

(No Model.)

J. B. TUPPER.

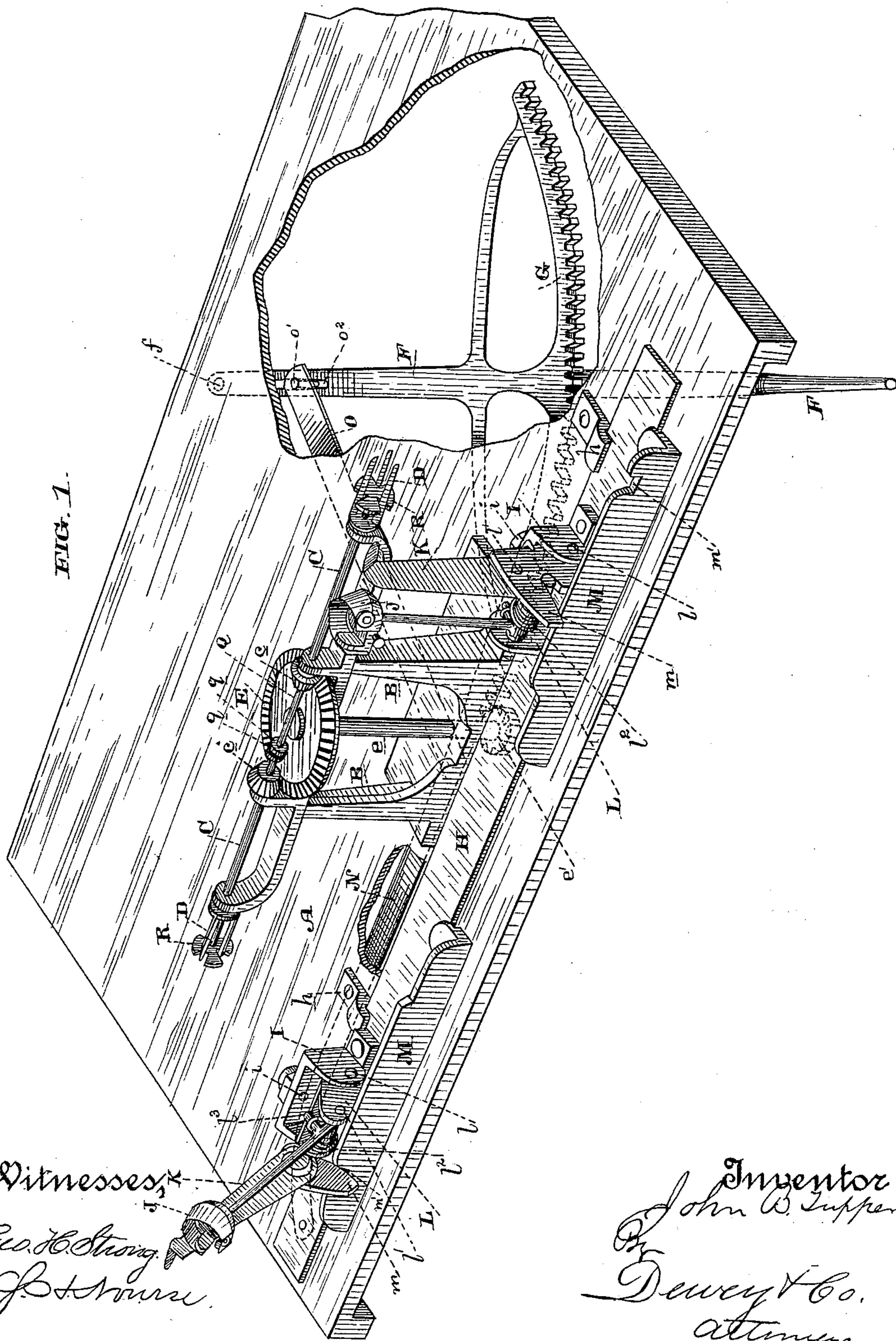
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APPLE PARER, SLICER, AND CORER.

No. 329,511.

Patented Nov. 3, 1885.

FIG. 1.



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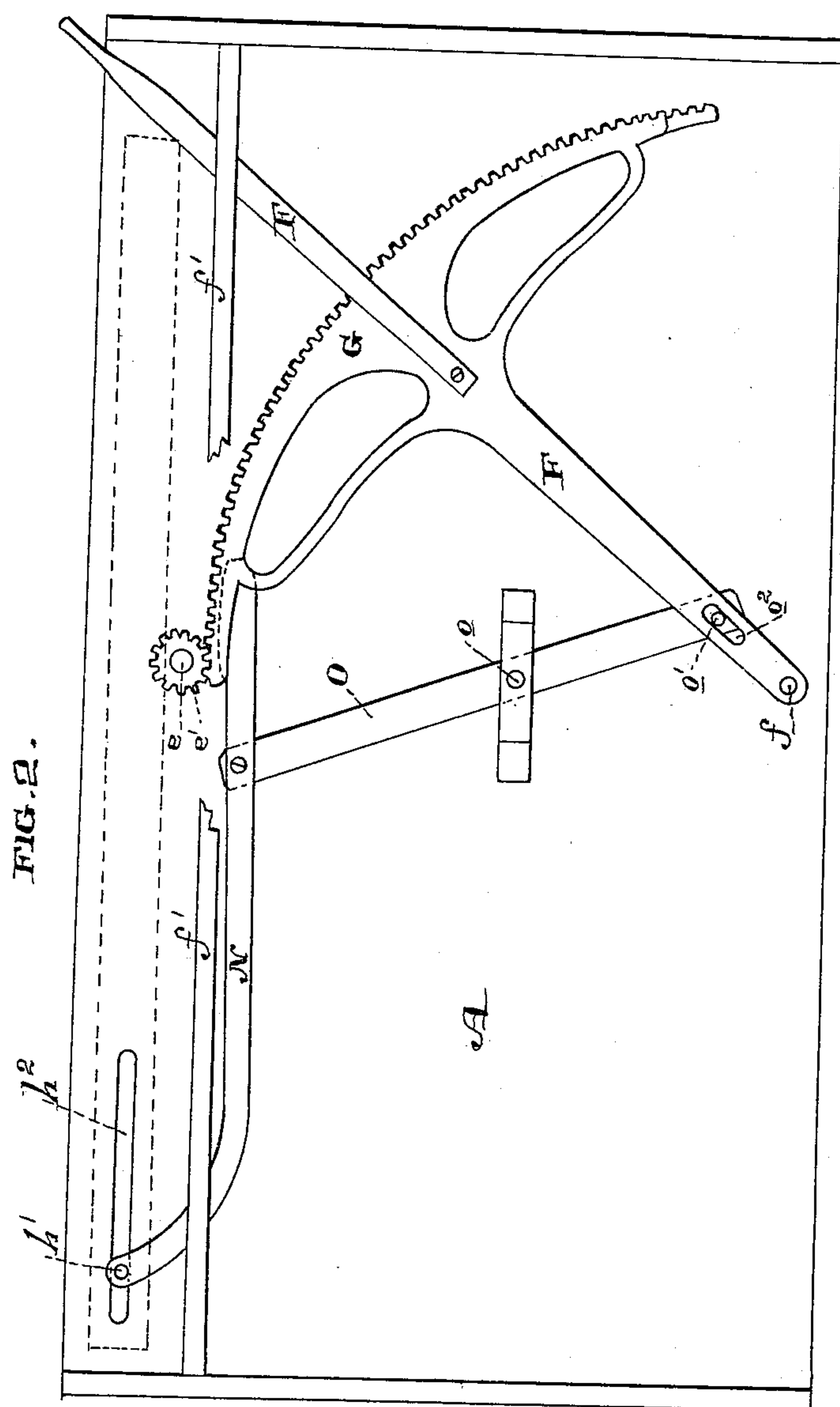
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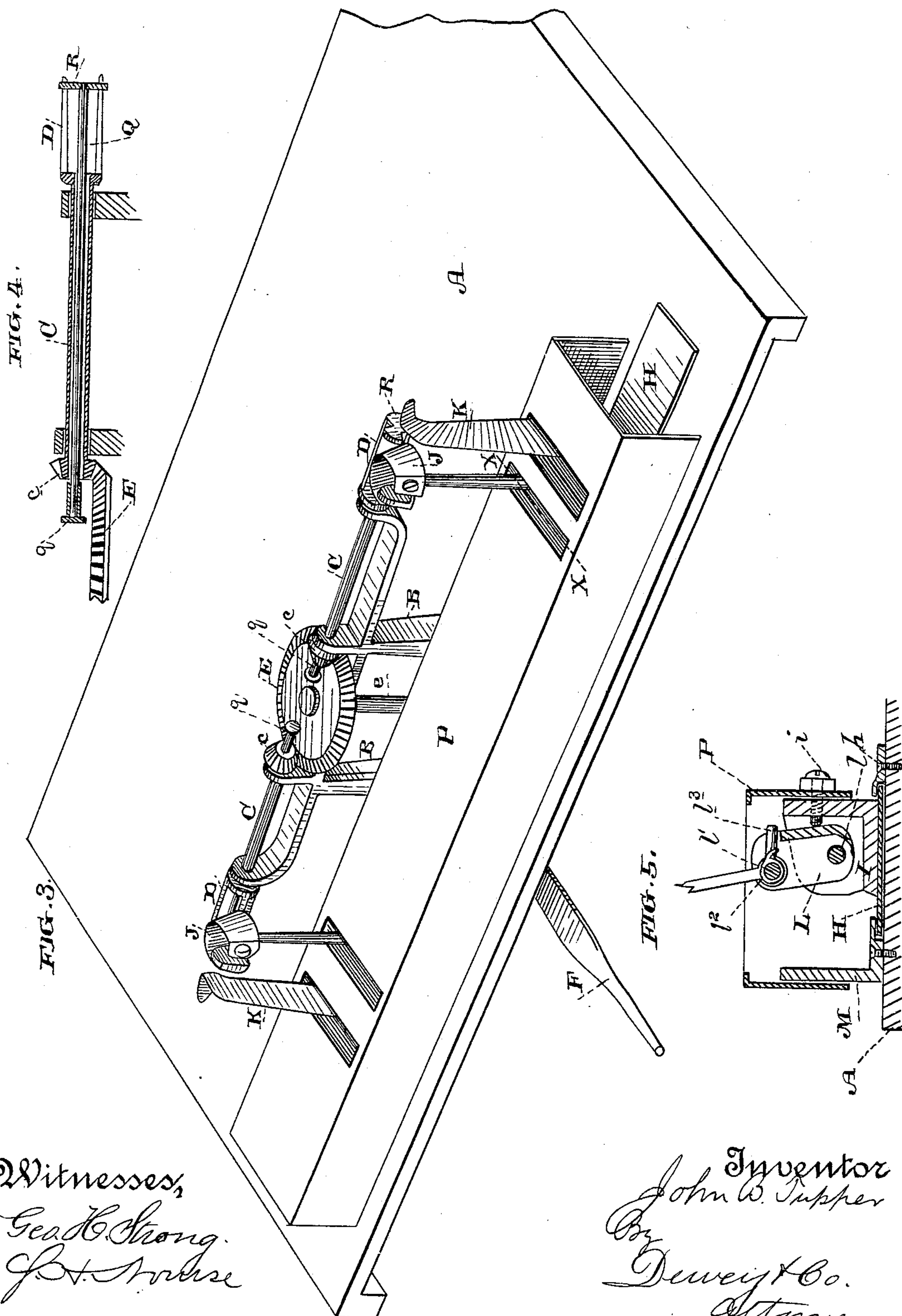
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# UNITED STATES PATENT OFFICE.

JOHN B. TUPPER, OF PETALUMA, CALIFORNIA.

## APPLE PARER, SLICER, AND CORER.

SPECIFICATION forming part of Letters Patent No. 329,511, dated November 3, 1885.

Application filed May 25, 1885. Serial No. 166,674. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN B. TUPPER, of Petaluma, county of Sonoma, and State of California, have invented an Improvement in Apple Parers, Slicers, and Corers; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to that class of apple-parers in which the apple is carried upon a rotating fork, and is pared and sliced by suitable knives which travel in contact therewith; and my invention consists in the combination of devices hereinafter described and claimed.

The object of my invention is to provide a simple, effective, and rapidly-operating apple parer, slicer, and corer.

Referring to the accompanying drawings, Figure 1 is a perspective view of my machine, a portion of bench A being broken away. Fig. 2 is a bottom view. Fig. 3 is a perspective view showing the shield P in place. Fig. 4 is a longitudinal section through one of the fork-spindles. Fig. 5 is a cross-section on line X X, Fig. 3.

A is a bench or table. On its top is mounted a bracket, B, in the arms of which are journaled horizontally the independent spindles C, having on their outer ends the forks D. Upon the inner ends of these spindles are secured the pinions *c*, with which a master-gear, E, engages. This gear is on the upper end of a vertical shaft, *e*, which is mounted in the bracket and extends downwardly through the bench, being provided on its lower end with a pinion, *e'*. Pivoted under the bench at a point, *f*, is a lever, F, the end of which projects from under the bench, and is supported and guided by a cleat, *f'*. Formed with or otherwise secured to this lever is a segmental gear, G, which engages with the pinion *e'* on the bottom of the shaft *e*. By moving the lever F from side to side the master-gear is rotated, thereby rotating the forks.

H is the carriage-plate, consisting of a long bar, which is mounted on the bench just in front of the bracket, and is adapted to slide thereon, being guided by suitable strips, *h*, on the bench. Upon the carriage-plate are secured the brackets I, which carry the knives. One of these knives, J, is the usual paring-knife

found in the ordinary apple-parer, and the other, K, is the ordinary slicing-knife of said machine. These are mounted, in the usual manner, on a base-piece, L, which is pivoted on a cross-shaft, *l*, in the brackets I, so that said knives may have a movement to or from the plane of the forks. The paring-knife is further mounted, as usual, in the base by means of a cross-pin, *l'*, carrying an encircling spring, *l''*, and a lug, *l'''*, whereby the knife is normally held in a vertical position, and is limited in its movement by the lug *l'''* in one direction, although, by reason of its pivot, it may have a movement of its own away from the forks, whereby it conforms itself to the curvature of the apple. The joint pivotal action of both knives and the independent action of the paring-knife being the same as in the well-known apple-paring machines, I have not deemed it necessary to add a more complete description. Upon the bench are secured the tracks M, upon which an arm, *m*, from the swinging base L of the knives is adapted to travel, whereby said knives are held in a vertical position. Near the outer ends of these tracks are made notches *m'*, into which the arms *m* drop at the end of the back stroke, whereby said knives are adapted to fall back away from the plane of the forks, thereby removing them to such an extent as to permit convenient access to the apple for the purpose of removing it. These notches on their inner sides are beveled or curved, as shown, for the purpose of forcing the traveling knives back to a vertical position, thus acting in the capacity of a cam. Their movement beyond a perpendicular is controlled and limited by means of stop-screws *i*, which pass through the back of the brackets I and impinge against the back of the knife-bases L. By properly adjusting these screws the knives are held to their proper position for contact with the apple.

The means by which the travel or feed of the knives is effected are as follows: Secured to a stud, *h'*, which projects downwardly from the carriage-plate through a slot, *h''*, in the bench, is an arm, N, which extends transversely directly under the bench. Pivoted to this arm is the outer end of a lever, O, which is pivoted under the bench at *o*, and is provided at its inner end with a stud, *o'*, which plays



in an elongated slot,  $o^2$ , in the lever F, just forward of its pivot-point. This connection is such that when the lever F moves to one side the lever O moves to the other side, and therefore the travel of the carriage is the reverse of the lever F. This enables the operator while working the lever F with one hand to have his other hand free to pick up a fresh apple and be ready to put it on the fork nearest his free hand the moment the stroke of the lever is complete. By reason of the slotted connection between the levers O and F the travel of the carriage-plate or the feed of the knives is rendered uniform and accurate. Over the carriage-plate H, the brackets I, the base of the knives, and the tracks M is fitted a casing or shield, P, which serves to keep out any obstructing material. This shield has a slotted top to enable it to fit down over the knives, and it is secured to the brackets I by the screws  $i$  at the back. It therefore travels back and forth with the knives. The spindles C are made hollow or tubular from end to end. Through them are loosely passed rods Q, the outer ends of which are provided with radially-grooved disks R, which fit within and upon the tines of the forks. The inner ends of the rods are provided with heads  $q$ , which are adapted to abut. The length of these rods is such that when the disk of one is moved back to the base of the fork its head, coming in contact with the head of the other rod, forces it longitudinally, so that its disk moves out to the end of its forks. These disks are the doffers, and operate as I shall explain.

The operation of the machine is as follows: Supposing the lever F to be moved over to the limit on the right, the position of the right-hand knives is just back of base of the fork, they having performed their work of paring and slicing the apple. The other knives, on the left hand, are beyond the end of their fork, and are thrown backward at an angle, the arm  $m$  lying in the notch  $m'$  of the track M. An apple is now placed upon the left-hand fork, and the lever F is then moved to the left. This causes the rotation of the forks and the feed to the right of both sets of knives, the left-hand set being thrown to a perpendicular by its arm traveling up the incline of the said notch  $m'$  in the track M, and the knives are held in this position by reason of said arm resting upon the top of the track. The right-hand set of knives simply pass by their fork, but the left-hand set perform their work of paring and slicing the apple on the left-hand fork. When the motion ceases, the positions are the reverse of those first described. A fresh apple is placed upon the right-hand fork, and in so placing it it pushes to the left the corer-disk R, which, through its rod, pushes to the left the other corer-disk, which forces the previously pared and sliced apple from its fork. The lever F is again moved to the right, when the right-hand knives perform their work on the fresh apple, the left-hand knives merely moving back to the beginning of the

stroke. It will be observed that the mere placing of a fresh apple upon one fork forces the core from the other fork, so that no time is lost in removing the cores.

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

1. In an apple parer, slicer, and corer, the plate H, the bracket I, the knives J K, the arm  $m$ , and base L, pivoted in the bracket, in combination with the track M, having cam-notch  $m'$ , whereby the knives are thrown to an upright position, and the stop-screw  $i$ , passing through the back of the bracket and impinging against the back of the base L, whereby the movement of the knives on their pivot is controlled, substantially as herein described.

2. In an apple parer, slicer, and corer, the combination of the reciprocating carriage-plate H, the brackets I, secured thereto, the swinging base-piece L, pivoted to the bracket and provided with an arm,  $m$ , the vertically-swinging paring and slicing knives mounted on the base L, and a track having a cam-notch, substantially as herein described.

3. In an apple parer, slicer, and corer, the paring and slicing knives and the plate H, by which they are carried, in combination with the mechanism by which the plate is reciprocated, consisting of the pivoted lever F, the pivoted lever O, a pivot-connection between one end of the lever O and the plate, and a sliding pivot-connection between its other end and lever F, substantially as herein described.

4. In an apple parer, slicer, and corer, the bench A, the knives J K, and the plate H on top of the bench, and by which the knives are carried, in combination with the arm N under the bench and connected with the plate H, the lever F, pivoted under the bench, and the lever O, pivoted at one end to the arm N, and having a stud at its other end playing in a slot in lever F, said lever O being pivoted under the bench at a point between its end connections, substantially as herein described.

5. In an apple parer, slicer, and corer, the bench A, the carriage-plate H, fitted and adapted to slide on the bench, the swinging knives J K, having arm  $m$ , and the tracks M, having cam-notches  $m'$ , into which the arm drops, in combination with the means by which the knives are reciprocated, consisting of the arm N under the bench and connected with the plate H, the pivoted lever F, and the pivoted lever O, pivoted at one end to arm N, and connected at the other end by a sliding pivot-connection with lever F, substantially as herein described.

6. In an apple parer, slicer, and corer, the oppositely mounted and aligned forks D, the knives J K, and the plate H, carrying said knives, in combination with the means by which the forks are rotated and the knives fed, consisting of the pivoted lever F, a gear and shaft connection between said lever and the forks, the pivoted lever O, a pivot-connection between one end of said lever and the plate,



and a sliding pivot-connection between its other end and the lever F, substantially as herein described.

7. In an apple parer, slicer, and corer, the forks D, having spindles C, the knives J K, and the knife-carrying plate H, having arm N, in combination with the pivoted lever F, the means for rotating the forks, consisting of the segmental gear G on the lever, the vertical shaft *e*, having pinion *e'* on its base and master-gear E on its top, and the pinions *c* on the spindles, and the means for reciprocating the plate H and feeding the knives, consisting of the pivoted lever O, pivoted by one end to the arm N, and having a stud on its other end playing in a slot in lever F, substantially as herein described.

8. An apple parer, slicer, and corer comprising the bench A, the bracket B, the forks D, having hollow spindles C, and arranged oppositely and mounted in line on the bracket, the sliding doffer-disks R on the forks, and the abutting rods Q of the disks passing through the hollow spindles, the sliding carriage-plate H on the bench, the pivoted paring and slicing knives J K, secured to the plate and having

the arms *m*, the tracks M on the bench, having cam-notches *m'*, the main lever F, pivoted under the bench, a gear and shaft connection between said lever and the fork-spindles, whereby they are rotated, and the pivoted lever O, pivoted at one end to an arm of the carriage-plate, and having a stud, *o'*, on its other end, playing in a slot in the lever F, whereby the knives are fed, all combined, arranged, and adapted to operate substantially as herein described.

9. In an apple parer, slicer, and corer, the reciprocating carriage-plate H, the brackets I on the plate, knives J K on the brackets, and the guide-tracks M, in combination with the shield or casing P, secured to the brackets and covering the carriage-plate, the tracks, and the base of the knives, and having slots or openings through which the knives pass, substantially as herein described.

In witness whereof I have hereunto set my hand.

JOHN B. TUPPER.

Witnesses:

S. H. NOURSE,  
H. C. LEE.