

(No Model.)

DE LANCY KENNEDY.

PROJECTILE.

No. 371,461.

Patented Oct. 11, 1887.

Fig. 1.

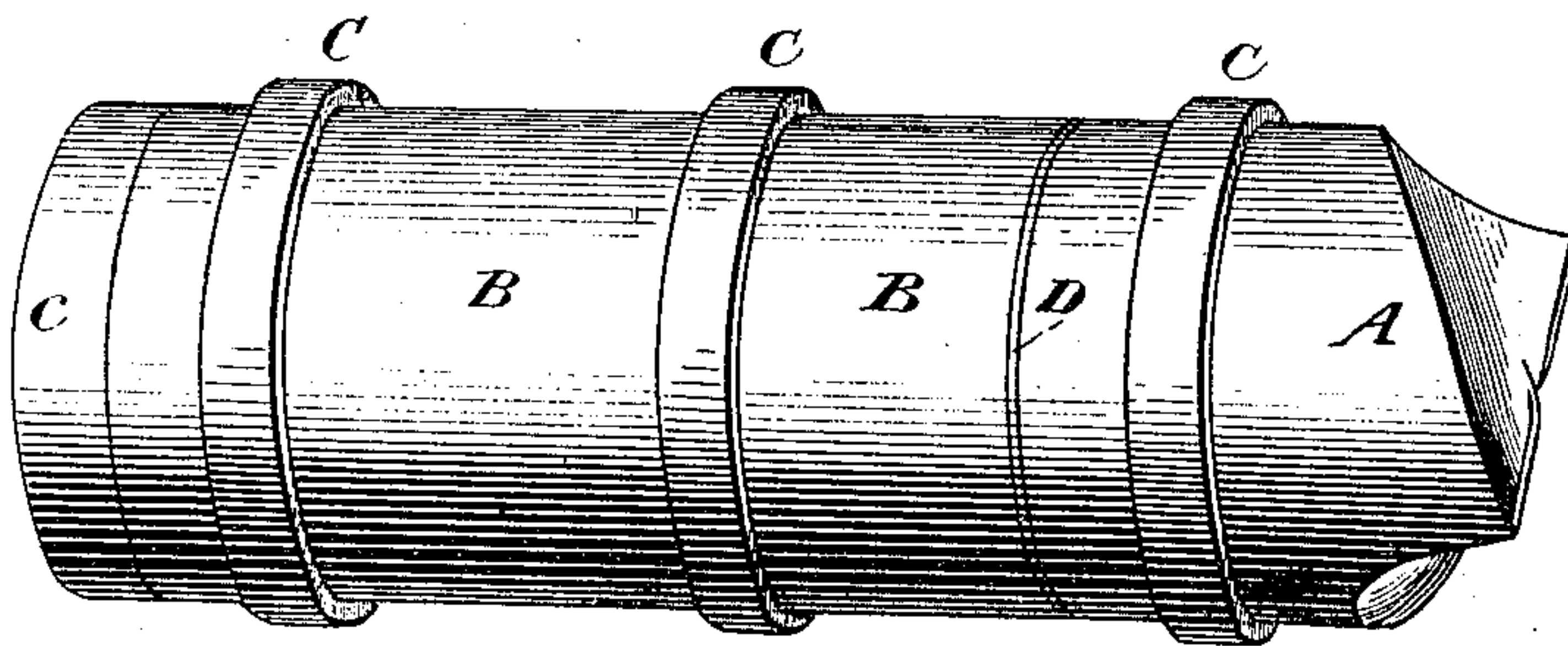
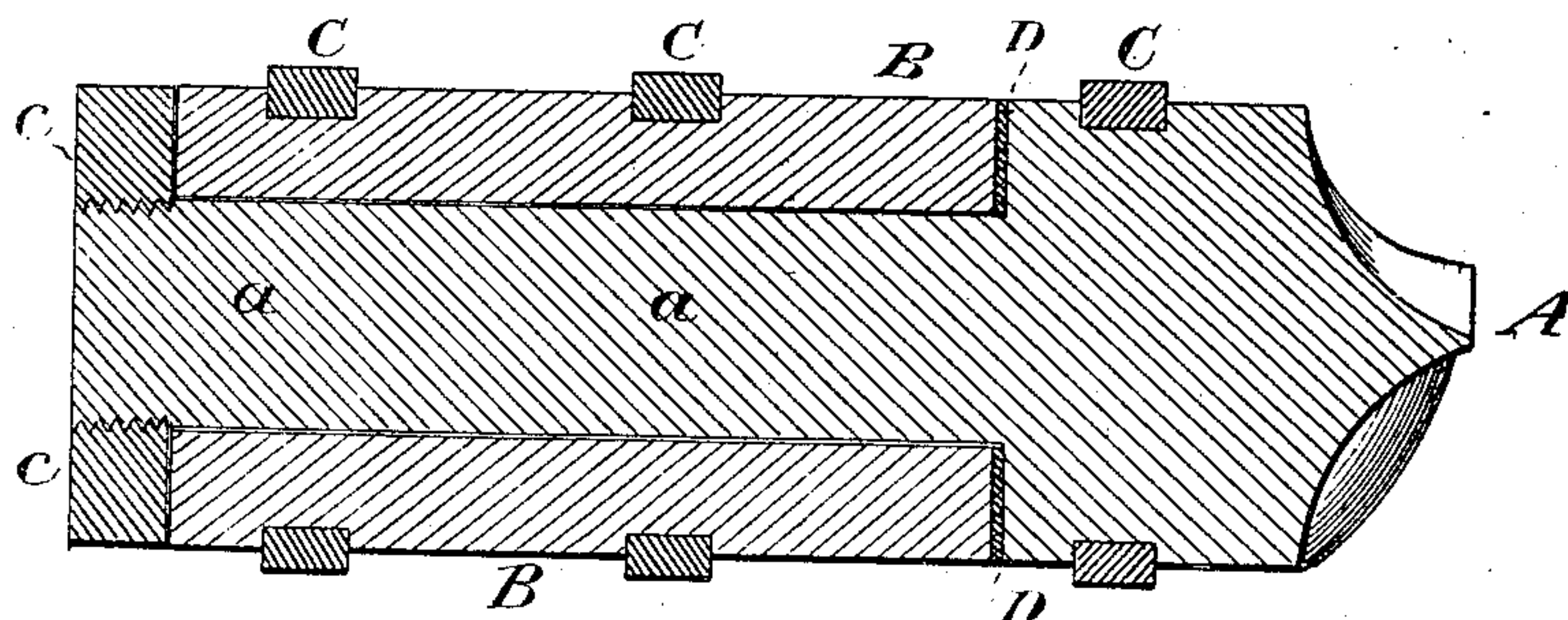


Fig. 2.



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UNITED STATES PATENT OFFICE.

DE LANCY KENNEDY, OF NEW YORK, N. Y.

PROJECTILE.

SPECIFICATION forming part of Letters Patent No. 371,461, dated October 11, 1887.

Application filed February 17, 1887. Serial No. 227,912. (No model.)

To all whom it may concern:

Be it known that I, DE LANCY KENNEDY, of the city, county, and State of New York, have invented a certain new and useful Improvement in Projectiles, of which the following is a specification, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention is preferably an improvement upon that described in Letters Patent No. 189,043, granted to me April 3, 1877, the object of the invention described in that patent being to provide a projectile which will more easily penetrate the armor-plating of war-vessels by effecting a continuous shearing cut.

The invention is, however, applicable to projectiles other than that described in my said patent.

It has been found that where such a projectile as is described in my said Patent No. 189,043 is fired from a rifled gun the rotation given to the projectile is apt, on being suddenly checked by the penetration of the point of the projectile, to cause the fracture of said end or the fracture of the projectile at or near the limit of its penetration. To prevent such fracture it would be necessary to form the entire projectile of steel sufficiently strong and so tempered as to withstand the violent torsional strain to which the projectile would be subjected by the sudden stoppage of its rotation.

The object of my present invention, therefore, is to provide a projectile having all the important and destructive qualities of that described in my said patent, and which shall nevertheless be free from the objections above named. To accomplish this object I adapt the greater portion of the length of the projectile to freely revolve upon that part constituting the point or penetrating element, whereby, after said point has penetrated the armor, the greater part of the projectile having the greater weight may continue to revolve until its rotating force has been expended.

In the accompanying drawings, Figure 1 is a perspective view of my improved projectile. Fig. 2 is a vertical section of the same.

Similar letters of reference indicate similar parts in the respective figures.

A is the forward end or point of the projectile, which may have the cutting-edge constructed substantially in accordance with my

said Patent No. 189,043. The said forward end of the projectile is preferably made, in whole or in part, of hardened or properly-tempered steel, and is provided with a pin or axle, *a*.

B represents the larger and heavier part of the body of the projectile, which is in the form of a hollow cylinder and rests upon the pin or axle *a*. The part B constitutes about two-thirds of the length of the entire projectile, and may be made of cast-iron. The two parts A and B are grooved or recessed and provided with bands C, of softer metal. The end of the pin or axle *a* is screw-threaded at its outer end to receive a circular nut, *c*, which is preferably of the same diameter as the body of the projectile.

D is a washer, which may, if desired, be made of some anti-friction metal of any suitable thickness, the washer surrounding the pin or axle and being placed between the two parts A and B of the projectile.

The operation will be readily understood from the foregoing description; but it may be stated that on the forward end of the projectile striking and penetrating an armor-plate or other object this part of the projectile is prevented from continuing the rotary movement imparted to it by the rifled construction of the gun from which the projectile has been discharged; but as the part of the projectile having the greater weight is permitted to revolve, while incapable of longitudinal or end movement, the rotary movement given the projectile may continue until the force has been expended.

I thus provide a projectile which may have all the advantages attending the construction set forth in my said Patent No. 189,043, and which may be of any desired length without danger of the projectile becoming fractured after it strikes the object at which it has been discharged.

Having thus described my invention, I claim—

1. A cylindrical projectile having a portion of its body in the rear of its point or forward end adapted to revolve independently of said point, but incapable of longitudinal or end movement, substantially as set forth.

2. In a cylindrical projectile, a point or front portion and a pin or axle in the rear

thereof, combined with a hollow cylinder mounted on said pin and capable of rotary but incapable of longitudinal or end movement, substantially as set forth.

5 3. In a cylindrical projectile, a forward part or point and a pin or axle homogeneous therewith and in the rear thereof, combined with a hollow cylinder mounted on said pin or axle and capable of rotary but incapable of longitudinal or end movement, substantially as set forth.

10 4. In a cylindrical projectile, a forward part and a pin or axle in the rear thereof, combined with a hollow cylinder mounted on said pin or axle and capable of rotary but incapable of longitudinal or end movement, and means for maintaining said cylinder on the pin, substantially as set forth.

15 5. In a cylindrical projectile, a forward part or point having a pin or axle in the rear thereof, combined with a hollow cylinder

mounted on said pin and capable of rotary but incapable of longitudinal or end movement, and a washer surrounding said pin or axle between the said forward part and hollow cylinder, substantially as set forth. 25

6. In a cylindrical projectile, a forward part or point having a pin or axle in the rear thereof, combined with a hollow cylinder mounted on said pin and capable of rotary but incapable of longitudinal or end movement, a washer surrounding said pin or axle between the said forward part and hollow cylinder, and means for maintaining the hollow cylinder upon the pin or axle, substantially as set forth. 30

In testimony whereof I hereunto set my hand and seal. 35

DE LANCY KENNEDY. [L. S.]

Witnesses:

GEO. H. HOWARD,
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