

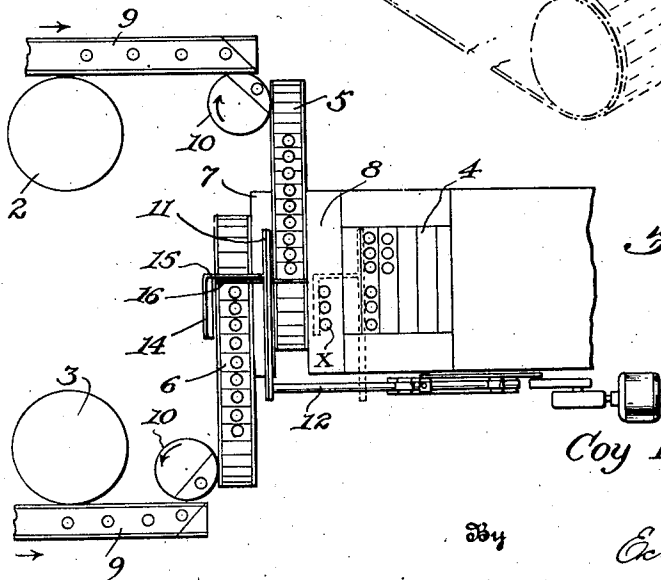
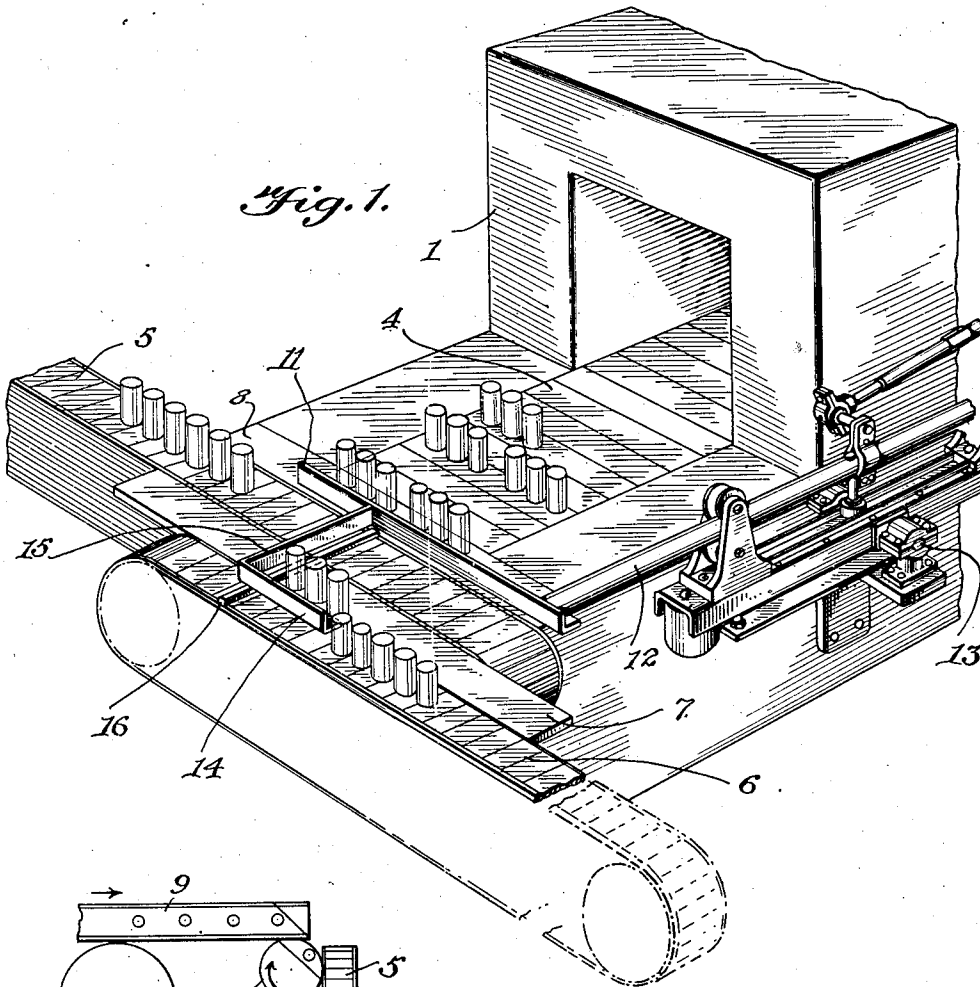
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LEER LOADER

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LEER LOADER

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This invention relates to leer loaders or feeders and has for its primary object to provide a mechanism for feeding glassware from a plurality of forming machines to a leer. Prior devices have been constructed for feeding ware from a plurality of forming machines to a leer, but such prior constructions were for use with relatively large leers which were situated in the factory at a considerable distance from the forming machines. The present construction is intended for use with leers placed close to the forming machines and generally termed individual leers; although in the embodiment shown the leer is somewhat larger than an individual leer so as to have a capacity for receiving the ware from two forming machines.

Another object of the invention resides in the provision of a compact arrangement of conveyers for presenting the ware in front of the leer from whence it may be readily projected into the leer in orderly fashion with the ware from each machine segregated from that of the other.

A further object of the invention consists in the provision of an attachment to an ordinary stripper bar by means of which the ware may be carried from two separate conveyers to the leer conveyer.

Other objects and advantages of the invention will be apparent from the following description when taken in connection with the accompanying drawing, in which

Figure 1 is a perspective view of the front end of a leer with the novel leer loader installed thereon; and

Figure 2 is a more or less diagrammatic view showing the arrangement of the forming machines, cross-conveyers, etc., in connection with the leer and leer loader.

Referring to the drawing in detail, the numeral 1 indicates a leer of the individual type, but made slightly larger in order to accommodate ware from two forming machines 2 and 3. As will be understood, these individual leers are ordinarily placed close to the forming machines and the ware is transferred from the forming machine to a cross-conveyer by a take-out mechanism, and thence

projected onto the leer conveyer by a leer loader, without substantial loss of heat.

In the present embodiment of the invention the leer conveyer is indicated by the numeral 4, and the cross-conveyers for the two forming machines are indicated by the numerals 5 and 6. These conveyers are spaced apart slightly and the space is bridged by a plate 7 to provide for the passage of the ware from the outer conveyer into the leer. Likewise the usual shadow pan 8 is provided for bridging the gap between the conveyer 5 and the main leer conveyer 4. Short conveyers 9 may be employed for transporting the ware from the forming machines to the cross-conveyers and under such circumstances rotatable tables 10 are used for transferring the ware from the conveyers 9 to the cross-conveyers 5 and 6.

Where a single cross-conveyer is employed for carrying the ware across the front of a leer a variety of leer feeding devices have been employed for projecting the ware from the cross-conveyer into the leer. The essential features of one such device are disclosed herein and are shown and described in detail in the application of Arthur Covey, Serial No. 290,834, filed July 6, 1928. This structure includes a stripper bar 11 which is rigidly connected to one end of a bar 12, and is positioned to traverse that part of the cross-conveyer 5 which aligns with the leer conveyer 4. The bar 12 is reciprocated longitudinally by means of suitable mechanism and is also rocked about a pivot 13 so as to lift the stripper bar 11 over the oncoming ware on conveyer 5 as the stripper bar is moved to its outer position in preparation for projection of a row of ware onto the leer conveyer. This mechanism has been fully described in the application above referred to and need not be repeated herein except to indicate the type of leer feeder to which the present invention relates.

So far as the feeder itself is concerned my improvement consists of an auxiliary stripper bar 14 which is connected to the main stripper bar 11 by an arm 15. This auxiliary bar is rigidly connected to the main bar 11 so as to be reciprocated in unison with it and to be

raised and lowered as the latter is raised and lowered. Therefore, as the stripper bar 11 carries a row of ware from the conveyor 5 onto the leer conveyor the auxiliary bar 14 will move the ware on the conveyor 6 an equal distance, namely, onto the shadow pan 8 as indicated by reference character X on Figure 2. On the next inward stroke of the leer feeder the stripper bar 11 will not only carry its prescribed quota of ware from conveyor 5 onto the leer conveyor but will also collect the ware X previously left on the shadow pan by auxiliary bar 14, and carry it onto the leer conveyor. This action is, of course, repeated, so long as the mechanism continues in operation.

The cross-conveyers 5 and 6, as indicated in Figure 2 carry the ware from opposite sides of the leer toward the center of the leer, and in order to limit this movement to the center line of the leer, I provide a bar 16. This bar extends across both conveyers 5 and 6 and is fixed in position in alignment with the center line of the leer 1. Consequently, the ware from the two forming machines will remain segregated at all times inasmuch as the rod 16 will prevent any overlapping of the ware as it is being transported into position for transfer to the leer conveyor 4.

It will be noted that in the specific arrangement illustrated, the cross-conveyor 5 moves from left to right, and the stripper bar 11 for this conveyor has its right end attached to the bar or support 12 and its left end free; while the cross-conveyor 6 moves from right to left and the stripper bar 14 for this conveyor has its left end attached to the arm or support 15 and its right end free. It is apparent therefore that the supports for the two stripper bars will never cross the path actually traveled by the ware on either cross-conveyor, and hence the ware has a free passage at all times, and it is unnecessary to intermittently stop the free passage of ware on the cross-conveyor.

While the operation of the several elements of the mechanism have been referred to in connection with the description of the structure, I will now describe briefly the general operation of the complete assemblage.

The articles produced on the forming machines 2 and 3 are transferred to the cross-conveyers 5 and 6 by conventional types of take-out mechanisms or by such mechanisms in conjunction with the conveyers 9 and turntables 10. The ware received on these cross-conveyers is conveyed from the opposite sides of the leer into position in front of the leer in alignment with the leer conveyor 4. This movement of the ware is limited to the center line of the leer by means of a stop bar 16 which prevents any overlapping of the two lines of ware. In accordance with the timing of the mechanism the stripper bar 11 is drawn across the conveyor 5 and moves the ware which is in

front of one-half of conveyor 4 onto this conveyor as shown in dotted lines in Figure 2. At the same time the auxiliary stripper bar 14 is drawn across conveyor 6 and moves such ware as is in front of its half of the conveyor 4 onto the shadow pan 8 as indicated by reference character X. The bar 12 is then swung up about its pivot 13 and moved rearwardly and then down into its original position as shown in full lines on Figure 2. Upon the next movement of the stripper bars toward the leer, which occurs when the cross-conveyers have brought additional ware to the front of the leer, the stripper bar 11 will first carry ware from conveyor 5 onto the shadow pan 8 at which point it engages the ware X and carries both rows onto the leer conveyor 4; at the same time the auxiliary stripper bar 14 will move another row of ware from conveyor 6 onto the shadow pan, and so on while the apparatus continues in operation. It will thus be seen that the apparatus including the cross-conveyers, stripper bars, etc., provides for not only conveying the ware from two forming machines to an adjacent leer, but also maintains the ware from each machine segregated from that of the other machine and so deposits it in the leer.

From the foregoing description it will be apparent to those skilled in the art that the present mechanism, which is of simple and inexpensive construction, is reliable in operation and contains no delicate mechanism which is liable to become disorganized. It will also be noted that the compact arrangement of leer loader which is capable of accommodating the ware from two forming machines permits of the installation of a leer adjacent the forming machines with all of its attendant advantages. Moreover, the ware from the two machines is segregated throughout.

The preferred embodiment of the invention has been described herein as required by the patent statutes, but it is to be understood that the specific mechanism is capable of various modifications as to details of construction without departing from the spirit of the invention and all such changes are intended to be included within the scope of the appended claims.

What I claim as new and desire to secure by Letters Patent is:

1. In a device of the class described, a leer, conveyers traversing the front of said leer, a dead plate between said conveyers, a shadow pan between one of said conveyers and the main leer conveyor, and means for simultaneously projecting ware from one of said conveyers across the dead plate onto the shadow pan and from the other conveyor into the leer.

2. In a device of the class described, a leer, a leer conveyor, a cross-conveyor traveling across the front of the leer, a second cross-conveyor traveling across the front of the leer

and arranged in rear of the first-mentioned cross-conveyer, a stripper bar of substantially the width of the leer conveyer cooperating with the first-mentioned cross-conveyer, and a stripper bar of substantially half the width of the leer conveyer cooperating with the second-mentioned cross-conveyer, for the purpose described.

3. In a device of the class described, a leer, a leer conveyer, a cross-conveyer traveling across the front of the leer, a second cross-conveyer traveling across the front of the leer and arranged in rear of the first-mentioned cross-conveyer, a stripper bar of substantially the width of the leer conveyer cooperating with the first-mentioned cross-conveyer, a spacing arm extending rearwardly from said stripper bar, a second stripper bar of substantially half the width of the leer carried by said spacing arm and of substantially half the width of the leer conveyer.

4. In a device of the class described, a leer, a leer conveyer, a cross-conveyer carrying ware across the front of the leer, a shadow pan between said cross-conveyer and the leer conveyer, a second cross-conveyer arranged rearwardly of the first-mentioned cross-conveyer and simultaneously carrying ware across the front of the leer in a direction opposite to that of the first-mentioned cross-conveyer, a main stripper bar conveying ware from the first-mentioned cross-conveyer and from the shadow pan onto the leer conveyer, and an auxiliary stripper bar associated with the main stripper bar, said auxiliary stripper simultaneously conveying ware from the second-mentioned cross-conveyor onto the shadow pan.

5. In a device of the class described, a leer, a leer conveyer, two cross-conveyers arranged in front of the leer, the two cross-conveyers traveling in opposite directions, and one arranged in rear of the other, a shadow pan between the leer conveyer and the forward cross-conveyer, means for feeding ware from the forward cross-conveyer and from the shadow pan onto the leer conveyer, and means for simultaneously feeding ware from the rearward cross-conveyer onto the shadow pan.

6. In a device of the character described, a leer, a leer conveyer, two cross-conveyers arranged in front of the leer, said cross-conveyers continuously moving in opposite directions across the front of the leer, a main stripper bar and an auxiliary stripper bar, the former supported from its right end and having its left end free, and extending the full width of the leer conveyer, the latter supported from its left end and having its right end free, and extending substantially half the width of the leer conveyer, for the purpose described.

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