

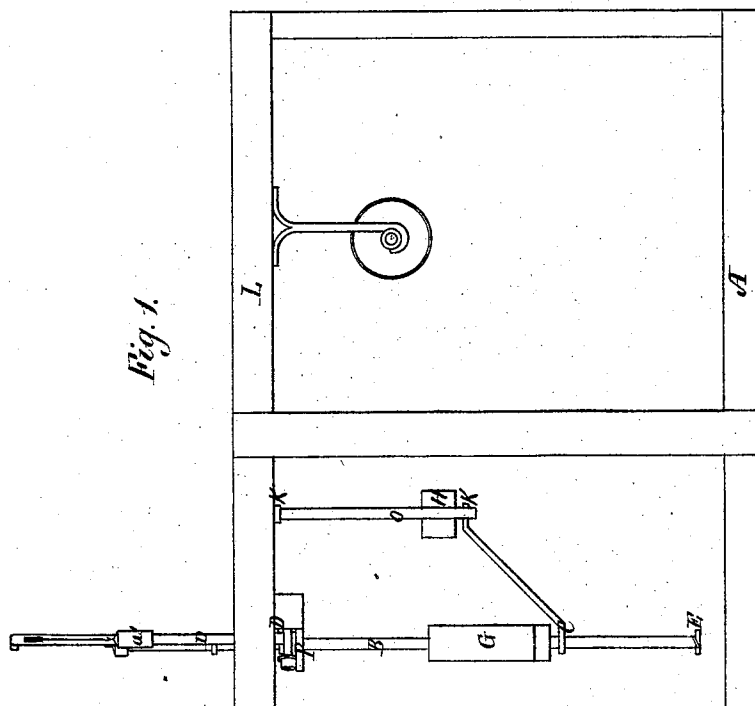
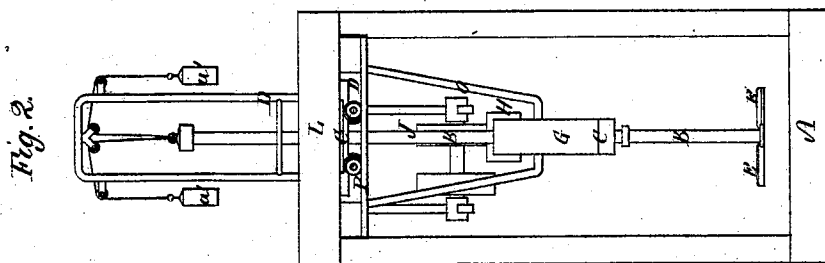
(155.)

CORNELIUS E. HAYNES.

Improvement in Machine for Packing Sugar.

No. 121,518.

Patented Dec. 5, 1871.



Witnesses.

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UNITED STATES PATENT OFFICE

CORNELIUS E. HAYNES, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR PACKING SUGAR.

Specification forming part of Letters Patent No. 121,518, dated December 5, 1871.

To all whom it may concern:

Be it known that I, CORNELIUS E. HAYNES, of Boston, in the county of Suffolk and State of Massachusetts, have made an invention of a new and useful Machine for Packing Sugar, &c.; and do hereby declare the following to be a full, clear, and exact description thereof, due reference being had to the drawing making part of this specification and accompanying the same, in which—

Figure 1 is a side elevation; Fig. 2, a front elevation.

The purpose of my invention is to provide a means of expeditiously packing or condensing moist sugars or other analogous substances in barrels or other receptacles, in order not only to economize labor by performing the act in less time than can otherwise be accomplished, but to stow a much larger quantity in a given space than at present. To this end my present invention consists in the employment of one or more sloping blades revolving about an axis in a horizontal plane, and so mounted upon a suitable carriage as to be permitted a free vertical movement in order to accommodate themselves automatically to the increasing height of the sugar as it accumulates within the barrel, due provision being also made whereby the carriage and packing device may be expeditiously and easily moved about from one barrel or locality to another in order to avoid the labor of taking such barrel and the sugar to the machine in filling the former.

The drawing accompanying this specification represents at A what may be supposed to constitute the floor of the structure in which the operation of packing sugar is performed. B represents an upright shaft, which plays freely in a vertical direction within boxes or guides C C affixed to an upright frame or carriage, D, which supports the shaft and which in turn is supported and travels upon curved rails or guides P P applied to the under side of a stage or platform, L, erected upon the floor of the structure and over the revolving blades hereinafter referred to. To the lower extremity of the shaft B I affix one or more blades, E E, which are horizontal in their length, while laterally they slope at an angle of about forty-five degrees and revolve with the shaft in such a direction that the highest edge is in advance in order to crowd down and condense the sugar or other material which is deposited or finds its way below them in the act of filling a barrel, the blades continuing to ascend as the material accumulates

until the barrel is filled, a slight pressure or weight being exerted upon the blades varying with the degree of compactness which should be imparted to the accumulating mass. A long pulley, G, is affixed to the shaft B, about which and a second driving-pulley, H, an endless band, I, travels the length of the pulley G, being somewhat greater than that of the barrel or other receptacles to be filled in order that the bolt shall not slip from off it as it rises and falls during the operation, the said driving-pulley H being mounted upon a vertical shaft, J, which shaft in turn is supported by and revolves within boxes *k k*, upheld by or making part of a hanger, *o*, suspended from the staging or platform L, before explained. The curved rails P P are disposed in the form of a circular arc, of which the shaft J is a center, since the path traveled by the carriage D must be concentric with the axis of the pulley H, which drives the blades E E.

The purpose sought in mounting the shaft B upon the carriage and ways or their equivalents is to obtain a motion of the packing-blades over a considerable space in order to accommodate the packing-blades to different localities and obviate the necessity of conveying barrel sugar to the machine. The upper portion of the shaft B should be provided with weights, practically as shown at *a' a'* in the drawing, these weights being of sufficient gravity to counterbalance to a certain extent the weight of the shaft, since the weight would exert too great a pressure for the sugar; and these weights *a'* should be proportioned to the degree of solidity with which the sugar is to be packed.

I claim—

1. In a device for packing sugar, the combination of one or more revolving sloping blades with an upright shaft, to which the same are applied, sliding vertically in suitable bearings, the whole being as and for the purposes shown and set forth.

2. In combination with the blades E E, shaft B, pulley G or its equivalent, and the traveling carriage D, the carriage being mounted upon the guides P P, and the whole operating as and for purposes herein stated.

3. In combination with the blades E E, shaft B, and carriage D or its equivalent, the weights *a' a'*, for purposes stated.

CORNELIUS E. HAYNES.

Witnesses:

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