

(No Model.)

2 Sheets—Sheet 1.

J. ADAMS.  
FRUIT CORING MACHINE.

No. 482,327.

Patented Sept. 6, 1892.

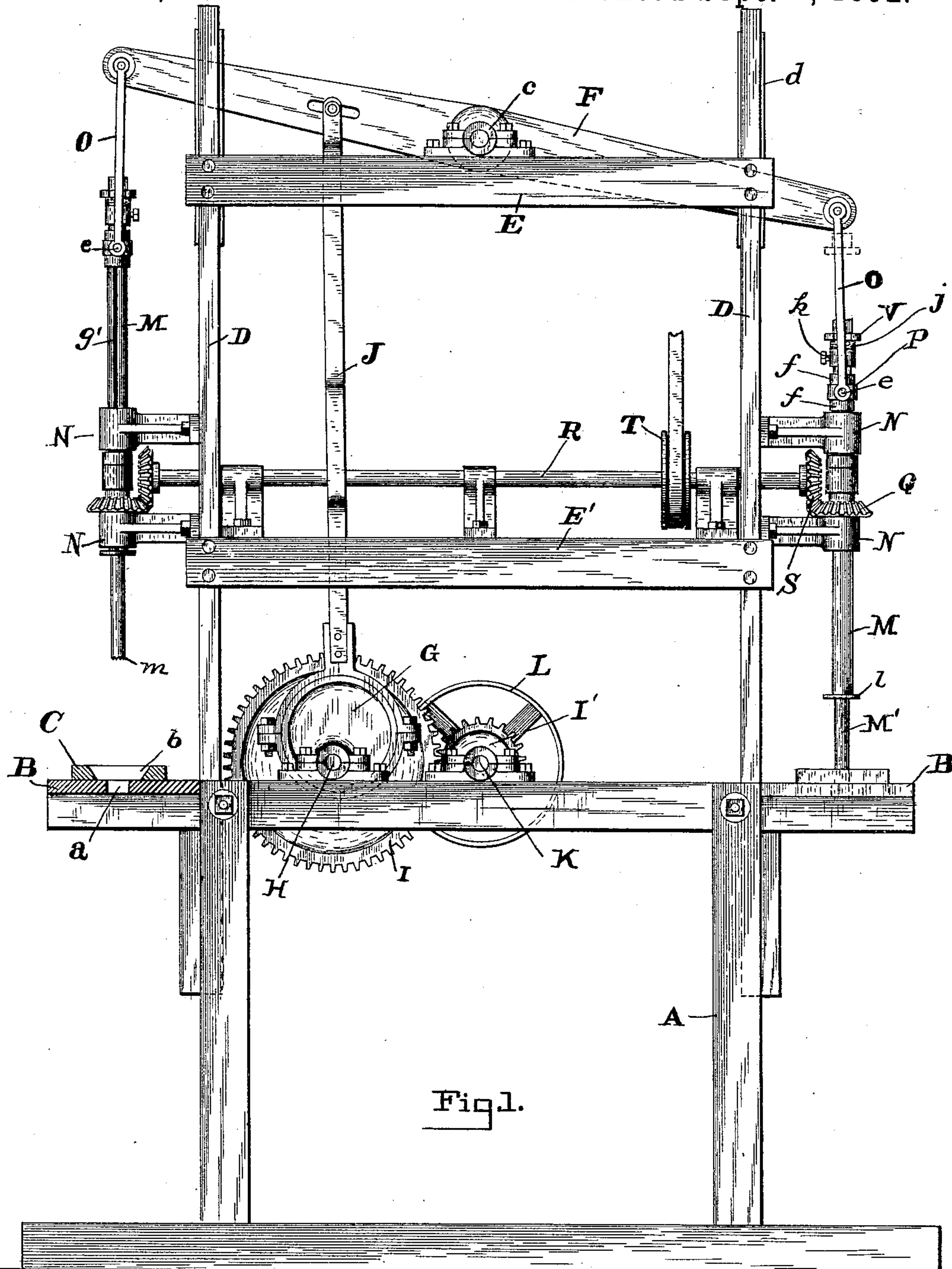


Fig. 1.

WITNESSES:

A. O. Babendree  
J. Parker Davis.

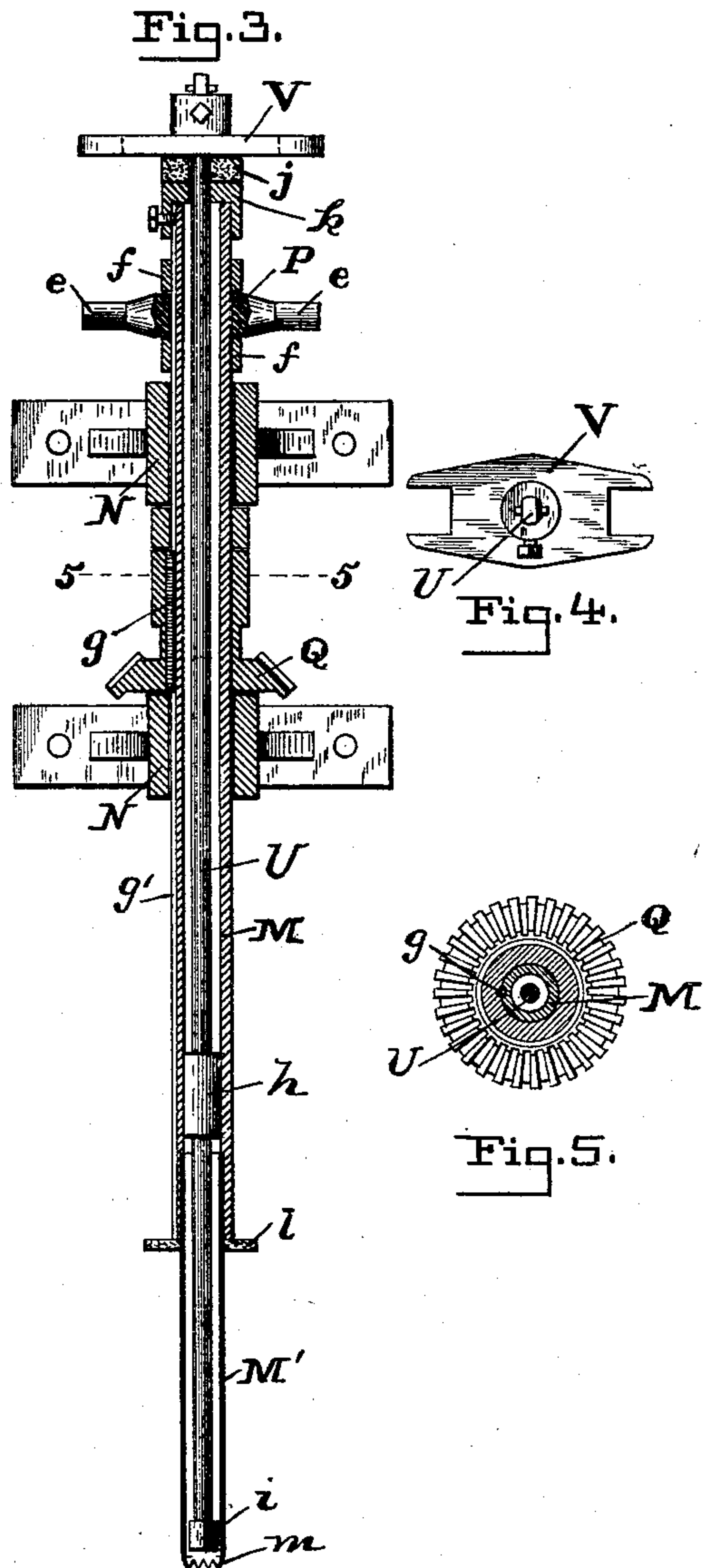
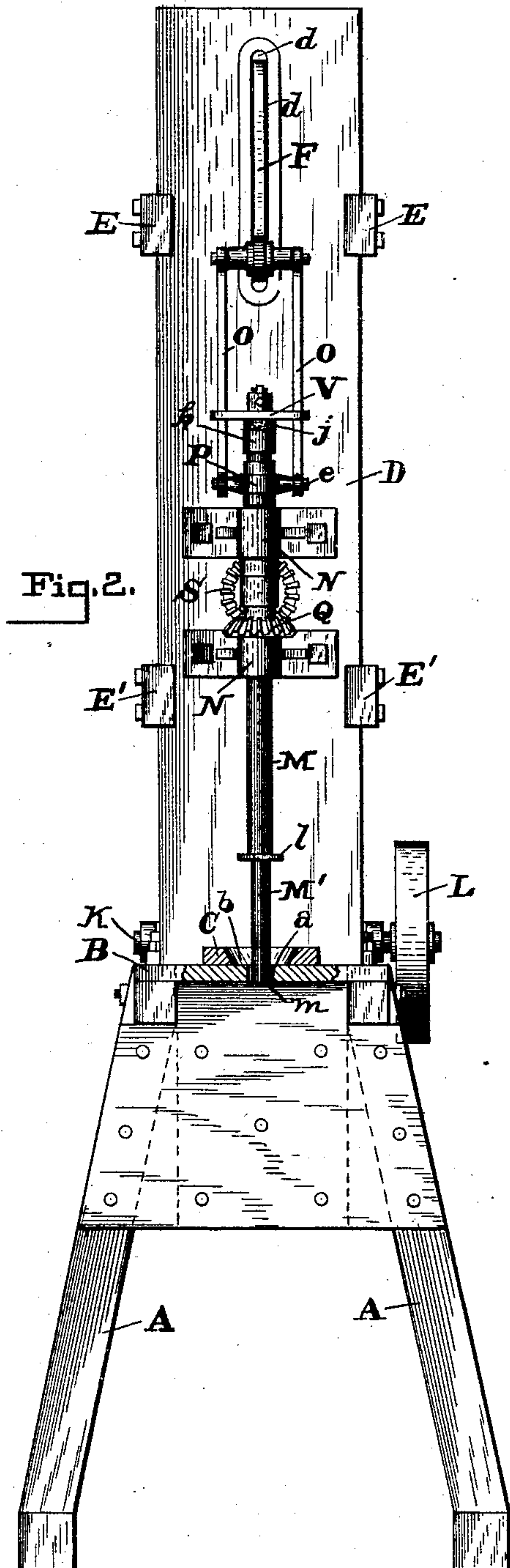
INVENTOR:

John Adams  
By Chas. B. Mann  
Att'y

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# UNITED STATES PATENT OFFICE.

JOHN ADAMS, OF BALTIMORE, MARYLAND, ASSIGNOR TO THE A. BOOTH  
PACKING COMPANY OF BALTIMORE CITY, OF SAME PLACE.

## FRUIT-CORING MACHINE.

SPECIFICATION forming part of Letters Patent No. 482,327, dated September 6, 1892.

Application filed June 4, 1892. Serial No. 435,473. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN ADAMS, a citizen of the United States, residing at Baltimore city, in the State of Maryland, have invented certain new and useful Improvements in Fruit-Coring Machines, of which the following is a specification.

This invention relates to an improved machine for coring fruit, and has for its object the provision of mechanism to expedite this operation in the handling of fruit for canning.

To this end the invention consists in the novel features of construction and combinations of parts hereinafter described and claimed.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 shows a side elevation of the machine; Fig. 2, an end view; Fig. 3, a section of one of the coring-tubes and plungers; Fig. 4, a top view of the cross-head of the plunger; Fig. 5, a cross-section of one of the corers and plungers on line 5 5 of Fig. 3.

A supporting-stand A has a projecting table B at each end with a central opening *a* through it for the core and a block C, secured on its upper surface and turned out to form a flared socket *b* to hold the fruit centered while it is being cored. Uprights D rise from the table A at each end and are connected by horizontal bars E E', and a walking-beam F is supported in bearings *c* on the upper bars E and extends through slots *d* in the uprights D. An eccentric G is mounted on a shaft H, which also carries a gear-wheel I, and said eccentric is connected with the walking-beam by a rod J. The gear-wheel I meshes with a gear-wheel I' on a shaft K, which carries a drive-pulley L. Through this mechanism the walking-beam receives its reciprocating motion.

A coring-tube M is located at each end of the machine and extends vertically through bearings N, which project from the upright D, and said tube may slide up and down and also revolve in said bearings. Said tube is connected with the walking-beam F by links O, jointed at their upper ends to the latter and at their lower ends fitted on trunnions *e* of a collar P, which fits loosely on the coring-tube.

Fixed collars *f* above and below said loose collar hold the latter from sliding. The lower end *m* of the coring-tube is serrated and slightly contracted and has position over the hole *a* in the table B.

The coring-tube receives rotary motion as follows: A bevel gear-wheel Q is placed on the tube between the bearings N and has a feather *g* engaging a longitudinal spline-groove *g'* in said tube, and a longitudinal shaft R carries a bevel gear-wheel S at each end engaging the bevel gear-wheels on the coring-tubes, and said shaft also carries a driving-pulley T. A plunger-rod U extends through each coring-tube and has an enlargement *h* to fit the walls of the tube and constitute a guide, and also has a head *i* at its lower end, which comes within a short distance of the lower end of the tube. The upper end of the plunger-rod is fastened in a cross-head V, which seats on a buffer *j*, interposed between it and a cap *k*, closing the upper end of the coring-tube. Said cross-head has bifurcated ends fitting the links O, which form guides for it.

The operation of the machine is as follows: The fruit is placed end upward in the sockets *b* of the tables and the walking-beam drives the coring-tubes down through the fruit. Said tubes at the same time revolve, and the core will be cut from the fruit, the lower end of said tubes entering the holders *b* and thereby cutting free the core. As the coring-tube enters the fruit the plunger-rod U is pushed upward in the tube by the fruit coming against the head *i* of said rod; but as soon as the core is freed from the fruit the plunger-rod drops by gravity and shoves the core out of the tube and through the opening *a* in the table. The contraction of the lower end of the coring-tube prevents the core sticking therein by causing a wider kerf to be cut by the serrated edge. The cutting part M' of the coring-tube is a separate piece from the tube proper and is fitted in the lower end of the latter, as seen in Fig. 3. A washer *l* is fitted on said cutting part and up against the end of the tube proper to prevent the fruit-juices from getting up past the cutting part of the tube.

The machine is designed more especially



for coring pine-apples, but may be used for other articles.

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

1. In a coring-machine, the combination of a stand or table, vertical coring-tubes mounted to slide and revolve in suitable bearings, a walking-beam connected with said coring-tubes, a bevel gear-wheel on each tube and having spline connection therewith, and a drive-shaft carrying gear-wheels meshing with those on the coring-tubes.

2. In a coring-machine, the combination of a suitable support for the article under treatment, a vertically-reciprocating coring-tube,

and a sliding gravity-plunger within the said tube to push out the core, substantially as described.

3. In a coring-machine, the combination of a suitable support for the article under treatment, a walking-beam, a coring-tube, links connecting said walking-beam and coring-tube, and a plunger-rod within the coring-tube and having a cross-head arranged to slide on the said connecting-links.

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

JOHN ADAMS.

Witnesses:

CHAS. B. MANN,

A. O. BABENDREIER.