A. WRIGHT.

Projectiles for Ordnance.

No. 147,216. Patented Feb. 3, 1874.

Fig. 1.

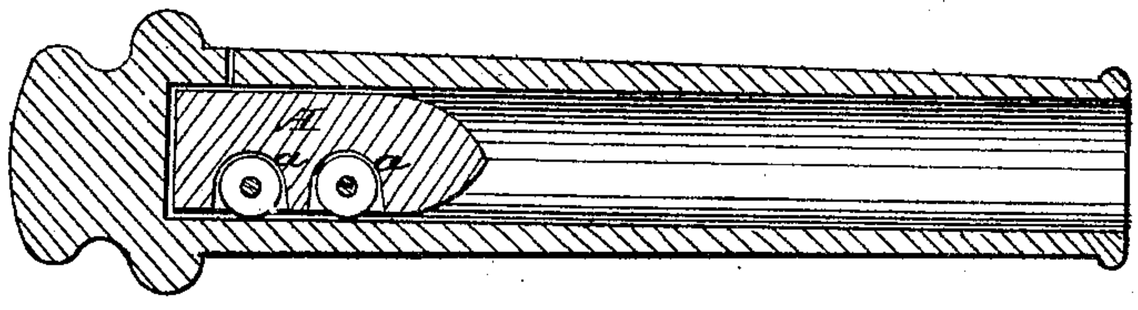
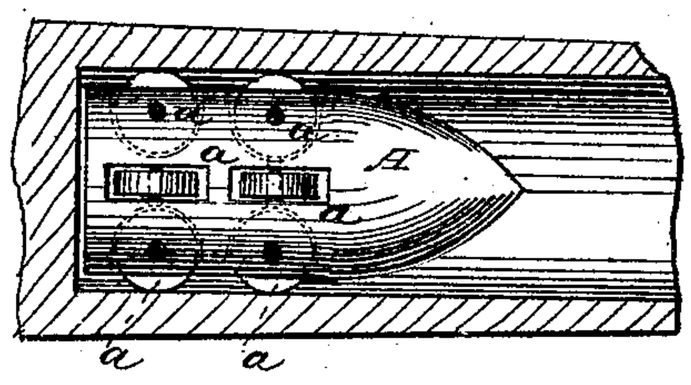


Fig. 2.



WITNESSES:
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ABRAM WRIGHT, OF CLINTON, MASSACHUSETTS.

IMPROVEMENT IN PROJECTILES FOR ORDNANCE.

Specification forming part of Letters Patent No. **147,216**, dated February 3, 1874; application filed December 17, 1873.

To all whom it may concern:

Be it known that I, ABRAM WRIGHT, of Clinton, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Projectiles; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification.

The nature of my invention consists in providing a projectile for heavy guns with two or more rollers or wheels in one or more of its sides, said rollers being arranged one behind the other, and in a line parallel with the longitudinal center of the projectile, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a longitudinal section of a gun with a projectile having one set of rollers; and Fig. 2 is a similar section, showing the projectile with three sets of rollers.

A represents an elongated projectile, such as is ordinarily used in heavy guns. In the side of the projectile A are made two or more recesses, for the reception of two or more rollers or wheels, *a a*, which are so arranged as to project the least distance beyond the exterior surface of the projectile. The rollers may be arranged in a direct or indirect line with each other; but in either case each roller must be parallel with the longitudinal axis of the projectile. When these rollers are used only on one side of the projectile, this side should be the under side when the projectile is inserted in the gun. The rollers *a a* thus take the weight upon them as the projectile is forced out of the gun, thereby avoiding the friction which is always occasioned by the projectile sliding out. It also prevents the so frequent plowing out of the bottom of the bore of the gun. Similar rollers or wheels may also be arranged in the projectile, to bear against the sides of the bore of the gun, if desired, so as to still further reduce the friction.

I am aware that rollers or wheels have been arranged in the sides of projectiles at certain angles, for the purpose of twisting or revolving the projectile around its longitudinal axis; and I do, therefore, not broadly claim the attachment of rollers or wheels to projectiles as my invention.

My invention has for its object to reduce the friction as the projectile is forced out of the gun; and to this end the rollers or wheels are arranged one behind the other, and on a line with the longitudinal center of the projectile.

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

A projectile for heavy guns provided with two or more rollers or wheels in one or more of its sides, and said rollers or wheels arranged in a line parallel with the longitudinal center of the projectile, substantially as and for the purpose specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

ABRAM WRIGHT.

Witnesses:
C. F. W. PARKHURST,
J. B. BAKER.