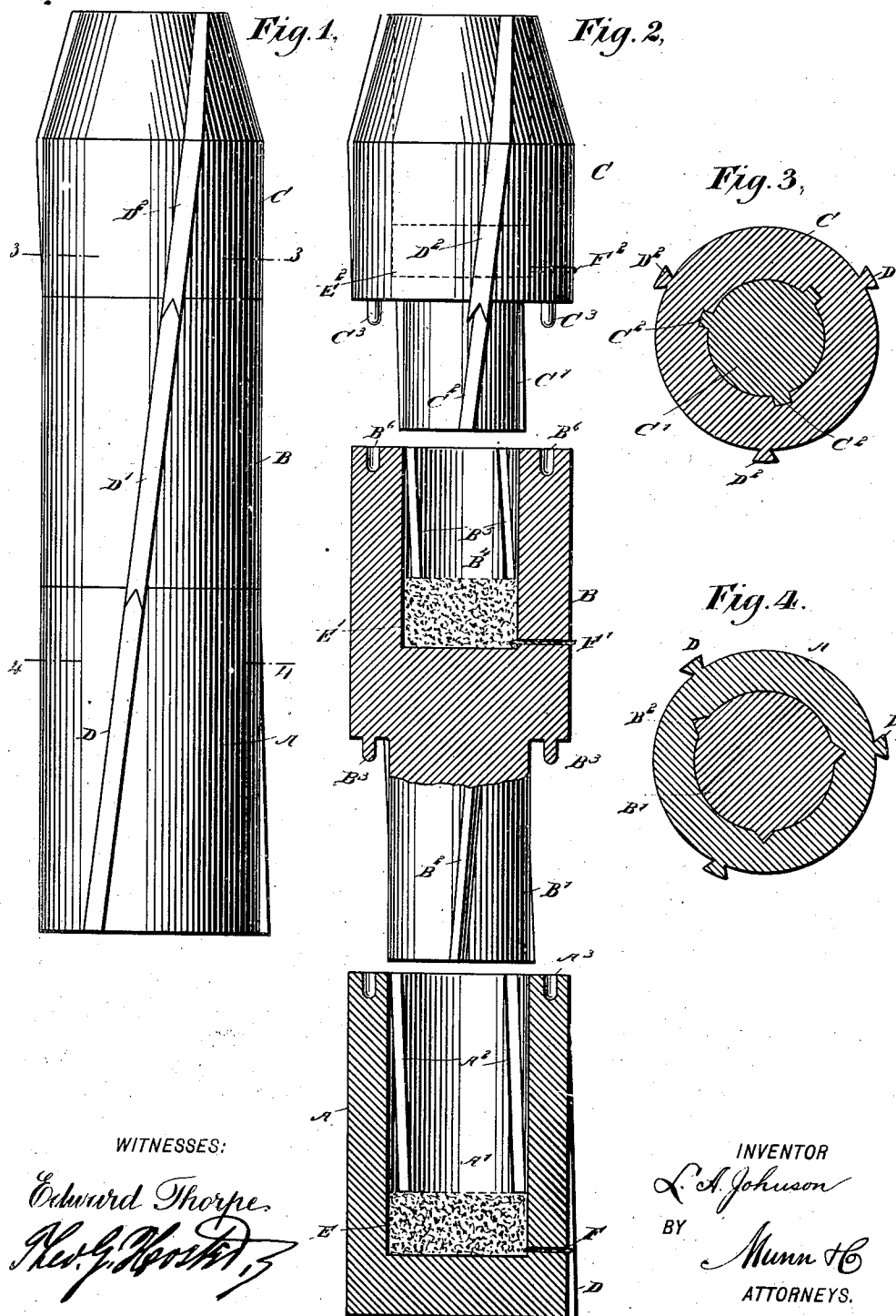


(No Model.)

L. A. JOHNSON.
MULTIPLE PROJECTILE.

No. 556,632.

Patented Mar. 17, 1896.



WITNESSES:

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UNITED STATES PATENT OFFICE.

LARENCE ALEXANDER JOHNSON, OF SAN FRANCISCO, CALIFORNIA.

MULTIPLE PROJECTILE.

SPECIFICATION forming part of Letters Patent No. 556,632, dated March 17, 1896.

Application filed April 12, 1895. Serial No. 545,520. (No model.)

To all whom it may concern:

Be it known that I, LARENCE ALEXANDER JOHNSON, of San Francisco, in the county of San Francisco and State of California, have
5 invented a new and Improved Projectile, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved projectile which is simple
10 and durable in construction and more especially designed for long-range use.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed
15 out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate
20 corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement. Fig. 2 is a sectional side elevation of the same with the parts separated. Fig. 3 is a cross-section of the improvement on the line
25 3 3 of Fig. 1, and Fig. 4 is a similar view of the same on the line 4 4 of Fig. 1.

The improved projectile is made in three or more sections A B C adapted to be separated from each other and arranged to form
30 a projectile to be fired from a cannon or other ordnance in the usual manner. The sections A B C are provided with the usual external spiral ribs, each made in sections D D' D², attached to the corresponding body-section, and the joint between the sections D D' and D'
35 D² is preferably made V-shaped, as plainly indicated in Fig. 1.

The lower or base section, A, is provided with a central bore A' adapted to receive
40 through part of its length the shank B', projecting from the lower end of the middle section, B. This shank B' is provided with spiral ribs B², preferably made V-shaped, as is plainly shown in Fig. 4, to engage corresponding
45 grooves A² formed on the inner wall of the bore A'.

Dowel-pins B³ on the base of the section B fit into corresponding recesses A³ in the upper end of the section A to connect the sections A and B with each other. In the bottom of the bore A' is sufficient space for a
50 charge E adapted to be fired by a time-fuse F extending to the outside of the section A.

In the upper end of the section B is formed a bore B⁴ adapted to receive through part of its length the shank C' projecting from the
55 base of the section C, and this shank C' is provided with spiral ribs C², preferably made square in cross-section and fitting into corresponding spiral grooves B⁵ in the wall of the section B. The space in the lower end of the
60 bore B⁴ is adapted to receive a charge E' adapted to be fired by a time-fuse F' extending to the outside of the section B.

In the outermost section, C, is placed a charge E² adapted to be ignited by a time-fuse F², likewise extending to the outside of
65 said section. Dowel-pins C³ on the base of the section C are adapted to engage recesses B⁶ in the upper end of the section B.

Having thus fully described my invention, 70 I claim as new and desire to secure by Letters Patent—

1. A projectile, comprising a body made in separable sections, the sections being provided with external spiral ribs, the ends of the ribs on one section being adapted to interlock with the ends of the ribs on the next section, substantially as shown and described. 75

2. A projectile comprising a body made in separable sections, each formed with a bore adapted to contain a charge, the sections being provided with a shank fitting in the bore of the next section, and the sections having dowel-pins to engage recesses in the opposing section, substantially as described. 85

3. A projectile, comprising a body made in separable sections, each provided with external ribs adapted to interlock with the ribs of the opposing sections, substantially as described. 90

4. A projectile, comprising a body made in separable sections, each provided with a bore having grooves formed on its inner wall, the sections being provided with a shank adapted to fit in the bore of the next section, the said shank being provided with ribs to engage the grooves in the bore, substantially as shown and described. 95

LARENCE ALEXANDER JOHNSON.

Witnesses:

JOHN JORSS,
PETER NELLMAN.