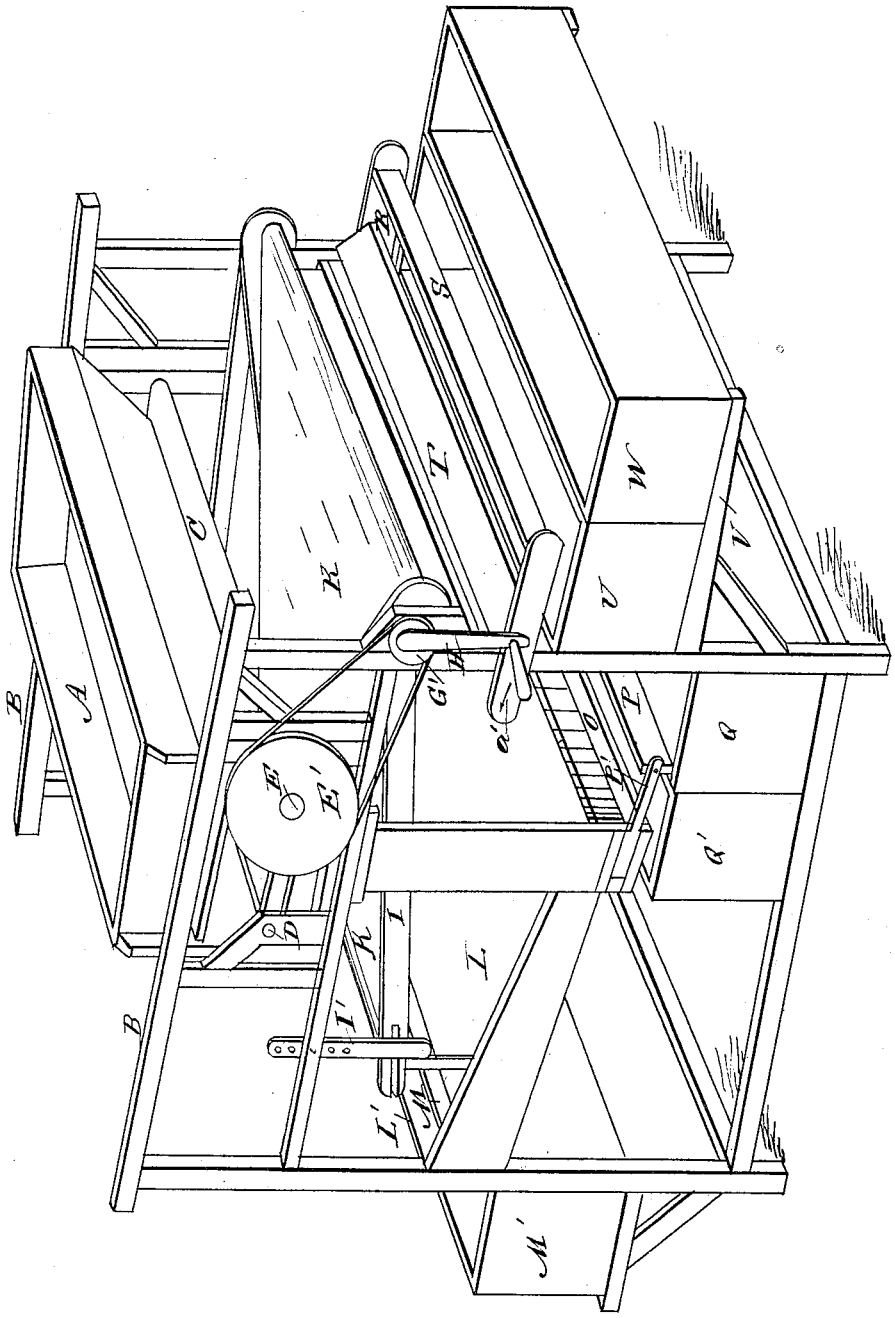
(No Model.) 2 Sheets—Sheet 1.

L. LELAND.

MACHINE FOR ASSORTING CRANBERRIES.

No. 263,542. Patented Aug. 29, 1882.

Fig. 1.



WITNESSES:

C. Neveux

L. Sedgwick

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(No Model.) 2 Sheets—Sheet 2.

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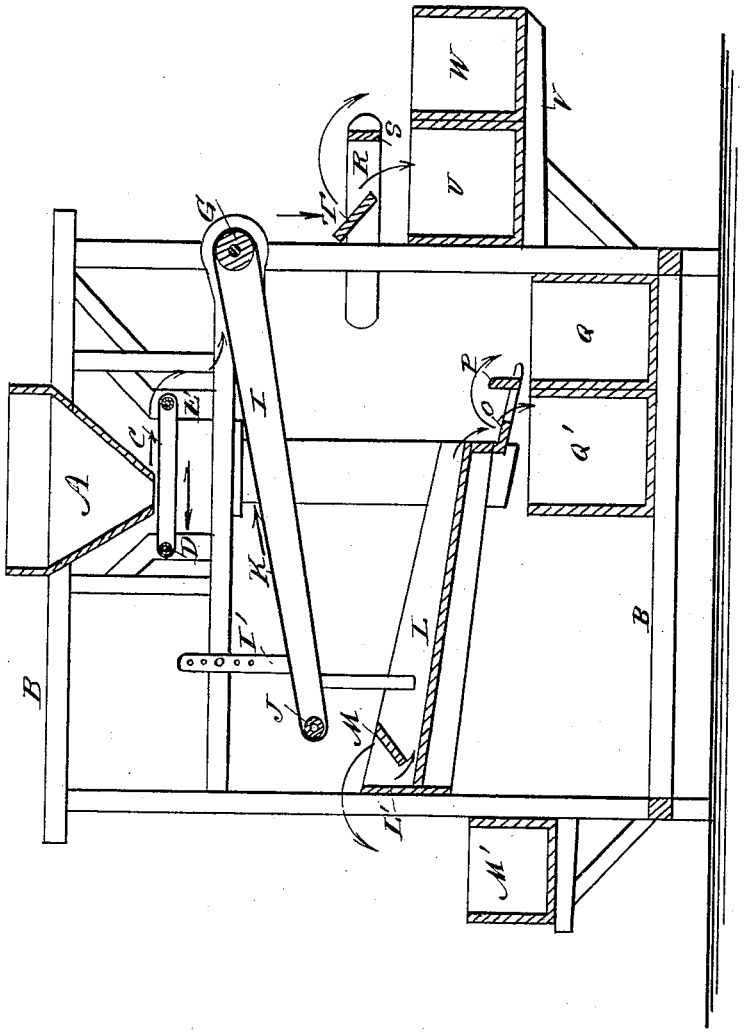
Fig. 2.



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UNITED STATES PATENT OFFICE.

LAURIN LELAND, OF HOLLISTON, MASSACHUSETTS.

MACHINE FOR ASSORTING CRANBERRIES.

SPECIFICATION forming part of Letters Patent No. 263,542, dated August 29, 1882.

Application filed May 20, 1882. (No model.)

To all whom it may concern:

Be it known that I, LAURIN LELAND, of Holliston, in the county of Middlesex and State of Massachusetts, have invented a new and Improved Machine for Assorting Cranberries, of which the following is a full, clear, and exact description.

The object of my invention is to facilitate the assorting of cranberries into different grades.

The invention consists in a machine provided with an endless carrier-belt under the hopper, and with an inclined carrier-belt which carries the flat and imperfect berries upward, the sound berries rolling down this inclined belt upon an inclined platform, at the lower end of which a step or jumping-board is provided, upon which the berries drop. The soft berries drop into a receptacle below the jumping-board, and the hard berries jump over a vertical strip into another receptacle. The flat, imperfect berries that drop from the upper end of the inclined carrier-belt also drop upon a jumping-board for separating them. I have also provided a jumping-board at the upper end of the inclined platform under the inclined belt.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a perspective view of my improved machine for assorting cranberries. Fig. 2 is a longitudinal sectional elevation of the same.

A hopper, A, for receiving the cranberries to be assorted is fastened on a suitable frame, B, and about three-quarters of an inch below the lower edge of this hopper I have arranged a horizontal endless belt, C, which is of the width of the lower opening of the hopper and passes under the hopper. This belt C is mounted on a shaft, D, and on a shaft, E, provided at the end with a large grooved driving-pulley, E′, around which a cord passes, which also passes around a smaller grooved pulley, G′, on the end of a shaft, G, provided with a crank-handle, H, which shaft G is journaled in the upper or front ends of the side strips, I, which strips have a shaft, J, journaled in their lower ends. An endless belt, K, passes around the shafts or rollers G and J, and this carrier-belt K moves much more rapidly than the carrier-belt C. The lower ends of the strips I are suspended by adjustable hangers I′, by means of which the inclination of the carrier-belt K can be adjusted. A platform, L, inclined from the rear to the front of the machine, is held in the frame B, the upper end of this platform being below the lower end of the inclined carrier-belt K. A transverse strip, M, inclined from the front to the rear of the machine, is arranged a short distance above the upper end of the platform L and below the lower end of the belt K. The platform L is provided with a low transverse or end piece, L′, outside of which a box, M′, rests on brackets projecting from the frame B. A step, O, is formed at the lower end of the platform L, and an inclined or vertical transverse strip, P, is held by arms P′ some distance from the lower end of the platform L. Two boxes, Q and Q′, are placed in the frame B below the lower end of the inclined platform L, as shown. Below the upper end of the belt K two bracket-arms, R, project from the frame B, and these arms R are united at the ends by a vertical strip, S, and between the ends and the frame by an inclined board, T, inclined transversely in the direction from the front to the rear of the machine. Two boxes, U and W, are placed on brackets V below the bracket-arms R.

The operation is as follows: The cranberries are placed in the hopper A, and the crank-handle H is turned in the direction of the arrow *a′*, whereby the belts C and K will be moved in the direction of their arrows. The belt C withdraws a continuous layer of cranberries from the bottom of the hopper, and these cranberries drop from the belt C upon the inclined belt K. The perfect, hard, and round berries immediately roll down the belt K, although the same moves upward. The flat, light, and imperfect berries will be moved upward with the belt K, and will drop from over the upper shaft, G, upon the inclined board T. The good and hard berries that drop upon the board rebound and jump over the strip S into the box W, and the soft berries slide over the board T into the box U. The berries that roll down the belt K drop upon the strip M, and the hardest berries jump over the end strip, L′, into the box M′, and the remaining berries roll down the inclined plat-

form L and drop upon the step O. The hard berries jump over the strip P and into the box Q, and the soft berries drop into the box Q'. The berries are thus separated into five different grades, according to the shape and hardness of the berries. As hard berries rebound or jump, they can easily be separated from the other berries by causing all to drop upon a rebounding-board. The imperfectly-shaped berries are separated from the rest by means of the inclined apron, down which the round berries only will slide. By far the greater part of the perfect clean berries drop into the box M', which is designed to be larger than the rest.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a machine for assorting cranberries, the combination, with a hopper and a series of jumping-boards for the berries, of an endless carrier-belt passing below the hopper, substantially as herein shown and described, and for the purpose set forth.

2. In a machine for assorting cranberries, the combination, with a hopper and a series of jumping-boards, of a horizontal carrier-belt and an inclined carrier-belt, substantially as herein shown and described, and for the purpose set forth.

3. In a machine for assorting cranberries, the combination, with the hopper A and steps or jumping-boards M O T, of the horizontal carrier-belt C, the inclined carrier-belt K, and the inclined platform L, substantially as herein shown and described, and for the purpose set forth.

4. In a machine for assorting cranberries, the combination, with the hopper A, of the horizontal carrier-belt C, the vertical adjustable inclined belt K, and the inclined platform L, substantially as herein shown and described, and for the purpose set forth.

5. In a machine for assorting cranberries, the combination, with the hopper A, of the carrier-belts C and K, the inclined platform L, the inclined transverse strip M, and the step O at the lower end of the platform L, substantially as herein shown and described, and for the purpose set forth.

6. In a machine for assorting cranberries, the combination, with the hopper A, of the carrier-belts C and K, the bracket-arms R, the inclined strip T, and the vertical end strip, S, substantially as herein shown and described, and for the purpose set forth.

LAURIN LELAND.

Witnesses:
CHARLES E. SPRING,
W. F. GREENE.