A. J. HARTLEY.

ADJUSTABLE SPOUT OR CONVEYER.

APPLICATION FILED MAR. 16, 1911.

1,033,316.

Patented July 23, 1912.

Fig. 1.

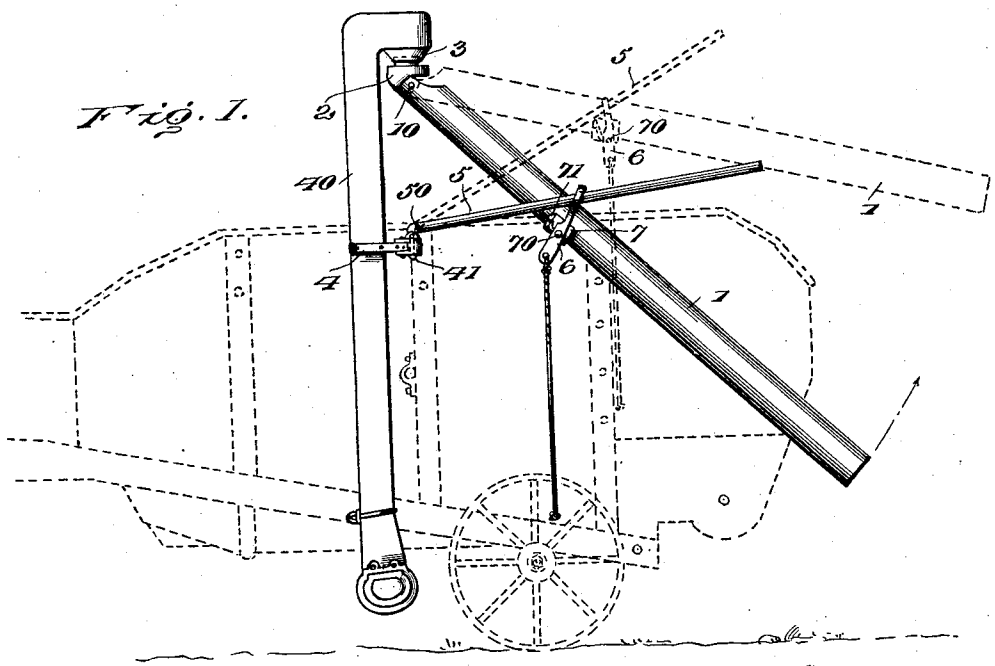


Fig. 2.

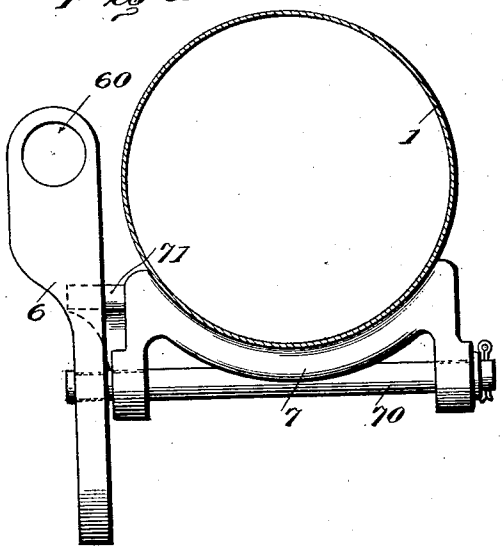
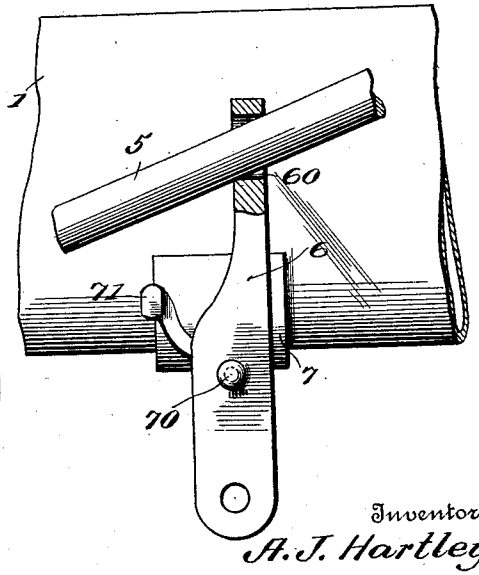


Fig. 3.



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UNITED STATES PATENT OFFICE.

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ADJUSTABLE SPOUT OR CONVEYER.

1,033,316. Specification of Letters Patent. Patented July 23, 1912.

Application filed March 16, 1911. Serial No. 614,941.

To all whom it may concern:

Be it known that I, ARTHUR J. HARTLEY, a citizen of the United States, residing at Decatur, in the county of Macon and State of Illinois, have invented certain new and useful Improvements in Adjustable Spouts or Conveyers, of which the following is a specification.

This invention relates to certain improvements in and relating to adjustable spouts and the like; and the objects and nature of the invention will be readily understood by those skilled in the art in the light of the following explanation of the accompanying drawings illustrating what I now consider to be my preferred embodiment from among other formations and arrangements within the spirit and scope of my invention.

An object of the invention is to provide improved means for supporting swinging spouts and the like in various positions and adjustments and whereby such spouts can be manipulated in adjusting the same by an operator located at any desired point below the spout.

A further object of the invention is to provide certain improvements in arrangements and construction of parts and elements for the production of a highly efficient and advantageous spout adjustment and support.

The invention consists in certain novel features in construction and in arrangements and combinations of parts as more fully and particularly pointed out hereinafter.

Referring to the accompanying drawings;—Figure 1, is an elevation showing a swinging spout provided with the adjusting and supporting means of my invention, dotted lines indicating the positions of the parts in a different adjustment from that indicated by full lines. Fig. 2, is a detail elevation, with the locking lever shown partially in section. Fig. 3, is an end view of the spout.

In the drawings, 1, is any suitable vertically and laterally swingable spout or conveyer, at its receiving end hung to swing vertically on horizontal pivot 10, by which the spout is pivotally joined to and supported by rotatory hollow connecting or coupling member or sleeve 2, supported by and hung from the hopper 3, or other suitable source of supply, and forming a downward continuation thereof to deliver grain or other suitable material, therefrom into the receiving end of the spout. The coupling member 2, is hung from the hopper in any suitable manner so as to be free to rotate independently thereof about a vertical axis. In the specific example illustrated, I show the coupling member loosely encircling and rotatable on and upheld by an annular flange at the base of the hopper.

At a suitable distance below the hopper 3, a bracket 4, is fixed to any suitable support or element 40, and an eye bolt 41, is mounted in this bracket to rotate about a vertical axis in the line of or coincident with the vertical axis on which the spout is swingable laterally, that is, the vertical axis on which the coupling member 2, is rotatable.

A straight elongated vertically and laterally-swingable spout-supporting brace or rod 5, is at one end supported by said bolt and is pivotally joined thereto to swing vertically thereon on horizontal pivot 50. This rod 5, extends outwardly beside the spout and is adjustably joined thereto at a point between the receiving and delivery ends of the spout and is designed to uphold the spout with its delivery end at any desired elevation. The rod swings laterally or horizontally with the spout and supports the spout whatever its position within its range of lateral or horizontal swing. The spout is provided with a suitable lock or clutch engaging the rod and normally locking the spout and rod together against independent and joint vertical swing, whereby the rod sustains the free end of the spout at the desired elevation. This lock or clutch is so arranged as to be capable of release to permit vertical swing of the spout and rod during which adjustment or movement, the clutch or lock moves longitudinally of the rod, either outwardly or inwardly thereon according to whether the spout and rod are being elevated or depressed.

In the specific example illustrated, the lock consists of an upright lever 6, carried by the spout and mounted to swing about a horizontal fulcrum, one end of the lever being formed with an enlarged transverse opening 60, receiving the supporting rod, and through which the rod is free to longitudinally slide when the longitudinal axis of the opening is in alinement with the axis of the rod or when the lever is in a position approximately at right angles to the length

of the supporting rod. The opening is so arranged and proportioned with respect to the rod that when the lever and rod are relatively tilted to throw the longitudinal axis of the opening out of alinement or parallelism with the longitudinal axis of the rod, the lever will form a friction lock or clutch tightly gripping the rod and locking the lever and rod together against independent longitudinal movement.

7, is a saddle or bracket fixed to and transversely of the underside of the spout and carrying a transverse or horizontal rock shaft 70, to the projecting outer end of which the lever 6, is fixed at a point intermediate its ends so that this shaft forms the horizontal fulcrum of the lever. The upper end of the lever formed with the opening 60, receiving the supporting rod 5, is arranged beside and spaced a distance from the spout. The depending free end of the lever is provided with a flexible depending pull connection 61, of a suitable length so as to be accessible to an operator located below the spout, and whereby the lever can be swung or jerked from locked position and then held in unlocked position while the spout is raised or lowered to the desired elevation.

71, is a stop carried by the saddle to engage the lever and limit opening or releasing swing thereof. When the spout has been moved by hand, either up or down, to the desired elevation, the pull or releasing connection is released, and the tendency of the spout to drop and slide the lever inwardly on the supporting rod, will immediately tilt said lever into gripping position tightly locking the lever and rod together and upholding the spout.

The device of this invention is peculiarly applicable to threshng machine spouts where delivery of grain is to be made to wagons, bins, bags and the like, differing considerably in elevation and lateral or horizontal location, and in this connection attention is directed to the fact that I herein employ the term "spout" in a generic sense to include conveyers and the like.

The device described is simple and durable in construction and accurate and reliable in action, the desired result being attained through the employment of a minimum number of parts.

It is evident that various changes and modifications might be resorted to without departing from the spirit and scope of my invention and hence I do not wish to limit myself to the exact disclosure hereof.

Desiring to protect my invention in the broadest manner legally possible, what I claim is;—

1. A vertically swingable spout provided with a friction clutch member arranged at an intermediate portion of the spout and fulcrumed thereto to swing vertically on a relatively fixed transverse axis, a support, a brace rod pivotally coupled to said support with its free end swingable vertically with said spout and arranged to uphold the free end of the spout at the desired elevation through the medium of said clutch member whereby the free end of said rod is coupled to said spout, said swingable clutch member having a transverse opening receiving said rod and whereby said member is freely movable on and longitudinally of said rod when said member is held in inoperative position with respect to said rod, means for holding said member in said inoperative position, said member having a limited swinging movement independently of said rod to frictionally lock the rod and member together and in spout supporting position.

2. In combination, a support, a spout pivotally mounted to swing vertically, a bracket fixed to said spout and provided with and carrying a vertically swingable friction clutch member arranged beside the spout, and a brace rod pivotally mounted to swing vertically and having its free end arranged beside said spout and extending transversely through said member, said member when in inoperative position being freely slidable on and longitudinally of said rod as the spout is swung vertically, said member having a limited swinging movement independent of said rod to and from friction gripping position with respect thereto, said member formed to grip said rod against movement thereon when swung to gripping position.

3. In combination, a spout pivotally mounted to swing vertically, a brace rod for upholding the free end of said spout and pivotally mounted to swing vertically and at its free end arranged beside said spout, and a vertically swingable clutch lever arranged beside said spout and at its free end having a transverse opening and rod gripping edges, said rod passing through said opening, said lever being freely movable longitudinally of said rod as the spout swings vertically when said lever is held in non-gripping position with respect to said rod.

4. In combination, a spout pivotally mounted to swing vertically, a brace rod pivotally mounted to swing vertically, a saddle fixed to the spout, and a vertically swingable clutch member carried by the saddle and arranged transversely with respect to the spout, said member having a free depending end for holding the member in inoperative position, said member having an upwardly projecting free end formed with a transverse opening and rod gripping edge, said rod extending through said opening, said member being freely movable longitudinally of the rod when held in inoperative position and as the free end of the spout swings vertically, said member having

a limited swinging movement independent of the rod to and from rod gripping and inoperative positions.

5. In combination, a spout pivotally mounted to swing vertically, a brace rod pivotally mounted to swing vertically and at its free end arranged adjacent to said spout, an automatic gripping member carried by and movable with respect to said spout, the free end of said rod extending transversely through said member and otherwise disconnected therefrom, said member when in inoperative position with respect to said rod being freely movable thereon and longitudinally thereof as the free end of the spout is raised and lowered, said member having a limited range of independent movement to and from inoperative and rod gripping positions, and means for holding said member in inoperative position, said member normally assuming rod gripping position.

In testimony whereof I affix my signature in presence of two witnesses.

ARTHUR J. HARTLEY.

Witnesses:

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