A. C. CAREY.

Feeding Attachment for Cartridge Loading Machines.

No. 163,151. Patented May 11, 1875.

Fig 1

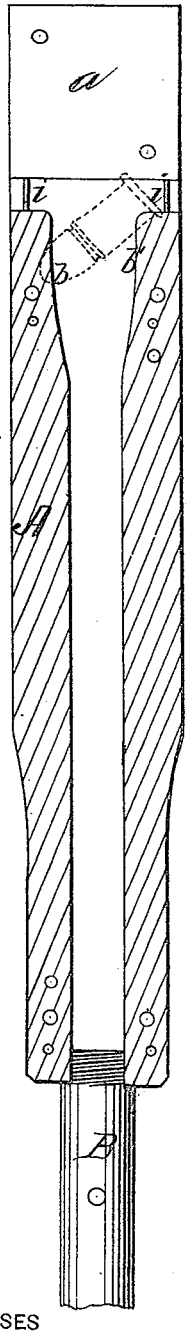


Fig 2

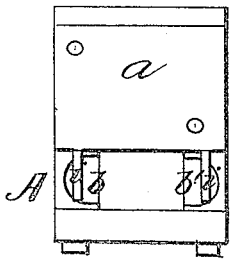
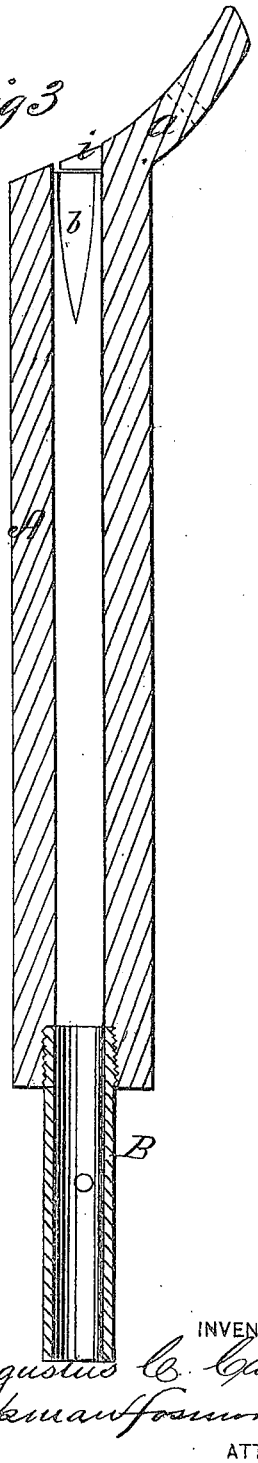


Fig 3



WITNESSES

Eug. W. Johnson,

Francis J. Clasi

INVENTOR

Augustus C. Carey

Elliman Foster & Co.,

ATTORNEYS

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

AUGUSTUS C. CAREY, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN FEEDING ATTACHMENTS FOR CARTRIDGE-LOADING MACHINES.

Specification forming part of Letters Patent No. **163,151**, dated May 11, 1875; application filed March 27, 1875.

To all whom it may concern:

Be it known that I, AUGUSTUS C. CAREY, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and valuable Improvement in Feeding Loaded Cartridges; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a vertical section of my cartridge-feeder. Fig. 2 is a detail view of the same, and Fig. 3 is a vertical sectional view.

This invention has relation to improvements in the cartridge-shell feeder for which Letters Patent of the United States were issued to me bearing date of the 30th of March, 1875, and numbered 161,382, wherein were described a hopper, in which the shells were promiscuously thrown, an agitator, and a feed-wheel for delivering the shells into a tube or feed-pipe, and a hook arranged in a recess of the said tube, for causing the said shells to be delivered at the end of the tube, closed end foremost.

The object of the invention and improvement is to adapt the devices described in the above-mentioned Letters Patent to the feeding of loaded cartridges from a hopper into the eduction-pipe, with their bullet ends foremost, so that they will be discharged from its lower end into a receptacle in a uniform position, and may be conveniently and regularly packed for transportation.

To this end the nature of the invention consists in a tube having rounded recesses in its upper end walls, which recesses gradually merge with the bore of the tube, and into which the cartridges are successively delivered in a horizontal position, whereby the flanged ends of the same will be arrested and the bullet end allowed to vibrate downward, disengaging the flanged end from the recess, and allowing the cartridge to fall bullet end foremost through the tube, as will be hereinafter more fully explained.

In carrying out my invention, the feed-wheel, instead of having feed-cups cut radially in its periphery, as described in the Letters Patent above mentioned, will have them cut transversely to the periphery, so that as the feed-wheel rotates the cartridges will be fed to the chute side foremost.

With these observations I shall now proceed to describe my invention.

In the annexed drawings, A designates a metallic tube, having upon its upper end a curved flange, *a*, whereby it is secured to the hopper-frame, and in its lower end a detachable nozzle, B. In practice, this nozzle may be straight, as shown in the drawings, or it may be curved, as I may elect, both shapes being necessary at times for delivering the cartridges upon their points in the first case, and in the second upon their sides. The upper end of tube A is provided with rounded recesses *b b'*, which gradually become shallower until they finally merge in the end walls of the tube, as shown in Fig. 1.

When the loaded cartridge is delivered to the tube from the feed-wheel it will fall in a horizontal position into the recesses *b b'* of the former, and these recesses being broader than the bullet, but narrower than the flanged end of the cartridge-shell, the flange on the shell will be prevented from passing the recess, upon which it falls, and the bullet will gravitate downward through its recess, as shown in Fig. 1. The flange on the shell becoming disengaged from the recess by this gravitation, the cartridge will fall into the tube, and be delivered bullet end foremost out of the same. This result will inevitably be obtained, whether the bullet end of the cartridge be in recess *b* or in recess *b'*, so that all danger of exploding the fulminating-powder in the end of the shell is effectually done away with.

With a view to guiding the cartridge accurately when falling into recesses *b' b*, so that they will not become clogged, I use guide-flanges *i*, projecting across the said recesses, as shown in figure. The distance between these flanges is slightly greater than the length of the cartridge, so that the latter will readily be received between them and be turned with their bullet ends foremost.

Tube A, its recesses *b b'*, and the trans-

versely-grooved feed-wheels will be made of various sizes, to suit the dimensions of different cartridges.

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

1. In a machine-feeder for cartridges, the tube A, having grooves or recesses *b b'*, adapted for use with a hopper and a transversely-grooved feed-wheel, substantially as specified.

2. The guide-flanges *i*, in combination with the grooves or recesses *b' b* of a feed-tube, A, substantially as specified.

In testimony that I claim the above, I have hereunto subscribed my name in the presence of two witnesses.

AUGUSTUS C. CAREY.

Witnesses:
JOS. B. LOOMIS,
GEORGE E. UPHAM.