Jan. 17, 1967 D. R. PFALSER ET AL 3,298,544

GRAIN ELEVATOR SPOUT HOLDER

Filed Feb. 3, 1965 2 Sheets-Sheet 1

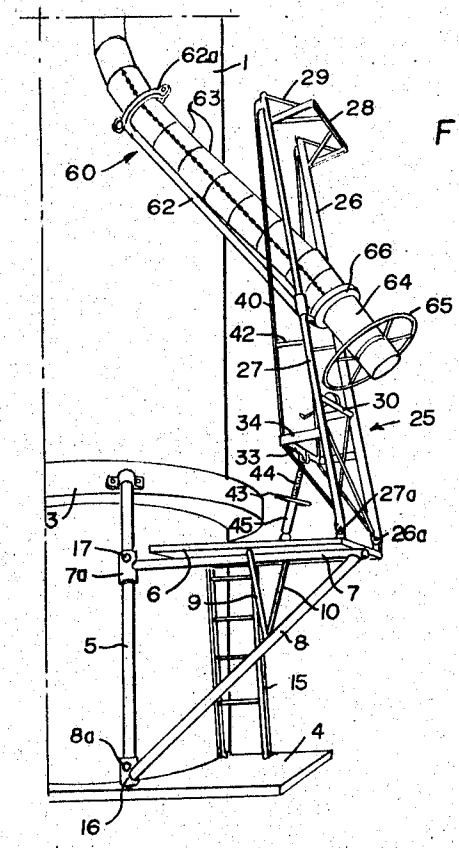


Fig. 1

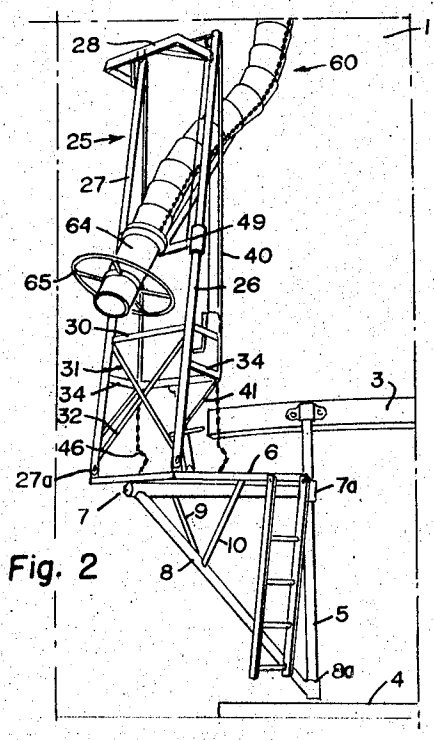


Fig. 2

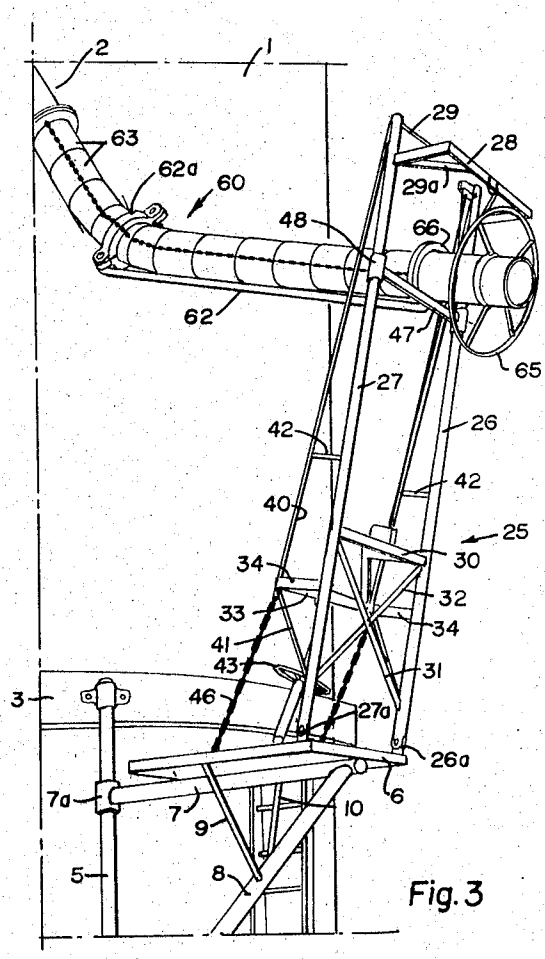


Fig. 3

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GRAIN ELEVATOR SPOUT HOLDER

Filed Feb. 3, 1965 2 Sheets-Sheet 2

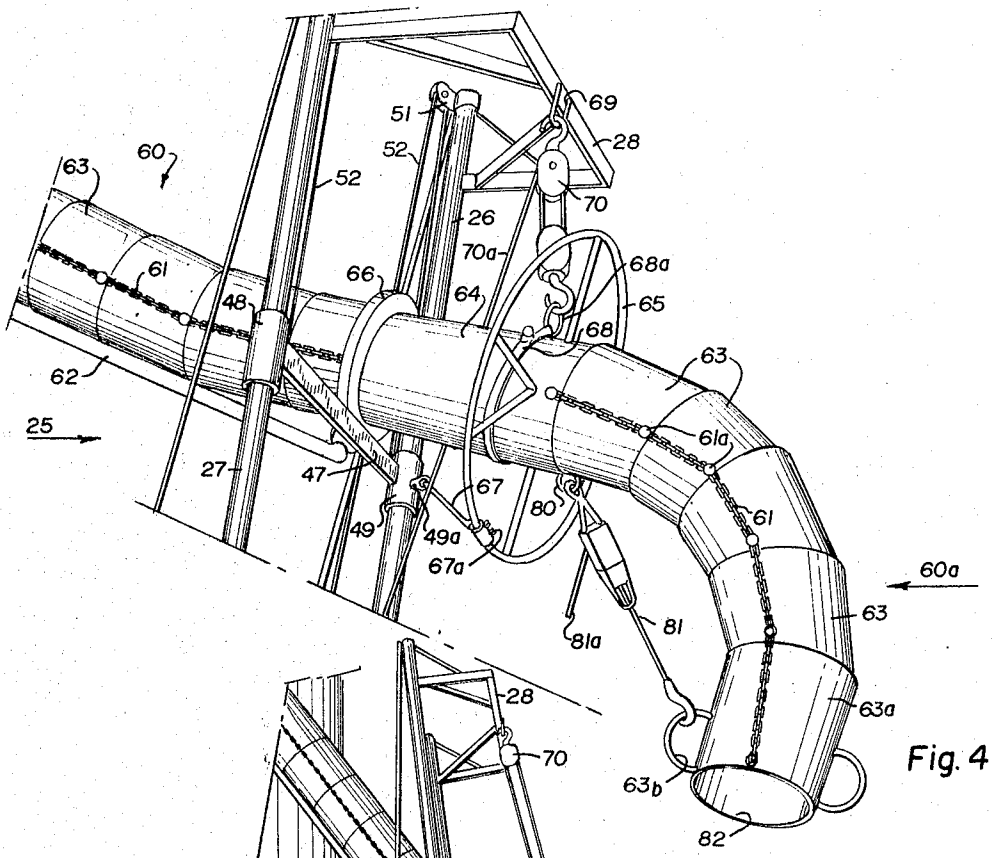


Fig. 4

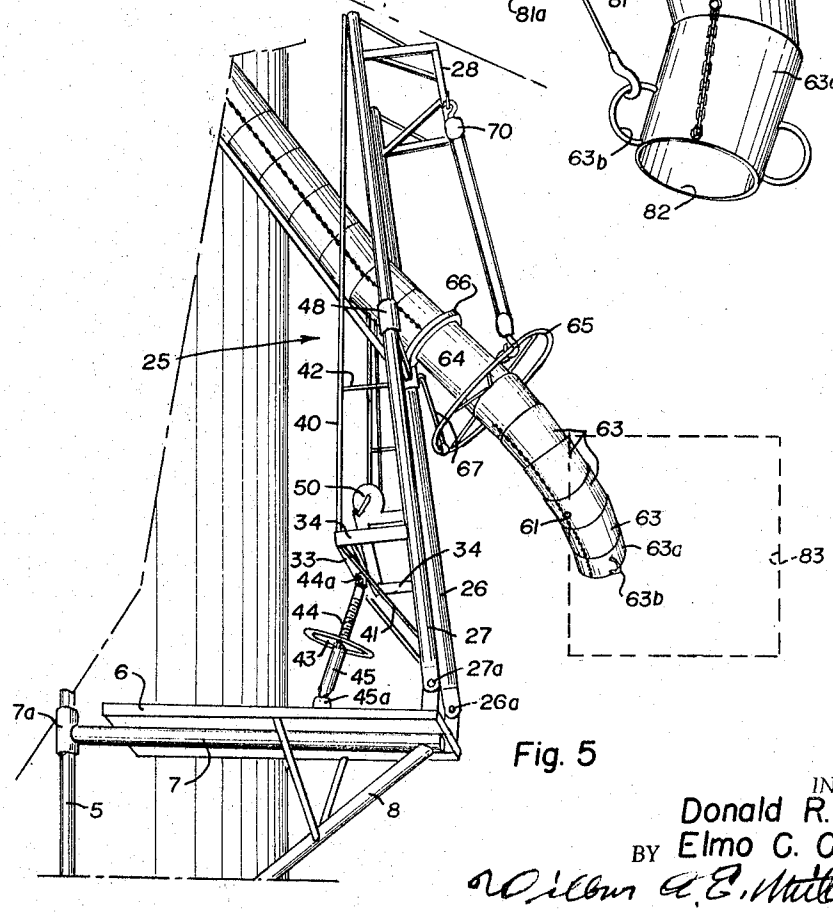


Fig. 5

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GRAIN ELEVATOR SPOUT HOLDER

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9 Claims. (Cl. 214—17)

This invention relates to grain elevators and storage bins, and more particularly to the flexible type spout or gravity delivery chute extending from an uppermost portion thereof for delivering the grain thereof into a receptacle, such as a railroad car.

Grain is usually transported by railroad car, after being loaded from an elevator or storage bin. Such cars are of different types and are sometimes of gondola design, having one or more entrances or trap doors near the top of the car and into which the end of the grain chute or the spout is inserted for delivery of the grain. The grain delivery spout is inserted into that car door opening, and usually there is no way of holding the spout at that opening, and during the grain delivery the force of the grain through the spout often acts to move the end of the spout out of alignment with the opening and the grain is spilled. Another type of railroad car commonly used for transporting grain is the ordinary box car having one large side door, and to be able to use such a car the opening of that door is partially closed with planks on the inside of the car, which is known as coopering. In the latter type of railroad car a greater problem presents itself as to how to successfully load that car with a flexible gravity feed grain spout and gravity feed of the grain into the car and the length of the car on each side of that door opening. In each of the types of railroad cars mentioned it has been found necessary to have the delivery end of that flexible grain spout conform to a crescent shape before use to load a car and so as to guide the gravity projected grain therefrom at the desired angle and distance for efficient loading of the car via the car door. Further, it has been found advisable to have that delivery end of the spout adapted as rotatable thereof also on the longitudinal axis of the discharge end of the spout so as to be able to adjustably hold itself in any adjustment of such crescent angle and of the elevation or lowering thereof and of the radial rotational setting thereof with relation to the longitudinal axis of the main spout, and without requiring any outside support from the car.

It is therefore a principal object of our invention to provide a substantially flexible gravity feed grain spout for an elevator with the lower end thereof adjustably held for elevational positioning thereof and also mounted by a horizontal pivotal means carrying the elevational means and whereby it is also adapted to be horizontally adjustably pivotally moved outwardly from the building and held in any horizontal positioning thereof.

Another principal object of our invention is the provision of a telescoping substantially flexible grain spout for an elevator pivotally held by novel horizontal and vertical pivotally adjustable holding means, and also having the delivery end of the spout completely rotatably adjustable on the longitudinal axis of the spout and means carried by said holding means for adjustably holding said end of the spout in any rotational adjustment thereof.

Another object of our invention is the provision of the delivery end of our spout being flexible and adapted to be adjustably held in any crescent arc extension and positioning thereof.

Another object of our invention is the provision of a novel rockable pivoted vertical yoke frame means, carried by our novel horizontal pivotally adjustable holding means, having vertical adjustable means thereon adapted to receive and hold a grain spout therein and thereby.

Other objects of our invention will be apparent to those skilled in the art from the following detailed description thereof and from the drawings, in which:

FIGURE 1 is a partial elevational view of the exterior of a grain elevator having silos **1** and **2**, and illustrating our novel spout holder for the gravity feed spout **60** therefrom;

FIGURE 2 is similar to FIGURE 1, but illustrates the horizontal pivotal positioning of the grain spout by our novel horizontal pivotally adjustable holder when not in use;

FIGURE 3 is an enlarged view, similar to FIGURE 1, illustrative of the vertical outward swinging of our novel pivoted yoke member **25** by screw-jack **43**, and at the same time illustrates the raising of the delivery end of the spout in that yoke by winch **50** and bar **47**;

FIGURE 4 is an enlarged partial fragmentary view of the upper end of our novel yoke member **25** and of the outer delivery end of the grain spout, **60**, in complete assembly of that delivery end and ready for grain delivery downwardly such as into the upper trap door of a gondola box car; and

FIGURE 5 is another partial fragmentary view of the positioning of the delivery end of the grain spout, by our novel horizontal vertical rockable adjustable holding means, and illustrates the positioning thereof into the side door of a box car, **82**, with the dotted lines indicating the vertical cross-section of such a car.

Throughout the drawings like parts have been given like reference characters.

A grain storage bin is usually a connected series of tall round cement so-called silos, built in close proximity to a railroad siding for gravity delivering the grain from an upper portion thereof down through a grain spout into a railroad car on the siding. The grain spout, indicated generally as **60**, is of conventional construction most of its length from the upper portion of the elevator down to cross-arm **47**, of our novel vertical yoke holding means indicated as **25**. That conventional construction consists of individual so-called telescoping buckets or sections. Each of the sections are about a foot long and telescope one into and in prolongation of another, and each has an outer peripheral diametrically opposed pair of pegs, and the pegs of the sections of the spout, **60**, are aligned and held by a chain, in conventional manner. There are a pair of the chains in diametrically opposing relationship extending longitudinally externally of the spout from peg to peg of the sections, thereby making the spout into a flexible snake-like tube. Heretofore the outer or delivery end, **60***a*, thereof has simply ended in a straight end section. We have perfected that delivery end section, but we will first explain our novel holder for the entire delivery chute or spout.

Usually there is a reinforced cornice-like projection **3** around grain elevators, about 6 to 8 feet above the ground, and such is a horizontal projection affixed to the building. To that cornice projection **3** substantially in alignment below the uppermost attachment of the gravity grain delivery spout **60** to the elevator building, we securely fasten a rigid vertical pipe **5** also firmly setting that pipe in a concrete platform **4** on the ground. We have developed a novel horizontally swingable pivot platform **6** to carry our novel reverse-pendulum rockable yoke holder **25** for the spout, and which we pivot in a conventional manner to said vertical pipe **5**. We provide a rigid frame member **7** extending from a bearing member **7***a* rotatably mounted on the pipe **5**, and an angular supporting member **8**, for platform **6**, at its lower end **8***a*, being formed into a bearing member rotatably carried on the pipe **5**. That platform frame has angular braces **9** and **10**. We provide a conventional manually operable locking mechanism, indicated as **16** and **17**, for locking

a horizontal pivotal adjustment of the platform 6 on the vertical member 5, such as by having a manually removable bolt to extend through aligned openings in an outer journal member 7*a* or 8*a*, and the inner post 5 to hold the horizontal platform 6 in any rotational positioning on pipe 5.

We provide a novel reverse-pendulum rockable yoke, indicated as 25, by which we adjustably hold the grain spout, consisting of a pair of vertically positioned aligned upright pivot posts 26 and 27, each having their lower ends pivoted at 26*a* and 27*a*, respectively, to a suitable bearing adjacent the outer edge of and onto the horizontally pivotal platform 6. To strengthen that vertical yoke framework, we join their upper ends together by a rigid U-shaped horizontal frame member 28 and angular supporting braces 29 and 29*a*, as illustrated, and provide a rigid cross-brace 30 therebetween across the lower portion thereof, and a suitable X-frame rigid supporting arms 31 and 32 between the vertical uprights, as by each being welded together. To further support the vertical upright posts 26 and 27 we provide a right angular extension rigid member 34 from each adjacent its lower portion, and we connect the outer ends thereof by a cross-bar 33 rigidly secured thereto as illustrated. Suitable bridging members 40 and 41 extend from the upper and lower proximities of each upright post 26 and 27, and are joined together at the extremity of the cross-brace 34 of a post, as illustrated. A further supporting brace 42 is provided on each upright 26 and 27 at a point substantially midway between 34 and the end of each. It will be observed that our novel vertical yoke supporting member 25, just explained, is adapted to reverse pendulum-like pivotally rock outwardly from the elevator, as illustrated in FIGURE 3, and inwardly back toward the elevator, as illustrated in FIGURE 5, and we accomplish such pivotal rocking adjustment and holding by a conventional screw-jack, indicated as 43. We have illustrated the screw-jack in FIGURE 5, having a hollow internally threaded pipe portion 45 having a wheel 43 integral therewith, and having a lower knob portion pivotally held in a conventional socket member 45*a* affixed on the upper central portion of the platform 6. An externally threaded rod portion 44 of a size to rotatably fit within the pipe 45, and with matching screw threads, is adapted to be screw-threaded into the pipe 45 upon a turning of the latter by the wheel 43. The upper extremity 44*a* of the rod 44 is likewise conventionally formed into a knob portion and is pivotally held in a suitable pivot socket secured to the underside of the cross-bar 33. The conventional screw-jack 43, just explained, acts as adjustable means for rocking the vertical yoke 25 on pivots 26*a* and 27*a*, by adjustably varying the distance between 44*a* and 45*a*, as its construction, on a turning of the jack wheel, will either spread or pull together those pivot points. Safety chains, 46, are provided to assure that the outer pivotal rocking of the vertical yoke 25 does not cause it to accidentally separate the parts of the operable screw-jack, just explained. It will be seen that upon a turning of the wheel, 43, to thereby cause the pipe 45 internal threads to mesh on the external threads of the rod 44, to cause that rod to move into the pipe 45 of the screw-jack 43, that the pivot socket points 45*a* and 44*a* of the horizontal platform 6 and the yoke 25 will be thereby moved towards each other. The vertical yoke, 25, will thereby and thereupon be pivoted on 26*a* and 27*a* or rocked towards the elevator building, 1 and 2, substantially as illustrated in FIGURES 1 and 5, illustrative of such ultimate positioning of that vertical yoke. A reverse movement of the wheel 43 than that just explained will be understood to cause the pivot sockets 44*a* and 45*a* to be separated, by the screw-jack forcing the vertical yoke 25 to rock or pivot outwardly from the elevator, as ultimately substantially shown in FIGURE 3. Screw-jack means, 43, 44, 44*a*, 45 and 45*a*, acts like a conventional double acting hydraulic ram means, during operation, for effecting and holding any rocking position of 25 on its pivot points 26*a* and 27*a*. It will be noticed that we secure the grain spout 60 for vertical sliding in and between the vertical posts 26 and 27, of the vertical yoke 25, by affixing same to a slidable I-shaped cross-bar, 47, mounted slidably by portions 48 and 49 thereof, over the vertical posts 27 and 26, respectively. A suitable collar, 66, is provided around the section 64 of the spout, and is affixed to the cross-bar 47, and as will be further explained. It will be noted that we hold several sections of the flexible spout 60, between the silo and the yoke 25, together or substantially against a flexing of sections thereof by a suitable rigid bar 62 clamped thereon, as by securing that bar by a clamp, 62*a*, at its building proximity portion, and at the outer end of 62 the bar is secured to the central peripheral clamp, 66, which in turn is secured to the vertically slidable cross-bar 47 on the upright posts. However, it is to be understood that there is considerable flexibility of the spout 60 between 62*a* and the buildings, 1 and 2, and the chains permit the spout sections to turn slightly radially as to each other. The downwardly extending telescoping sections 63 of the main spout extend into and are held by said peripheral collar 66.

It will be observed that an outward and inward up-side-down pendulum-like adjustable positioning or rocking of the vertical yoke 25, previously explained, may be accomplished, as explained, by the screw-jack 43, without any alteration or adjustment longitudinally of the grain spout 60, in its affixation thereof just explained by the collar 66 at the cross-bar 47, as the entire over-all length of the spout from the grain elevator to that collar is sufficiently flexible whereby to adjust itself in that rocking movement of the vertical yoke 25 on its pivots 26*a* and 27*a*. The purpose of that vertical rocking of the yoke 25 outwardly of the elevator silos 1 and 2 will be understood as being to accommodate an extension movement of the delivery end 60*a* thereof out over the receiving receptacle for the grain, such as over a box car, when needed.

As mentioned, we extend the flexible sectional chain held spout 60 downwardly beyond the cross-bar, 47, of the yoke, by a straight tubular elongated section 64. The spout section 64 is conventionally rotatably held within the interior of a peripheral collar angle-iron-like bearing member, 65, so that the section 64 hangs therein and thereon. The upper sectional spout 60 is telescopically inserted within the upper end of 64 and held to 66 by the chain 61, as previously explained. Section 64 is adapted to freely rotate within said collar 66 and adjacent the opposite end of the section 64, from said collar 66 end, we secure a radial peripheral wheel, 65, extending as a rigid part of 64 and therefrom. We mount several flexible bucket telescoping spout sections, 63, in prolongation of the longitudinal axis of the section 64, to extend downwardly of the entire spout, or to the right as illustrated in FIGURE 4, and which sections, 63, are constructed and flexibly held together as previously explained with relation to such identical sections 63 of the upper part of the grain spout 60 extending downwardly immediately from the elevator, but without any rigid member 62. It will be understood that these last mentioned sections, extending downwardly beyond the wheel 65, while flexible telescopically, are, nevertheless, held together from rotating with relation to each other and against rotating with relation to the section 64, by their outer lugs, 61*a*, being held together by their chains 61, and which chains extend and are secured from lug to lug of each section and from section 64, as illustrated. To hold the outer or discharge end of the entire spout, 60, indicated generally as 60*a*, into a bent or arc adjustment positioning thereof, with relation to the longitudinal axis of the section 64, and which discharge end may be flexibly moved into any arc thereof as may be desired, we provide an adjustable means to hold any such arc adjustment during use. The extreme discharge section,

63*a*, will be noted to have outer peripheral handles, 63*b*. At the outer or downward end of section 64 we provide a loop or eyelet portion, 80, integral therewith, and we mount a conventional pulley member 81 between one of the handles, 63*b*, of the discharge end and said eyelet, 80, for the purpose of thereby adjustably holding the longitudinal arc formation adjustment of said spout discharge end, 60*a*, just explained. It will be understood that the spout 60*a*, shown in FIGURES 4 and 5, is used on the end of section 64 of FIGURES 1, 2 and 3. It will be seen that as the spout section 64 and its wheel 65 and discharge end of the spout 60*a* with its pulley, 81, all as one rigid unit, and in any arc adjustment of the end 60*a* permitted by releasing or contracting the pulley 81, all as a composite rigid unit, may be revolved freely and rotatably on the longitudinal axis of the section 64 in and on the collar 66 of the cross-bar 47, and as supported in collar 68. In use we manually turn the wheel 65 to accomplish such rotational adjustment of 64–65–60*a*–81, so as to have the discharge port 82 at any radial angle in relation to the longitudinal central axis of the section 64 as may be desired or needed, such as in loading a gondola box car, or in loading through the side door of a conventional box car. It will be seen that upon any such radial setting of the spout end 60*a*, that it should be removably held against rotation during discharge use. To accomplish such a setting holding, we provide an eyelet fixedly on the surface on the one slide member, 49*a* of 47, and we pivotally secure and extend a rigid setting bar, 67, thereto. Bar 67 has a clamp 67*a* at its outer end and which clamp is conventionally adapted to be removably secured, by suitable set-screws onto the periphery of the wheel 65, as shown in FIGURE 4; upon any rotation of that wheel, to hold 64, 65, 60*a* and 81 to 49 and thereby against rotation on the axis of 64 once 67*a* is clamped onto 65. During use the weight of the grain being discharged through the entire spout is quite substantial, and, as a result, we provide a weight carrying means to assure that such weight does not damage our novel spout discharge end 64–60*a*. Such is accomplished by having a rotatable peripheral journal collar, 68, around the exterior of the section 64, adjacent to the wheel 65, and it is provided with an outstanding eyelet projection 68*a*. We mount a conventional rope-pulley 70 between that eyelet 68*a* of the collar 68, on the one hand, and a loop extension 69, provided at the center of the U-shaped reinforcing bar 28 across the top of the upright posts 26 and 27, on the other hand. The purpose of the pulley is to be adjusted to support the discharge end, 64–60*a*, of the spout to carry the weight of the grain therein during grain discharge, by the operator affecting a setting of the conventional pulley 70 so that the section 64 is substantially in longitudinal prolongation positioning, as normally carried by the collar 66, and of the portion of the spout 60, adjacent and as held by the supporting bar 62, as illustrated in FIGURES 4 and 5, upon any vertical adjustment positioning of the cross-bar 47 in the upright yoke posts 26 and 27. It will be understood that the pulley 70 is manually operable to have its overall length substantially set to assist in supporting the discharge end before the commencement of grain discharge, and in any such vertical adjustment of the spout on the bar 47 and within the yoke 26–27, and as will be further explained.

It will be observed that one of the novel features of our invention is the provision of the vertical or up-side-down pendulum rockable yoke means, 26–27–28, constructed and operable as previously explained, and between the uprights 26 and 27 of which, as explained, we extend and secure the spout 60–60*a* by the collar 66 onto the vertical slidable cross-bar 47 and that we slidably adjustably raise or lower that cross-bar 47 by its slidable collar ends 48 and 47 onto said upright. We adjustably slide the horizontal bar, 47, upwardly and downwardly upon the upright posts 26 and 27 as a means for raising and lowering the entire spout, 60'–64'–60*a*, and at the same time supporting same on that bar 47, and we provide for a manual setting thereof in any desired vertical positioning of the spout. We accomplish such raising or lowering and holding of the solid cross-bar 47 on said upright posts 26 and 27 by a conventional hand-winch, 50, which we mount on one of the braces, 34, of the yoke unit. The winch, 50, has a conventional hand crank operable drum and a manually releasable latch means and a pulley rope over that drum and extending upwardly in a conventional manner, as will be understood though not fully illustrated, to have that rope as a loop extend upwardly from the drum, to the cross-bar, 47, where suitable pulley wheels are provided. The rope extends through and over said pulley wheels to upper pulley wheels 51 at the top of each upright post, 26 and 27, said pulley loop being illustrated as 52, and so that, upon a turning of the crank of the winch in one direction, said pulley rope will effect a horizontal raising of the cross-bar 47 by its ends 48 and 49 sliding on the posts 26 and 27, and upon permitting a turning of said winch crank in the other direction said pulley rope will permit the weight of the spout on the cross-bar 47 to slidably lower that cross-bar on the posts. It will be seen that the winch-rope just explained provides the means for accomplishing any desired positioning vertically of that cross-bar 47, with relation to and slidably on the posts 26 and 27, and further, so that, upon a conventional setting of the latch-dog-holding of the winch drum, against rotation, by the operator, that said rope and winch will then hold said cross-bar 47 in any vertical position thereof on said upright posts 26 and 27, for any desired vertical position of the discharge end 60*a* and its port 82 of the grain spout held by and on said yoke member 25. It will be noted that both the horizontally pivotally movable platform 6, on which the yoke 25 is pivotally mounted, as well as that pivotally rockable yoke, provide the means for assisting and effecting the horizontal positioning of that discharge end 82 of the spout, away from and toward the silo buildings, as illustrated in FIGURES 3 and 2, respectively.

Many changes and modifications may be made within the teaching of the preferred embodiment of our invention herein shown, and described, and therefore we wish to be bound only within the scope of the hereunto appended claims.

What we claim and desire to secure by Letters Patent is:

1. In a grain elevator spout holder, the combination with a storage silo having a substantially flexible gravity delivery spout extending from an uppermost outlet portion thereof, of a horizontally pivotal spout-supporting platform pivotally mounted on and for horizontal movement in close proximity to the silo and substantially below said upper outlet portion and adapted upon a certain horizontal pivoting thereof to extend horizontally outwardly from the silo and upon another horizontal pivoting thereof to extend in close proximity to the silo, pivot means carried by said silo for effecting said horizontal pivotal mounting of the platform, locking means carried by said platform pivot means for effectively locking it in any such horizontal pivotal positioning thereof on its pivot means, a vertically extending rockable yoke spout holding means pivotally mounted on and carried by said horizontal pivotal platform and adapted for rocking thereof on a horizontal axis on said platform and further adapted for vertically adjustably carrying of said spout thereby, means carried by said platform for effecting said pivotal mounting of said rockable yoke holding means thereon, operable ram-acting power means carried by and extending between each of said horizontal platform and said rockable yoke means for effecting a pivotal rocking of the yoke means on the horizontal platform and also for effecting a holding thereof in any rocking position thereof thereon, operable winch and pulley means carried by said yoke means for effecting a vertical adjustable posi-

tioning of the spout thereon and with relation thereto and also for effecting a releasable holding of any such vertical positioning thereof thereon, the portion of the flexible spout adjacent its delivery end being carried by said yoke means by a freely rotatable collar means carried by the yoke means for adapting said delivery end of the spout for free rotational positioning with relation to the longitudinal axis of the main portion of the spout, manually operable and releasable locking means carried by the yoke means and adapted to extend to the delivery end of the spout and to be removably secured thereto in any such rotational positioning of said delivery end of the spout for holding the delivery end in any such rotational positioning thereof, said delivery end of the spout being adapted to be flexed longitudinally thereof into an arc with relation to the longitudinal axis of the main portion of the spout, and pulley operable releasable and holding means carried by the delivery end of the spout at two points thereof for releasably holding any such arc adjustment positioning thereof with relation to the longitudinal axis of the main portion of the spout during use thereof.

2. The combination with a silo having a substantially flexible gravity spout extending therefrom as defined in claim 1 characterized further by the definition of the means for effecting a horizontal pivoting of the platform and the means for effecting a rocking of the yoke means and means for effecting a vertical positioning of the spout on the vertical yoke means and the means for effecting a freely rotatable holding of the delivery end of the spout, each being operable independently of the other.

3. In a grain elevator spout holder, the combination with a storage silo having a substantially flexible gravity delivery spout extending from an upper outlet portion thereof, of a horizontally pivotal platform adapted to carry said spout and pivotally mounted on and for horizontal movement in close proximity to the silo and substantially below said upper positioning outlet and adapted upon a certain horizontal pivoting thereof to extend into a position outwardly from the silo and upon another horizontal positioning thereof to extend into a position in close proximity to the silo, means carried by said silo for effecting said horizontal pivotal mounting of the horizontal platform, carrying means on the platform for carrying the delivery end of said spout thereon, and means carried by said horizontal platform for releasably locking it in any such horizontal pivotal positioning thereof on said pivot means.

4. In a grain elevator spout holder, the combination with a storage silo having a substantially flexible gravity delivery spout extending from an upper outlet portion thereof, of a horizontally pivotal platform adapted to carry said spout and pivotally mounted for horizontal movement on and in close proximity to the silo and substantially below said upper positioning outlet and adapted upon a certain horizontal pivoting thereof to extend into a position outwardly from the silo and upon another horizontal positioning thereof to extend into a position in close proximity to the silo, means carried by said silo for effecting said horizontal pivotal mounting of the horizontal platform, carrying means on the platform for carrying the delivery end of said spout thereon, means carried by said horizontal platform for releasably locking it in any such horizontal pivotal positioning thereof on said pivot mounting means, the portion of the flexible spout adjacent its delivery end being so held by said carrying means by a freely rotatable collar means carried by the carrying means for adapting said delivery end of the spout for free rotational positioning with relation to the longitudinal axis of the main portion of the spout, manually operable locking means carried by the carrying means and adapted to extend to the delivery end of the spout and to be removably secured thereto in any such rotational positioning of said delivery end of the spout to hold the delivery end in any rotational positioning thereof, said delivery end of the spout being adapted to be flexed into a longitudinal arc extension thereof from and with relation to the longitudinal axis of the main portion of the spout, and operable pulley holding means carried by the delivery end of the spout at two points thereon for releasably holding any such arc adjustment positioning thereof with relation to the longitudinal axis of the main portion of the spout during use thereof.

5. In a grain elevator spout holder, the combination with a storage silo having a substantially flexible gravity delivery spout extending from an upper outlet portion of the silo, of a horizontally pivotal spout supporting platform pivotally mounted adjacent and on and for horizontal movement in close proximity to the silo and substantially below said upper outlet portion and adapted upon a certain horizontal pivoting thereof to extend outwardly from the silo and upon another horizontal positioning thereof to extend inwardly toward and in close proximity to the silo, means adjacent the silo for effecting said horizontal pivotal mounting of the horizontal platform, operable means carried by said horizontal platform for releasably locking it in any such horizontal pivotal positioning thereof on said pivot means, a vertically extending rockable on a horizontal axis yoke spout supporting means pivotally mounted on and carried by said horizontal pivotal platform and being adapted to adjustably vertically carry said spout thereon, means carried by said horizontal platform for effecting said pivotal mounting of said rockable yoke carrying means thereon, double acting operable power means carried by and between each of said horizontal platform and said rockable yoke means and pivotally extending therebetween for effecting a pivotal rocking of the yoke means on the horizontal platform and also for effecting thereon a holding thereof in any rocking position thereof, and operable means carried by said yoke means for effecting a vertical positioning and holding of the spout thereon.

6. In a grain elevator spout holder, the combination with a storage silo having an outside adjacent delivery platform and having a substantially flexible gravity delivery spout extending from an upper outlet portion thereof, of a vertically extending rockable yoke spout holding means pivotally mounted on the platform below said upper outlet portion and adjacent the silo and adapted for rocking on a horizontal axis on said platform and to adjustably vertically carry said spout thereon, means carried by said horizontal platform for effecting said pivotal mounting of said rockable yoke holding means thereon, double acting power means carried by each of and extending between said horizontal platform and said rockable yoke means for effecting a pivotal rocking of the yoke means on the horizontal platform and also for effecting a holding thereof in any rocking position thereof, and operable winch and pulley means carried by said yoke means for effecting a vertical positioning and holding of the spout thereon and with relation thereto.

7. In a grain elevator spout holder, the combination with a storage silo having a substantially flexible gravity delivery spout extending from an upper outlet portion of the silo, of operable adjustable support elevation means adjacent the silo, the portion of the flexible spout adjacent its delivery end being held by the elevation means, said delivery end of the spout being freely rotatable in the elevation means for adapting said delivery end of the spout for free radial rotational positioning with relation to the longitudinal axis of the main portion of the spout, manually operable releasable locking means carried by the elevational means and adapted to extend to the delivery end of the spout and to be removably secured thereto in any said radial rotational positioning of said delivery end of the spout and to hold the delivery end in any rotational radial positioning thereof, said delivery end of the spout being adapted to be flexed into any longitudinal arc extension thereof from the longitudinal axis of the main portion of the spout, and operable pulley holding means carried by the delivery end of the spout

at two points thereon for releasably holding any such longitudinal arc extension positioning thereof during use thereof.

8. In a grain elevator spout holder, the combination with a storage silo having a substantially flexible gravity delivery spout extending from an upper outlet portion of the silo, and a platform adjacent the silo, of a vertically extending rockable yoke spout holding means pivotally mounted on and carried by the platform adjacent to the silo and adapted for rocking thereof on said platform and adapted for vertically and adjustably carrying said spout thereon, means carried by said platform for effecting said pivotal mounting of said rockable yoke spout holding means thereon, means on and pivotally extending between the platform and the pivotal yoke means for effecting a pivotal rocking of the yoke means on the platform and also for effecting a holding thereof in any pendulum-like rockable positioning thereof, operable elevating means carried by said yoke means for effecting a vertical positioning of the spout thereon and with relation thereto and also for effecting a holding of any vertical positioning thereof thereon, the portion of the flexible spout adjacent its delivery end being so held by said yoke means and adapted for free radial rotation of the delivery end of the spout, manually operable locking means carried by the yoke means and adapted to extend to the delivery end of the spout and to be releasably secured thereto in any said radial rotational positioning of said delivery end of the spout to hold the delivery end in any such rotational positioning thereof, said delivery end of the spout being also adapted to be flexed into any arc extension thereof with relation to the longitudinal axis of the main portion of the spout, and operably pulley holding means carried by the delivery end of the spout at two points thereof for releasably holding any such arc adjustment positioning thereof with relation to the longitudinal axis of the main portion of the spout during use thereof.

9. In combination, a grain storage silo, a downwardly extending gravity delivery flexible spout extending from an upper outlet position thereof, a horizontally pivotally movable platform pivotally secured adjacent to the silo below said outlet point, means for so pivotally securing said platform adjacent to the silo, a rockable yoke rockably movable on a horizontal axis on and carried by said platform, means for so rockably mounting the yoke on the platform, said yoke being adapted to support the spout adjacent the spout's discharge end, power means carried by the platform and extending between it and the yoke for effecting a rocking movement of the yoke on its horizontal axis and a holding of the yoke in any rocking position on its axis, said platform being adapted to be horizontally pivotally movable into and out of close proximity relationship to the silo, said horizontally movable platform and its said pivotally rockable yoke together comprising the means for effecting horizontal positioning of the discharge end of the spout from and with relation to the silo.

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