Jan. 5, 1932. J. A. STURTZ 1,839,712

FRUIT AND VEGETABLE SPOUT

Filed Sept. 27, 1930

Fig. 1.

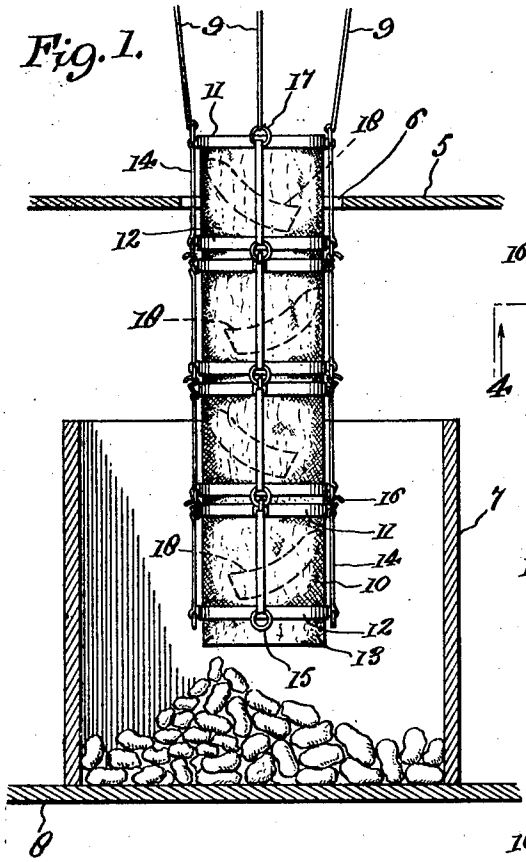


Fig. 2.

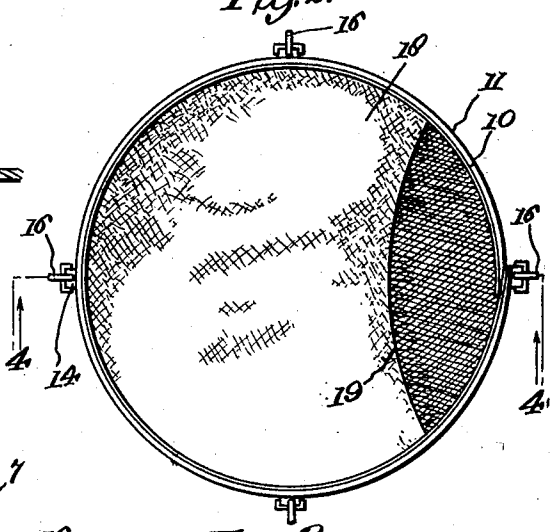


Fig. 3.

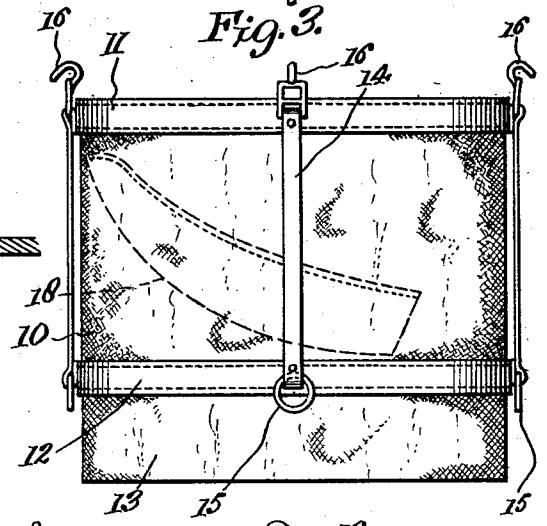
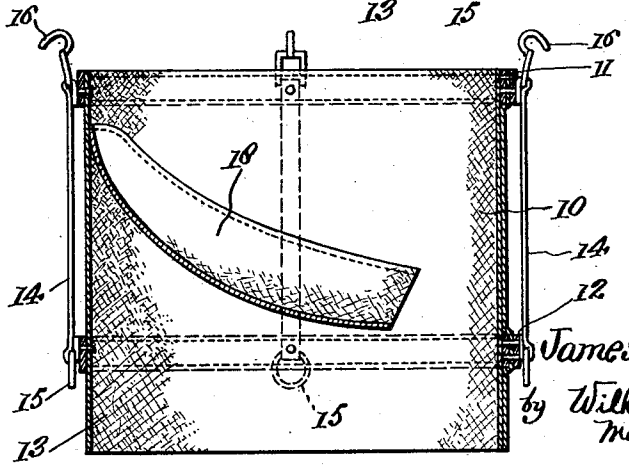


Fig. 4.



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UNITED STATES PATENT OFFICE

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FRUIT AND VEGETABLE SPOUT

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The present invention relates to improvements in fruit and vegetable spout, and has for an object to provide a spout through which fruit and vegetables may be loaded into suitable receptacles without bruising the same.

Another object of the invention is to provide an improved sectional spout, which may be assembled in any desired length whereby fruit and vegetables may be lowered from a considerable elevation, while breaking the fall of the material and causing it to quietly descend to the depository.

A further object of the invention is to construct an economical spout in which the sections may be added to as desired, and quickly assembled into the requisite length of spout.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claim appended hereto.

In the drawings, wherein like symbols refer to like or corresponding parts throughout the several views,

Figure 1 is a fragmentary vertical section through a warehouse and bin with the improved spout shown mounted in four sections.

Figure 2 is an enlarged top plan view showing one of the sections.

Figure 3 is a side view of the same, and

Figure 4 is a section taken on the line 4—4 of Figure 2.

Referring more particularly to the drawings, the device is adapted to be used in warehouses, or other places, having an upper floor 5 with an opening 6 through which the spout is adapted to descend, and below which is disposed a bin or other depository 7, located on the floor 8 below.

The improved spout may be supported by the rods or other supports 9, and as many sections of the spout as required may be provided.

Figures 2, 3 and 4 show the construction of the sections.

In the preferred form, a tube 10 of canvas, or other flexible material, is provided with bands 11 and 12 encircling the same and being secured thereto. The upper band, preferably of leather, is secured to the upper edge of the tubular section 10 as by sewing; and the lower band 12, also preferably of leather, is also stitched to the canvas section 10 at an appropriate distance above its lower edge, sufficient to leave a flap or skirt 13 designed to be interfitted with the next section below, whereby to close the joints between the sections, and form a continuous spout.

Stays 14 of leather or other appropriate material extend between the bands 11 and 12, and are secured thereto, as by the use of rivets, or other appropriate fastenings. These stays 14 may be in any suitable number about the circumference of the sections. At the lower and upper ends of the stays 14, or upon the bands 11 and 12, are provided fastening devices, consisting in the instance shown of rings 15 and hooks 16. The rings are shown as at the lower portions of the sections, while the hooks 16 are at the upper portions of the sections; except that the uppermost section may be provided with rings 17, as indicated in Figure 1, to cooperate with the supports 9.

Within the section body 10 is provided a canvas or other pocket or diaphragm 18, which is stitched, or otherwise secured, to the canvas body 10, and is made of a generally circular form, as indicated in Figure 2, having a segmental opening 19 at one side. As shown in Figures 3 and 4, the partition or diaphragm 18 preferably slopes from a high point at its closed side downwardly to the opening 19. The inclination given will be preferably gentle, and owing to the flexible character of the partition 18, the same will sag, as indicated in Figure 4, with the weight of the material, which will further reduce the per cent of the inclination, and cause such material to slide slowly and easily down the partition to the opening 19.

It will be understood that the sections of the chute or spout may be made in any desired size as to diameter and length of section. I have found that a diameter of eighteen inches and a length of one foot for each section is convenient and possesses large capacity.

The straps or bands 11 and 12 circumscribe

the tube or section 10 at top and bottom, and are designed to make the section rigid in open position, and they also act as adequate reinforcements. These bands 11 and 12 may be of two-inch leather strap.

It will be apparent from Figure 1 that, where more than one section is to be used, the sections are so connected and interlocked that the openings 19 in the sections are relatively reversed. In other words, the opening 19 in one section will be disposed above the highest portion of the pocket or diaphragm 18 of the next lower succeeding section. This will cause the openings 19 to be placed in staggered relation down through the various sections.

This relative arrangement will enable the fruit and vegetables being conveyed through the spout to strike the sloping canvas 18 of the first section, roll down through the opening 19 and drop upon the highest portion of the reversed canvas pocket 18 in the second canvas section. This action will alternate the full length of the spout and the drop at no time will exceed, say for example, six inches. The bruising of the fruit and vegetables is thereby avoided.

In Figure 1, the device is shown as attached to a potato grader on the ground floor of a potato warehouse. A sufficient number of sections is attached to reach from the grader through a trap-door 6 to a potato bin 7 in the basement. The bottom section frequently reaches the floor of the bin. As the bin fills and the level of the potatoes rises, one at a time, the sections of the spout may be detached.

It will be noted that the spout is completely closed throughout all its sections, and therefore, the fruit, vegetables and other material are not enabled to jump over the edges of the spout sections, which results in bruising a high percentage of the product, thus entailing serious financial loss. The spout being made entirely of canvas or leather has no hard surface with which the fruit or vegetables can come in contact.

Of course, it will be understood that the diameter and length of the sections may be varied to meet different requirements.

The canvas pocket may be set at any desired angle, and the opening of the pocket in each section of the spout may be made larger or smaller.

The flap or skirt at the bottom of each section fits inside of each succeeding section, and the top leather belt of the second section fits up snugly to the lower belt of the preceding section, thus forming a completely closed spout from top to bottom.

The sections may be detached at any time, and this is a very desirable feature.

It will be obvious that various changes in the construction, combination and arrangement of parts could be made, which could be used without departing from the spirit of my invention, and I do not mean to limit the invention to such details, except as particularly pointed out in the claim.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States is:—

An article of manufacture providing a semi-rigid spout comprising a plurality of sections capable of being folded both longitudinally and circumferentially, each composed of canvas tubular bodies, canvas sloping partitions sewed within each body, and having segmental openings at their lower parts, leather bands extending about said canvas bodies, one band extending about and sewed to the upper marginal edge of the body, the second band sewed to the body above the lower edge thereof leaving a skirt for fitting within the next lower section, leather braces secured between said bands, and hooks and rings carried by said braces for interlocking to secure a number of the sections together.

JAMES A. STURTZ.