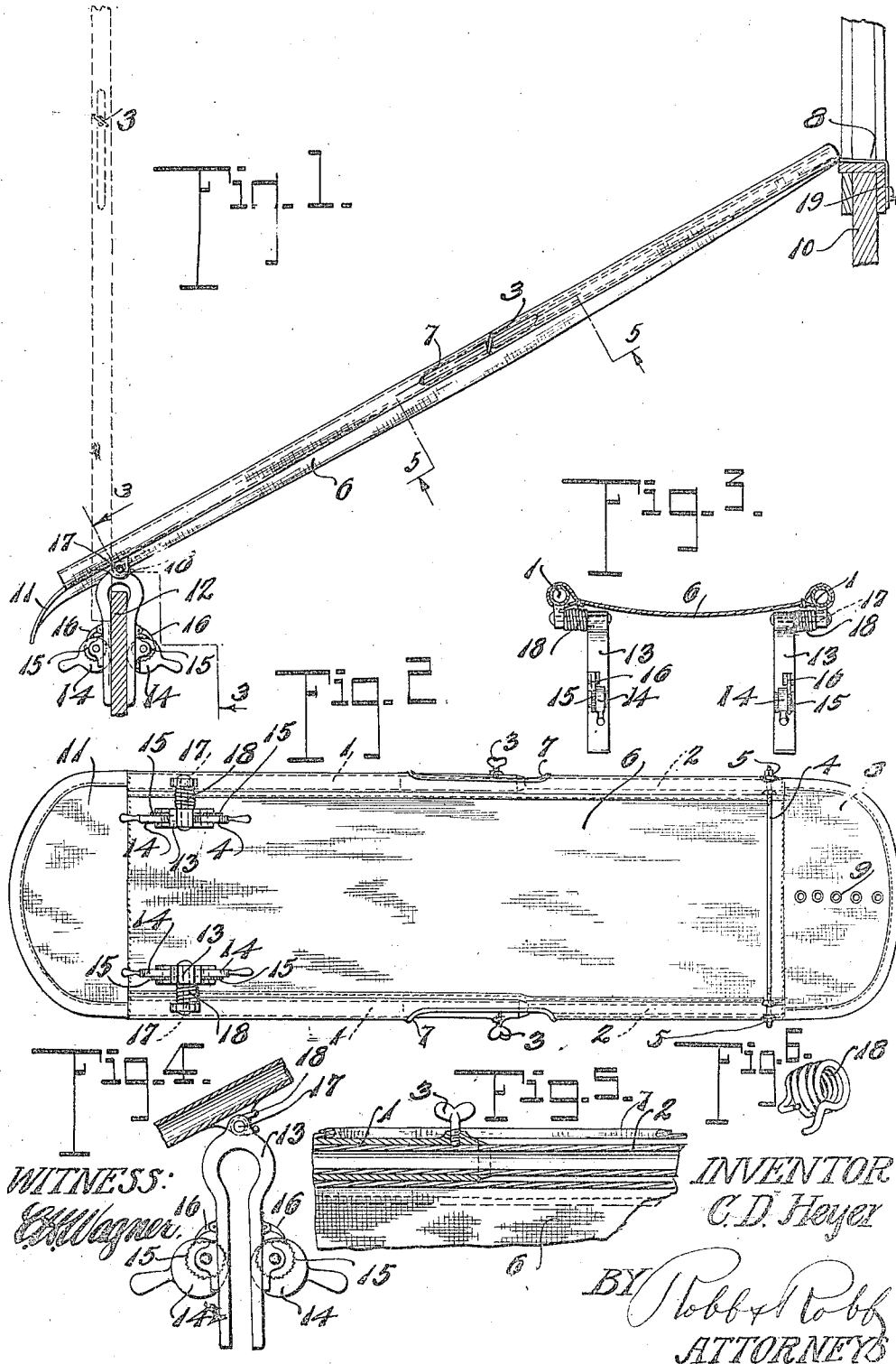


C. D. HEYER.
ADJUSTABLE CHUTE CONSTRUCTION.
APPLICATION FILED MAY 11, 1918.

1,307,199.

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CARL D. HEYER, OF COUNCIL BLUFFS, IOWA.

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Specification of Letters Patent. Patented June 17, 1919.

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To all whom it may concern:

Be it known that I, CARL D. HEYER, a citizen of the United States, residing at Council Bluffs, in the county of Pottawattamie and State of Iowa, have invented certain new and useful Improvements in Adjustable Chute Constructions, of which the following is a specification.

The present invention relates to improvement in what I term labor saving devices, more particularly characterized as an adjustable chute designed especially for use in loading and unloading operations. The invention consists primarily in a frame, preferably extensible or adjustable, and means for attaching and holding the frame in operative position.

An object is to provide special attaching means readily applicable to a support for sustaining the chute not only in operative position but also in an inoperative position, which latter position is assumed upon a mere release of one of the ends of the chute.

A further object is to provide a chute of this type that may be easily collapsed into a compact form for storage or shipment.

These and such other objects as may hereinafter appear are attained by the novel construction, combination and arrangement of parts to be hereinafter specifically described and claimed. Reference will now be had to the accompanying drawings forming a part of this specification, wherein:

Figure 1 is a side elevation of a device constructed in accordance with my invention and showing the same in operative position in full lines, the supports to which it is attached being in section, and further showing in dotted lines the inoperative position of the device;

Fig. 2 is a top plan view of the invention;

Fig. 3 is a sectional view on the line 3—3 of Fig. 1;

Fig. 4 is a view showing the clamping member in side elevation, and a portion of the chute to which it is attached, in section;

Fig. 5 is a sectional view on the line 5—5 of Fig. 1; and

Fig. 6 is a detail view of the spring used in connection with this device.

Throughout the following detail description and on the several figures of the drawings, similar parts are referred to by like reference characters.

The device which constitutes the subject matter of this application consists primarily of a pair of side members each of which is composed of a lower section 1 and a telescopic upper section 2 designed to be held in cooperative relation by means of a set screw 3. These side members are preferably cylindrical in form and are connected at their upper ends by a suitable rod 4 having removable nuts 5 at the ends. The bottom or body of the chute is formed by a canvas or similar fabric apron 6 which at each side is hemmed so as to receive in the hemmed portion the respective side members of the frame. The canvas is provided with an elongated opening as indicated at 7 adjacent to the set screw 3 at each side so as to allow for adjustment of the parts whereby the sides are disposed in proper relation to each other. In other words, it is to be understood that these side members may be adjusted toward or from each other so as to affect the width of the chute or they may be adjusted with respect to their longitudinal dimension, in which latter adjustment the canvas is sufficiently flexible to accommodate the adjustment. That is to say, if the adjustment of the side members in length is shorter than the normal full length of the canvas the canvas will lie in folds as will readily be understood by those skilled in this art.

At the upper end the chute is provided with the overlapping flap 8 having a series of openings or eyelets 9 therethrough by means of which this upper end of the chute is adapted to be attached to a support 10 which may be a bin, crib, car or the like, while at the lower end a similar flap 11 is provided to overhang into the body of the wagon or other vehicle indicated at 12.

The lower end of the chute is held in fixed relation to the wagon 12 by means of suitable clamping means now to be described. Each of the frame members has pivotal connection with a clamping device 13 of substantially U-shaped configuration and each leg of this clamping device carries an eccentric cam 14. At one side each of the cams 14 has a serrated element 15 with which a pivoted dog 16 carried by the particular leg of the U-shaped member 13 engages. When the U-shaped member has been inserted over the side of the wagon 12 the cam levers or members 14 are pressed downwardly and thereby

forced against said side 12, being held in tight clamping relation by the pawl or dog 16 above referred to. Surrounding the pivot 17 between the clamping device and the side member of the frame is a spring 18 which co-operates with the frame member so as to cause the same to move vertically when the upper end of the chute is released from its engaged or operative position shown in Fig. 1. It is to be understood that the chute is held in this operative position by driving a nail or similar object 19 through one of the eyelets 9 and when the flap 8 is released from the nail the chute will move into a vertical position shown in dotted lines in Fig. 1.

It will be obvious from the foregoing description that a simple and relatively cheap device is provided which is particularly useful when it is desired to shovel grain or the like from a wagon into a car, in which operation the grain which falls from the shovel in the process of throwing will pass down the chute back into the body. Obviously the

contents of the car may be similarly introduced into the wagon body by shoveling the same into the chute in the ordinary manner and I do not wish to be restricted to any special use of the device in question.

It might further be added that when it is desired to fold the chute it is only necessary to move the side members together after removal of the rod 4 and to shift the upper sections of the frame members into their telescoped position.

Having thus described my invention, what I claim as new is:—

Supporting means for chutes of the class described comprising spaced gripping devices pivotally connected to the chute at one end, each having means for clamping the devices to a suitable support, and springs between the devices and the chute tending to throw the chute into an elevated position when the other end thereof is free to move.

In testimony whereof I affix my signature.

CARL D. HEYER.