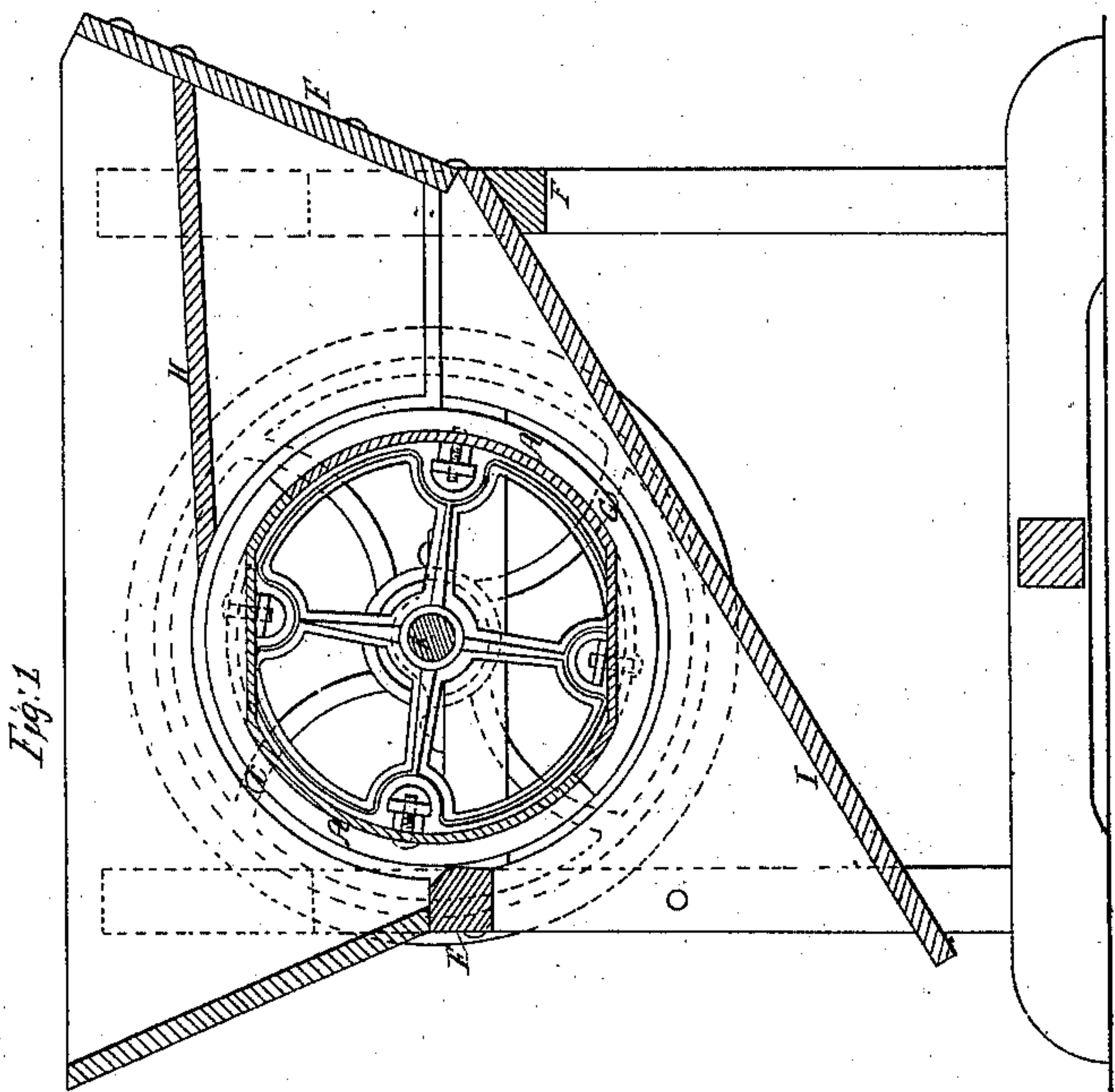
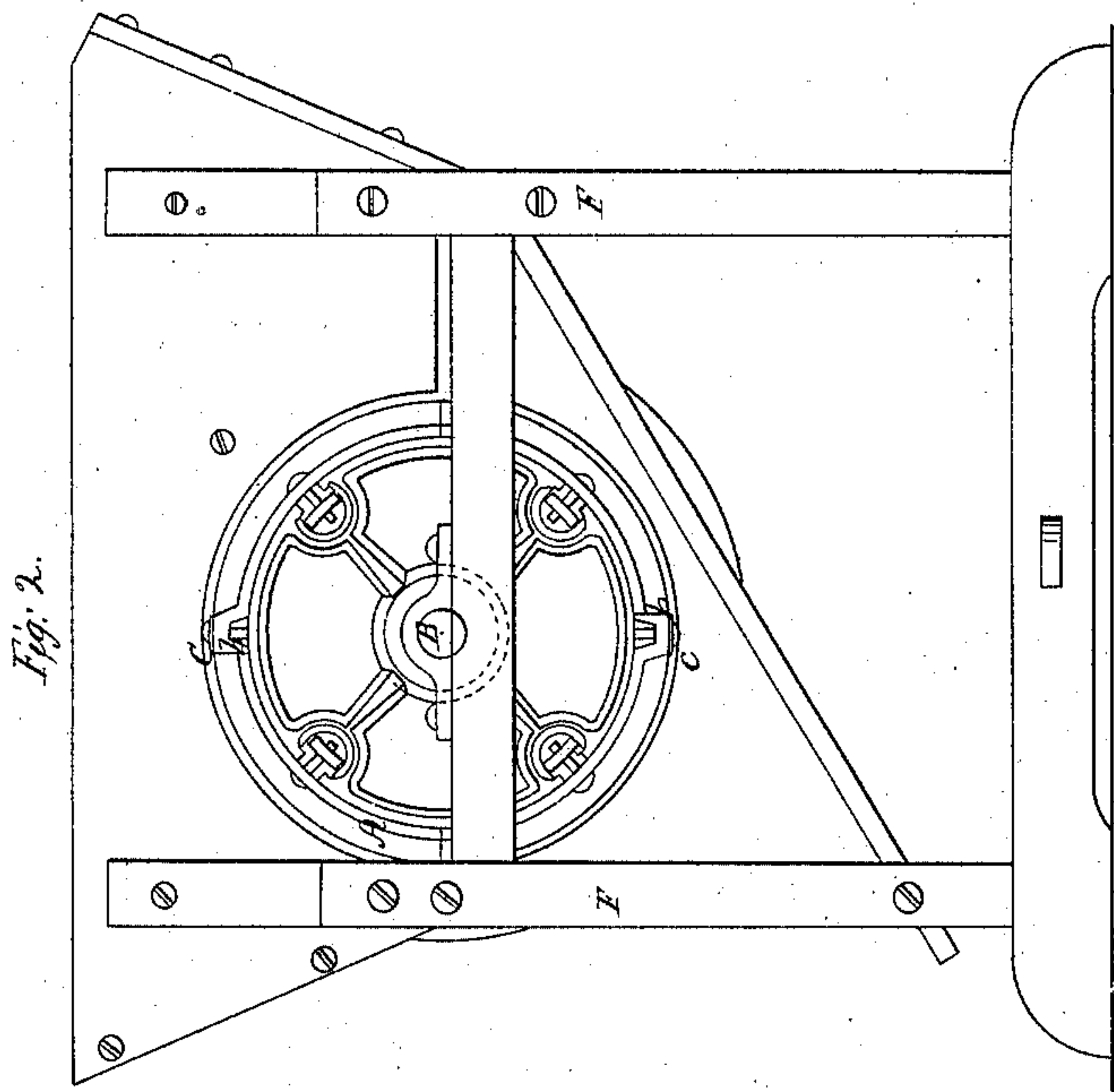


W. Gale.

Vegetable Cutter

N^o 97,184.

Patented Nov. 23, 1869.



Witnesses:
Jno. Alfred Ellis
A. J. Mum.

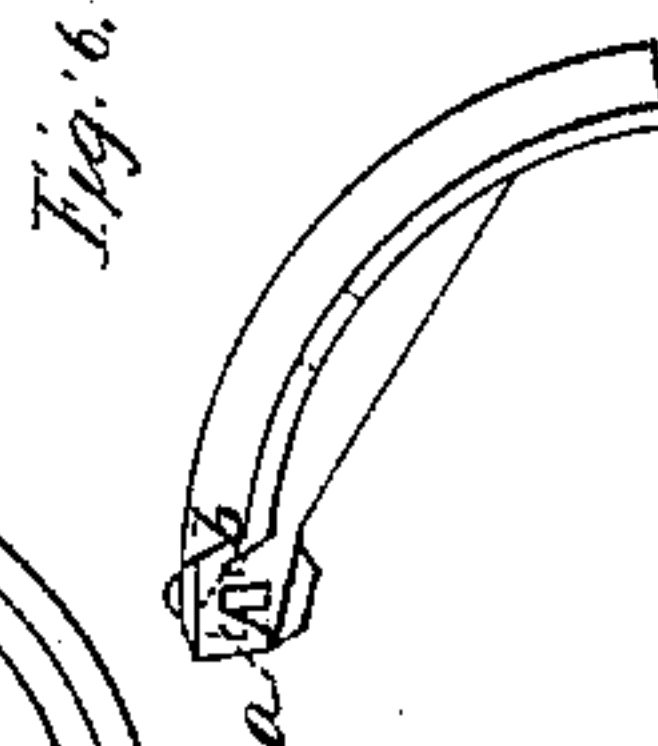
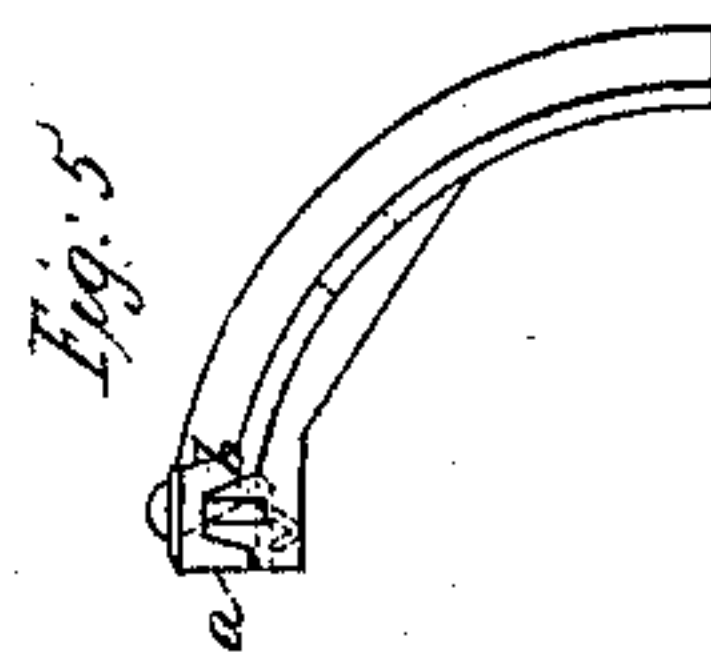


Fig. 7.

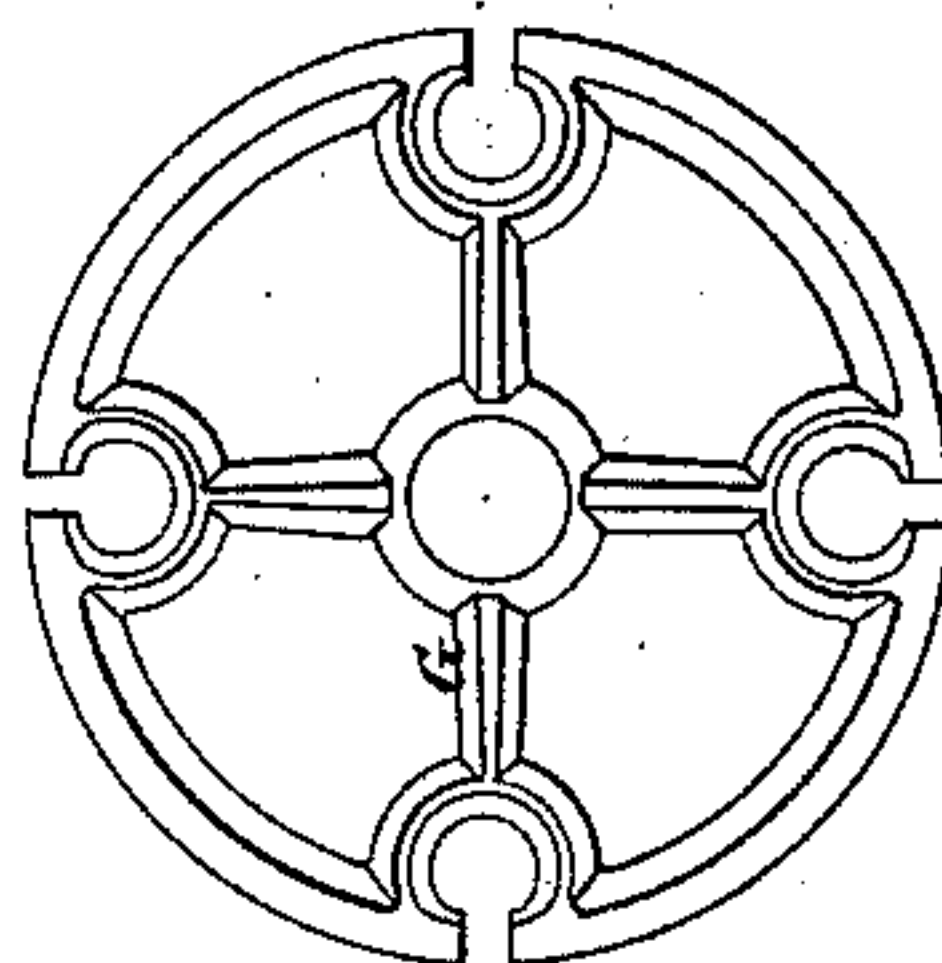


Fig. 3.

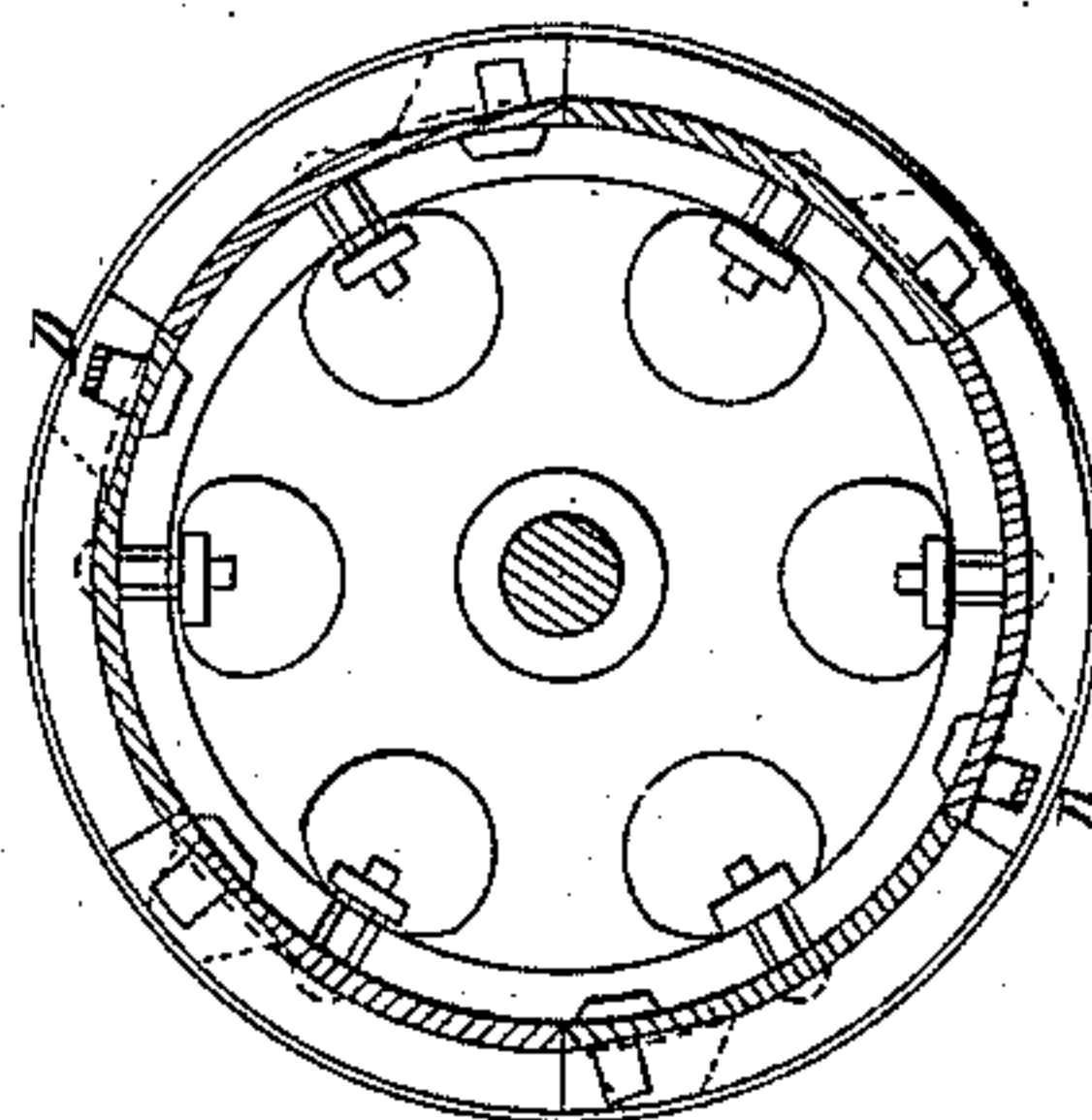
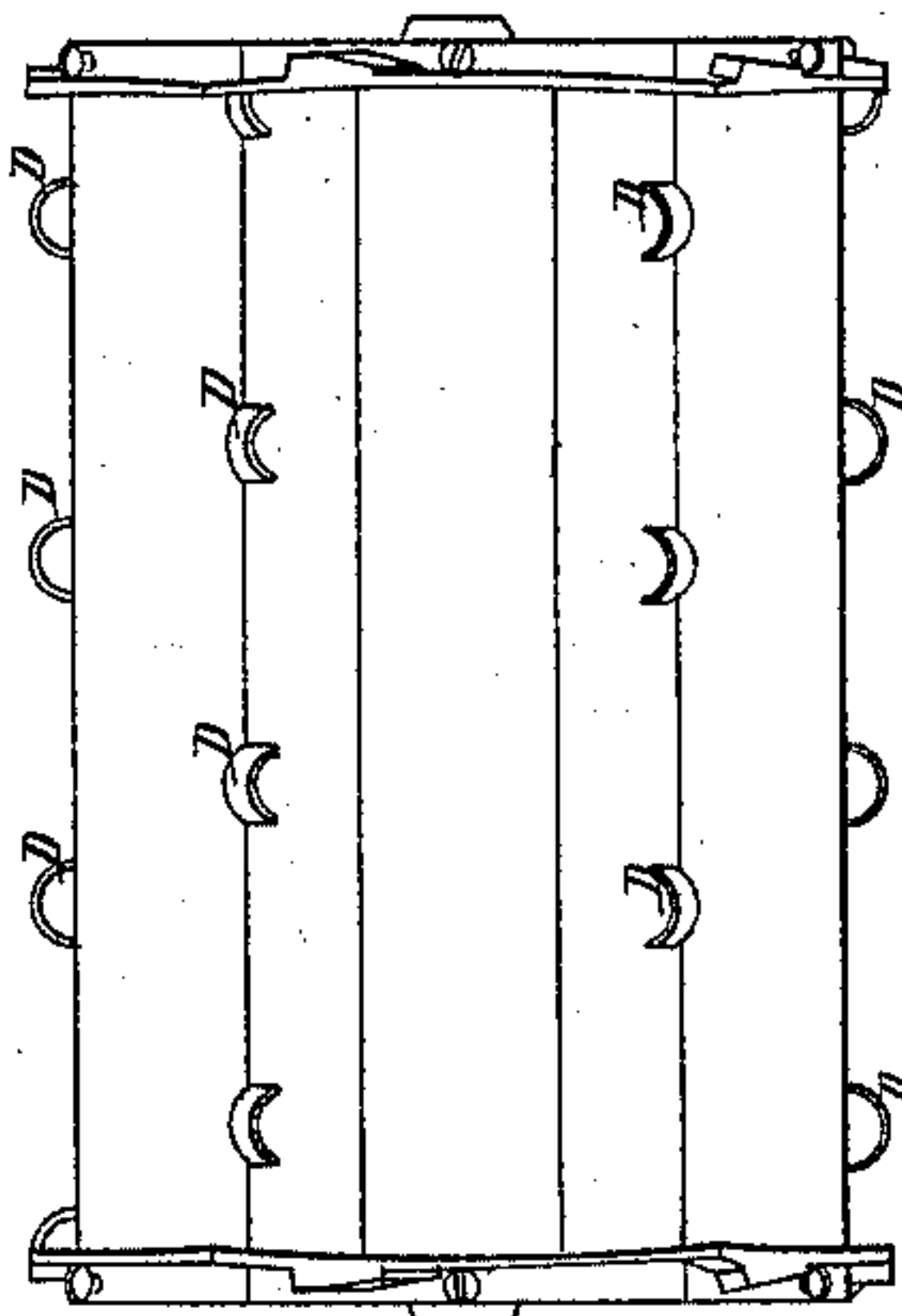


Fig. 4.



Inventor:
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per
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United States Patent Office.

WARREN GALE, OF PEEKSKILL, NEW YORK.

Letters Patent No. 97,184, dated November 23, 1869.

IMPROVEMENT IN VEGETABLE-CUTTERS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, WARREN GALE, of Peekskill, in the county of Westchester, and State of New York, have invented certain new and useful Improvements in Machines for Cutting or Slicing Vegetables, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The nature of my invention consists in the construction and general arrangement of a vegetable-cutter or slicer, as will be hereinafter fully set forth.

In order to enable others skilled in the art to which my invention appertains, to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a longitudinal vertical section of my machine.

Figure 2 is a side elevation of the same.

Figure 3 is a cross-section, and

Figure 4, a side view of a cylinder, with semicircular knives, which I may use in place of the one shown in figs. 1 and 2.

Figures 5 and 6 are side views of still other knives that may be used; and

Figure 7 is a side view of the head of the cylinder, shown in figs. 1 and 2.

I usually make my vegetable-slicer or cutter with a hollow cast-iron cylinder, A, which may be cast of the proper form, hereafter to be more particularly described, in one piece, and the shaft B, on which it runs, made of one piece of wrought-iron, and may be cast into the cylinder; or two short shafts may be used, each one cast into the end, or otherwise fastened to the cylinder.

The best way, however, to make the cylinder, is in separate sections, fastened by screws, or otherwise, to separate head-pieces, the head-pieces being fastened to a wrought shaft.

As turnips, carrots, or other vegetables to be cut, almost always have more or less grit or dirt mixed with or adhering to them, causing considerable wear on the surface of the cylinder, it is especially desirable, that whatever mode of construction is used, the surface next to the vegetables shall be of metal. A wooden cylinder, with a metal covering, might be used.

Across the cylinder A, two main slicing-knives are fastened.

The knives C C, I prefer to make flat on the side next to the cylinder, and straight across the cylinder, in preference to using a spiral knife, or a knife with a curve on its under side. A straight knife is cheaper

made than a spiral one, and the vegetable is less likely to slide before the knife, and is more readily pierced by the edge of a straight knife than when a spiral one is used.

I do not limit myself to any number of slicing-knives. The number should vary, according to the diameter of the cylinder, more being used as the diameter is increased.

Immediately below, and extending back some distance from the knife, on the cylinder, I form a depression, as shown in fig. 1, and arrange the knife on the cylinder, so the space between the under side of the knife and cylinder is wider at the back side.

By this arrangement, I find, by experience, the slices, as cut from the turnips, &c., will readily pass from the machine, being discharged freely without going into the cylinder, as in other machines, to be discharged at the end.

The slicing-knife should be bevelled on the outside, as, when bevelled wholly on the under side, or curved, it takes a too rank hold of the turnip, and gives the slice such a turn or direction that it is more likely to stick fast or clog between the knife and cylinder.

The knives can be fastened to the cylinder in any convenient manner. When the detachable section is used, I prefer attaching the knife directly to the section which is provided with the depressed surface, the distance between the edge of the knife and section varying, according to the thickness it is desired to cut the slice.

When cross-section knives *a a*, as shown in figs. 5 and 6, are used, to still further divide the slice, I cast, or otherwise fasten them into the section immediately below the main slicing-knife; but this latter should extend some distance beyond the former, to protect them from injury by coming in contact with stones, &c.

I provide the detachable sections with a curve or projection, *h*, at each end, to which the main slicing-knives C C are attached, so that either or both can be removed without disturbing the balance of the cylinder. The sections carrying these knives may also be removed, and other sections, with other knives of any shape, substituted, so as to cut the vegetables in any manner desired, with substantially the same machine.

I may make detachable throat-pieces, separate from the section or cylinder, so that it will only be necessary to remove said throat-pieces when it is desired to change the machine to cut fine or coarse. These detachable throat-pieces are provided with projections on the under side, fitting into corresponding depressions on the section or cylinder, and the throat-piece is held in place by the main knife pressing against the ends of the cross-section knives. The throat-piece may be held in place in any other convenient way.

I may also use detachable sections, having loop-shaped or curved knives, D D, as shown in figs. 3 and 4, which knives I prefer to cast into the sections, so as to allow the cylinder to present a smooth surface, which would not be the case if otherwise fastened. The loop-knives are so arranged that at each revolution they cut over the whole width of the box, so that no part of the vegetables will be left without being caught and cut by the edge of some one of the knives.

The cylinder A is placed in the box F, the shaft B having its bearings of said box, and the sides or sections of the cylinder are provided with a rib or projection at each end, so as to prevent any small vegetables from escaping from the box uncut.

When I use a cylinder made of detachable sections, I prefer making the head-pieces G of the cylinder with openings through the rim, as shown in fig. 1, which enables me to use screws and bolts to fasten the sections. The sections will then come together without filing or drilling, even if they should be of slightly irregular shape, which is often the case, from the moulding or unequal shrinking in casting.

The frame or box F, in which the cylinder works, is provided with a hinged hopper, H, so arranged that the vegetables will mainly rest on the same, and only come in contact with the cylinder for about one-fourth of its circumference.

The vegetables to be cut are placed in the hopper H, the cylinder put in motion, when the slices will pass out, through the spout L, into a suitable vessel placed for their reception, or may fall on the floor.

Having thus fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. In a vegetable-slicer, a cylinder, made whole or in sections, of any suitable form, when provided with a straight knife fastened across the cylinder, with an opening between the knife and cylinder to govern the thickness of the slice, and with a depression or space on the cylinder, below the knife, made wider at its back part, so the slices will pass under the knife, and be discharged without going into the cylinder, substantially as described.

2. In a vegetable-slicer, a cylinder, of any suitable form, made with an outside metal surface, when said cylinder is armed with one or more knives, of any suitable form, and is also made with a space between said knife and metallic surface, made wider at its back part, substantially as described.

3. A cylinder of a vegetable-slicer, composed of detachable sections, and attaching the knives to said sections, in such a manner that the knife, or knives, and sections can be removed without disturbing the other parts of the cylinder, substantially as described.

4. So constructing the detachable sections of the cylinder, that a space will be left between the sections and the knives, which shall be wider at its back than its front, substantially as and for the purpose set forth.

5. Providing the detachable sections of a cylinder in a vegetable-slicer with a bend or projection, at or near its end, to which the knife is attached, and also with a projection, extending around the cylinder, substantially as and for the purpose described.

6. The combination of the cylinder A, constructed substantially as herein set forth, with the hopper H, and arranged in the frame F, in such a manner that the vegetables will only come in contact with about one-fourth of the circumference of the cylinder, substantially as described.

7. In a vegetable-slicer, a detachable throat-piece, P, in combination with a detachable section, D D, so the throat-piece can be removed without removing the section, substantially as described.

8. A vegetable-slicer, constructed with a detachable section, D, to which the knife, or knives, or cutters, of whatever form, are attached, in combination with a slotted head-piece, G, to which the section is fastened, all substantially as and for the purpose set forth.

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

WARREN GALE.

Witnesses:

E. O. BENNETT,
DANL. MILLER.