No. 810,998. PATENTED JAN. 30, 1906.

A. W. THOMAS.

CUTTING MACHINE FOR VEGETABLES, &c.

APPLICATION FILED SEPT. 26, 1904.

2 SHEETS—SHEET 1.

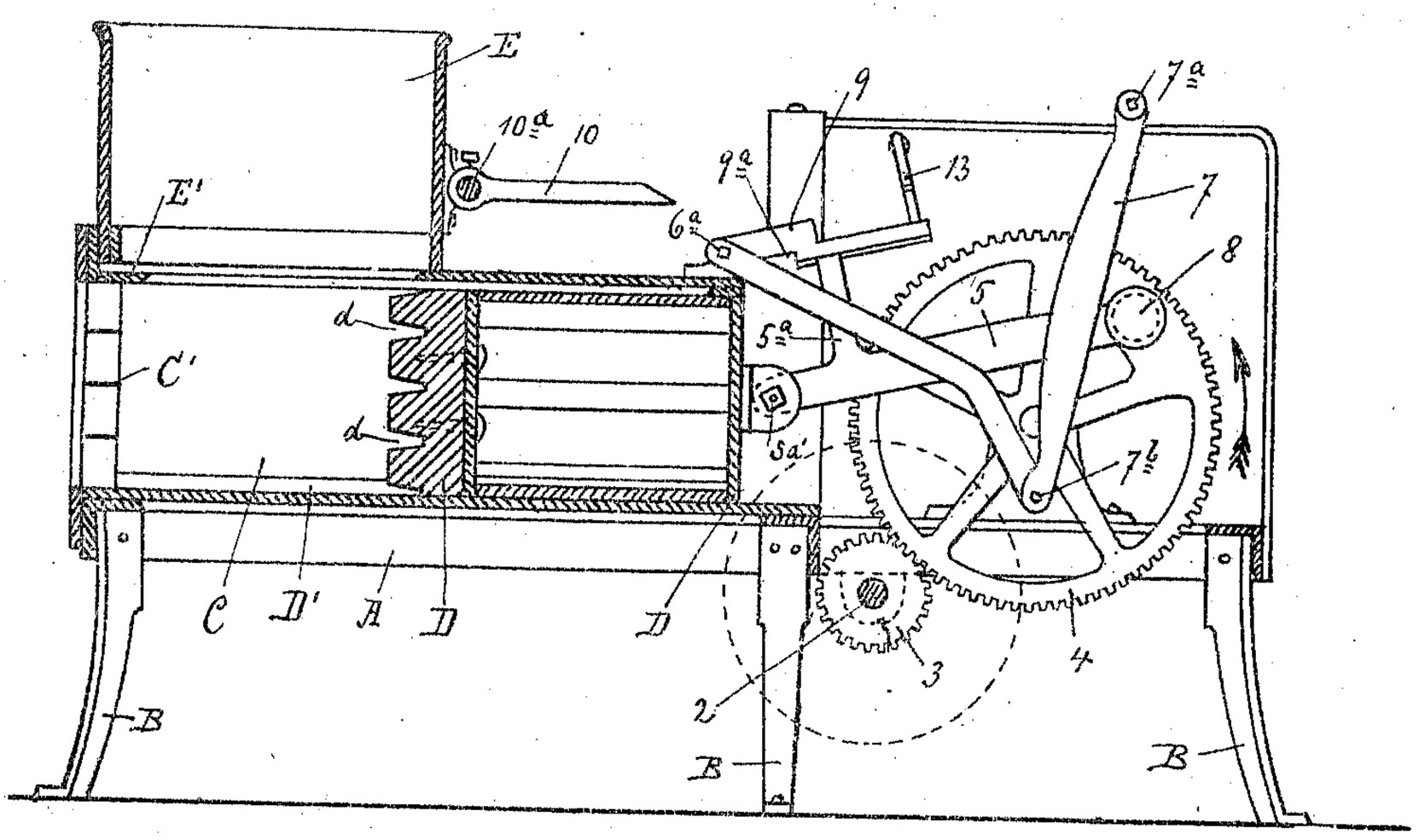
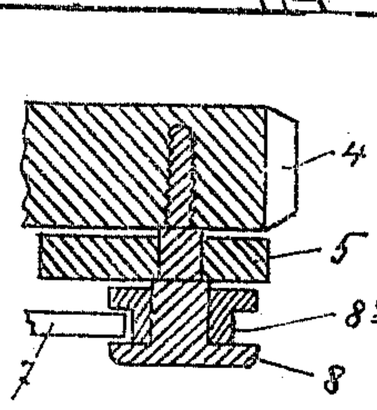


Fig. 1.

Fig. 3.



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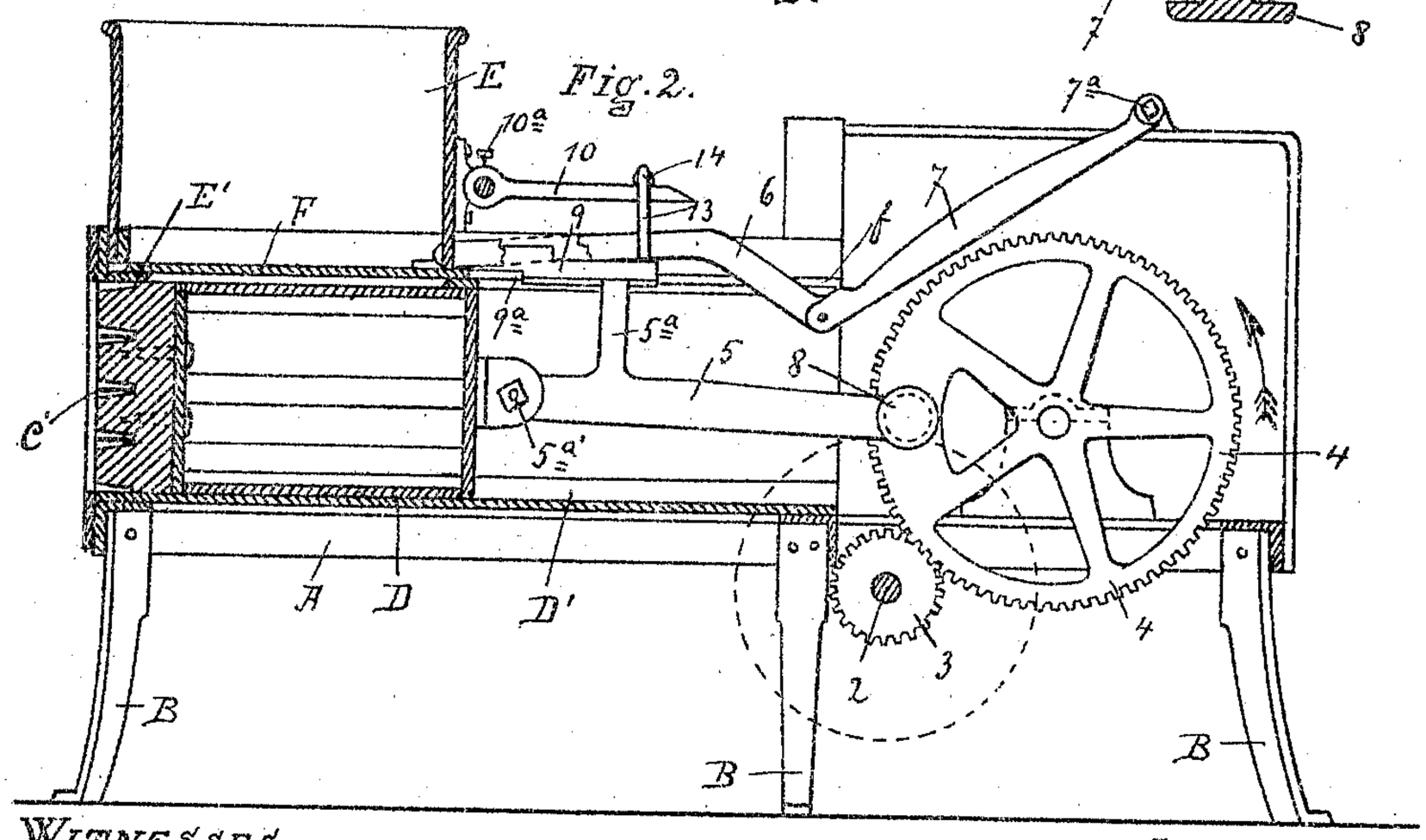

Fig. 2.

WITNESSES

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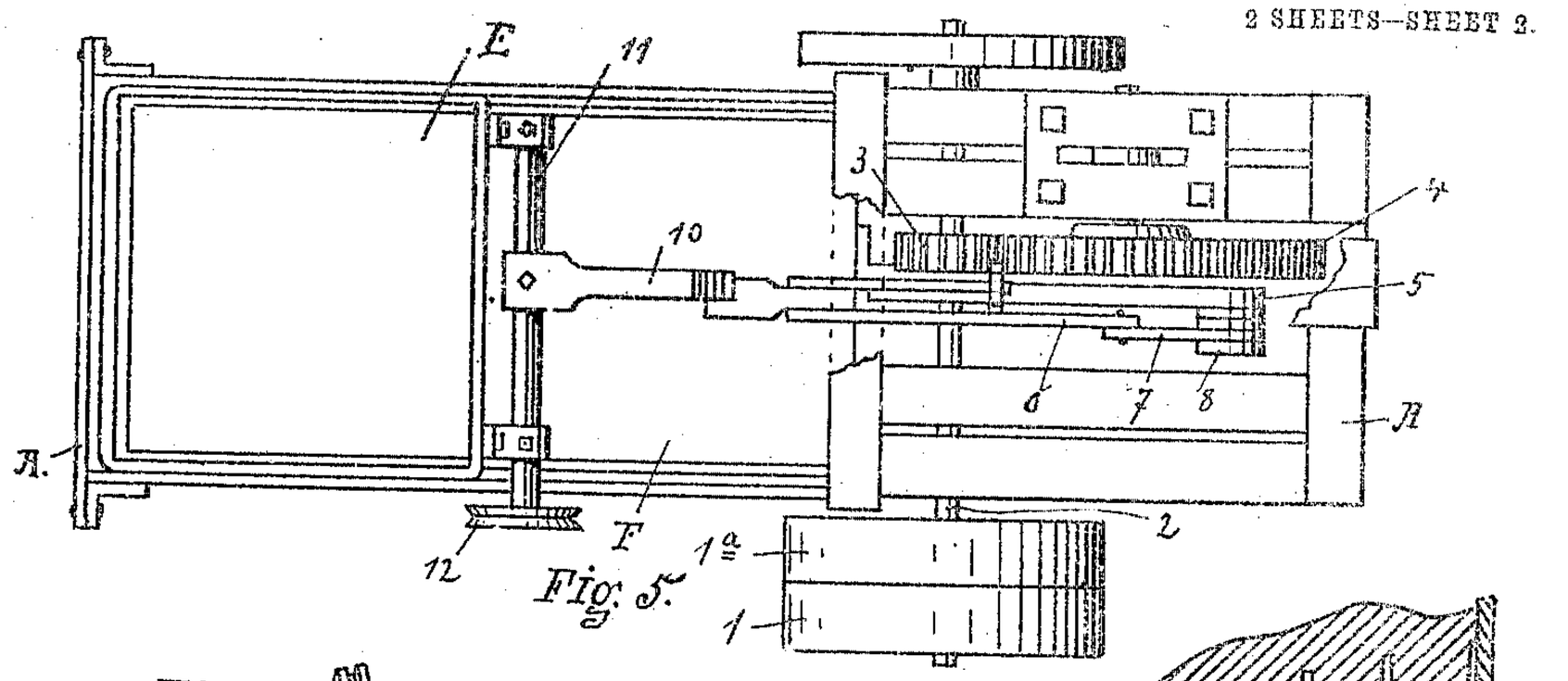

Fig. 5.

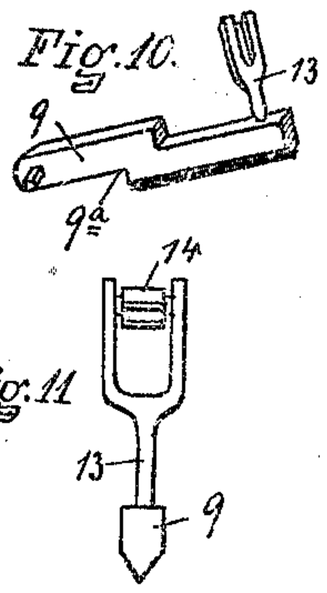

Fig. 10.

Fig. 11

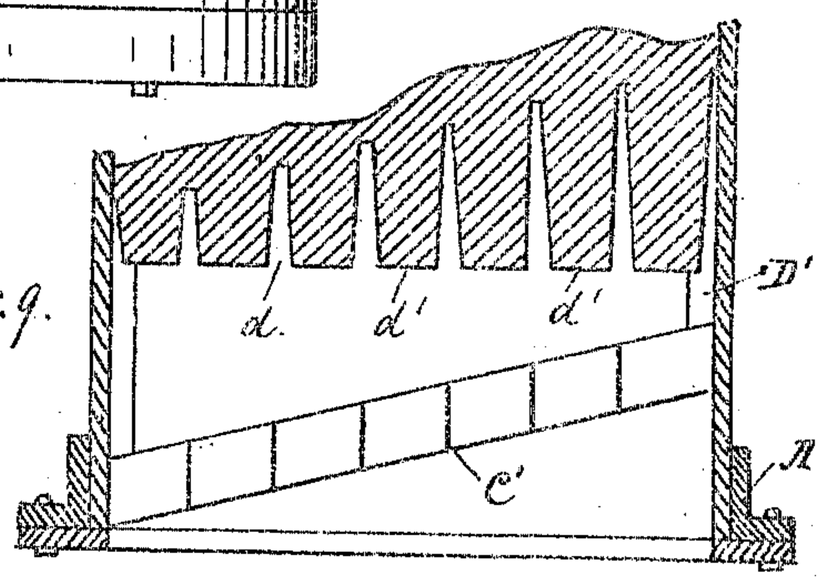

Fig. 9.

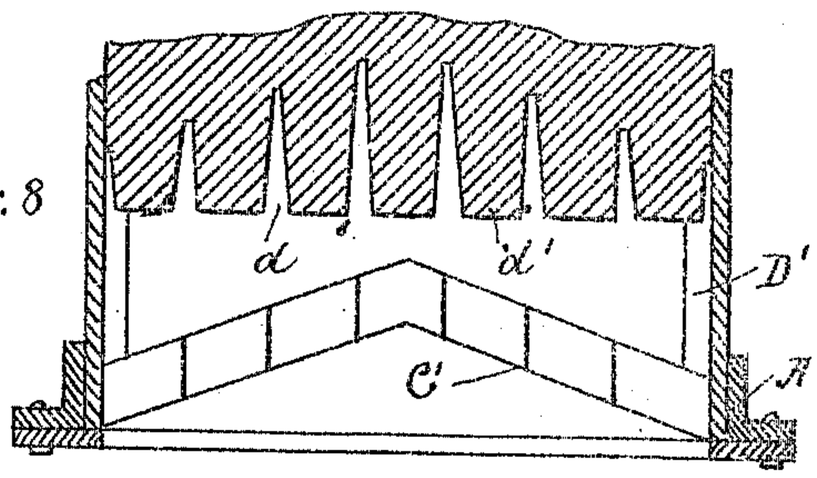

Fig. 8

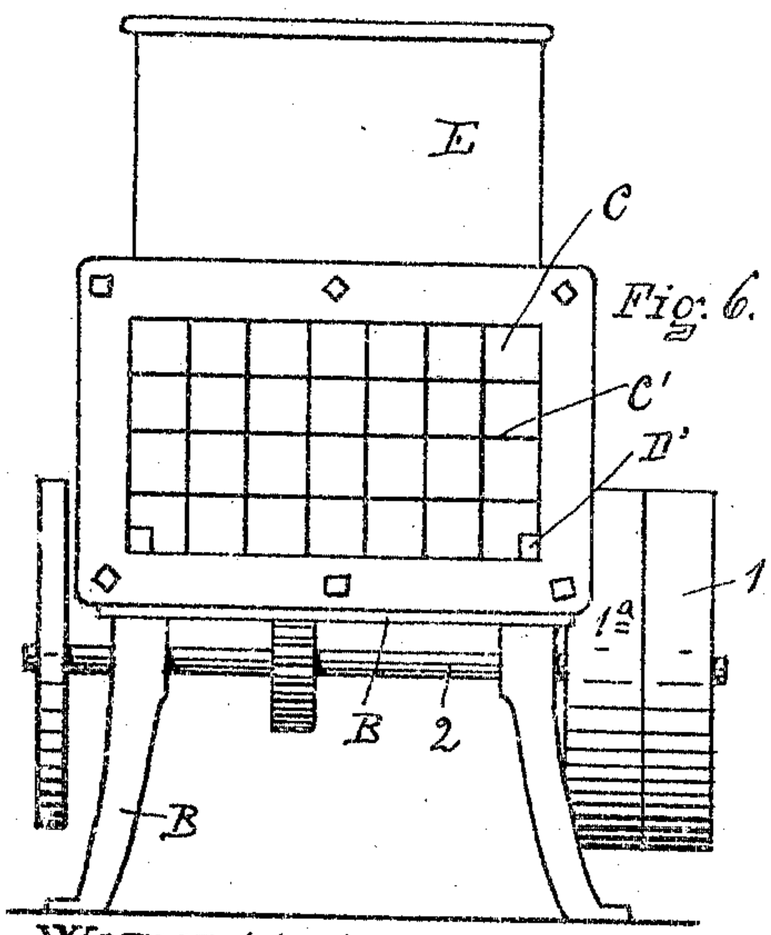

Fig. 6.

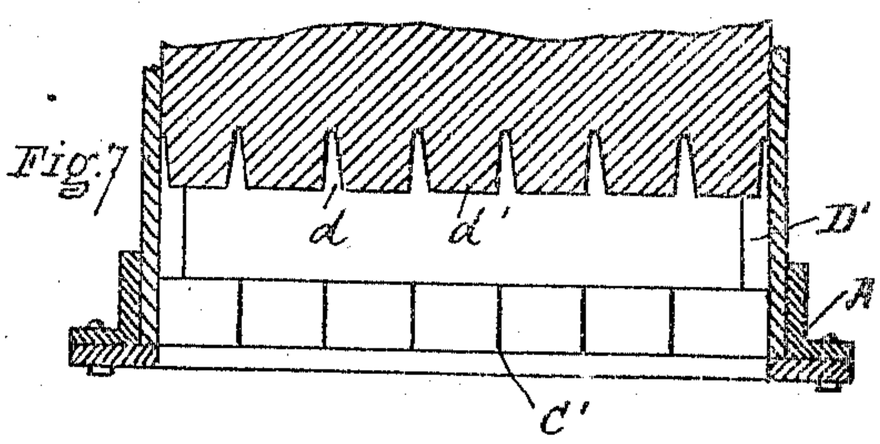

Fig. 7.

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UNITED STATES PATENT OFFICE.

ALBION W. THOMAS, OF ROME, NEW YORK, ASSIGNOR TO LEON V. JONES, OF ROME, NEW YORK.

CUTTING-MACHINE FOR VEGETABLES, &c.

No. 810,998. Specification of Letters Patent. Patented Jan. 30, 1906.

Application filed September 26, 1904. Serial No. 225,949.

To all whom it may concern:

Be it known that I, ALBION W. THOMAS, a citizen of the United States, residing at Rome, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Cutting-Machines for Vegetables, &c., of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to an improved cutting-machine for cutting pumpkins and such vegetables; and I declare that the following is a full, clear, concise, and exact description thereof sufficient to enable one skilled in the art to make and use the same, reference being had to the accompanying drawings, in which like letters and numerals refer to like parts throughout.

My invention as illustrated in the accompanying drawings discloses an apparatus particularly adapted for cutting pumpkins into suitable pieces for canning, although it is applicable to other uses; and it consists in the construction and arrangement of the several parts herein disclosed, including various features which will be particularly pointed out below.

In the drawings, Figure 1 is a longitudinal sectional view with the operating parts in one position, while Fig. 2 is a similar view with the parts in a different position. Figs. 3 and 4 are details in cross-section. Fig. 5 is a plan view with the parts in substantially the same position as in Fig. 1. Fig. 6 is an end view. Figs. 7, 8, and 9 are horizontal views in section of the end of the machine shown in Fig. 6, and Figs. 10 and 11 are detail views.

Referring to the figures more in detail, A represents a horizontal frame supported by legs B. On the frame is a horizontal box C, in which plays to and fro a plunger D on guides D′, the lower face of the plunger being substantially against the bottom of the box C. Across the outer end of the box are the stationary cutting-blades C′, which are illustrated as crossing each other at right angles, Fig. 6, so that material forced therethrough is cut in squares, though, of course, the arrangement of the knives may be as desired. In Figs. 8 and 9 the knives are shown as arranged in a somewhat different manner, as is clearly seen, the purpose of which is to make the cutting easier, as though by a knife drawn through the article, or, in other words, distributing the work of the machine over the period of its operation instead of having it all done at once, as when the knives are formed transversely across the end of the box. The corresponding end of the plunger has the grooves *d*, formed for the cutting abutment or knives C′ when the plunger is thrust to the end of the box. It will be observed, however, that these grooves have inwardly-converging sides, leaving the heads *d′* of pyramidal outline, and that there is some space between the cutting abutment or knife and the edge of the pyramidal head, which is provided to give space for seeds and the like to lodge. Above the horizontal box C is a hopper E, opening into the adjacent end of the box C. Transversely of the box and between it and the hopper is a stationary blade E′. Sliding between the box and the hopper is a blade F, which travels in grooves *f*, provided in the upper edge of the box sides and which is forced into cutting engagement with the stationary knife E′ in the operation of the machine and which in its to-and-fro movement closes and opens the connection between the hopper and the box.

1 represents a power-pulley, which is adjacent to idle pulley 1ª, seated on the shaft 2, which carries pinion 3. On the frame is mounted gear-wheel 4, with which pinion 3 engages. 5 is a pitman extending from a wrist-pin near the periphery of the gear 4 and pivotally connected to the head of the plunger at 5ª′, so that the operation of the gear thrusts the plunger to and fro in the box.

It is desired that the cutting-blade F shall not have the same movement to and fro as the plunger, but shall precede it, so as to cut off the supply from the hopper before the plunger reaches the stationary knives C′. To accomplish this, I provide the links 6 and 7, the former of which is pivotally mounted at 6ª on the head of the blade and one end of link 7 being pivotally mounted at 7ª on the frame, the links being pivotally connected at their other ends at 7ᵇ. These links are so constructed and arranged that they are operated by the gear 4, which has mounted thereon a suitable pin for engaging the edge of link 7. In this instance I show this means as comprising set-screw 8, with sleeve or col-

lar 8ª, grooved to receive the edge or link 7, the said means being combined with that which mounts the bar 5 on gear 4, Fig. 4. This operative means engages the link 7 in the revolution of the gear 4 and through the link 6 thrusts the blade F to the end of the box before the revolution of the gear 4 has forced the plunger to its farthest limit. The blade F is retracted with the plunger. This is accomplished by means of the angular bar 9, pivotally mounted, as at 6ª, to the head of the blade and having a notch 9ª, in which the edge of the plunger engages when it is retracted and carries the blade with it. To lift this bar 9, so that the blade F can move oppositely without hindrance therefrom, I provide on bar 5 an arm 5ª, which terminates in a groove which receives the lower edge of the bar 9, which is formed to ride therein, Fig. 3, as the two play on each other. When the pitman-head 8 comes slightly above the horizontal center, the arm 5ª lifts the arm 9, so that the notch 9ª clears the edge of the plunger; but when the pitman-head comes to the opposite point of its travel the arm 9 is lowered, so that its notch engages the plunger-head on its return.

It is sometimes desired to interrupt the feed while the plunger continues its work, which I accomplish by providing to leave the blade F across the bottom of the hopper at the will of the operator, which is done by the following means: 10 is an outwardly-projecting finger pivotally mounted at 10ª on the transverse bar 11, pivotally mounted, adapted to be operated in this instance by grooved wheel 12, adapted to carry a rope as one means of operating these parts to raise and lower the outer end of the finger 10. The outer end of bar 9 has an arm 13, slotted or forked at its upper end and in this instance having friction-collar 14. The outer end of the finger is tapered, (or the finger may be so mounted as to accomplish the same result,) so that when the arm 9 reaches it the tip of the finger comes under the collar 14 and holds the arm 9 up, so that the notch 9ª escapes the plunger in its movement.

It will be understood that I do not limit myself to the particulars shown in the present instance and that various modifications can be made without departing from the spirit and scope of my invention, intending herein to illustrate merely one form of the same.

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

1. In a machine of the character described, the combination with fixed knives, a plunger adapted to feed thereto, and mechanism for operating the plunger, of a blade mounted to reciprocate in a plane parallel with the plunger, means to advance the blade independent and in advance of the plunger to cut off the feed of material to the plunger, means operatively connecting the blade and the plunger automatically to retract said blade with the plunger, substantially as shown.

2. In a machine of the character described, the combination with fixed knives, a plunger adapted to feed thereto, and mechanism for operating the plunger, of a blade mounted to reciprocate in a plane parallel with the plunger and separate therefrom, means to advance the blade ahead of the plunger to cut off the feed of material to the plunger, means for connecting the blade and the plunger during the back stroke and means for suspending the operation of said connecting means whereby the blade may remain in position to cut off feed to the plunger, substantially as shown.

3. In a device of the character described, the combination of a plunger-box with a feed-opening thereto and a plunger operating therein, knives at the end of said plunger-box, a sliding knife traversing the feed-opening to the plunger-box, mechanism for operating the plunger, independent means actuated by said mechanism to thrust the blade forward, and means normally connecting the blade to the plunger during the back stroke together with means for disconnecting the blade from the several means which operate it to and fro, substantially as shown.

4. In a device of the character described, the combination of a frame, a box, a hopper, a plunger, and a knife operating between the box and the hopper to intercept material being fed to the said box, common means for reciprocating said blade and plunger through separate members actuated thereby, such members, and means for suspending the retracting operation of the member connected with the blade.

5. In a device of the character described, the combination of a plunger-box, knives arranged transversely of the plunger-box, a plunger, a feed-hopper, a sliding blade, mechanism to reciprocate the plunger, means operatively connected with said mechanism to withdraw the blade, and means operative at will to prevent the back stroke of the blade with the plunger, substantially as shown.

6. In a device of the character described, comprising a plunger-box, a plunger reciprocating therein, means for reciprocating the plunger, a feed-hopper and a blade slidable in a plane parallel with the plunger, link members connected to the said blade so placed as to be actuated by the plunger-operating mechanism to thrust the blade forward across the feed-opening, a latch operative by gravity to connect the blade with the plunger on the back stroke of the latter, and means for engaging the said latch to prevent the back stroke of the blade with the plunger.

7. In a device of the character described having a plunger, a plunger-box, a feed-hopper and a blade, means operative to recipro-

cate the plunger, means operative to give the blade a forward stroke by contact of the said means with the plunger-actuating parts, means automatically operative to connect the blade to the plunger on the back stroke, and means for suspending the operating of said latter means.

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

ALBION W. THOMAS.

Witnesses:
FRANK Z. JONES,
SADIE M. PAYNE.