(No Model.)

G. D. HUNTER.

CRIMPER FOR CARTRIDGE SHELLS.

No. 505,046. Patented Sept. 12, 1893.

Fig. 1.

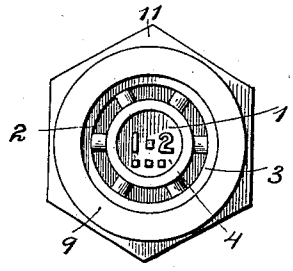
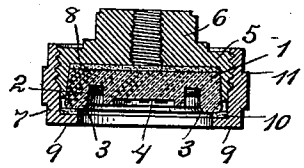


Fig. 2.



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CRIMPER FOR CARTRIDGE-SHELLS.

SPECIFICATION forming part of Letters Patent No. 505,046, dated September 12, 1893.

Application filed May 9, 1893. Serial No. 473,529. (No model.)

To all whom it may concern:

Be it known that I, GEORGE DUNN HUNTER, a citizen of the United States, residing at Auburn Park, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Crimpers for Cartridge-Shells; 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 relates to improvements in crimpers, which are designed to crimp or close the outer ends of paper cartridge shells, used with breech loading shot guns, and it consists in the construction and arrangement of parts which will be hereinafter fully described, and particularly pointed out in the claims.

My present invention is an improvement in the forms of crimpers disclosed in United States Letters Patent Nos. 449,536 and 449,537, granted to me on March 31, 1891, for improvements in crimpers, and is designed to adapt glass crimping disks for use with automatic cartridge loading machines. The main feature of both of said patents is the use of a glass crimping disk to crimp the outer ends of the cartridge shells, and in both of said patents the glass crimping disk is described as being held in position in its holder by a layer of cement, means being provided to prevent the said crimping disk from turning in said holder. While this construction is suitable for hand crimping devices, in which the motion of the parts is not rapid, or entirely continuous, and has been found to be well adapted for this purpose, I have found by experience that when the crimpers shown in said patents are used on automatic cartridge loading machines, such for instance as that described in United States Letters Patent No. 480,015, granted to C. S. Hisey on August 2, 1892, the rapid motion of the parts gives rise to heating of the glass crimping disk, and the consequent expansion of the same causes it to crack and fly apart, thus rendering it useless.

One object of my present invention is to provide a holder for the glass crimping disk which will entirely do away with the use of a cement to hold the disk in position, and which, while holding the same securely, and preventing it from turning, will at the same time allow free expansion of the said disk without breakage.

Another object of my invention is to so form the holder of the crimping disk that it shall be light and compact in form, and shall be capable of easy and rapid adjustment to the cartridge loading machine to which it is to be applied.

I have found by actual experience that my present form of crimper can be used with success on automatic cartridge loading machines, and that the crimper is durable, and will only wear out after continued use.

My invention is fully represented in the drawings accompanying and forming a part of this application, in which the same reference numerals refer to the same or corresponding parts, and in which—

Figure 1 is a bottom plan view of my crimper, and Fig. 2 is a vertical section of the same.

Referring to the drawings, 1 represents the glass crimping disk, which is made entirely of glass, and is cast into the desired shape. The disk is bell shaped, and is formed on its lower surface with a deep annular groove or depression 2, radial ridges being formed at the bottom of said groove, which serve, in the operation of the crimper, to smooth and make even the crimped end of the cartridge shell. The outer end of said groove 3 is slightly flaring in form, so that the end of the cartridge shell may be gradually turned, and crimped. The elevation 4, formed in the interior of the lower surface of the disk, is not quite on the level of the outer rim of the crimping disk, and on this elevation are formed such configurations or devices as are desired to be used to designate the size of shot, the quantity of powder, &c., used in the shells which are crimped.

The main holder 5, in which the crimping disk rests, is a hollow cylindrical shell, whose interior is smooth and slightly bell shaped to correspond with the shape of the crimping disk which it contains, and whose exterior is screw-threaded to permit of the attachment of the auxiliary holder or cap 7. Through a screw threaded opening in the top of the holder passes the screw attaching the same to the proper operative tool of a cartridge load-

ing machine, the holder being formed on its upper surface with the projecting portion 6 to give a longer bearing to said screw, and thus render the attachment more secure.

Between the top of the crimping disk and the inner surface of the holder, I preferably place the seating 8, to prevent the crimping disk from being broken by the shock and jar of the operating mechanism, or from frictional contact with the cartridge shells while they are being crimped. This seating is preferably made of asbestus, both on account of the perfect seating thus afforded, and because asbestus is a non-conductor of heat, and thus assists in keeping the crimping disk cool when in continuous operation, but rubber, or paper may be used instead if desired, or the seating may be entirely dispensed with, as it is not essential to the satisfactory operation of my crimper. The crimping disk is held in position in the main holder by the auxiliary holder or cap 7, which is interiorly screw-threaded to engage with the exterior screw threads on the holder, and is formed on its bottom surface with an inturned rim or flange 9, which presses against the glass crimping disk, and holds it in position in the main holder. A seating 10 is preferably provided on the upper surface of said flange, upon which the glass disk actually rests, as the risk of breaking from shock or jar is thereby diminished, and such seating is preferably made of asbestus for the same reasons that led to the choice of that material for the seating 8, but said seating 10 may be dispensed with if desired. On the exterior of the auxiliary holder or cap 7 is formed a hexagonal flange 11, in order to enable this part to be more readily grasped when it is to be attached to the operating tool of a cartridge loading machine.

In putting the parts of my crimper together, the asbestus seating 8 is first placed in the main holder, and the glass crimping disk 1 is then put in position therein. The cap 7 is then screwed into place, and holds the crimping disk tightly and securely in position, in such a manner as not to allow it to revolve or slip, though allowing it perfect freedom to expand. Since the disk is not held in its holder by cement, or other like substance, the expansion can take place uniformly over the entire glass disk, and therefore no risk or breakage can arise therefrom.

By forming the containing receptacle for the crimping disk in the holder 5 in the manner shown, said holder being in effect an enlarged shaft head of the cartridge loading machine, and by securing said disk in position by the auxiliary holder or cap 7, I secure lightness of the parts, and compactness in the crimping device.

I do not limit myself to the precise means I have illustrated for holding the crimping disk in position in the main holder, but

What I claim as new, and desire to secure by Letters Patent, is—

1. In a crimper for cartridge shells, the combination with a glass crimping disk, of a holder for the same, and means separate from said holder holding said disk in position in said holder, substantially as described.

2. In a crimper for cartridge shells, the combination with a glass crimping disk, of a holder for the same having its interior of a shape corresponding to that of the crimping disk, and means separate from said holder holding the disk in position in said holder, substantially as described.

3. In a crimper for cartridge shells, the combination with a glass crimping disk, of a holder for the same, a seating of asbestus or other suitable material between said holder and the top of the crimping disk, and means separate from said holder holding said disk in position in said holder, substantially as described.

4. In a crimper for cartridge shells, the combination with a glass crimping disk, of an exteriorly screw-threaded holder for the same, and an interiorly screw-threaded auxiliary holder or cap, formed with an interior rim, holding said disk in position in said holder, substantially as described.

5. In a crimper for cartridge shells, the combination with a glass crimping disk, of an exteriorly screw-threaded holder for the same, and an interiorly screw-threaded auxiliary holder or cap, formed with an interior rim having a seating of asbestus or other suitable material on its upper surface, holding said disk in position in said holder, substantially as described.

6. In a crimper for cartridge shells, the combination with a glass crimping disk, of an exteriorly screw-threaded holder for the same, a seating of asbestus or other suitable material between said holder and the top of the crimping disk, and an interiorly screw-threaded auxiliary holder or cap, formed with an interior rim having a suitable seating on its upper surface, holding said disk in position in said holder, substantially as described.

7. In a crimper for cartridge shells, the combination with a glass crimping disk, of a holder for the same, a central screw-threaded opening extending through the top of said holder, and means separate from the holder holding said disk in position in the same, substantially as described.

8. In a crimper for cartridge shells, the combination with a glass crimping disk, of a holder for the same provided on its top with a central projection, a central screw-threaded opening through said top, and means separate from the holder holding the crimping disk in position in said holder, substantially as described.

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

GEORGE DUNN HUNTER.

Witnesses:
R. G. ELLIS,
V. Q. PAXSON.