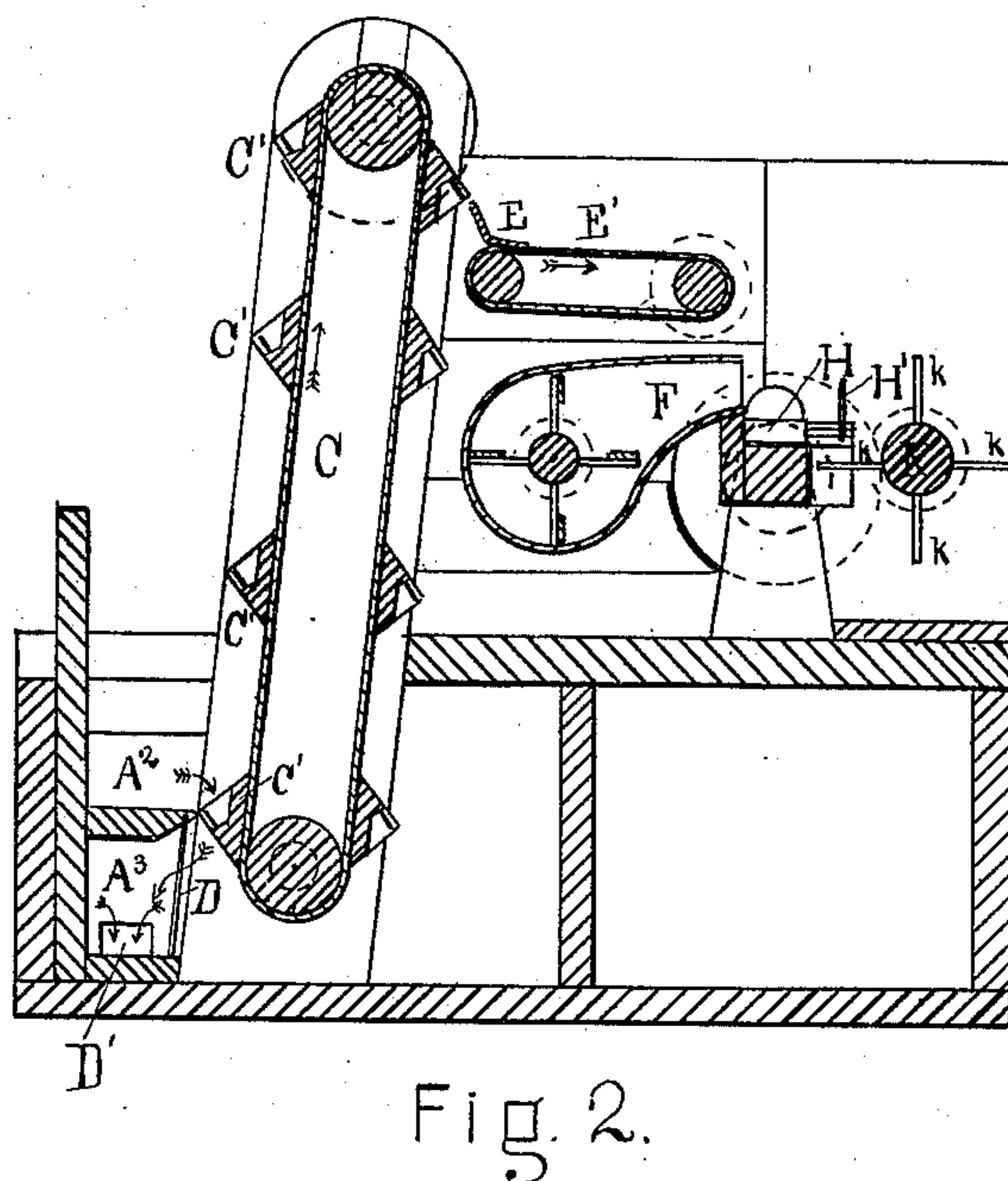
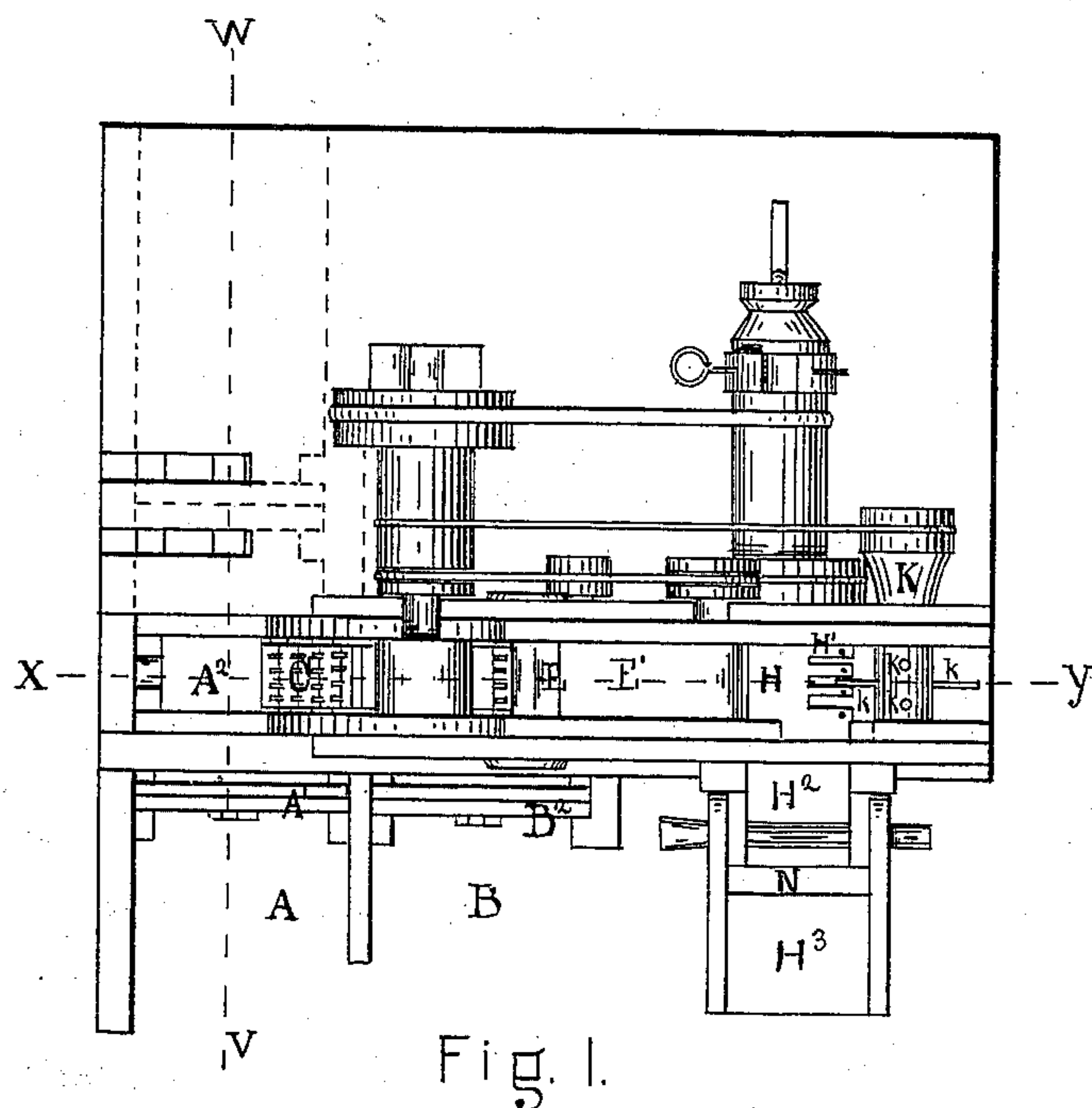


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MACHINES FOR GATHERING AND ASSORTING CRANBERRIES.  
No. 176,950.

Patented May 2, 1876.



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A. Lynn Berry

INVENTOR

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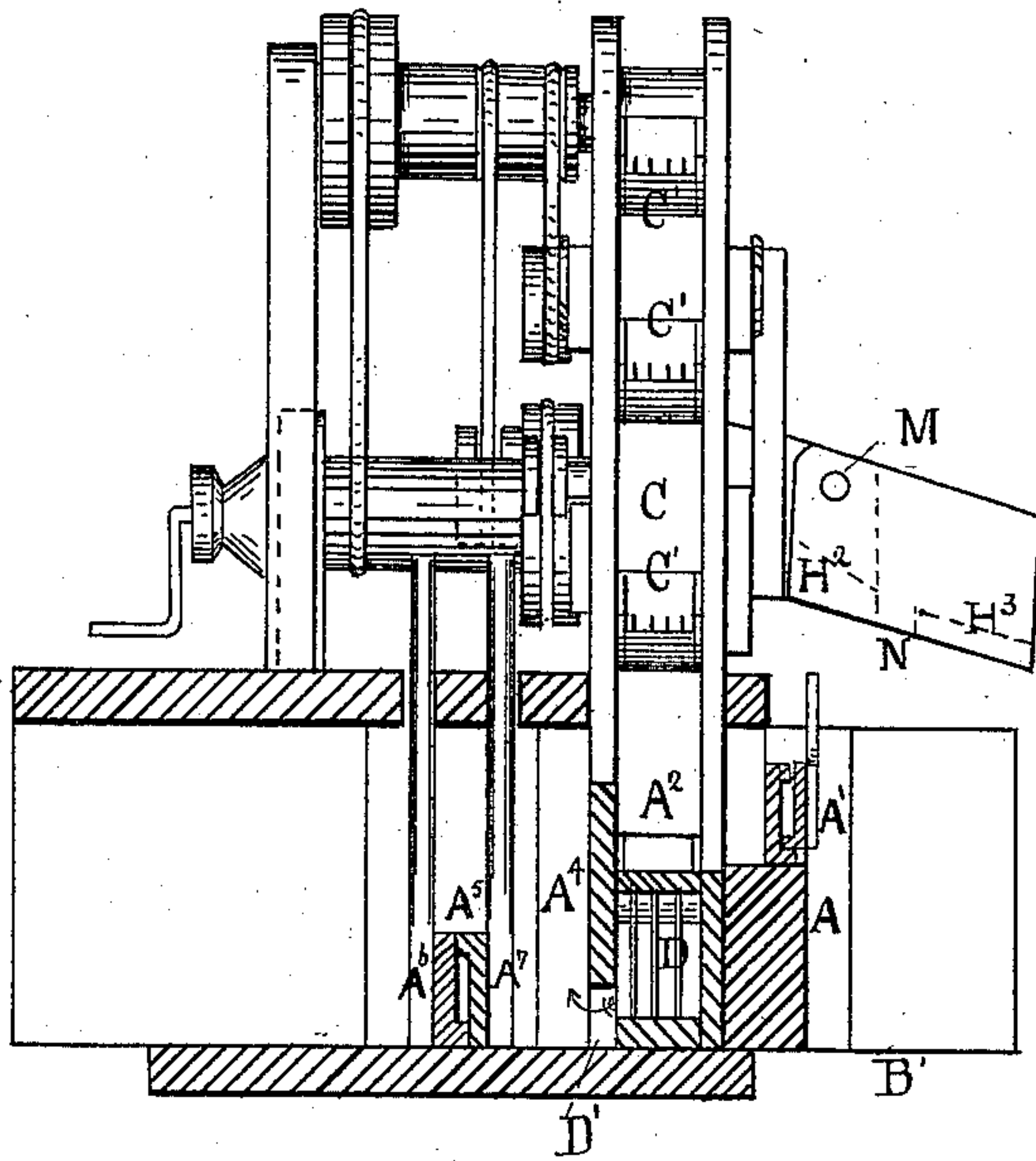


Fig. 3.

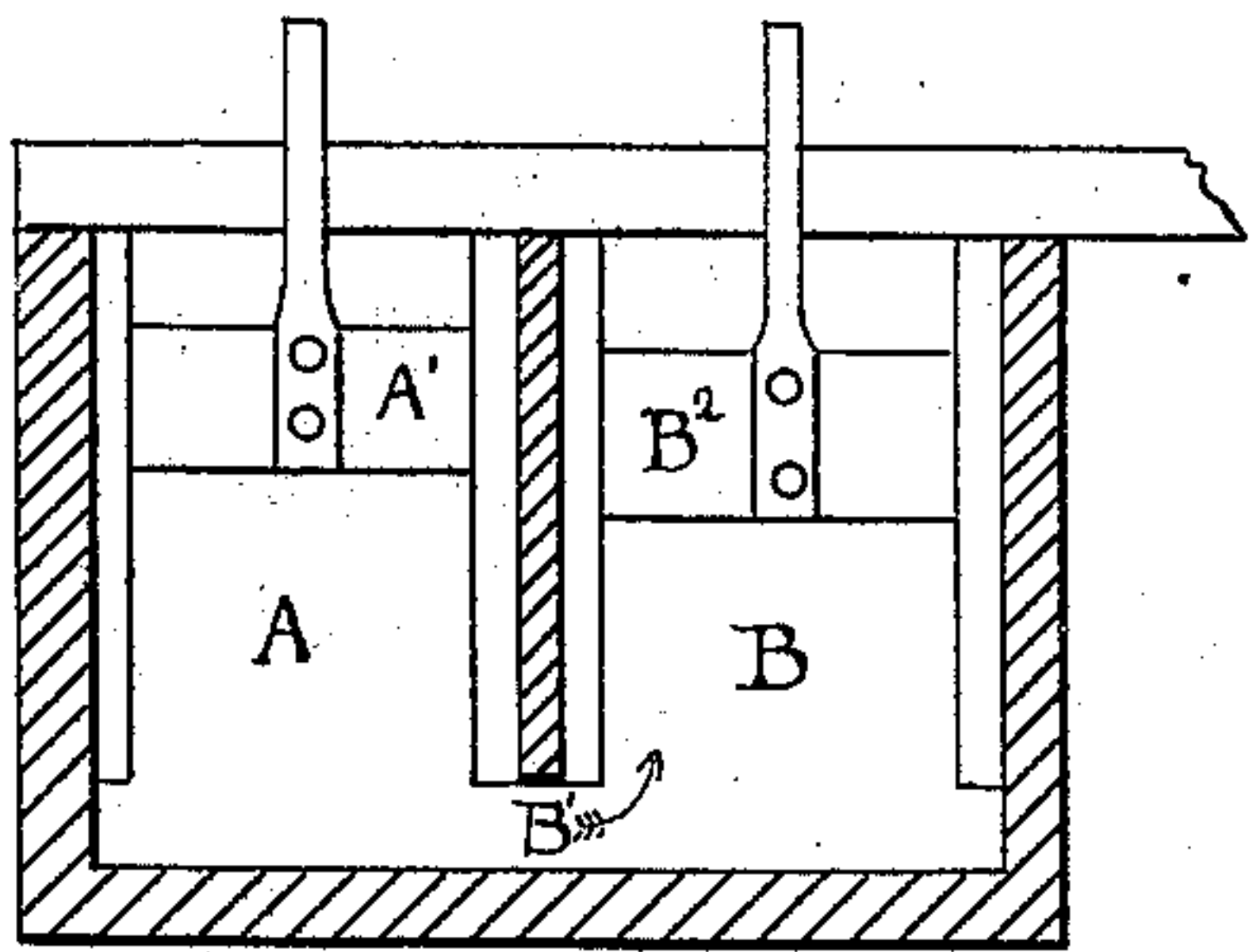


Fig. 4

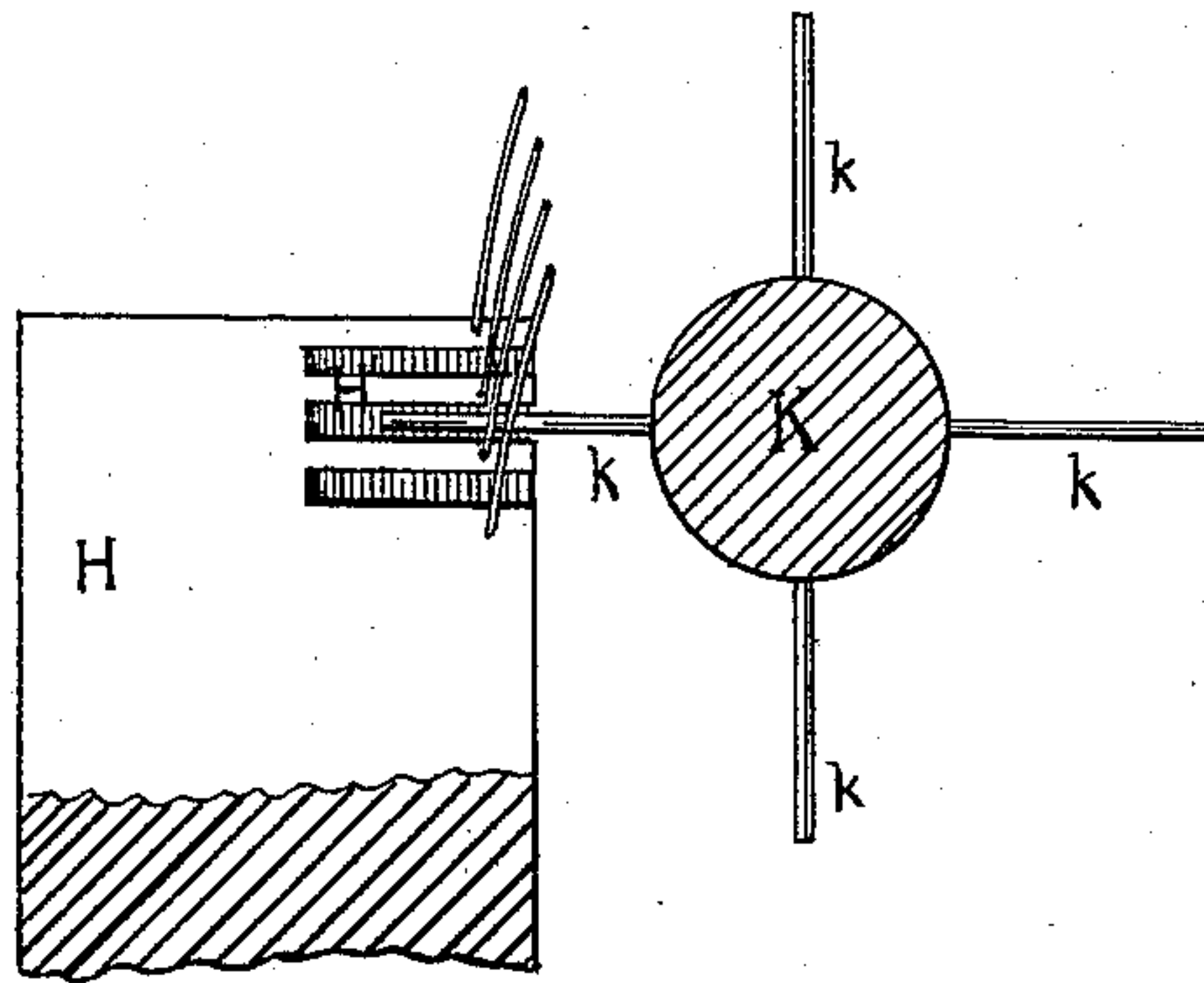


Fig. 5

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# UNITED STATES PATENT OFFICE.

ALBION K. GILE, OF ALFRED, MAINE.

## IMPROVEMENT IN MACHINES FOR GATHERING AND ASSORTING CRANBERRIES.

Specification forming part of Letters Patent No. **176,950**, dated May 2, 1876; application filed January 17, 1876.

*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 an Improvement in a Machine for Assorting and Gathering Cranberries, of which the following is a specification:

The nature of my invention relates to a method of gathering cranberries which are floating upon moving water; it also relates to drying, winnowing, and sorting the same; and consists in, first, the arrangement of flumes and waterways for the purpose of floating the berries within the place of action of the gatherer; second, the construction and arrangement of the gatherer, which is in the form of a bucketed belt-elevator; third, the combination, with the said elevator, of an endless apron-carrier and a fan-blower; fourth, the arrangement of the grill and revolving-fingers for removing any large pieces of roots, grass, floating wood, &c., that may have been brought up by the elevator; fifth, the sorting-chute, which is provided with one or more openings through which the poor berries will fall, while the good ones will pass on to a receptacle placed for them.

Figure 1 is a plan of my invention. Fig. 2 is a vertical section taken on the line *xy* of Fig. 1. Fig. 3 is a vertical section through the flume on the line *vw* of Fig. 1, showing other parts in elevation. Fig. 4 is an elevation showing the flume and wasteway. Fig. 5 is an enlarged view of the device for separating the drift from the berries.

The cranberries to be gathered are supposed to be floating upon a stream of water that is flowing into the flume A, Figs. 1, 3, and 4. The flowing water taking the cranberries on its surface is directed into the pen-stock A<sup>2</sup>, Figs. 1, 2, and 3, immediately in front of the elevator C, Figs. 1, 2, and 3, thence it flows through the lower bucket C', Fig. 2, of the elevator, leaving the cranberries in the bucket, as that is so made that though water may pass freely through it the berries will be retained by the grill-work of the buckets. After the water has passed through the bucket it flows down through the grill D, Figs. 2 and 3, into the space A<sup>3</sup>, as shown by the arrow, Fig. 2; from A<sup>3</sup> the water passes through the opening D<sup>1</sup>, Figs. 2 and 3, into the back-water

flume A<sup>4</sup>. The object of backing up the water in A<sup>4</sup> is to prevent too great a velocity in the current of water as it passes from A<sup>2</sup> into A<sup>3</sup>, as a rapid current would be liable to carry down with it more or less of the berries, which, collecting on the grill D, would interfere with the action of the machine. The height of water in the flume A<sup>4</sup> may be regulated by gates A<sup>5</sup>, Fig. 3, which are in pairs, one slipping past the other, so that both may be down, as shown, or one may remain down while the other is raised, thus requiring the water to rise high enough to pass over the combined height of the two gates A<sup>6</sup> A<sup>7</sup>, Fig. 3, or the gates may be so arranged that some of the water may pass under and some over the gates, &c. The inlet-gates, Figs. 1, 3, and 4, are also arranged in pairs, and may be regulated at will, as above described, to regulate the flow of water into the flume A<sup>2</sup>. In case too much water is flowing into the flume A, threatening an overflow, then the gates B<sup>2</sup>, Figs. 1 and 4, may be opened, thus allowing the surplus water to pass from A to B through the opening B<sup>1</sup>, Fig. 4, and out through the gates B<sup>2</sup>. C, Figs. 1, 2, and 3, represents an endless-belt elevator, which carries the buckets *c' c' c'*; the point of each of these buckets *c' c' c'* is made of grill-work, so that water may pass freely through them while the berries are retained by the grill. As the elevator moves in the direction of the arrow, Fig. 2, the cranberries are taken from the water at A<sup>2</sup>, carried up and dropped onto the chute E, Fig. 2, from the chute E they will roll onto the moving apron F', which drops them across the mouth of the fan-blower F, Fig. 2, onto the chute H, Figs. 1, 2, and 5. As the berries pass the mouth of the blower F the current of air dries and winnows them; while the berries are dropped onto the chute H the drift, dirt, &c., is sent over to the grill H<sup>1</sup>. This grill H<sup>1</sup> has in connection with it a series of revolving arms, *k k k k*, affixed to the spindle K, the function of the arms *k k k k* being to lift and take away any large drift matter that may have been brought over with the cranberries, the arms being so far apart that they will not lift a cranberry, but will take up any large particle, such as grass, pieces of roots, &c. The berries next pass down the chute



H H<sup>2</sup> H<sup>3</sup>, Figs. 1 and 3. This chute H H<sup>2</sup> H<sup>3</sup> is made with an opening, N, Figs. 1 and 3, the object of the opening N being to separate the good from the bad berries, the principle of acting being this, a perfect berry being round, smooth, and hard, will easily jump the opening N, while an imperfect berry being soft or light, or both, and imperfect in other respects, will move so slowly that it will almost invariably drop through the opening. In some cases I have a number of these opening N in the chute H H<sup>2</sup> H<sup>3</sup>. The size of the opening N may be regulated by tilting the chute H<sup>3</sup> on the pivot *h*; by raising the part H<sup>3</sup> the opening is enlarged, while by lowering it the opening is made smaller. The inclination of the chute is also regulated in this manner.

Having now described the construction and

operation of my invention, what I claim is as follows:

1. The combination of the belt-elevator O with the water-flumes and ways A A<sup>2</sup> A<sup>3</sup>, arranged to gather and elevate the berries from the water, substantially as described and for the purpose set forth.

2. In a cranberry separator, the combination of the grill H<sup>1</sup> and chute H with the revolving arms *k k k*, operating substantially as described and for the purpose set forth.

3. In a cranberry-gatherer, the combination of the sections H<sup>2</sup> and H<sup>3</sup>, pivoted together, and arranged to separate the berries, substantially as described.

ALBION K. GILE.

Witnesses:

P. EVANS, Jr.,

WILLIAM EDSON.