameter to accommodate the shank of said crimper.

It is further an important object to provide simple and durable means whereby a single implement may be made to accommodate different sizes of shells by providing said crimpers with different sizes of ironers and crimping-heads.

There are at this time in general use what are known as "inside" ironers, the diameter of which is determined by the space required to hold the turned-over portion of the shell between the inner diameter of the shell and the outer diameter of the ironer. Thus each and every different size of shell requires a different and specific size of ironer, which has necessitated thus far the manufacture of a separate and complete implement for each and every different size of shell. (To enumerate, ten, twelve, fourteen, sixteen, or twenty gage, &c.) As these are many, the expense to users is great, they being compelled to purchase so many different implements.

Heretofore the cylindrical shank or crank-shaft, to which power is attached and to which the crimping-head is fastened, has been made with the inner chamber or recess conforming to the size of the outer diameter of the ironer required for each of the several sizes. No one size could be interchanged with the other, as each size of ironer is of a different diameter, as set forth above. To overcome this difficulty, I make the shanks to which the heads are attached of exactly the same outside dimensions and the holes of exactly the same diameter, or, in other words, the shank is the same inside and out for all gages. I am able to do this by giving two diameters to the ironers, as follows: the rear end of all sizes to be the same, which shall be a sliding fit into the hole of the shank. The forward end of the ironers are to be of the specific size required for each gage, the threaded portion of the shank and the threaded portion of the various crimping-heads to be all of the same diameter and pitch, the end of all the ironers to be slotted, as shown.

Upon the accompanying drawings, which form a part of this specification, the same reference-characters denote like or corresponding parts upon the several figures, and of which—

Figure 1 is a side elevation of my novel crimping-tool, the driving connections therefor being omitted. Fig. 2 is a front end elevation of Fig. 1. Fig. 3 is a central vertical longitudinal section. Fig. 4 is a similar central vertical longitudinal section of a slightly-modified form. Fig. 5 is an end view of the construction shown in Fig. 4. Fig. 6 shows a vertical longitudinal section of the head and a plan and end view, respectively, of a slightly-modified form of ironer. Fig. 7 is a similar vertical longitudinal section of a head and plan view of the ironer shown in Fig. 4.

Referring to the reference-characters upon the several figures of the drawings, A indicates the shank or holder, which is cylindrical in form and adapted to be used as a lathe crimping-tool, which are now made as a distinct article of manufacture, or it may be used in connection with a crimping-tool such as is shown in my former patent, No. 553,024, of January 14, 1896. This shank is provided with two distinct peripheral surfaces 1 and 2, the former serving as a bearing or spindle and the latter as means for attaching power mechanism, such as a crank or driving-wheel. Within this shank I provide a bore 3, to accom-

modate a spiral spring 4, which serves to yieldably retain the ironer in position. The inner end of the surface 1 is threaded to engage internal threads of the detachable heads B.

The heads B are made in different sizes, all of which are provided with an internal threaded surface 5 of a uniform size to admit of the ready attachment of the threaded shank. They are further provided with the usual recess 6 to receive the shell to be ironed, and the pins 7, adapted to engage and turn in said shell. Also an internal rib 8 is formed within the head and serves to engage the shoulder of the ironer, thus retaining the same against the action of the spring 4.

The ironers C are made in different sizes to fit the heads above mentioned, their inner ends 9 being larger than their outer ends 10, thus forming a shoulder 11, which is firmly retained against the rib of the head by the action of the spring 4 within the shank. The ironer is further provided with a longitudinal slot 12 in the top thereof to accommodate a screw 13, fitted within the shank, having its end extending into said slot, thus preventing said ironer from having any independent rotary motion, at the same time allowing it a free longitudinal movement.

In the construction shown in Figs. 4, 5, and 7 I have shown an ironer whose operative end is equal to or larger than its inner end, and I provide one or more grooves 14 in said outer end, forming shoulders 11^a to receive the end of one of the pins 7, which are longer than the pins shown in the above figures, and serves as a means for retaining said ironer in position.

It will be obvious from the above that it is immaterial as to the size of the outer operative end of the ironer so long as the same conforms to the size of the head, which is made of a certain gage, yet it is important that the inner end of said ironers should be of a uniform diameter to admit of the various sizes of ironers being used interchangeably.

It will be seen that my construction of the shank, as described and shown by me, is of great value to the manufacturer, for instead of, as now, making a complete implement for each separate gage all frames and all shanks are alike. They are one and the same for all gages, dispensing with the necessity of separate patterns for castings for frames for each gage, also the making and keeping in order of a multiple of tools required for the manufacture of a variety, as well as a variety of stock which must be kept on hand. With this construction the shanks are made in quantities all alike, from which may be filled orders for any gage of lathe crimping-tools. The same may be taken and inserted in the frames common for all; also the same may be used for the power-crimper by attaching the driving-wheel. Thus immense saving is apparent.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a cartridge-crimper of the class described, the combination with a shank having two distinct peripheral dimensions and a bore central thereof, of a detachable head secured to said shank, an ironer fitted longitudinally within said head and provided with two distinct diameters, forming a shoulder to be engaged by said head, and whereby the same is retained in position, substantially as described.

2. In a cartridge-crimper of the class described, a shank having a bore, a head detachably secured to said shank, an ironer having two distinct diameters and suitable means for retaining the ironer yieldably in place in the shank, whereby said ironer is made interchangeable for various gages of cartridges, substantially as described.

Signed at New Haven, in the county of New Haven and State of Connecticut, this 9th day January, A. D. 1896.

JOHN H. BARLOW.

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