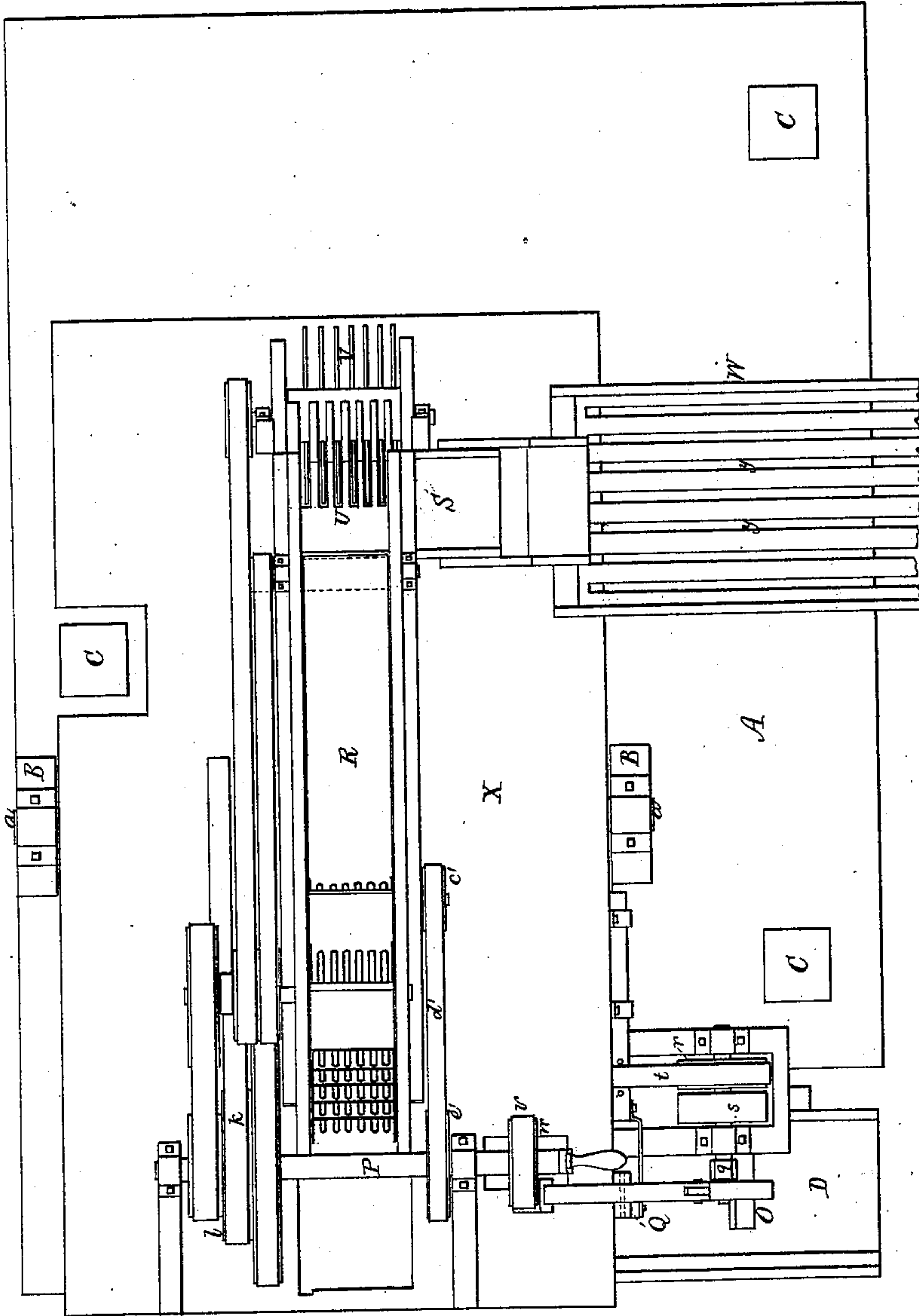


A. K. GILE.  
Cranberry Gatherer.  
No. 202,103. Patented April 9, 1878.

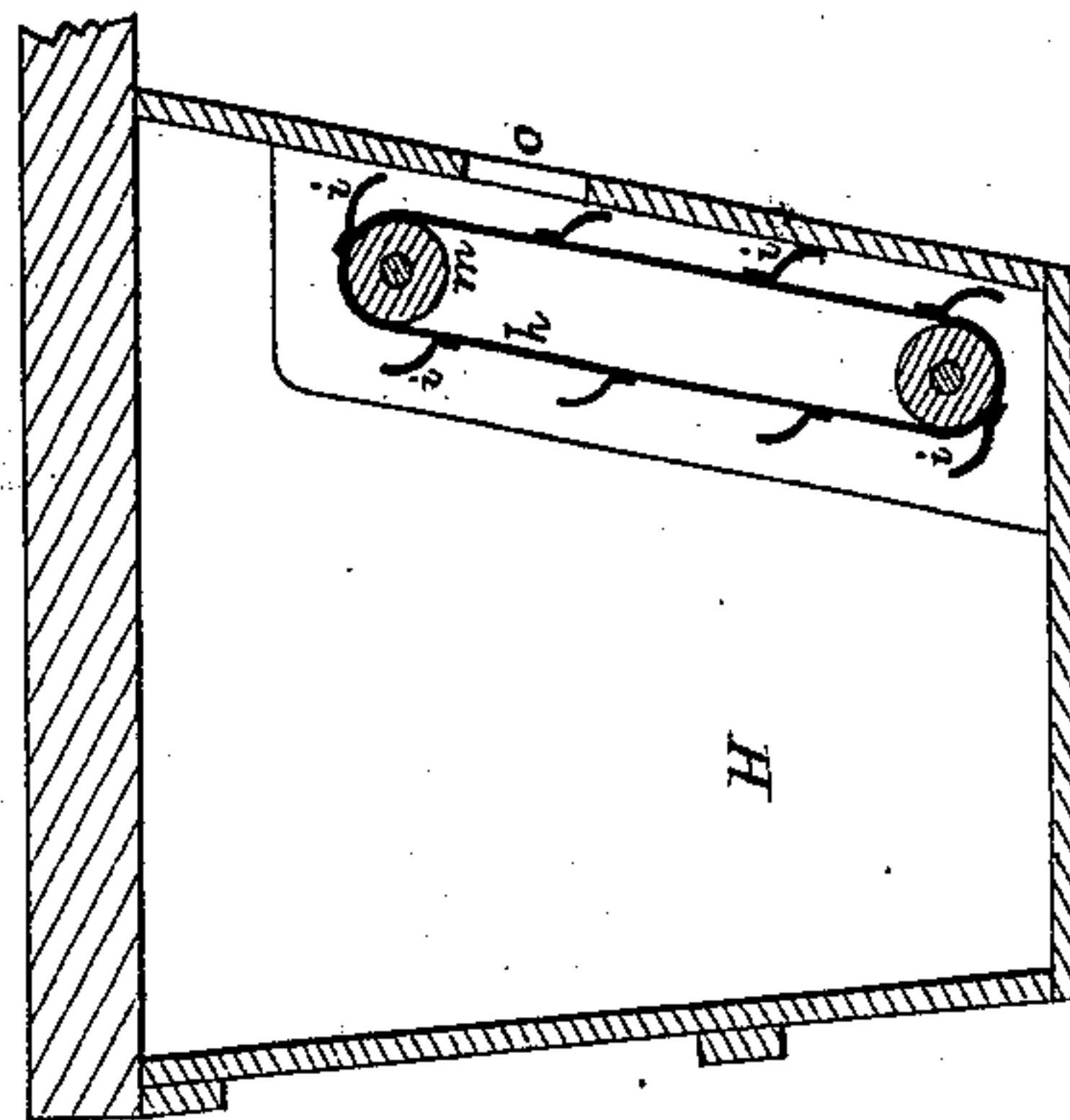
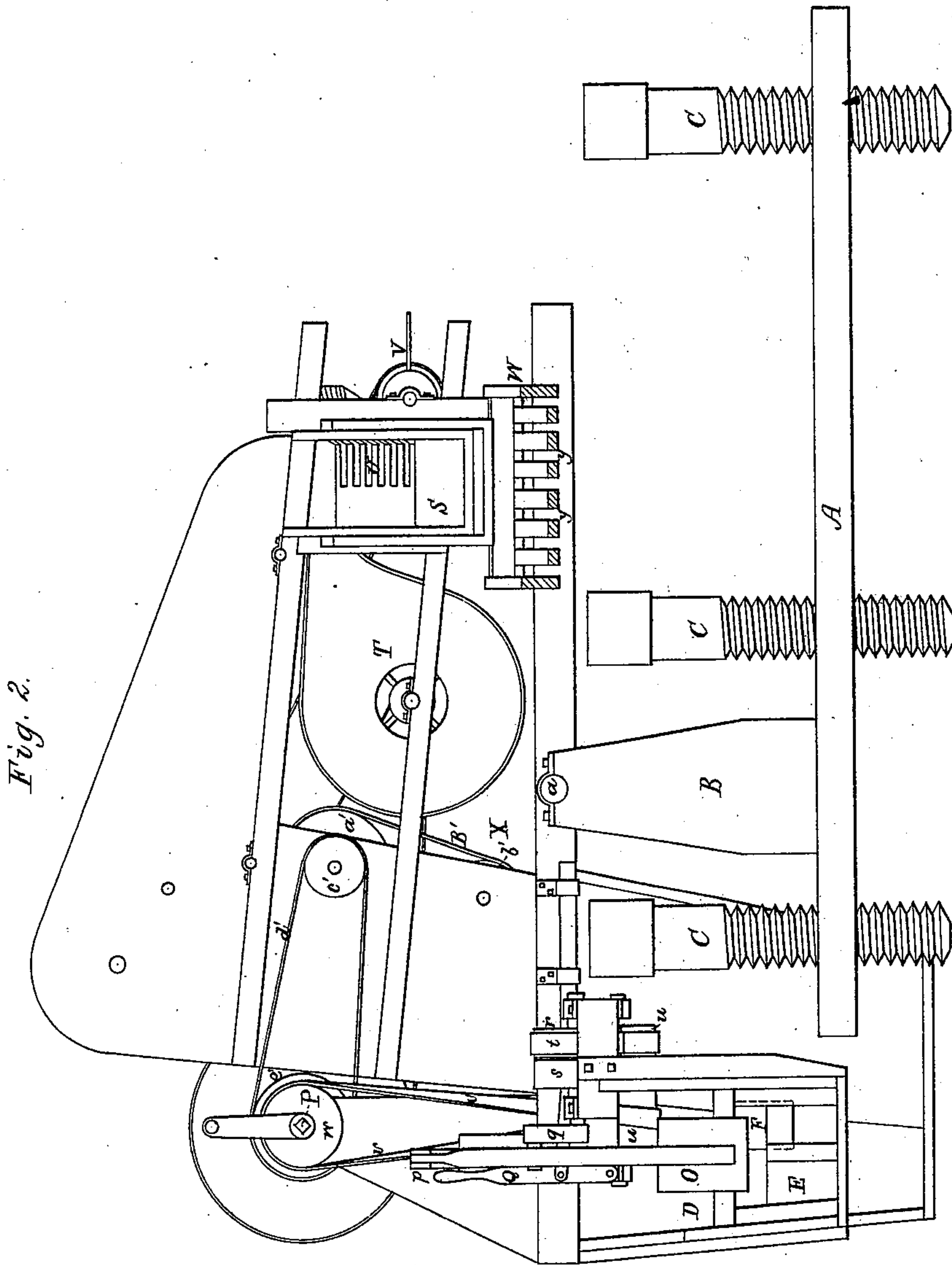
Fig. 1.



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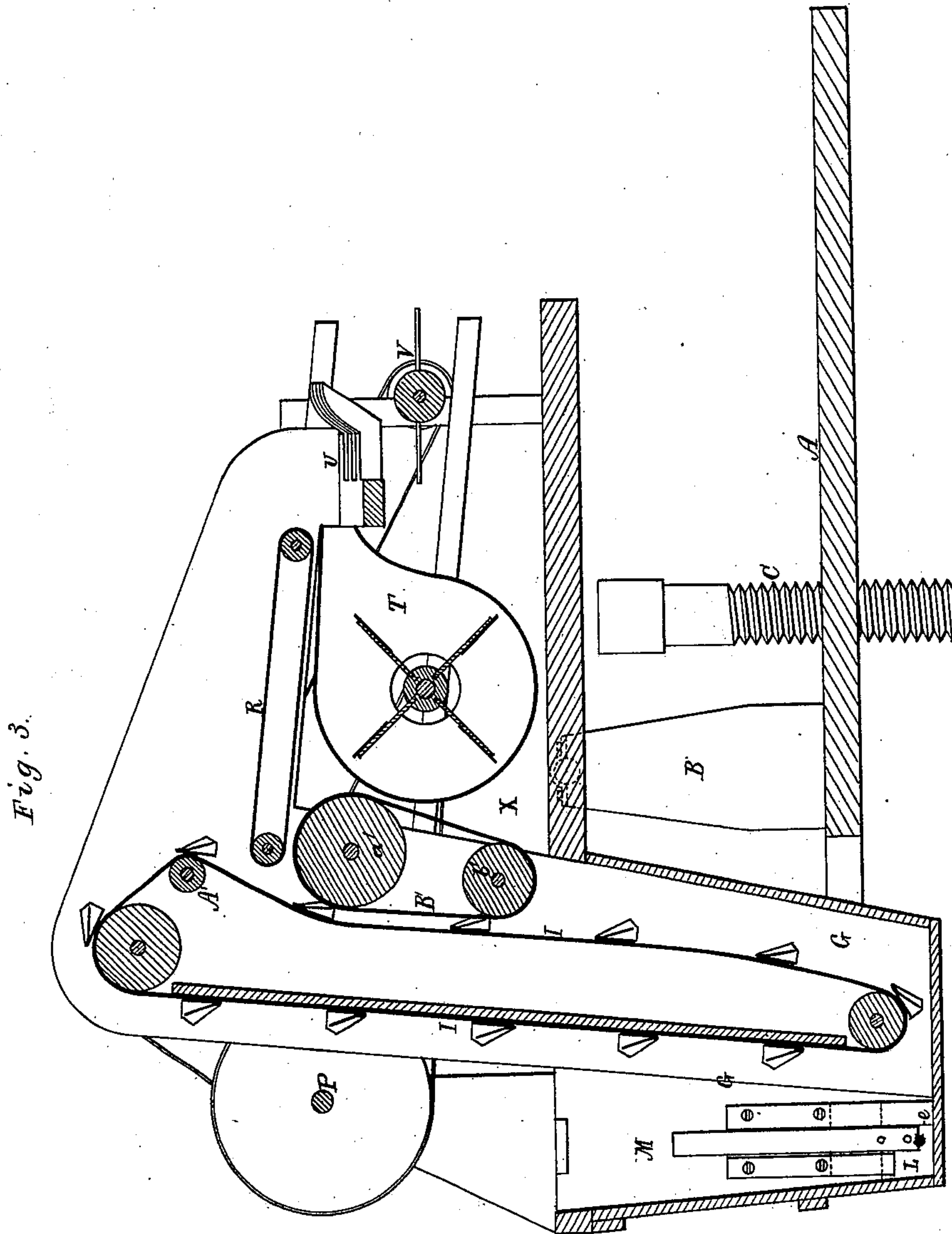
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Fig. 5.

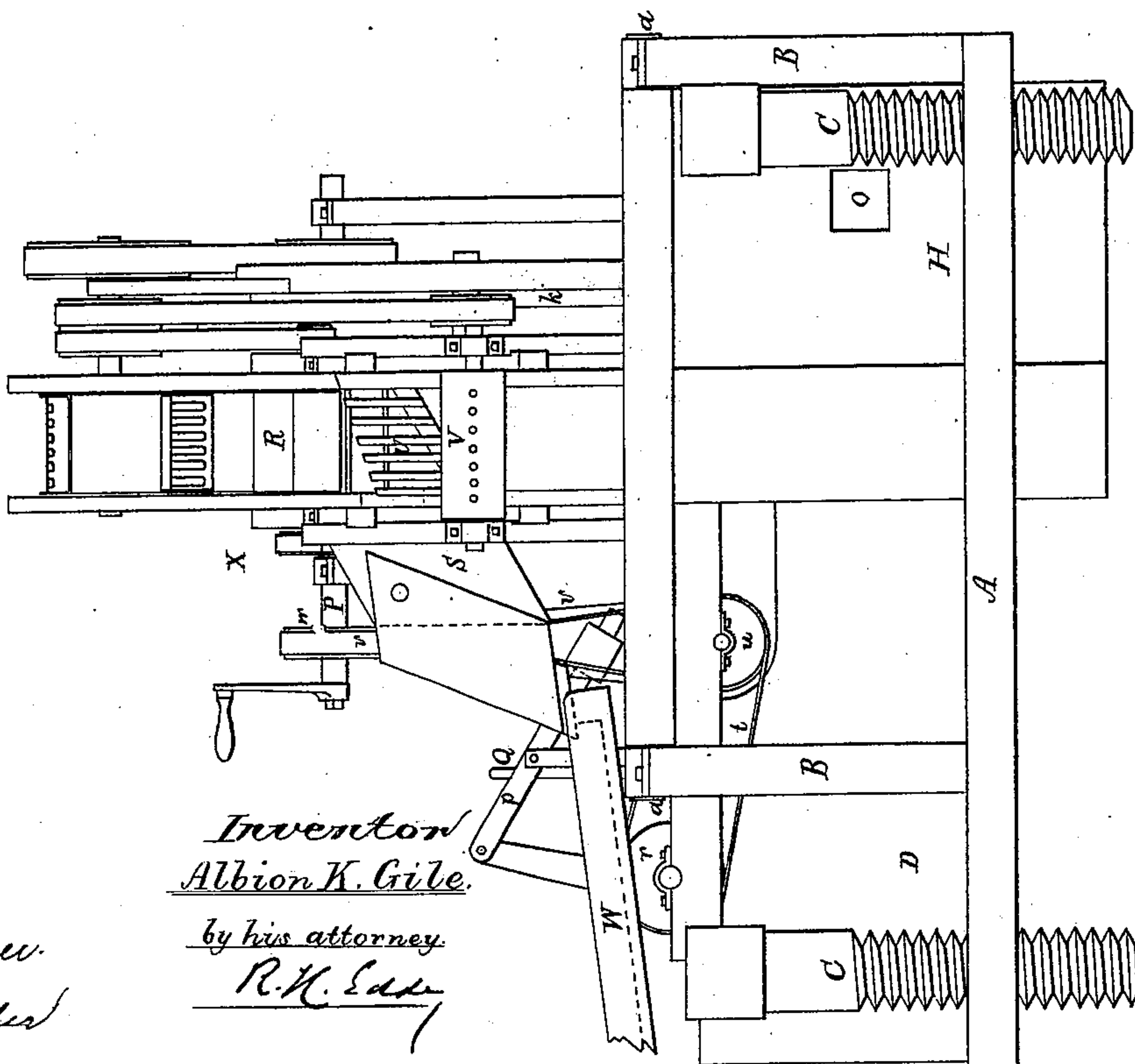


Fig. 7.

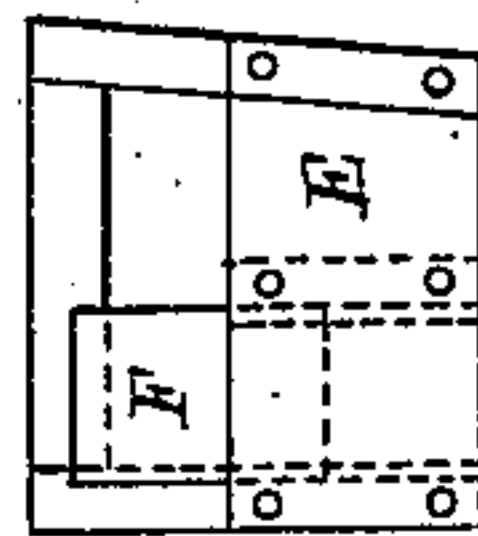


Fig. 10.

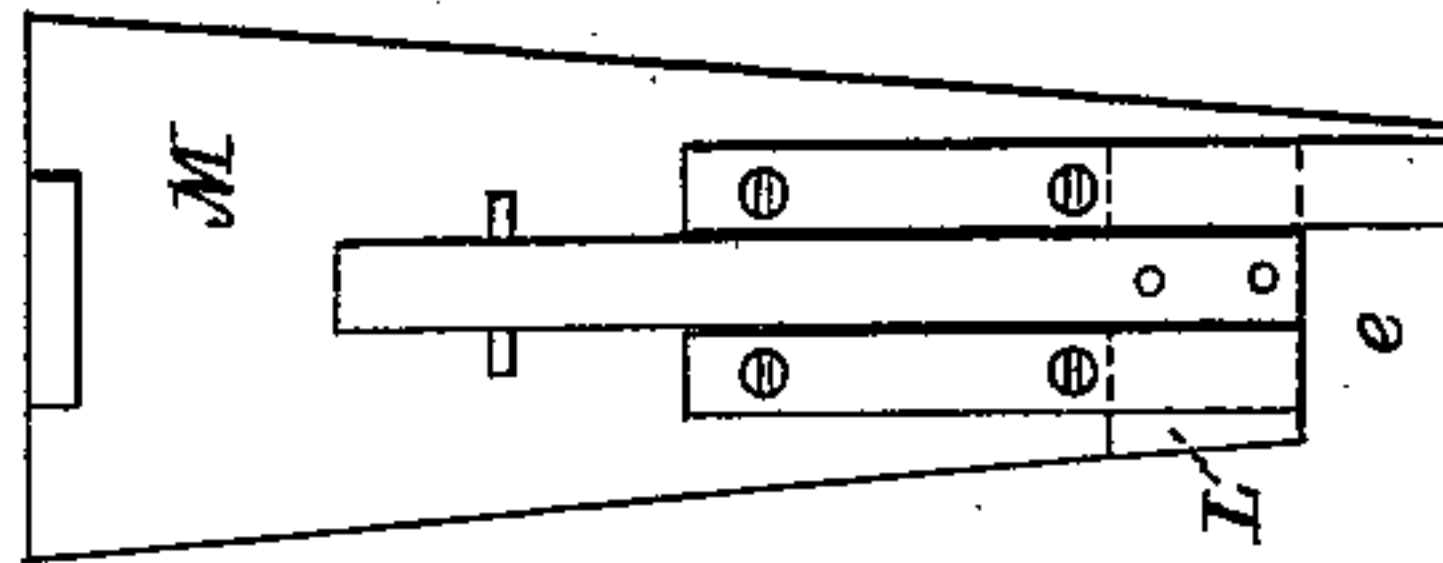


Fig. 9.

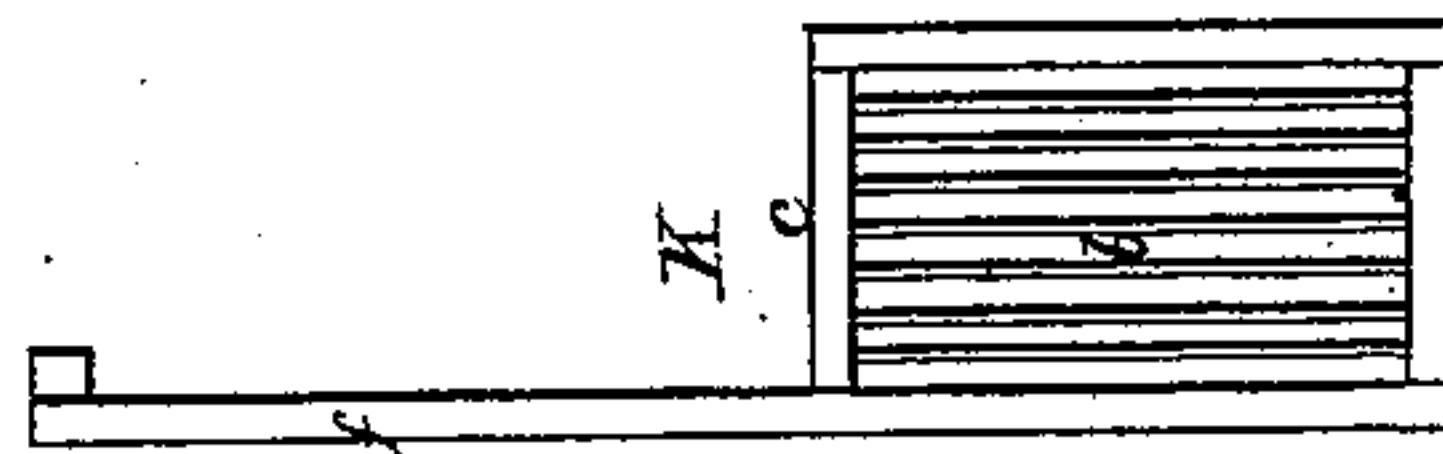
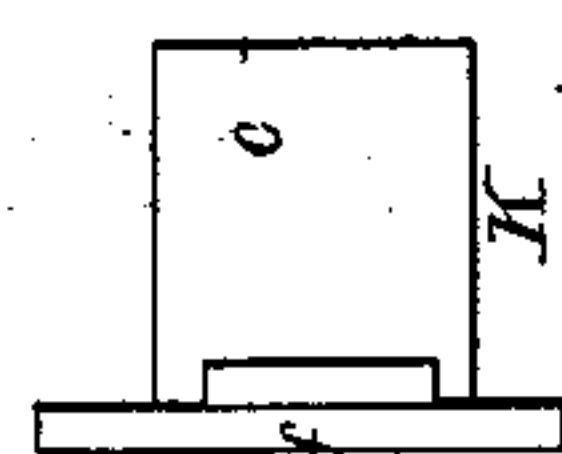


Fig. 8.



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Cranberry Gatherer.  
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Fig. 6.

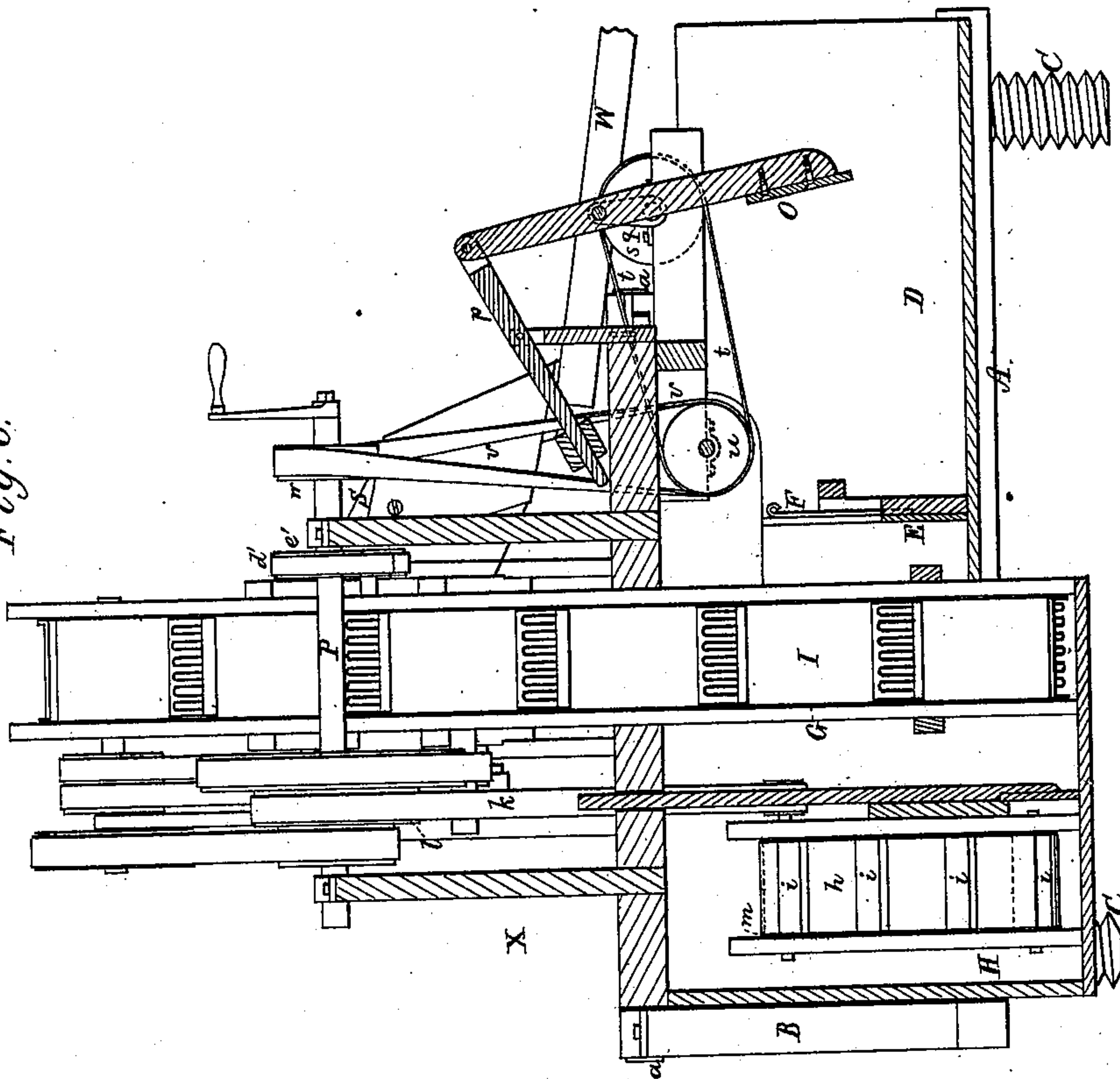
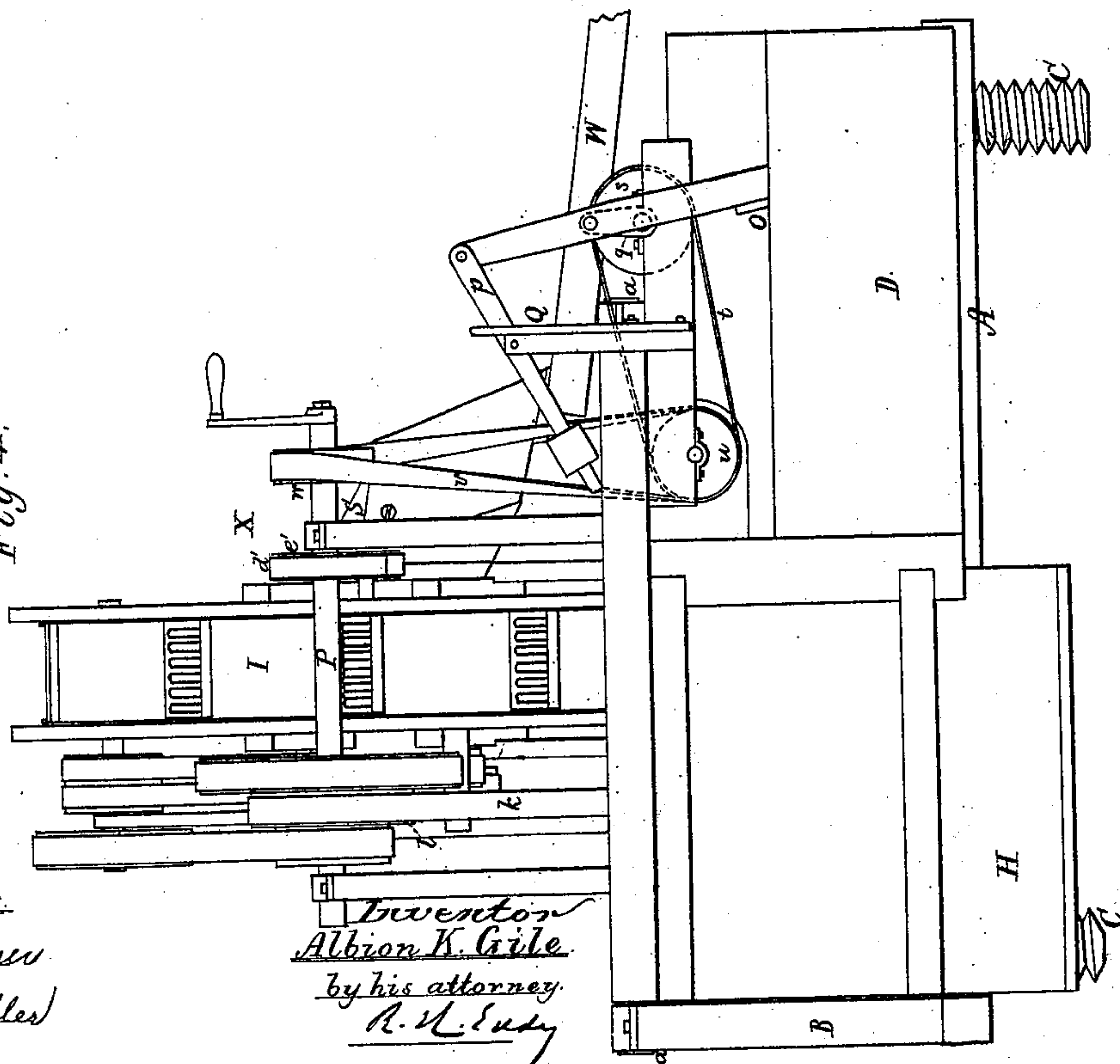


Fig. 4.



Witnesses  
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# UNITED STATES PATENT OFFICE.

ALBION K. GILE, OF ALFRED, MAINE.

## IMPROVEMENT IN CRANBERRY-GATHERERS.

Specification forming part of Letters Patent No. **202,103**, dated April 9, 1878; application filed February 15, 1878.

*To all whom it may concern:*

Be it known that I, ALBION K. GILE, of Alfred, in the county of York and State of Maine, have invented a new and useful or Improved Machine for Gathering, Winnowing, Assorting, and Drying Cranberries; and do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a side elevation, Fig. 3 a longitudinal section, Fig. 4 a front end view, and Fig. 5 a rear end elevation, of such machine. Fig. 6 is a vertical and transverse section taken through the flumes and the paddle or current or cranberry advancer. Figs. 7, 8, 9, 10, and 11 are hereinafter referred to and described.

In carrying out my present invention, I have made sundry useful additions to the cranberry gatherer and winnowers as patented by me on May 2, 1876, by Letters Patent No. 176,950. Such additions are hereinafter duly described, and are especially defined in the claims, as herein made by me.

The machine or cranberry-gatherer shown at X is supported on a raft or floatable platform, A, and is so connected therewith as to be capable of being elevated or depressed thereon, for the purpose of introducing into the water over a cranberry-meadow the flumes of such machine, and subsequently raising them therefrom. For this purpose the machine is arranged between and pivoted to the standards B B erected on the platform, one of the pivots being shown at *a*. Furthermore, the platform is provided with three or any other suitable number of screws, C, which, screwing down through it, serve to hold it in place. Usually planks are laid on the meadow or bog directly underneath the screws, for their lower ends to rest or bear upon. As the water flowed over the bog is generally too shallow for the flumes to be properly depressed, the bog should first be excavated to a suitable depth underneath the flumes to allow of their proper depression.

The induction-flume is shown at D as provided at or near its inner end with a gate, E. This gate, a side view of which is shown in Fig. 7, has an auxiliary gate or slide, F, to play or move vertically relatively to it. Such

auxiliary gate I usually furnish with means of readily raising or depressing it. When it is sufficiently raised above the main gate, such auxiliary gate answers to prevent the current of cranberries entering the backwater-flume from directly passing to the buckets of the elevator.

Between the said induction-flume and what I term the "backwater-flume" H is the elevator-chamber G, for reception of the berries, such chamber having an endless-band elevator, I, arranged within it, as shown. Within this chamber there usually is what I call a "removable table," K, formed as represented in top view in Fig. 8 and in side view in Fig. 9. There is a grating, *b*, in the rear part of the said table. The current of berries flows over the part *c* of the table, thence to the elevator, the water passing off the part *c*, and down through the grating *b* to the backwater-flume.

When the machine is used for separating the good from the bad or decayed berries the table K is not employed; but the auxiliary gate F is used in connection with another gate, L, applied to an opening, *e*, in the lower part of a partition, M, that is used in the place of the partition or part *f* of the table.

Fig. 10 is a side view of the partition M, with its gate L and opening *e*.

The gate F, when raised, prevents the current of cranberries from passing directly to the buckets of the elevator. The good or perfect berry will float, while the bad or imperfect ones, by their greater specific gravity, will sink in the water, and be carried by the current through the opening *e*, the gate of which is used to close such opening more or less, as occasion may require.

There is applied to the backwater-flume a means of extracting water from it, in order to produce such a current through the flumes as may be necessary from time to time. Such means may be an Archimedean screw, or a common pump, or an endless band, *h*, provided with a series of buckets or paddles, *i*, all being as shown in Fig. 11, which is a vertical section through the backwater-flume. An endless belt, *k*, going around a driving-pulley, *l*, and a pulley on the shaft of the upper roller *m* of the band *h*, serves to put the said band in revolution. The water raised by the endless



band or bucket pump is discharged through an educt, *o*.

For promoting the delivery of the cranberries into the machine, I use a paddle, *O*, whose shank at its upper end is pivoted to a lever, *p*. The shank is also pivoted to a crank, *q*, projecting from the end of the arbor of a fast pulley, *r*, and a loose pulley, *s*, arranged as shown. An endless band, *t*, goes around one of such pulleys and a driving-drum, *u*, from which an endless band, *v*, extends to a pulley, *w*, on the driving-shaft *P* of the machine.

To the band *t* a lever, *Q*, is suitably applied for shifting the band from the fast to the loose pulley, or the reverse, as circumstances may require. The paddle is to extend into the water. On such paddle being moved forward it will impel the cranberries along in the water, and aid in driving them into the chamber *G*. By means of the lever *p* the paddle may be raised out of the water.

In connection with the elevator, the machine has an endless carrying-apron, *R*, an inclined chute, *S*, a fan-blower, *T*, a grill or grid, *U*, and a rotary toothed separator, *V*, the latter being to operate with such grid. These parts, arranged as represented, are common to the aforesaid cranberry-gatherer patented by me on May 2, 1876, patent numbered 176,950, and consequently need no further description.

To the discharging-chute of the machine I apply an inclined auxiliary or drying chute, *W*, whose bottom has narrow openings or long slots *y* made in it for air to pass freely through it. In practice the drying-chute has to be about sixty feet in length. The cranberries are discharged into it, and while they pass through it they become desiccated, they being exposed on all sides to the air which may be in circulation through the chute. This chute is to be inclined sufficiently to cause the cranberries to roll down it; but the slits should be of a width sufficient to prevent the berries from falling through them.

In the above cranberry-gatherer the berries floated into it are taken up by the endless elevator and discharged upon the carrying-belt, passing down and from which, they are winnowed of foreign matters and discharged into the drying-chute through which they pass, and are dried in the passage.

Instead of pivoting the machine to the platform, as and for the purpose described, such machine may be otherwise applied thereto, so as to be capable of being moved more or less into and out of the water, as may be desirable.

In order that the berries, on being discharged from the elevator *I*, may not fall between it and the carrying-apron *R*, I carry the elevator around a third roll, *A'*, and against an endless belt, *B'*, arranged with the apron *R* and the upper supporting-roller of the elevator, in manner as shown. The said apron

*R* extends somewhat underneath the roller *A'* and over the endless belt *B'*, which keeps the buckets of the belt while descending from impinging against the carrying-apron.

The belt *B'* is sustained by two rollers, *a' b'*, on the shaft of one of which is a pulley, *c'*, to receive rotary motion from an endless belt, *d'*, suitably applied to it, and to a pulley, *e'*, on the driving-shaft. The belt *B'* is to move with the same or about the same velocity as the elevator.

In the place of the endless belt, its upper roller only may be used; but with it the movement of the elevator will not be steady, as the buckets, in passing the roller, cause the belt to vibrate more or less. By means of the additional roller *A'* and the endless belt *B'* the berries will be properly received upon the carrying-apron *R*.

Having thus described the machine, what I claim therein is as follows:

1. The combination of the platform or float *A* with a cranberry-gatherer, *X*, applied thereto, so as to be adjustable therewith, substantially as set forth.

2. In combination with the cranberry-gatherer *X* and the platform or float *A*, connected as explained, the series of screws *C*, arranged with or applied to the platform or float, substantially as and for the purpose described.

3. In combination with the receiving-chamber of a cranberry-gatherer, *X*, the paddle *O*, provided with mechanism for moving it in the water, so as to impel the berries forward therein and into the receiving-chamber of the machine, as set forth.

4. In the cranberry-gatherer, the main and auxiliary gates *E F L*, combined with and applied to the receiving-chamber *G* of the elevator, as and for the purpose substantially as described.

5. In the cranberry-gatherer, the combination of a pump or endless band, *h*, and its series of buckets, applied to the backwater-flume and receiving-chamber, and provided with suitable operative mechanism, such pump being to cause or increase the flow of water through the flumes and receiving-chamber, as set forth.

6. The combination of the perforated or slotted desiccating-chute *W* with the machinery for winnowing the berries, as set forth.

7. In combination with the bucketed elevator *I* and the endless raising-apron *R*, the auxiliary roller *A'* and the endless belt *B'*, arranged with such elevator and carrying-apron, substantially as specified.

ALBION K. GILE.

Witnesses:

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