

No. 670,710.

Patented Mar. 26, 1901.

A. KERRY.  
RATCHET DRILL.

(Application filed Oct. 15, 1900.)

(No Model.)

Fig. 1.

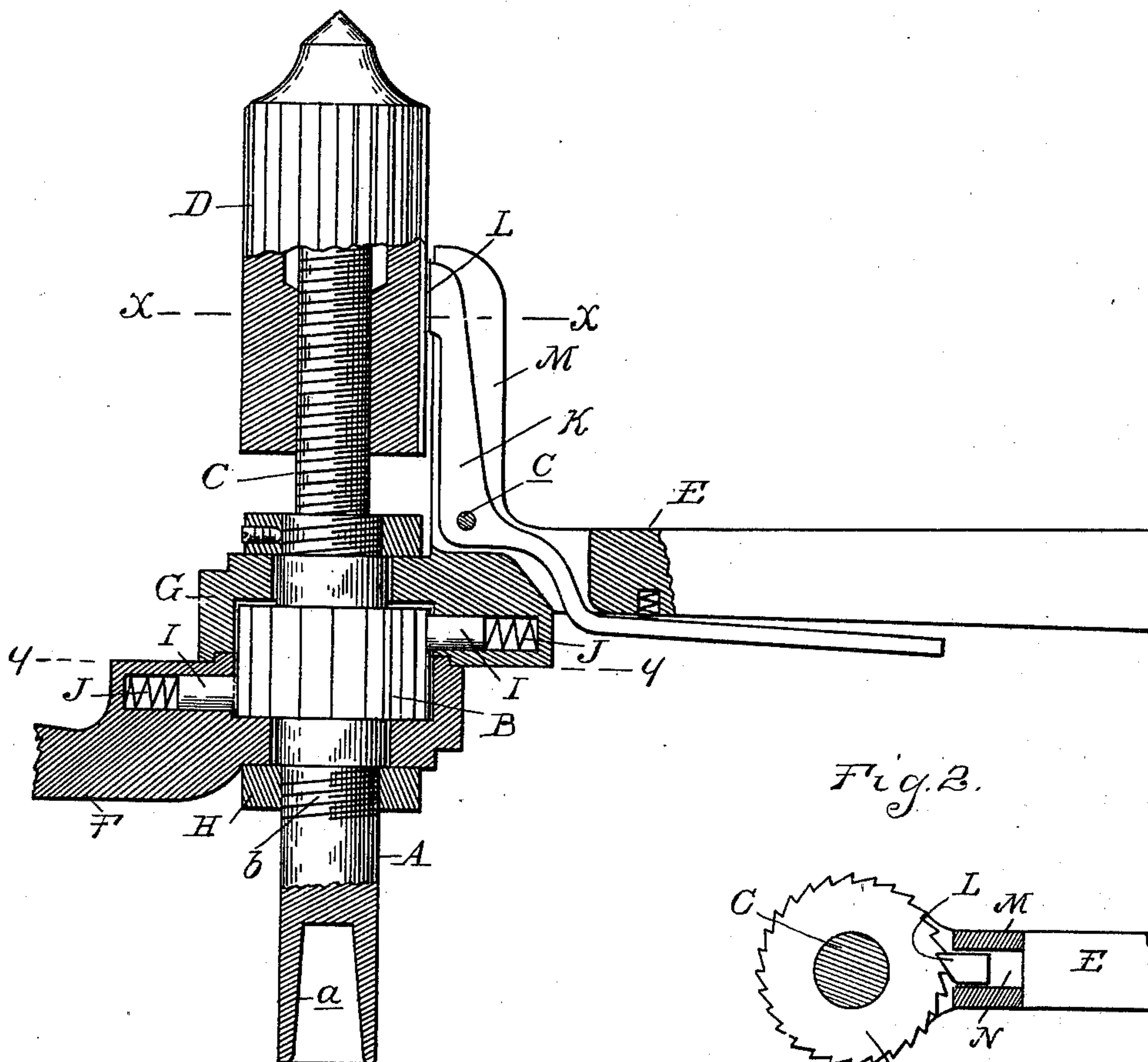


Fig. 2.

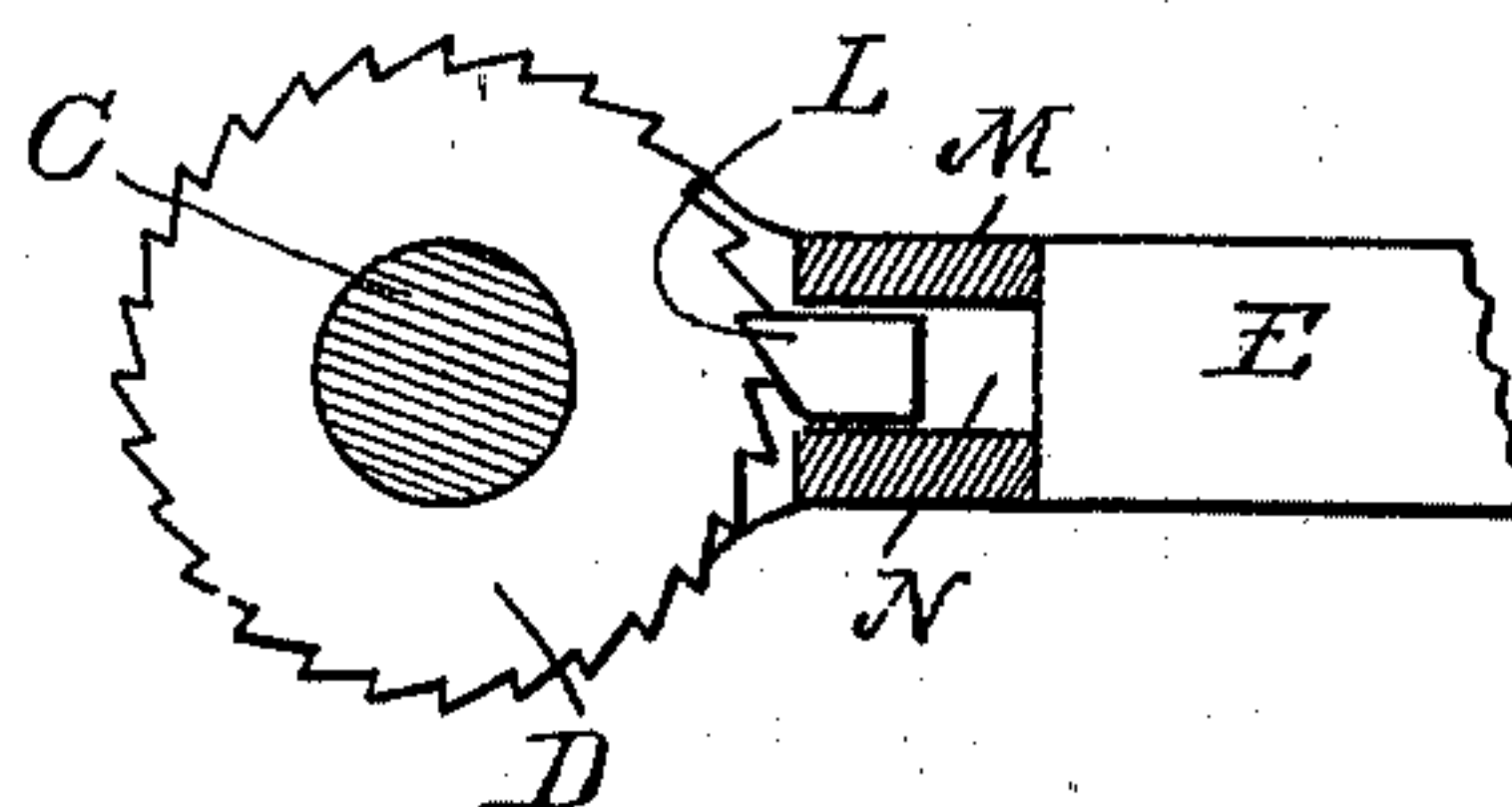
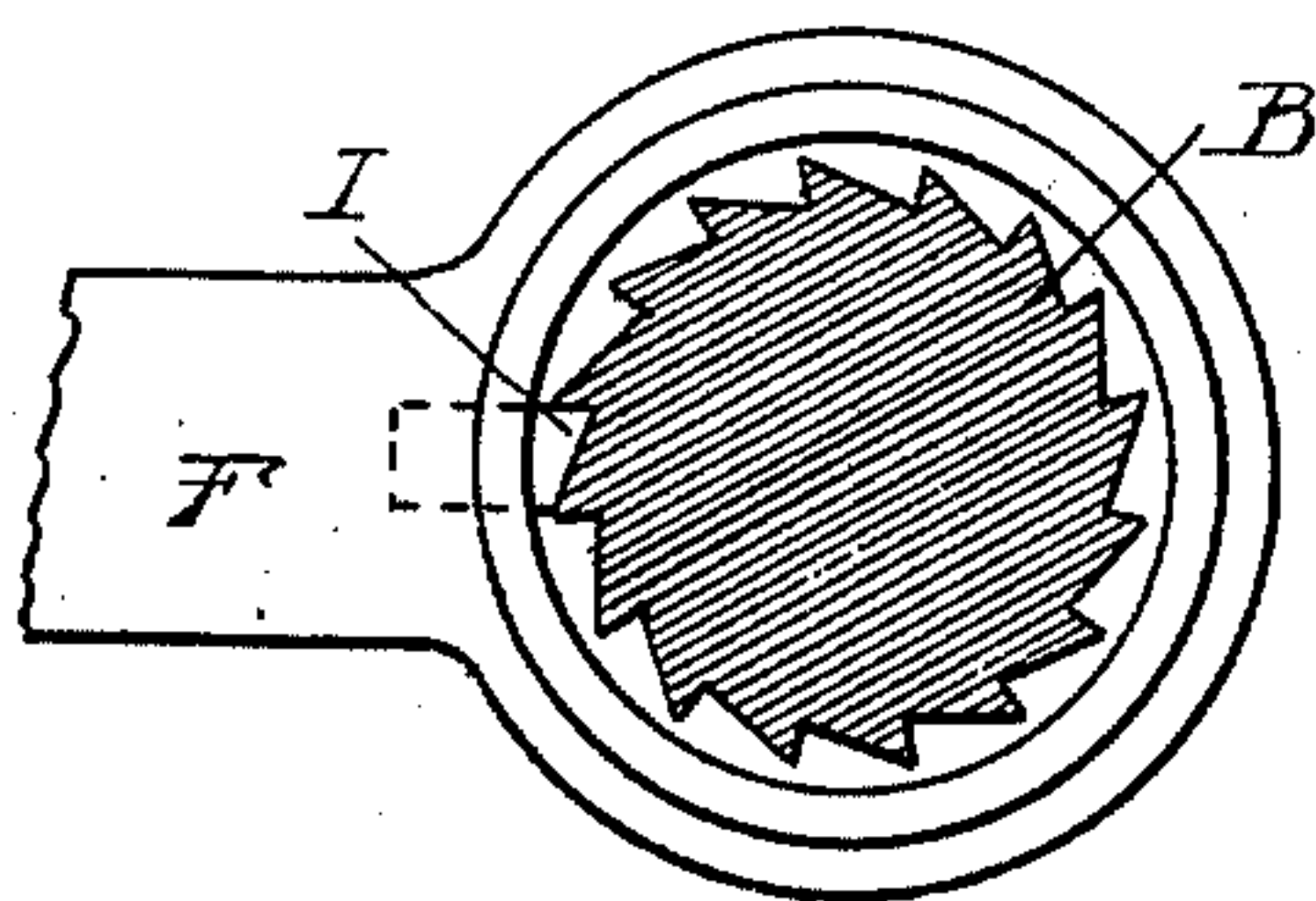


Fig. 3.



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# UNITED STATES PATENT OFFICE.

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## RATCHET-DRILL.

SPECIFICATION forming part of Letters Patent No. 670,710, dated March 26, 1901.

Application filed October 15, 1900. Serial No. 33,110. (No model.)

*To all whom it may concern:*

Be it known that I, AARON KERRY, a citizen of the United States, residing at Marysville, in the county of St. Clair and State of Michigan, have invented certain new and useful Improvements in Ratchet-Drills, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention has reference to an improved type of ratchet-drill; and it consists in the peculiar construction thereof and in the novel arrangement and combination of its various parts, as will be fully hereinafter described, and shown in the drawings, in which—

Figure 1 is a vertical central section, partly in elevation. Figs. 2 and 3 are sections taken on lines *xx* and *yy*, respectively, of Fig. 1.

The reference-letter A designates the rotatable member of the ratchet-drill, which is in the form of a vertical shaft the lower end of which is provided with a socket *a*, adapted to receive the tool. The upper portion C of the shaft is screw-threaded to receive thereon the usual feed-nut D.

B designates the ratchet-wheel, fixed in any suitable manner to the rotatable member, and E and F are two actuating-arms for rotating the wheel. In construction each arm is provided with a socket member, such as G, which is centrally apertured to permit of its being swiveled upon the rotatable member, as shown in Fig. 1, the socket members being so arranged relatively to each other as to form a housing for the ratchet-wheel, as indicated.

H designates collars threaded upon the rotatable member bearing against and holding in proper position the socket members of the arms, and these collars may, if desired, be secured to the rotatable member by suitable set-screws. Within the socket member of each arm is formed a recess, such as J, in which is arranged a spring-impelled pawl I, which engages the ratchet-wheel.

M is a bifurcated extension upon one of the arms, preferably the arm E, and K is a lever pivoted at *c* to swing between the furcations.

L is a dog arranged upon one arm of the lever adapted to be engaged upon the movement of the latter with the feed-nut, and O represents a spring arranged in a recess in the arm E, which bears normally against the

opposite lever-arm and holds the dog normally out of engagement with the nut.

In operating the ratchet-drill the two actuating-arms are moved simultaneously either away from or toward the operator. During the movement of the arms in one direction one of the latter engages the ratchet-wheel and partially rotates the same, while upon the return movement of the arms the ratchet is further rotated by the other arm. By means of this construction the ratchet-wheel is practically continuously rotated. To feed the tool held within the socket referred to its work, the operator while moving the actuating-arm presses the lever K, which causes the dog to engage with the feed-nut and rotates the latter independently of the rotatable member. Thus the feeding is effected without the necessity of the operator removing his hand from the actuating-arm.

What I claim as my invention is—

1. In a ratchet-drill, the combination with a rotatable member and a feed device therefor, of an actuating-arm for turning the member, and means pivotally mounted in operative relation to the feed for actuating the latter, said means including an operating member extending into adjacency to the portion of the actuating-arm adapted to be grasped by the operator.

2. In a ratchet-drill, the combination with a rotatable member and a feed device therefor, of an actuating-arm for turning the member, and means pivotally mounted in operative relation to the feed for movement in a vertical plane, said means including an operating member extending into adjacency to the portion of the actuating-arm adapted to be grasped by the operator.

3. In a ratchet-drill, the combination with a rotatable member carrying a ratchet-wheel thereon, an actuating-arm for turning the ratchet-wheel, a feed-nut upon the rotatable member, and means for turning the nut independently of said member, comprising a dog arranged in operative relation to the nut, and a lever controlling the dog extending in proximity to the actuating-arm and adapted to be actuated by the hand of the operator moving said arm.

4. In a ratchet-drill, the combination with



a rotatable member carrying a ratchet-wheel thereon, an actuating-arm for turning the ratchet-wheel, a feed-nut upon the rotatable member, and means for turning the nut independently of said member, comprising a dog arranged in operative relation to the nut and held normally out of engagement with the latter, and a lever controlling the dog pivoted to the actuating-arm and adapted to be controlled by the hand of the operator moving said arm, substantially as described.

5. In a ratchet-drill, the combination with a rotatable member, of a ratchet-wheel fixed thereon, actuating-arms swiveled upon the rotatable member upon opposite sides of the

ratchet-wheel, pawls carried by the arms engaging the ratchet-wheel, a feed-nut threaded upon the rotatable member, a bifurcated extension upon one of the arms adjacent to said nut, a lever, controlled from the arm, pivoted to swing between the furcations of the extension, and a dog carried by the lever adapted to be engaged with the nut, substantially as described.

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

AARON KERRY.

Witnesses:

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