

(No Model.)

G. W. HUMPHREY & L. O. BUSH.

APPLE SLICER.

No. 344,379.

Patented June 29, 1886.

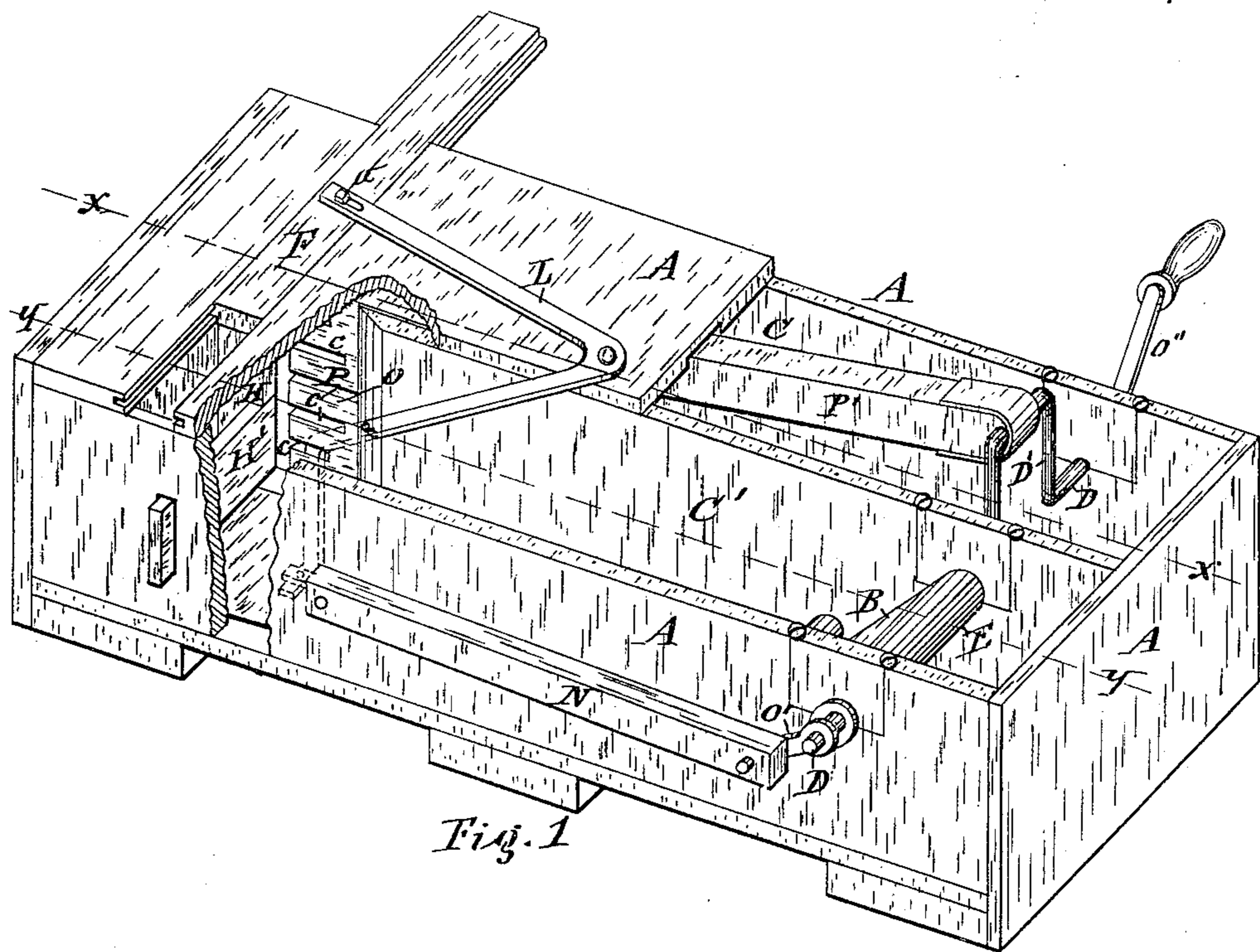


Fig. 1

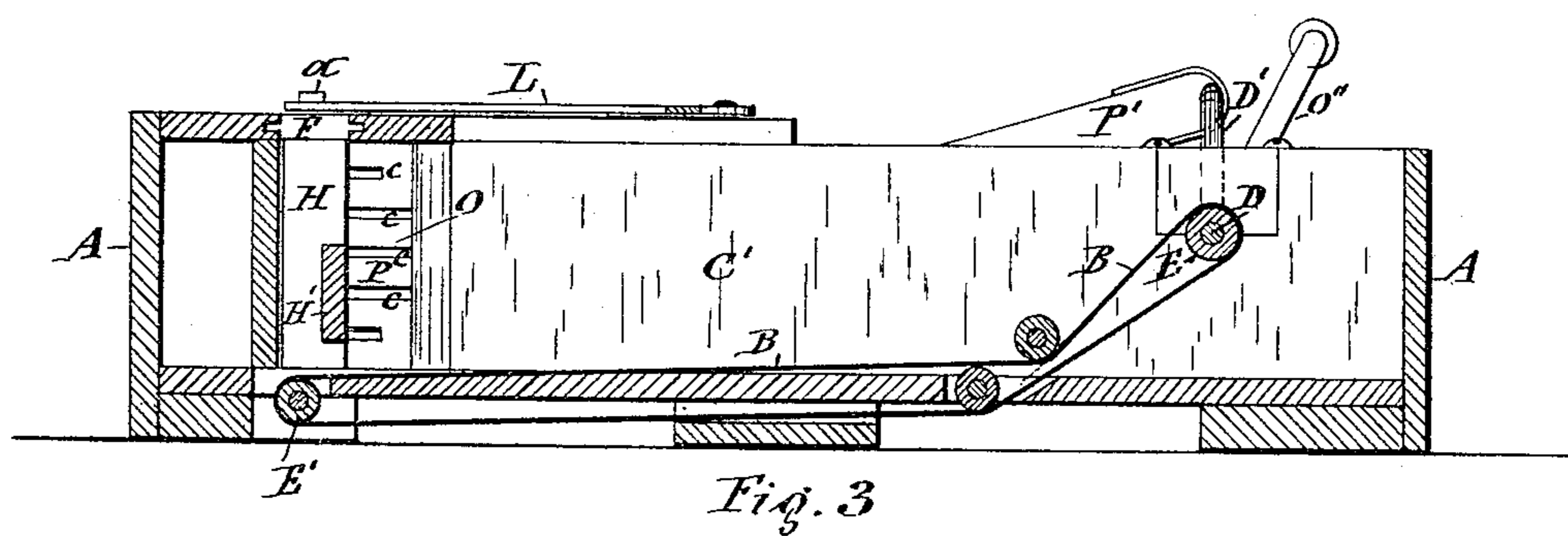


Fig. 3

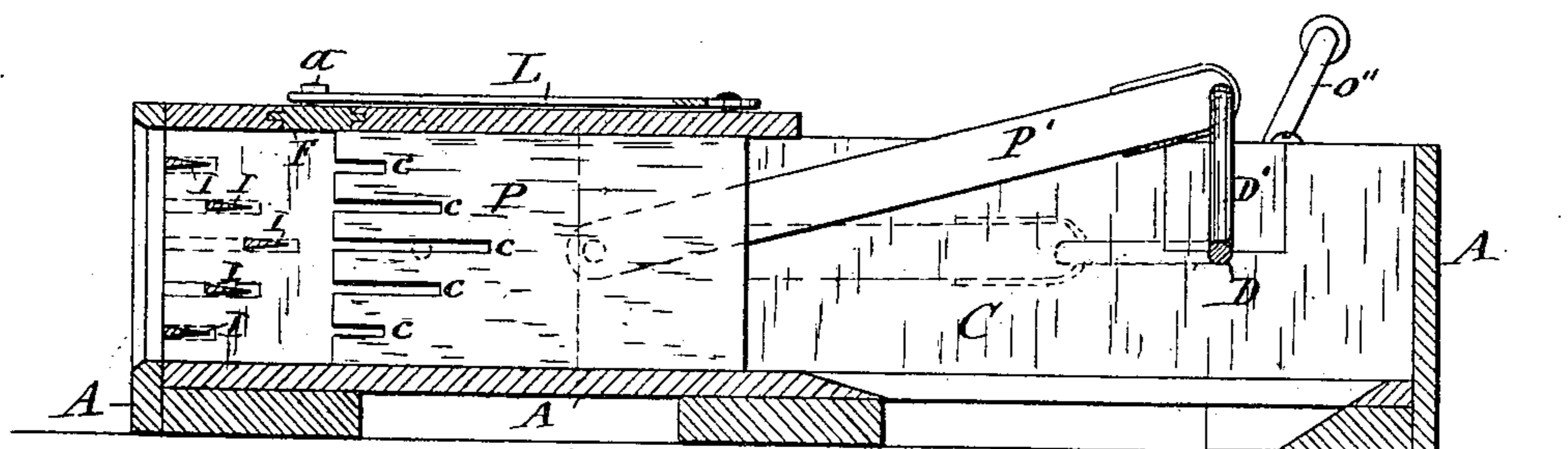


Fig. 2

WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE W. HUMPHREY, OF DELPHI, AND LEVERRIER O. BUSH, OF ROSE,
NEW YORK; SAID BUSH ASSIGNOR TO SAID HUMPHREY.

APPLE-SLICER.

SPECIFICATION forming part of Letters Patent No. 344,379, dated June 29, 1886.

Application filed April 17, 1886. Serial No. 199,203. (No model.)

To all whom it may concern:

Be it known that we, GEORGE W. HUMPHREY, of Delphi, county of Onondaga, State of New York, and LEVERRIER O. BUSH, of Rose, in the county of Wayne, in the State of New York, have invented new and useful Improvements in Apple-Slicers, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the class of vegetable-slicing machines in which a plunger forces the vegetable through a series of knives arranged proper distances apart to cut the vegetable into slices of the requisite thicknesses and at one stroke of the plunger.

The invention consists, first, in an improved arrangement of the knives in relation to the plunger, whereby different-sized apples are guided with equal accuracy through the slicing-knives, and thus the slices are rendered uniform in thickness.

The invention also consists in an improved construction of the plunger, which is adapted to pass completely through the spaces between the knives, and thus push the slices clear of the knives; and the invention, furthermore, consists in novel devices for feeding the apples to the slicer, all as hereinafter more fully explained, and specifically set forth in the claims.

In the annexed drawings, Figure 1 is a perspective view of our invention; and Figs. 2 and 3 are longitudinal vertical sections, respectively, on lines X X and Y Y, Fig. 1.

Similar letters of reference indicate corresponding parts.

A represents the frame of the slicing-machine, which frame is formed with horizontal channels C C', arranged parallel side by side and communicating with each other near one end by a port, O, in their adjacent sides or intervening partition. In the same end of the channel C, beyond the port O, is secured a series of horizontal knives, I I, arranged in the form of a "V," and with the central knife or apex of the V toward the plunger P, which slides in the channel C. The end of the said plunger adjacent to the knives is formed with a straight vertical face, and provided with a series of horizontal longitudinal slots, C C, co-

inciding with the knives I I. Said slots are of sufficient depth to allow the intermediate solid portions of the plunger to pass completely through the spaces between the knives, and thus push the slices clear of said knives and keep the latter clean.

By the horizontal disposition of the knives, and their aforesaid V-shaped arrangement of the same with the center knife nearest the plunger, the apple is sliced successively from the center toward the top and bottom, and the knives pass through the apple without subjecting the same to compressions between the knives.

Across the opposite end of the frame is journaled a shaft, D, which is formed with a crank, D', in the channel C, and to said crank the plunger P is connected by the pitman P'.

In the channel C' is a roller, E, rigidly attached to the shaft D, and across the opposite end of said channel is journaled another roller, E', and around the two rollers is extended an endless belt or apron, B.

Across the top of the channels C C', directly over the feed-port O, is arranged a slide, F, from which is suspended the feeding-carrier H, which is carried in range with the port O, and has a guard-plate, H', projecting from the back thereof and through a slot in the outer side of the channel C'.

Upon the top of the frame A is pivoted a bell-crank lever, L, one arm of which is connected with the slide F by a bolt, a, passing through a longitudinal slot in the lever L and secured to the slide. Said bolt is provided with a T-head, so that by turning the bolt to bring the said head parallel with the slot the lever can be detached from the slide when necessary. To the other arm of the lever L is connected the pitman N, the opposite end of which is connected with a crank, O', attached to the end of the shaft D, and this shaft is rotated by a hand-crank, O'', connected to the opposite end thereof.

The operation of our invention is as follows: The apples are placed in the channel C'. Then by turning the hand-crank O'' the upper half of the belt B is caused to travel toward the end of the channel C', which is provided with the feed-port O. The travel of the belt conveys the apples to said end of the

channel. The feeding-carrier H, having in the meantime been drawn to the outer wall of said channel, is then forced across the channel C' and into the port O, and pushes an apple into the channel C between the knives I I and plunger P, which at that moment is in a retracted position. The next move of the machine propels the plunger P and causes the same to force the apple through the series of knives. At the same time the carrier H is retracted across the channel C' and drawn into position to allow another apple to be conveyed in front of it, which apple is transferred into the channel C by the carrier H, the plunger P having by that time been retracted to receive the apple between it and the knives.

All of the moving parts of the machine are so timed as to cause the apples to be conveyed in succession from the channel C' to the channel C, and then sliced by the plunger P, forcing the apple through the series of knives.

The guard H' serves to prevent the apples from entering between the back of the carrier H and outer wall of the channel C' while said carrier is in the port O at the opposite side of said channel.

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

1. In an apple-slicer, the combination of the frame formed with channels, the series of knives and plunger in one of said channels, and a lateral feed-carrier arranged to introduce the apple between the knives and plunger, substantially as set forth.

2. In an apple-slicer, the combination of a frame formed with two channels and with a port from one to the other of said channels, a series of knives and a plunger in one of the channels, and a feeding-carrier in range with said port, substantially as set forth.

3. The combination of the frame formed with parallel channels and with a feed-port

in the adjacent sides of said channels, the series of knives and plunger in one of said channels, a traveling belt in the other channel, a slide across the top of the channels, and a feeding-carrier suspended from the said slide in range with the aforesaid port, as set forth.

4. In combination with the frame formed with parallel channels and with a feed-port in the adjacent sides of said channels, the series of knives and plunger in one of said channels, the traveling belt in the other channel, the slide across the top of the channels, the feeding-carrier suspended from the slide in range with the aforesaid port, and a guide projecting from the back of the feeding-carrier through a slot in the side of the frame, substantially as set forth and shown.

5. The improved apple-slicer consisting of the frame A, formed with channels C C', and port O between said channels, the series of knives I I in one end of the channel C, the shaft D, extended across the opposite end of the two channels and formed with the crank D' in the channel C, and having rigidly attached to it the roller E in the channel C', and the crank O' on its end, the plunger P, connected with the crank by the pitman P', the roller E', the endless belt B, the slide F, carrier H, suspended from said slide, the bell-crank lever L, pivoted on the frame and connected at one end with the slide, and the pitman N, connecting the crank O' with the bell-crank lever L, substantially as described and shown.

In testimony whereof we have hereunto signed our names and affixed our seals, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 10th day of April, 1886.

GEORGE W. HUMPHREY. [L. S.]
LEVERRIER O. BUSH. [L. S.]

Witnesses:

FREDERICK H. GIBBS,
E. C. CANNON.