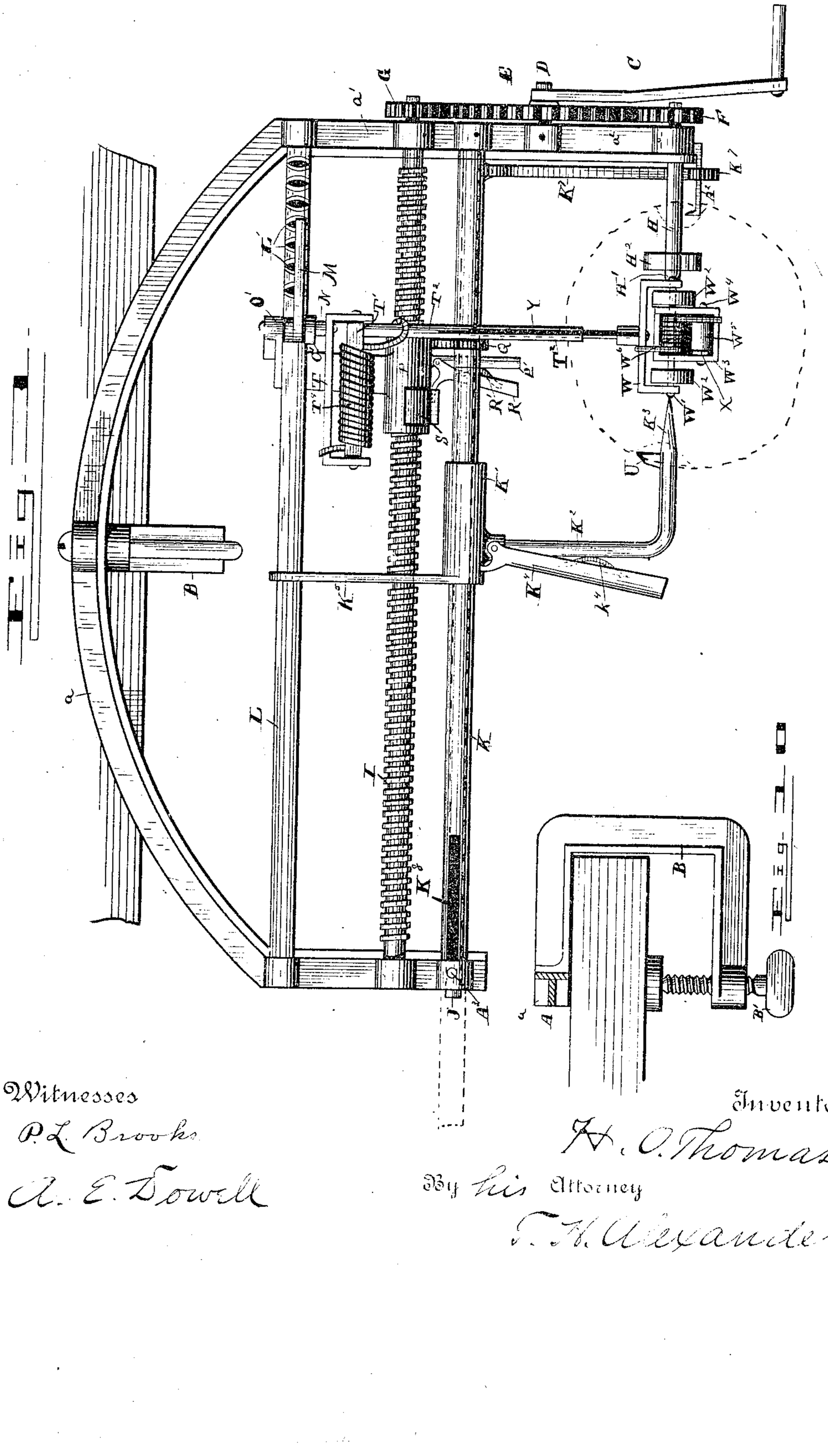
(Model.)

3 Sheets—Sheet 1.

H. O. THOMAS.

VEGETABLE PARER.

No. 403,793. Patented May 21, 1889.



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(Model.)

3 Sheets—Sheet 2

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Fig. 2.

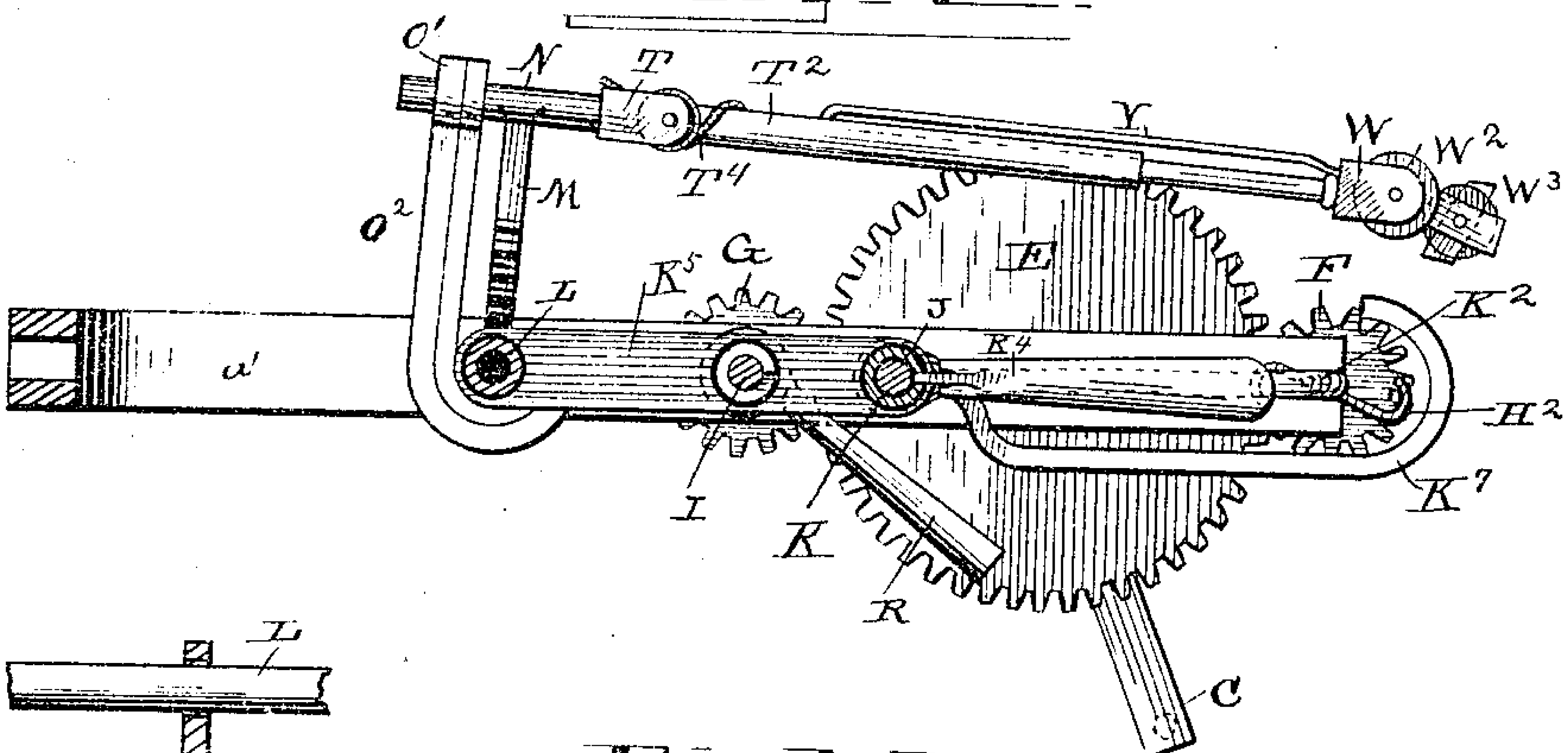


Fig. 6.

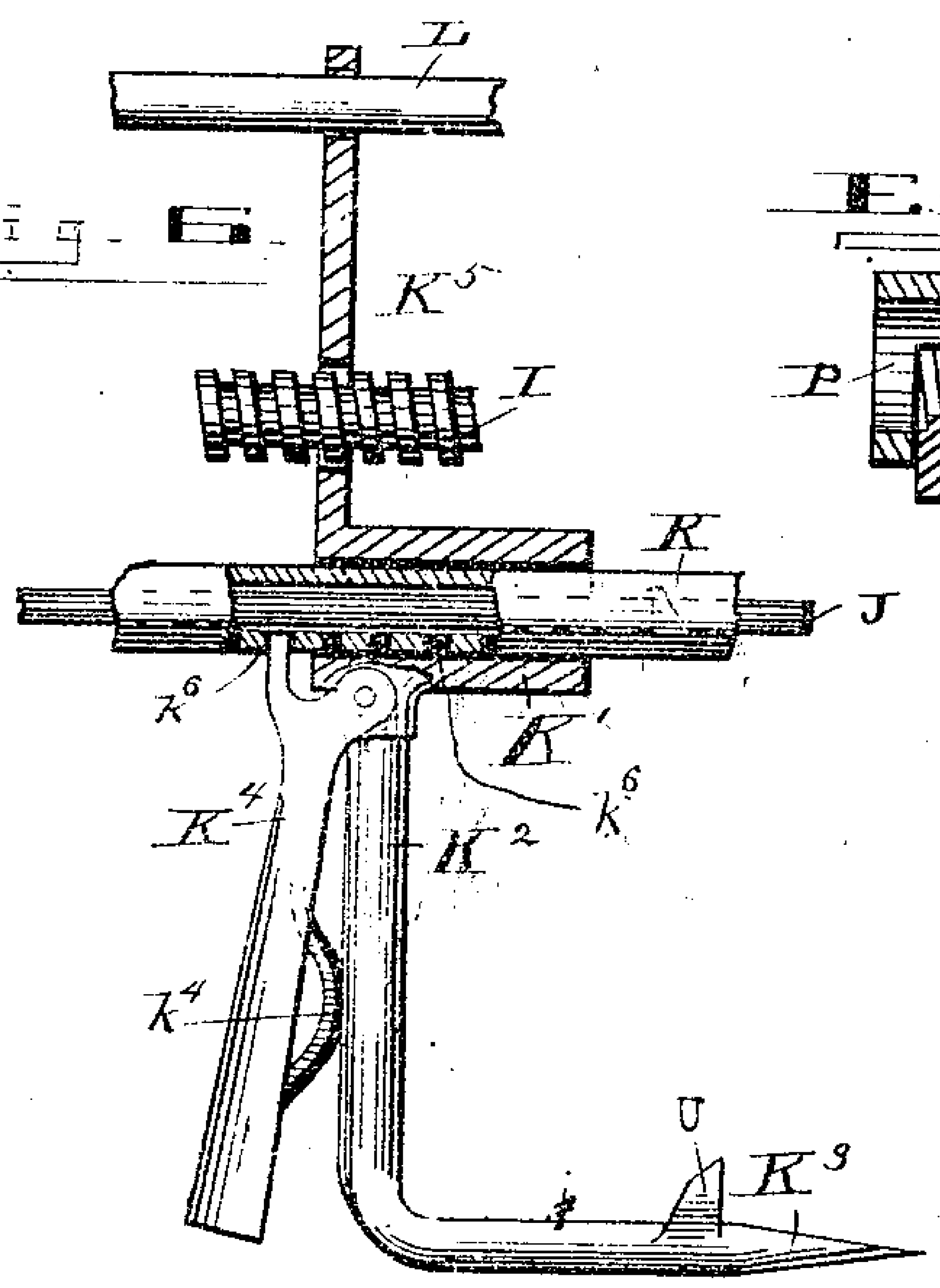


Fig. 11.

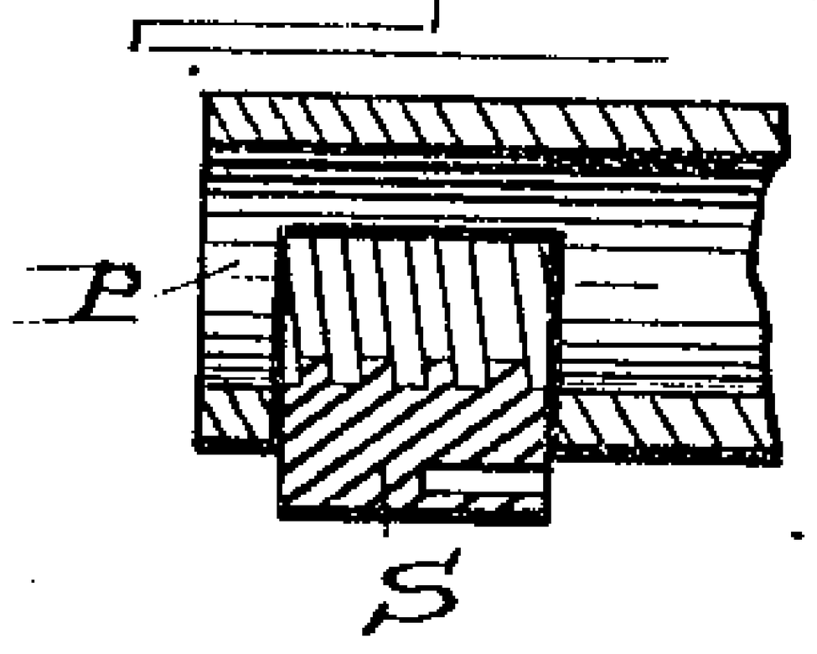
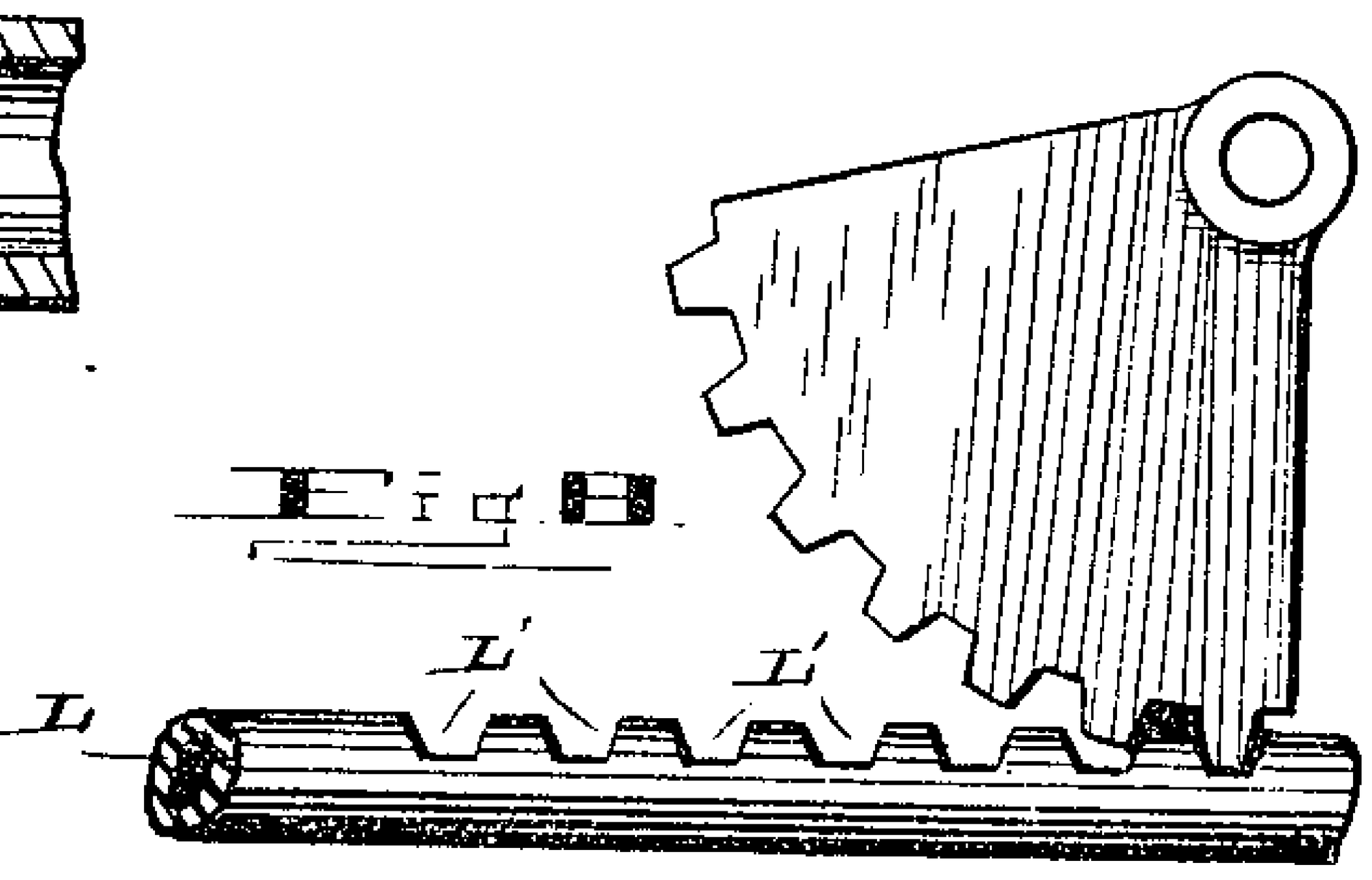


Fig. 8.



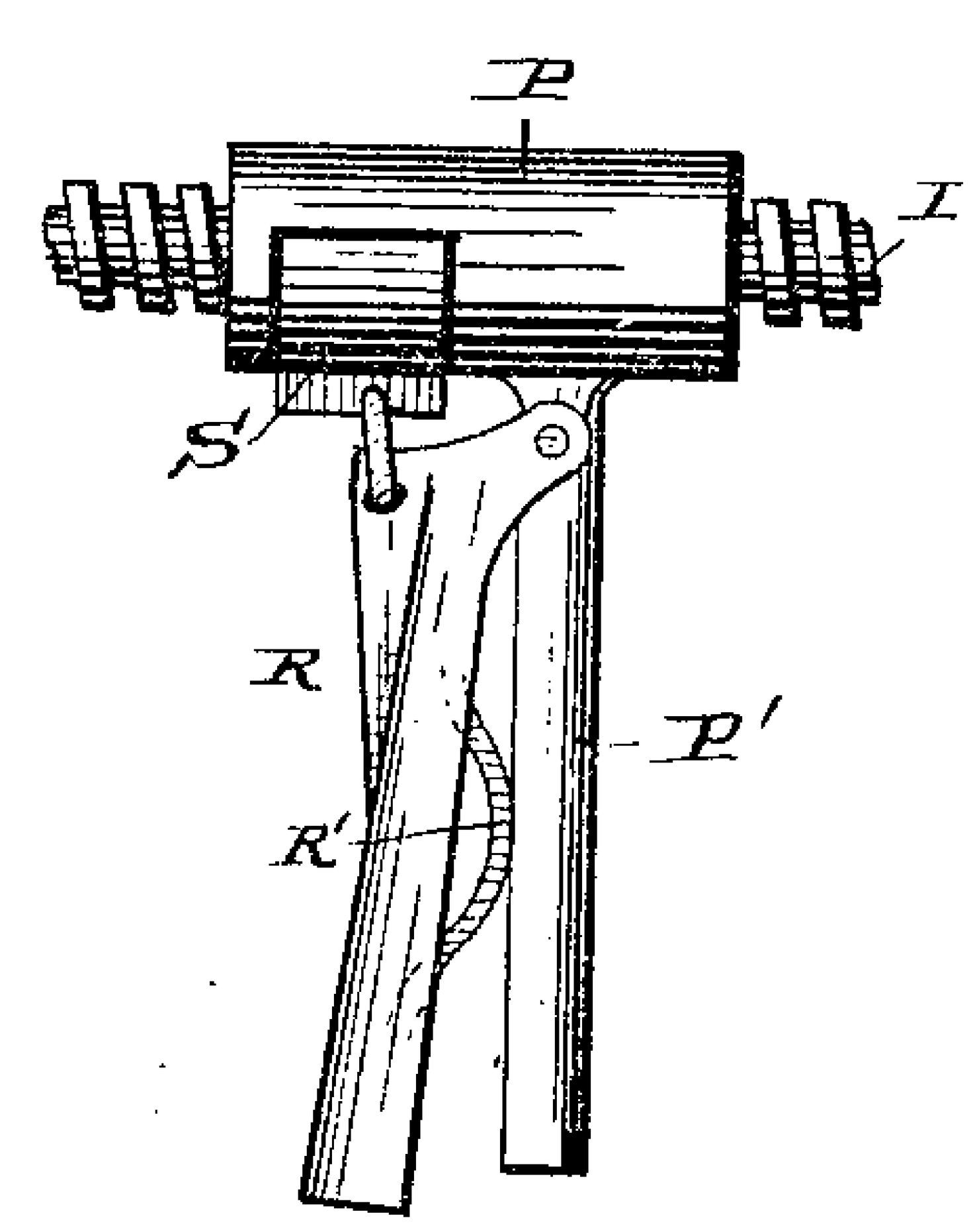
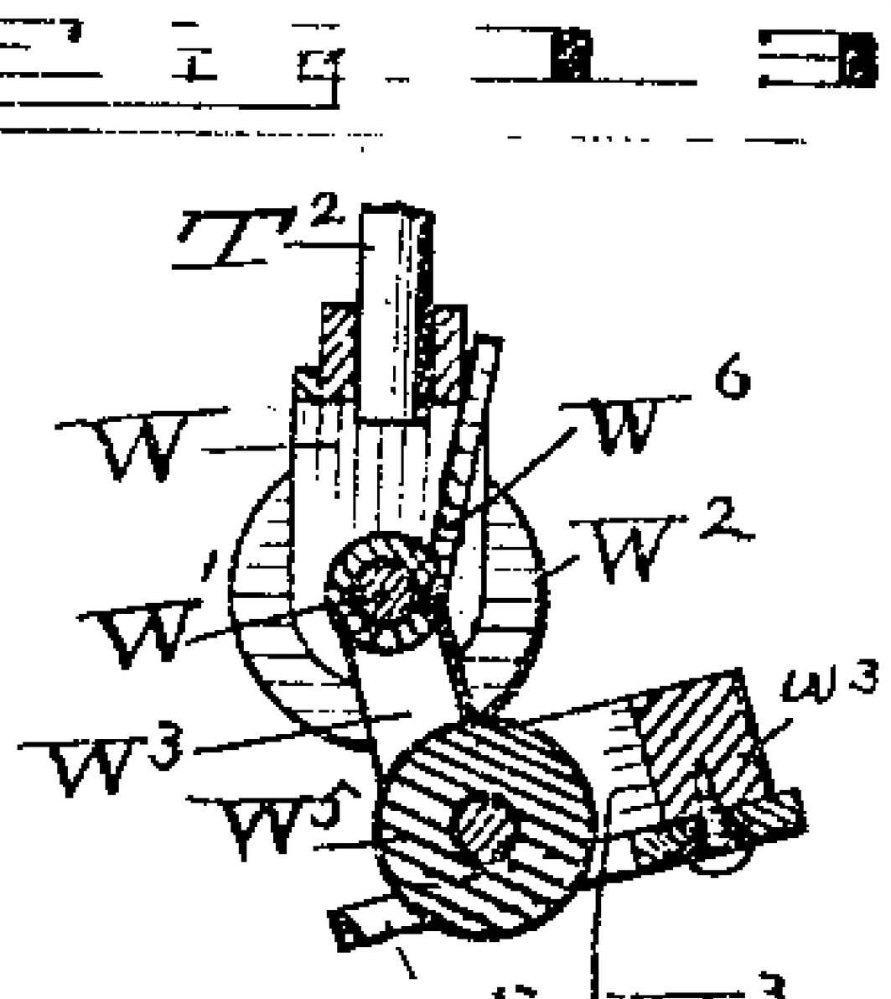


Fig. 9.

Fig. 13.



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(Model.)

3 Sheets—Sheet 3.

H. O. THOMAS.

VEGETABLE PARER.

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Fig. 3

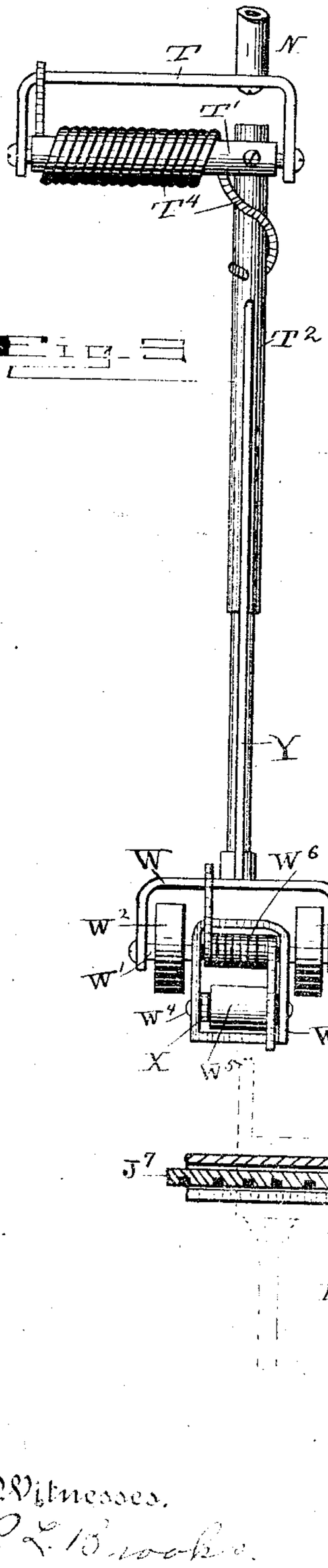


Fig. 4

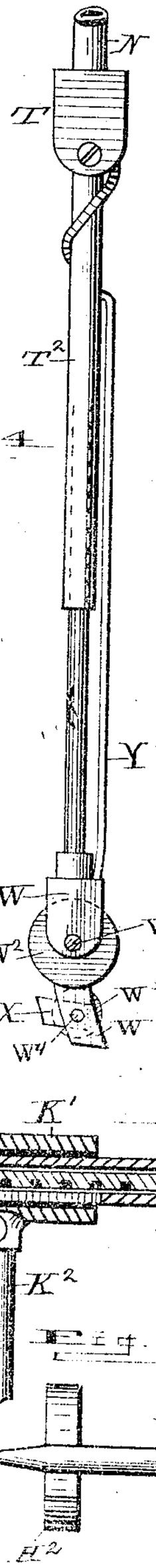
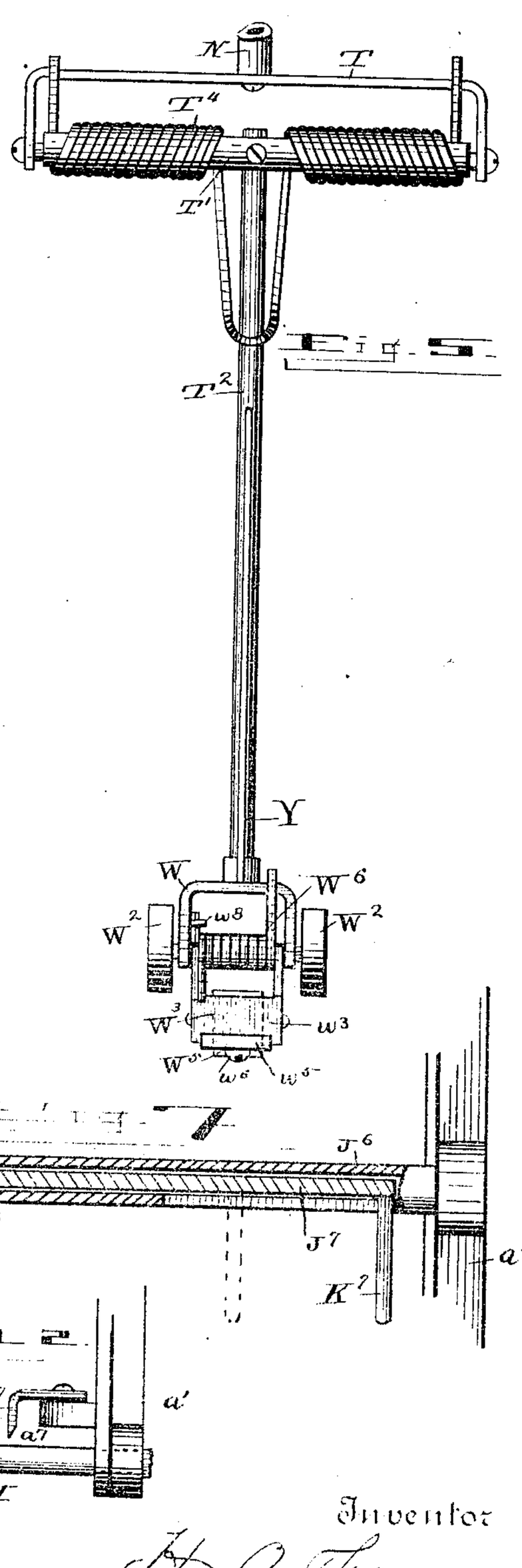
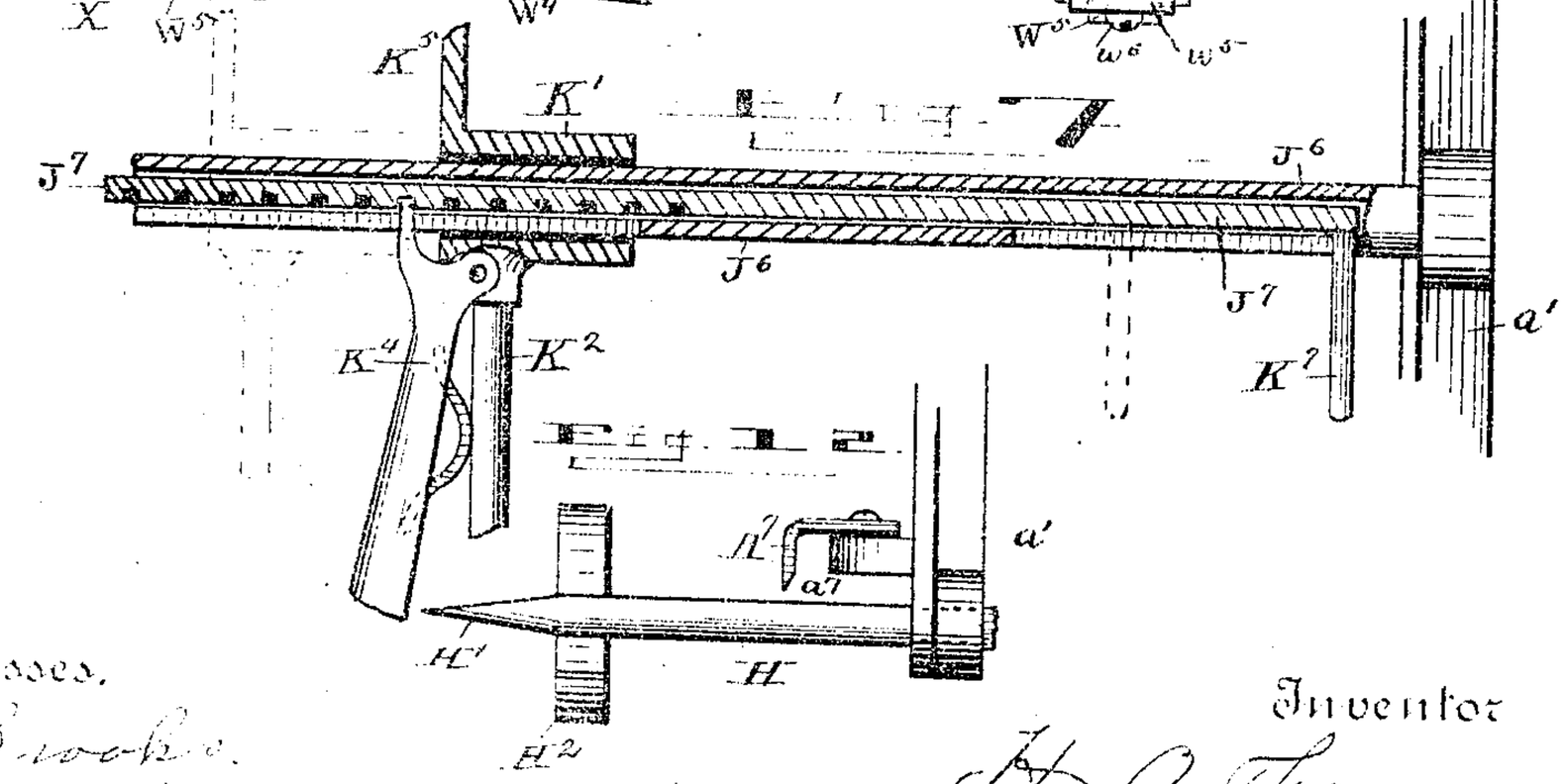


Fig. 5





Witnesses.
P. F. Brooks.
A. E. Sowell

Inventor
H. O. Thomas
By his Attorney
T. H. Alexander

UNITED STATES PATENT OFFICE.

HENRY O. THOMAS, OF CHEYENNE COUNTY, NEBRASKA, ASSIGNOR TO WILLIAM HOLT, OF DENVER, COLORADO.

VEGETABLE-PARER.

SPECIFICATION forming part of Letters Patent No. 403,793, dated May 21, 1889.

Application filed July 21, 1888. Serial No. 280,667. (Model.)

all whom it may concern:

Be it known that I, HENRY O. THOMAS, a citizen of the United States, residing in the county of Cheyenne, State of Nebraska, post-office address Pine Bluffs, Wyoming Territory, have invented a new and useful Improvement in Vegetable-Parers, of which the following is a specification, reference being had therein to the accompanying drawings, in which similar letters refer to corresponding parts.

Figure 1 is a top plan view of my improved parer. Fig. 2 is transverse sectional view of the same. Figs. 3 and 4 are top and side views of the paring devices. Fig. 5 is a top plan view of a modified paring device. Fig. 6 is a detail sectional view of the adjustable vegetable-holding devices. Fig. 7 is a similar view of a modified form of the holding devices. Fig. 8 is a detail view of the sector. Fig. 9 is a detail view of the clutching device of the paring devices carrying-sleeve. Fig. 10 is a detail of the attaching-clamp. Fig. 11 is a detail view of the clutch. Fig. 12 is a detail view of the revolving brad; Fig. 13, a sectional view of the knife-holding devices.

This invention relates to improvements in vegetable or fruit parers; and its objects are to simplify the construction of such devices, to give the knife a universal motion so that it will readily accommodate itself to inequalities of the vegetable or fruit, to improve the arrangement of the knife, and to so construct the parts that the fruit will be ejected from the machine when the paring is completed; and to these ends the invention consists in the novel arrangement and construction of parts hereinafter described and claimed.

Referring to the drawings by letter, A designates a horizontal frame, of any suitable construction, supporting the working parts of the machine, and in this instance having a rearwardly-extended curved bar, *a*, to which is attached an ordinary clamp, B, having a thumb-screw, B′, by which it can be attached to the edge of a table or stand.

E is a gear-wheel mounted on a short shaft, D, journaled in an extension, *a′*, of frame A, and provided with a crank, C.

F is a pinion meshing with gear E and mounted on a short shaft, II, journaled in the extremity of extension *a′*, the inner end of said shaft being formed into a brad, II′, on which is a blade, H^2, and A^2 is a knife mounted on the end of extension *a′*. In lieu of knife A^2 a knife, A^7, Fig. 12, mounted on a stud, a^7, to the inner side of shaft II might be used.

G is a pinion meshing with gear E and mounted on a screw-shaft, I, which is journaled longitudinally in frame A, as shown, so that the shafts II and I are driven from gear E.

J is a stationary bar mounted in frame A, parallel with and in front of shaft I, and K is a movable sleeve on said bar, to which is attached a wire hook, K^7, at the end nearest gear E. The outer end of the hook lies normally close to shaft II, and is curved as shown.

Instead of the fixed shaft J and sleeve K, as described, and shown in Figs. 1 and 6, I may employ as a desirable modification the construction shown in Fig. 7, in which a fixed sleeve, J^6, takes the place of rod J, and a rod, J^7, lying in said sleeve takes the place of sleeve K. The hook K^7 is in this instance attached to the end of rod J^7 and projects through a slot in sleeve J^6. Upon said sleeve K or J^6 is loosely mounted a movable collar, K′, to which is attached a forwardly-projecting arm, K^2, terminating in a brad, K^3, facing brad H′. Brad K^3 may have a knife, U, as shown in Fig. 1, which will pare the butt of the vegetable.

K^4 is a dog pivoted on arm K^2 and controlled by a spring, k^4, bearing against said arm. The tooth of said dog engages perforations k^6 in sleeve K, so that the arm K^2 can be retained in different positions on the sleeve or in notches in rod J^7, as indicated in Fig. 7.

K^5 is an arm projecting rearwardly from collar K′, the end of which engages shaft I and bar L, but moves freely thereover. Said arm prevents the dropping of arm K^2.

L is a fixed bar or tube parallel with and in rear of shaft I and provided with a series of openings, L′.

P designates a loose sleeve mounted on shaft I and having a rearwardly-extending arm, O, which underlies or embraces bar L, and Q is a forwardly-extending arm loosely embracing sleeve K or J^6.

P′ is an arm projecting from sleeve P, to which is pivoted a dog, R, controlled by a spring, R′, and to the inner end of this dog is attached an interiorly-screw-threaded half-nut or clutch, S, that engages the threads of shaft I through an opening in sleeve P, being kept in engagement with the shaft by spring R′. The dog and segment may be connected, as shown in Figs. 1 or 9.

O^2, Fig. 2, designates an upstanding extension of arm O, and N is a pin journaled in a collar, O′, in the upper end of said extension, on which pin is secured a toothed segment, M, which engages the openings L′ of bar L.

T is a rectangular metal frame attached to pin N, as shown in Figs. 1 and 2, so as to turn with the pin.

T′ is a shaft journaled in the front of the frame T and carrying a forwardly-extending rod, T^2.

T^4 is a tension-spring coiled around shaft T′ and arranged, as shown in Figs. 3 and 4 or 5, to depress rod T^2. To the forward end of rod T^2 is pivotally attached a rectangular frame, W, having a pin, W′, upon which work two small rollers, W^2, preferably of rubber, which bear upon the surface of the fruit and vegetables and direct and guide the knife-frame over any inequalities thereof.

W^3 is the knife-holder frame pivotally mounted on pin W′, between rollers W^2, and kept in position by a coiled spring, W^6, as shown. Preferably I arrange the knife as shown in Figs. 5 and 13, placing rollers W^2 outside frame W, while the frame W^3 has an upstanding portion, w^3, which is recessed in its outer face, and in this recess a knife, w^5, is secured by a set-screw, w^6, so that the knife can be adjusted closer to or farther from roller W^5, as is evident.

w^8 is a stop on frame W, arranged to stop the downward turning of frame W^3.

The knife-holder shown in Figs. 3 and 4 is provided with a roller, W^5, mounted on a pin, W^4, as shown.

X is a knife adjustably attached to the holder and partly surrounding roller W^5. The latter regulates the thickness of paring cut by the knife.

Y is a spring attached to arm T^2 at one end and projecting forward and entering an opening in frame W and keeping the frame normally in a horizontal position.

In operation, one end of the fruit or vegetable is impaled on brad H′ until blade H^2 enters it. Then arm K^2 is adjusted until brad K^3 enters the other end of the fruit, while the knife is carried back to the end of the machine nearest gear E. The segment being in engagement with shaft I, upon turning gear E motion is imparted to the parts, and blade H^2 forces the fruit to revolve with brad H′, and knives A^2 and U cut off the ends of the vegetable, while the parer-knife is forced to travel over the surface of the fruit as sleeve P is drawn along shaft I, and at the same time the knife is given a slow rotary movement by segment M, as is apparent from the drawings. Spring T^4 causes the knife to bear down upon, and spring W^6 assists in keeping the knife in cutting contact with, the vegetable, whether its surface be rough or smooth. It will be observed from the drawings and description that the knife is permitted to move in all directions. Upon the completion of the paring the further movement of sleeve P causes its arm Q to engage collar K′ and force the latter along with it, drawing brad K^3 out of the vegetable and simultaneously causing hook K^7, which is moved forward with sleeve K, to force the vegetable off brad H′. The end of sleeve K may be slotted at K^8 to permit the sleeve to pass the pin a^3, which secured bar J to the frame. The vegetable being pared and removed, clutch S is disengaged from shaft I, and the sleeve P and its attachments are moved back to the starting position.

Having thus described my invention, I claim—

1. In a parer, the combination of the vegetable-holding devices with the paring devices, consisting of a movable sleeve, a rod pivotally connected thereto, the knife-holder frame mounted on the end of said rod, and the rollers and knife and its controlling-spring on said frame, all substantially as described.

2. The combination of the vegetable-holding devices, the threaded rod, the sleeve moving thereon, and the knife-supporting spring-controlled rod carried by said sleeve, with the knife-carrying frame mounted on said rod and the guide-rollers and knife mounted in said frame, substantially as described.

3. The combination of the screw-shaft and sleeve thereon, the described paring devices, with the threaded clutch attached to said sleeve and engaging the shaft through an opening in the sleeve, and the dog pivoted on said sleeve and engaging the clutch, all substantially as described.

4. The combination of the frame, the shaft and sleeve, the paring devices, and the revolving brad, with the adjustable brad, its dog K^4, and collar K′, substantially as described.

5. The combination of the frame and paring devices, the revolving brad H′, and the shaft and sleeve, with the collar K′, its dog and brad K^3, and hook K^7, all substantially as described.

6. The combination of a revoluble brad, H′, the brad K^3, and the adjustable collar K′ and its locking-dog, with the screw-shaft, the collar engaging the same carrying the paring devices and having a projecting arm adapted to engage collar K′ upon the completion of the paring operation, substantially as specified.

7. The combination of the movable sleeve with the spring-controlled rod T^2, mounted thereon, the frame mounted on the end of

said rod, the guide-rollers mounted on said frame, and the spring-controlled knife, substantially as described.

8. The combination of the screw-shaft, the sleeve having a threaded clutch engaging said shaft, and the spring-controlled rod pivotally connected to and supported upon said sleeve, with the frame attached to the end of said rod having guide-rollers W^2, the knife mounted in said frame, and the roller W^5, for said knife and its controlling-spring, all substantially as described.

9. The combination of the holding devices for the fruit with a movable sleeve, a spring-controlled rod mounted thereon, the devices for rotating said rod, the frame on the end of said rod carrying guide-rollers, a spring-controlled knife, and a roller-guide therefor, and the spring for retaining said frame in position, substantially as described.

10. The combination of the main frame, the screw-shaft and revolving brad, the gearing for driving the same, and the sleeve having a half-nut or clutch engaging said screw-shaft with spring-controlled rod T^2, carried upon a frame mounted on said sleeve, the sector M, notched bar L, the spring-controlled frame on the end of shaft T^2, and the rollers and spring-controlled knife on said frame, all substantially as described.

11. The combination of the revoluble brad H′, having blade H^2, and knife A^7, secured to the frame with the screw-shaft, the sleeve thereon, and the paring devices carried by said sleeve, substantially as described.

12. The combination of the frame, the screw-shaft I, and brad H′, and gearing for driving the same, with the bar L, the sleeve P, having a half-nut or clutch engaging shaft I, and a frame thereon carrying a rod, T^2, provided with a segment, M, engaging bar L, to rotate the rod, the cutting devices on the end of rod T^2, and the shaft J and adjustable collar K′ and brad K^3 thereon, all substantially as specified.

13. The combination of the frame, the revoluble screw-shaft I, and brad H′, and the fixed rods J and L, with the sleeve P, mounted on shaft I, and having a clutch, S, engaging the same, the spring-controlled rod T^2, mounted on a frame on said sleeve, the knife-bearing frame mounted on said rod and the rollers thereon, and the sleeve K on rod J, its hoop K^7, and the collar K′, having arm K^2, brad K^3, and its locking-dog, all constructed and arranged substantially as described.

HENRY O. THOMAS.

Attest:

ISHAM R. HOWZE,
JAMES S. HOWZE.