

No. 683,100.

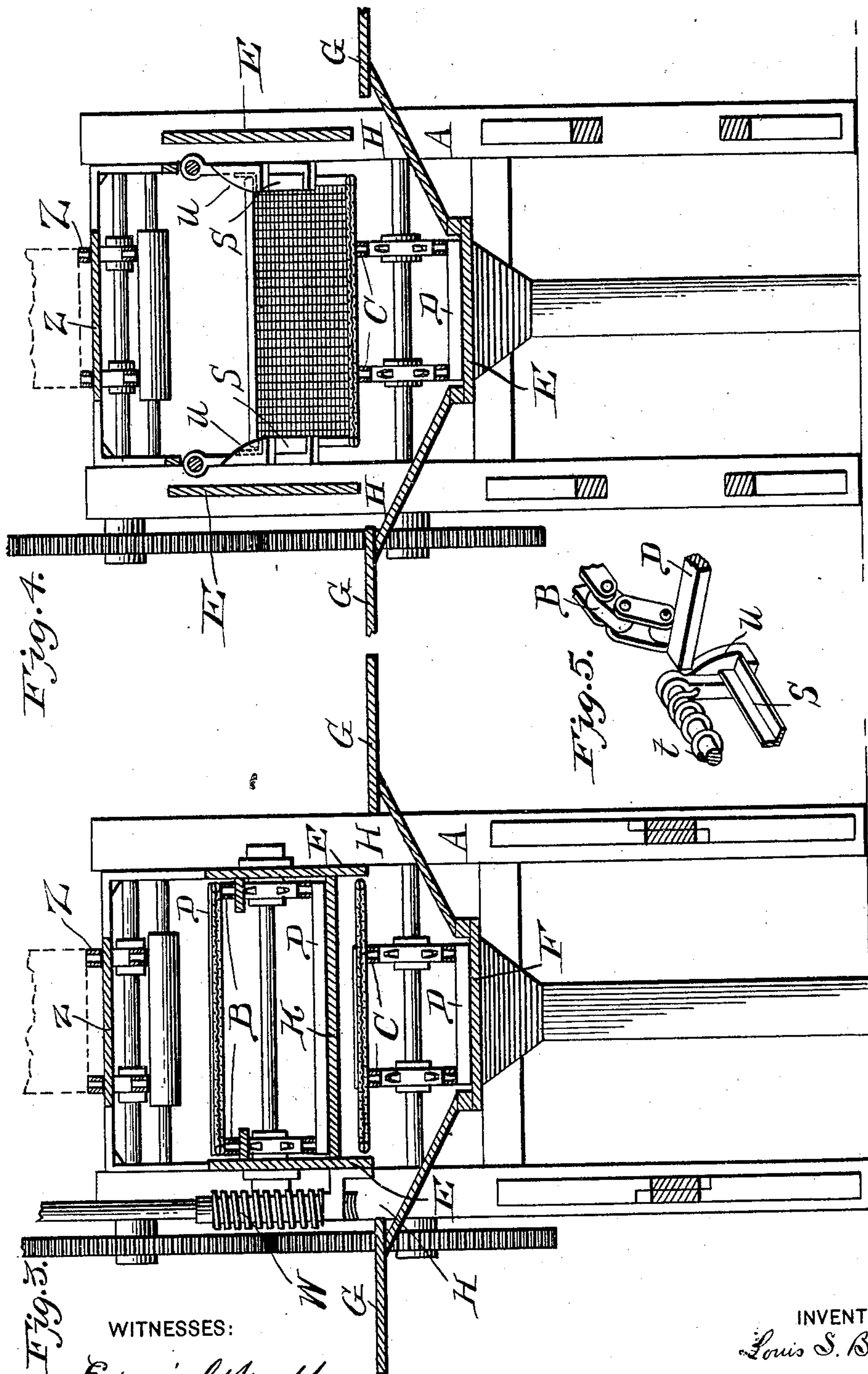
Patented Sept. 24, 1901.

L. S. BURBANK.
APPARATUS FOR FACILITATING PACKING.

(Application filed Dec. 21, 1899.)

(No Model.)

2 Sheets—Sheet 2.



WITNESSES:

Edwin G. Mettke
G. M. Anderson

INVENTOR

Louis S. Burbank

BY

E. W. Anderson
his ATTORNEY.

UNITED STATES PATENT OFFICE.

LOUIS S. BURBANK, OF WORCESTER, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE NATURAL FOOD COMPANY, OF NIAGARA FALLS, NEW YORK.

APPARATUS FOR FACILITATING PACKING.

SPECIFICATION forming part of Letters Patent No. 683,100, dated September 24, 1901.

Application filed December 21, 1899. Serial No. 741,073. (No model.)

To all whom it may concern:

Be it known that I, LOUIS S. BURBANK, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Apparatus to Facilitate Packing; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

In the accompanying drawings, Figure 1 is a side elevation of my apparatus. Fig. 2 is a vertical longitudinal section of same. Fig. 3 is a section on the line $x x$, Fig. 2. Fig. 4 is a section on the line $y y$, Fig. 2; and Fig. 5 is a detail view illustrating the engagement of the cross-bars D with the slideways.

The invention has relation to means for facilitating packing small articles, such as crackers, biscuit, cakes, &c., in cartons or cases; and it consists in the novel construction and combination of devices, as hereinafter set forth.

In the accompanying drawings the letter A designates a frame, of elongated form, in which the end sprockets or pulleys of the endless carriers B and C are mounted. Chain carriers are preferred when the goods are delivered in baking pans or trays. The lateral chains of each carrier are connected at intervals by means of transverse bars or scrapers D. The casing of the frame consists of side walls E and a bottom or trough portion F. The upper tray-holding portion of the upper carrier is exposed for the action of the packers, who are located when work is to be done along the sides of the apparatus before the lateral ledges or table-flanges G of the frame. Openings are provided at H at the inner edges of the packing-ledges G, said openings leading to the inclosed trough portion F, in which the lower carrier C runs. The floor of the chamber or boxing of the upper carrier is indicated at K, and in this floor, near the feed end, chutes or openings may be provided for the passage of waste material downward into the lower or trough chamber, from which it escapes through a chute m for such disposition as may be advisable. The lower carrier

is at one end of the apparatus extended beyond the end of the upper carrier, this extension (indicated at c) serving to receive the empty pans or trays when they are dropped thereon by the opening of the lateral receiver-slideways S, which are provided with closure-springs t . These slideways are located in parallel inclined position over the extension c of the lower carrier, their higher ends being near the sprockets of the chain carrier and having beveled projections, as at u , which are intermittently engaged by the ends of the cross-bars D during the movement of said carrier. This engagement causes the slideways to open or separate sufficiently to allow the pan or tray thereon to fall upon the lower carrier in position to be taken thereby and returned to the feed end of the apparatus. A stop extension V beyond the ends of the slideways and having an inclined bottom serves to prevent the pans or trays from passing too far beyond the ends of said slideways to be engaged by the return carrier. This stop extension also serves to cause the tray to come nearly to a counterbalance, so that it falls gently on the return chain. Elevated a little above the pan-carrier B is arranged a narrow endless carrier-belt Z, which is supported by a board z and serves to receive the packed cartons and conveys them away for further disposition. The carriers are moved by means of slow gearing, (indicated at W.)

The operation is as follows: An attendant at the feed end places the charged pans or trays upon the distributing-carrier B, which conveys them along between the lines of packers at the table-ledges, who, taking the biscuit or other articles from the trays as they move along on the carrier, pack them in cartons which are provided at hand and place the filled cartons on the upper small carrier Z to be conveyed away. The empty pans or trays are carried along to the end of this carrier and discharged upon the automatic slideways at its end, whereby they are dropped upon the lower carrier to be returned to the attendant. The cross-bars or scrapers of the carriers on their return movements, being turned downward, move along the floors of their respective chambers and carry such

waste material as may have accumulated therein to the chutes at the ends of said chambers. The importance of this apparatus in handling large quantities of delicate articles is found not only in saving time and floor-space, but also in avoiding all manipulation of the goods but that which is necessary to place them in the cartons.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination with an upper endless tray-carrier, and a lower endless tray-carrier moving in the opposite direction, and extending at one end, beyond the upper tray-carrier, of the lateral intermittently-acting slide-ways at the end of the upper carrier and above

the extension of the lower carrier, substantially as specified.

2. The combination with the upper and lower chambers, and the upper and lower tray-carriers respectively located therein, of the lateral packing-ledges of the frame, the waste chutes and openings, the carton-carrier, and the automatic drop device for the trays at the end of the upper carrier and over an extended portion of the lower carrier, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

LOUIS S. BURBANK.

Witnesses:

ALBERT H. CHAFFEE,
J. R. GILKESON.