

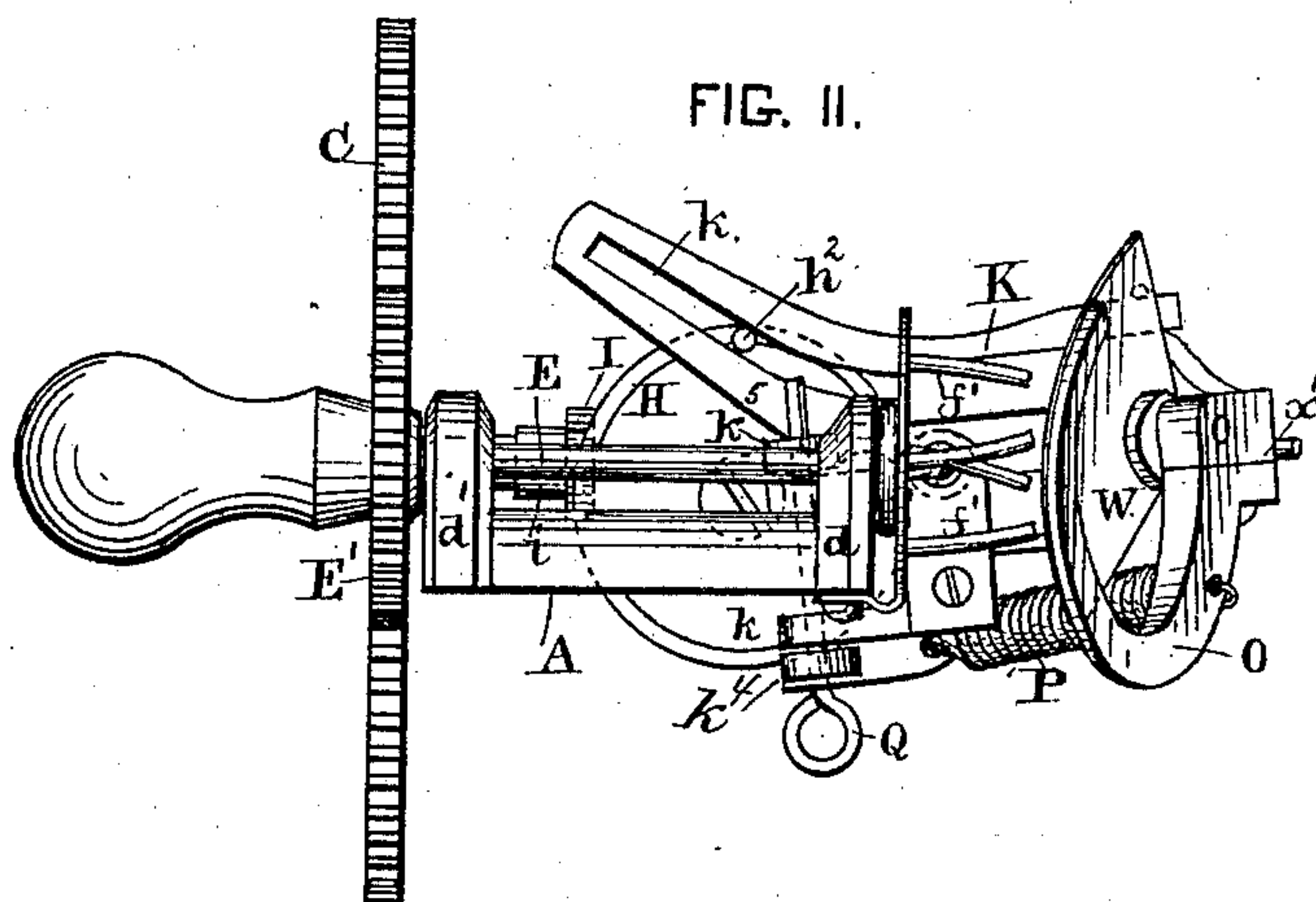
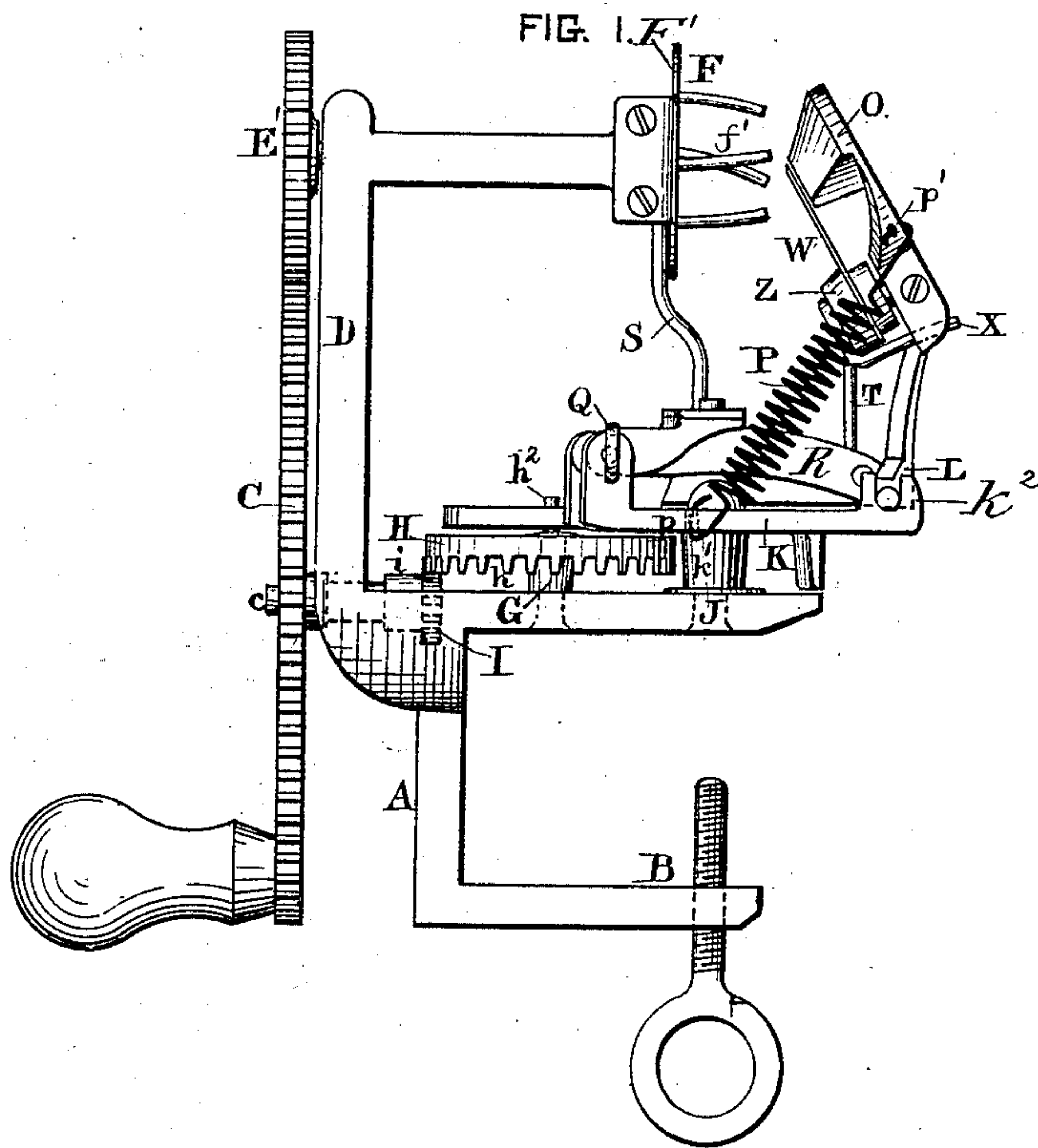
(Model.)

2 Sheets—Sheet 1.

D. H. WEEKS.
FRUIT PARING MACHINE.

No. 256,776.

Patented Apr. 18, 1882.



Daniel H. Weeks

INVENTOR

WITNESSES:

Reynold Beckman
A. W. Bell

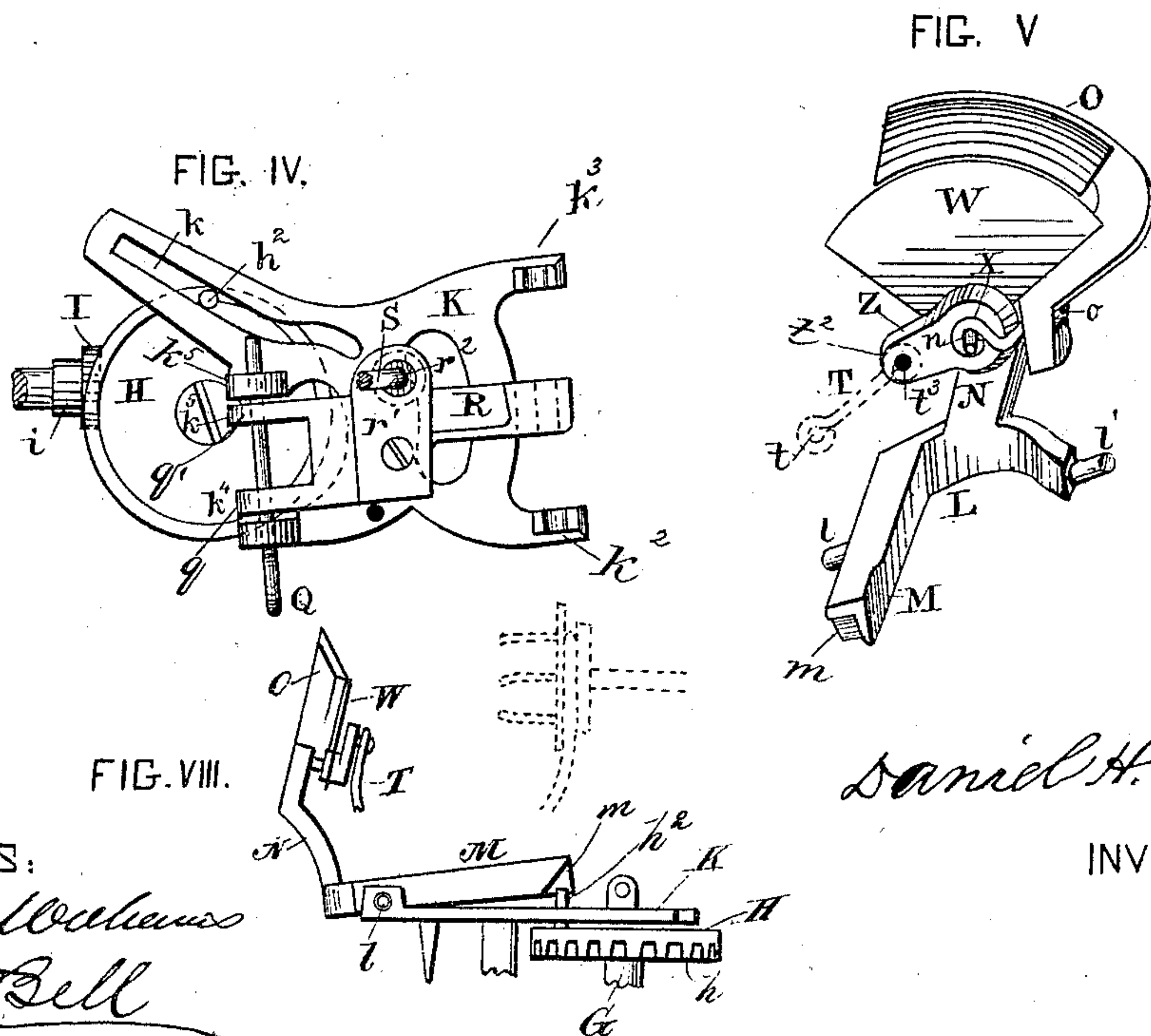
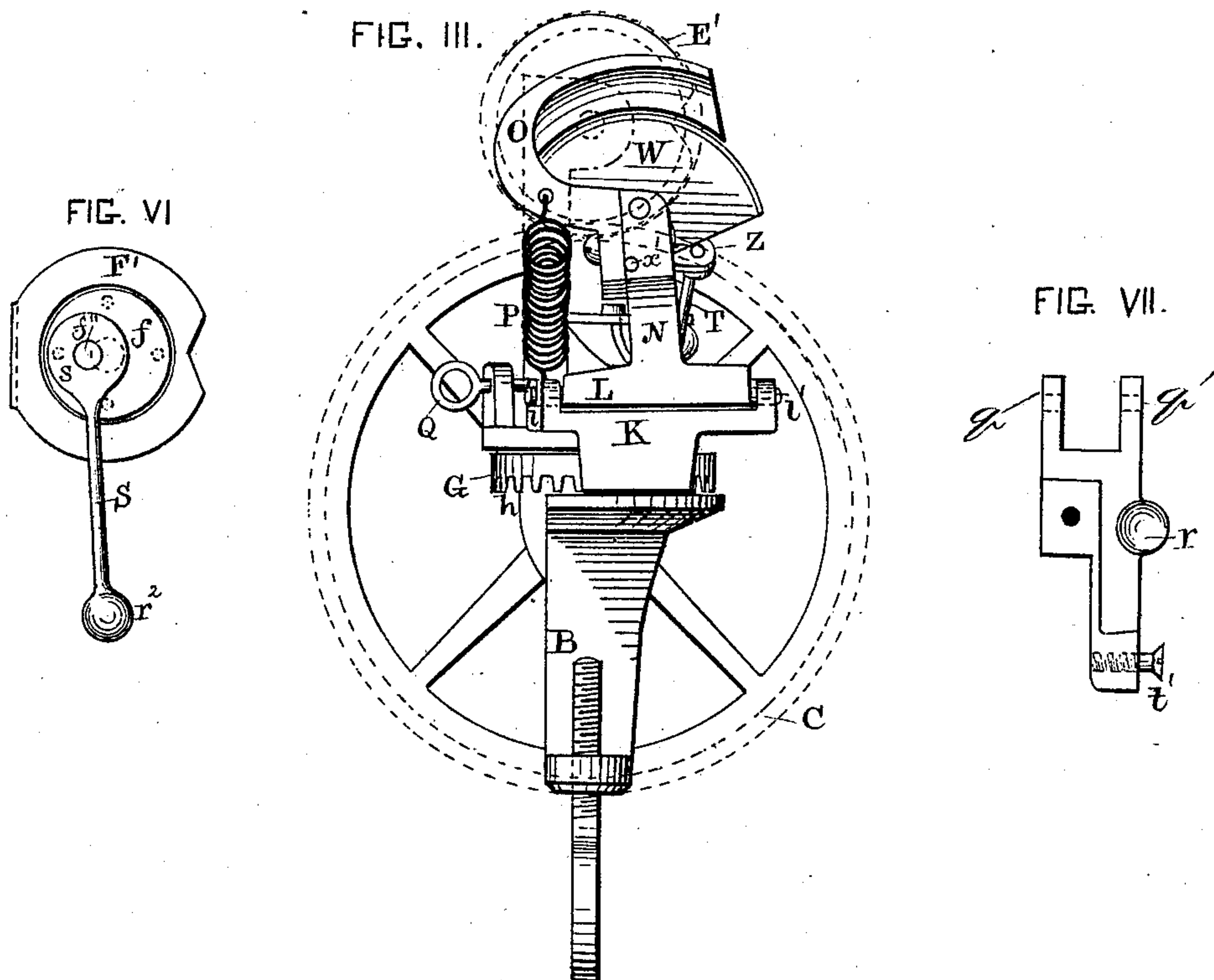
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FRUIT PARING MACHINE.

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WITNESSES:

Reynard Williams
A. W. Bell

Daniel H. Weeks

INVENTOR:

UNITED STATES PATENT OFFICE.

DANIEL H. WEEKS, OF MILFORD, DEL., ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO ROBERT P. SCOTT, OF NEWARK, N. J.

FRUIT-PARING MACHINE.

SPECIFICATION forming part of Letters Patent No. 256,776, dated April 18, 1882.

Application filed May 28, 1880. (Model.)

To all whom it may concern:

Be it known that I, DANIEL H. WEEKS, of Milford, county of Kent, and State of Delaware, have invented certain new and useful Improvements in Machines for Paring Fruit, of which the following description, taken in connection with the accompanying drawings, is a full and accurate specification.

The object of my invention is to provide a machine that will rapidly and neatly remove the skin or rind from fruit; and it is peculiarly adapted for paring fruit that has been cut in sections—such, for instance, as the halves of peaches.

My invention consists in a novel combination of devices, hereinafter described, and pointed out in the claim, for imparting to the paring-knife a rapidly-oscillating motion, and also a back-and-forth or rocking movement.

In the accompanying drawings, Figure I represents a side elevation of my fruit-paring machine. Fig. II represents a plan view thereof. Fig. III represents a front view thereof. Fig. IV illustrates more particularly the swinging frame or turn-table. Fig. V illustrates in detail the knife-carrier and the paring-knife. Figs. VI and VII represent detached portions of the mechanism for imparting the oscillating movement to the knife. Fig. VIII is a detached view, showing how the tilting frame or knife-carrier is tripped by the pin on the crown-wheel.

In these drawings, A is the main frame of the machine, which is provided with the clamp B, for attaching the machine to a table or other support.

C is the driving-wheel, which is provided on its periphery with gear-teeth, and which is held upon the stud *c*, projecting from the main frame A. To this driving-wheel is attached a crank or other means of imparting rotation thereto. A standard, D, rises from the main frame A, and the arms *d d'* of this standard form journal-bearings for the shaft E, which receives motion from the cog-wheel E', meshing with the driving-wheel C. To the end of this shaft is attached the rotating holding-fork F, consisting of the plate *f* and the bent prongs *f'*.

To the back of the plate *f* is attached a cam, *f''*, which, in connection with mechanism here-

inafter described, serves to impart the rapidly-oscillating motion to the paring-knife. The prongs *f'* of the holding-fork are bent, as shown, in the direction of the line of revolution of such fork, in order to better resist the tendency of the knife to draw the fruit from the fork. Surrounding the revolving fork is a plate or disk, F', the shank of which is attached by screws to the standard D. The purpose of this plate or disk is to better retain the fruit in its proper position on the fork during the operation of the paring-knife.

From the top of the main frame A rises the stud G, and upon this stud is secured the crown-wheel H, provided with depending gear-teeth *h*, and held at a proper distance above the main frame by means of a sleeve. This crown-wheel receives motion from cog-wheel I, which revolves on the stud or axle *c*, and which is rigidly attached to the main driving-wheel by means of the sleeve *i*. From the top of the main frame also rises a stud, J, upon which is held a swinging frame or turn-table, K, provided with the slot *k*. This frame K receives its motion from the crown-wheel H through the medium of the pin *h²*, projecting from the crown-wheel and working in the cam-slot *k*. The frame K is held at the required distance above the main frame A by means of the depending sleeve *k'*. Two journal-bearings, *k²* and *k³*, project from the vibrating frame K, and on these bearings rests the knife-carrier. This carrier consists of the base portion, L, having the side journals, *l l'*, one on each side, and the tripping-arm M, provided with the cam-face *m*, and the vertical standard or arm N, having the stud or axis *n*, on which the paring-knife is hung.

To the vertical arm N is attached the knife-gage O by means of the set-screw *o*. The broad vertical face of this gage is somewhat curved to coincide with the cutting-edge of the paring-knife, and is placed slightly behind and above the same. The distance from the knife is regulated by the set-screw *o*, which enables the gage to be clamped in any desired position, and thus govern the depth of the cut and the thickness of the paring. A spring, P, is attached to the swinging frame K at a point, *p*, and to the knife-gage O at a point,

p' . This spring serves to keep the knife in its normal position, drawn down or forward, so that it presses against the surface of the fruit. k^4 and k^5 , bearing the removable axis Q, upon

5 From the swinging frame K project the arms which are hung the arms q q' of the vibrating arm R. This arm R is provided with a socket. r , within which, by means of a clamp, r' , is held the ball r^2 , attached to the end of the pit-
10 man, and by this means a ball-and-socket connection between the pitman S and the vibrating arm R is formed. The end of the pitman S is provided with an eye or loop, s , which fits loosely over the cam f'' on the back of the
15 plate f of the fork, and which causes the pitman to be lifted by such cam at each revolution of the shaft E, and to thus vibrate the arm R.

To the arm R is attached a link, T, having at one end the loop t , which fits over the stud
20 t' , and at its other end the loop t^2 , which fits over the stud t^3 on the knife-crank Z. The knife W is rigidly attached to this crank, which is held upon the axis by means of the loop X, the end of which is clamped in the recess X'
25 in the vertical arm N by the shank of the knife-gage O.

The operation of my machine is as follows: The clamp having been securely fastened to the table or other support, power is applied to the
30 driving-wheel C, and from this driving-wheel motion is imparted to the cog-wheel E', to the revolving shaft E, and to the revolving holding-fork F. The cam f^2 at the back of the fork communicates a rapidly-reciprocating move-
35 ment to the pitman S, which being connected to the vibrating arm R causes the same to rise and fall, and through the medium of the link T and crank Z to impart an oscillating motion to the paring-knife. The cog-wheel I, being
40 rigidly attached to the driving-wheel by means of the sleeve i , revolves with the same and im-

parts motion to the crown-wheel H, the pin h^2 in the top of which, working in the cam-slot h of the swinging frame or turn-table K, gives motion thereto and causes the knife to move 45 back and forth in front of the fork. As the paring-knife reaches the limit of its movement at the side of the fork the pin h^2 , projecting from the crown-wheel H and through and above the slot h , strikes the cam-face m of the pro- 50 jecting arm M and causes the carrier L to tilt, and thus to lift the knife from the fruit. By means of this pin the knife is held from the fruit until it is carried back to a position in front of the fork to resume its work, when the 55 pin h^2 passes from under the projecting arm M and the knife is drawn down against the fruit by the spring P.

I am aware that holding-forks having curved prongs are not new, and that forks having 60 prongs of considerable length and curved and overlapping throughout are old. I am also aware that an inclined metallic guard has been placed in the rear of the holding-fork at some distance from the base of its prongs; and, fur- 65 ther, that a revolving knife has been employed for the purpose of paring fruit; and such features, therefore, I do not broadly claim; but,

Having thus fully described my invention, what I claim is— 70

The combination of the knife W, crank X, link T, vibrating arm R, pitman S, shaft E, and cog-wheels E' and C with the holding-fork, substantially as shown and described.

In testimony that I claim the foregoing as 75 my own I affix my signature in the presence of two witnesses.

DANIEL H. WEEKS.

Witnesses:

REYNEAR WILLIAMS,
A. W. BELL.