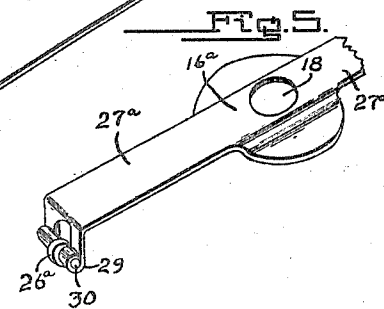
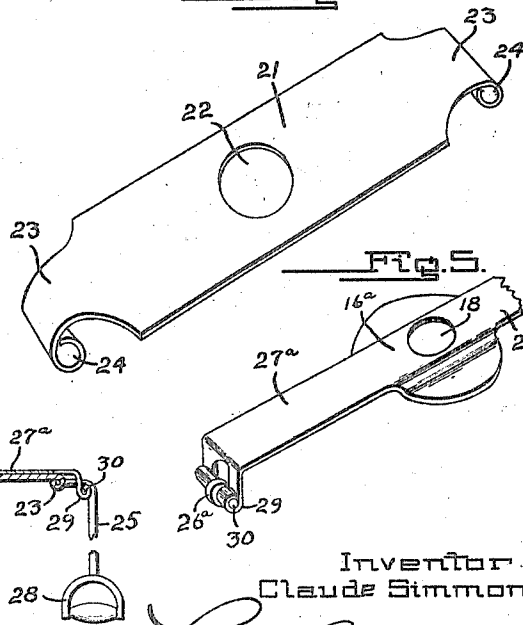
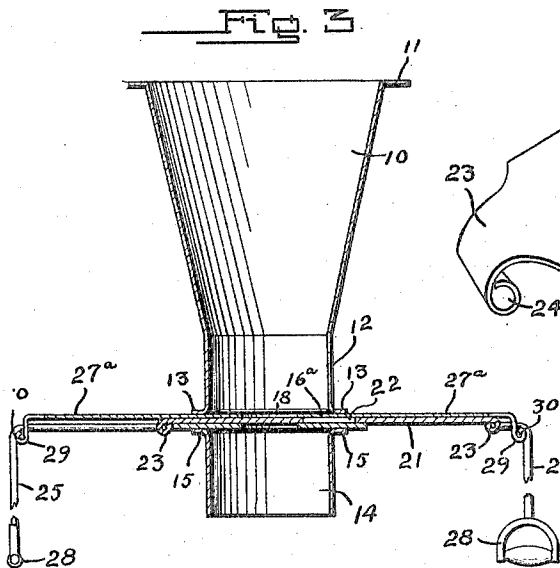
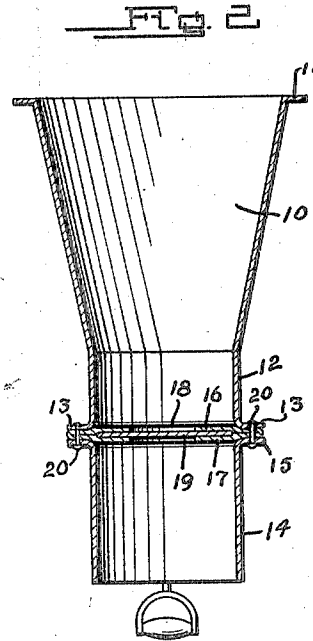
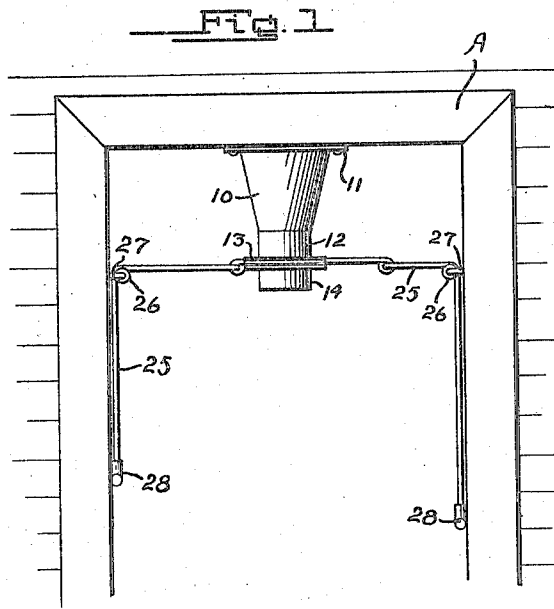


C. SIMMONS.
CUT-OFF FOR GRAIN SPOUTS.
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1,283,929.

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CUT-OFF FOR GRAIN-SPOUTS.

1,283,929.

Specification of Letters Patent.

Patented Nov. 5, 1918.

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To all whom it may concern:

Be it known that I, CLAUDE SIMMONS, a citizen of the United States, and a resident of Gibson City, in the county of Ford and State of Illinois, have invented a certain new and useful Improvement in Cut-Offs for Grain-Spouts, of which the following is a specification.

The present invention relates to grain spouts and the like, and more particularly to an improved cut-off for controlling the flow of grain therethrough.

An object of the present invention is to provide a simply and economically constructed spout and cut-off therefor which may be manually controlled from a point below the spout, and which is adapted particularly for controlling the flow of small grain without waste.

Another object of the present invention is to provide a spout and cut-off which may be entirely made from sheet metal of the desired thickness, and which may be galvanized to render the same durable and lasting.

The above and other objects and advantages of this invention will be in part described, and in part understood, from the following detailed description of the present preferred embodiment, the same being illustrated in the accompanying drawing wherein:

Figure 1 is a front elevation of a portion of a crib having a grain spout and cut-off constructed according to the present invention applied thereto.

Fig. 2 is a longitudinal section through the same taken transversely through the cut-off.

Fig. 3 is a similar view taken longitudinally through the cut-off, and showing a slight modification of the same.

Fig. 4 is a detail perspective view of the valve employed.

Fig. 5 is a detail perspective view of the pulley supporting member shown in Fig. 3.

Referring to this drawing, A designates a suitable support, which may be a crib or the like containing a bin in the usual manner and to which the spout of this invention may be connected.

The spout comprises an upper hopper section 10 of preferably frusto-conical form, and which tapers downwardly, the section 10 being provided at its upper end with an attaching flange 11 secured by screws or the like to the support A. The lower end of

the hopper section 10 is provided with a depending neck 12 of any desired length, and which is provided upon its lower extremity with an outturned annular flange 13. The spout is also provided with an outlet neck portion 14 of annular form having upon its upper end an outturned annular flange 15.

Between the flanges 13 and 15 are clamped a pair of guide plates 16 and 17 which may be of disk form, and which are provided with registering apertures 18 and 19 therethrough. Clamping bolts 20 engage through the flanges 13 and 15, and the outer marginal edge portions of the guide plates 16 and 17 to hold the element in clamped position in the spout.

The intermediate portions of the plates 16 and 17, within the spout, are pressed upwardly and downwardly away from each other to provide therebetween a space adapted to receive a slide valve 21. The slide valve 21, as shown in detail in Fig. 4, comprises an elongated metallic plate having an opening 22 intermediate the ends thereof adapted to register with the openings 18 and 19 in the guide plates 16 and 17 for the purpose of admitting the flow of grain or the like downwardly through the spout. The opposite ends of the valve plate 21 project beyond the sides of the spout and are preferably reduced in width to form tongues 23 which are rolled downwardly in over-turned relation to provide eyes 24 through which may be secured the inner adjacent ends of flexible cords or cables 25. The eyes 24 also form stops for limiting the sliding movement of the plate 21 when shifted into opposite positions, as shown in Fig. 1, the eyes 24 engaging against the opposite side portions of the lower guiding plate 17.

When the spout and cut-off is mounted in the frame of a doorway or the like, as shown in Fig. 2, pulleys 26 are mounted in brackets 27 which are secured against the inner opposite sides of the vertical portions of the framework. The cables 25 pass over the pulleys 26 and downwardly against the opposite sides of the frame A, and are provided upon their lower ends with suitable handles 28 which may be grasped one at a time for shifting the valve 21.

The modification disclosed in Fig. 5 shows the upper guide plate 16^a having at opposite sides integral relatively thin arms 27^a which project laterally beyond the opposite

sides of the spout. The outer ends of the arms 27^a are turned downwardly, and are bifurcated for the passage of the cables 25 therethrough. The lower ends of the arms 5 27^a are overturned to form eyes 29 adapted to receive transverse pins 30 therethrough upon which the pulleys 26^a are mounted, the latter being arranged between the fork arms on the extremities of the bracket arms 27^a.

10 The bracket arms 27^a are employed when the spout is arranged against the outer side of a crib or the like and where no lateral supports are found.

In both forms of the invention, the operation is identical, for when it is desired to adjust the valve 21 it is only necessary to grasp one of the handles 28 and draw the cable 25 connected thereto downwardly. This operation shifts the valve 21 between the 20 guide plates 16 and 17 and moves the opening 22 into and out of register with the openings 18 and 19 in the guide plates.

The entire device may be constructed from sheet metal, and is relatively strong and 25 durable, and is economical in its distribution of grain. The device also occupies but relatively small space and may be modified in construction and design for attachment to bins of various forms.

30 I claim:—

1. In a grain spout, the combination, of a hopper section, an outlet section, guiding plates positioned between the adjacent ends of the hopper and outlet sections and having registering openings therethrough, a 35 slide valve arranged between said guide plates and provided with an opening adapted to register with the openings in the guide plates, the upper guide plate having at its opposite lateral edges outstanding arms with 40 downturned forked extremities, rollers carried by the forked extremities, and flexible cables trained over the rollers and extending beneath the arms for engagement with the 45 opposite ends of the slide valve to shift the same.

2. In a grain spout, the combination of a hopper-section, an outlet section, a pair of guide plates positioned between the adjacent 50 ends of the hopper and outlet section and having registering openings therethrough, the intermediate portions of said guide plates being offset from each other to provide a space therebetween, a slide valve 55 slidably fitting between said guide plates and

having an opening adapted to register with the opening in the guide plates, the end portions of said slidable valve being reduced in width and rolled to form eyes, said eyes adapted to engage against said guide plates 60 to limit movement of the slide valve, the upper guide plate having at its opposite lateral edges outstanding arms, with downturned forked extremities, rollers carried in the forked extremities, and flexible cables 65 trained over said rollers and extending beneath the arms, said flexible cables being connected to the rolled ends of said valve plate to shift the same.

3. In a grain spout, the combination of a 70 hopper section, an outlet section, said hopper and outlet sections being provided with out-turned flanges, a pair of guide plates arranged between the flanges and the sections and provided with registering openings in 75 axial alinement with the sections, said guide plates having their intermediate portions offset in opposite directions to form a space therebetween, a metallic strip slidably fitting in the space between the guide plates 80 and having an opening therein adapted to register with the openings in the guide plates, one of said guide plates having laterally extending arms projecting beyond the opposite sides of the spout, rollers mounted 85 in the outer ends of said arms, and flexible connectors trained over said rollers and having connection with the opposite ends of said slidable strip to shift the same in opposite direction and control the flow of material 90 through the spout.

4. In a grain spout, the combination of a hopper section, an outlet section, a pair of guide plates clamped between said sections and having registering openings there- 95 through, the intermediate portions of said guide plates being offset from each other to provide a space therebetween, an elongated plate slidably fitting between said guide plates and having an opening therethrough 100 adapted to register with the openings in the guide plates, the upper guide plate having at its opposite lateral edges outstanding arms with down-turned forked extremities, rollers mounted in the forked extremities, 105 and flexible cables trained over the rollers and extending beneath the arms for engagement with the opposite ends of the elongated plate to shift the same.

CLAUDE SIMMONS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."