June 19, 1923.

1,459,463

M. BOBELDYK

INDICATOR FOR GRAIN SPOUTS

Filed Sept. 25, 1922 2 Sheets-Sheet 1

Fig. 1.

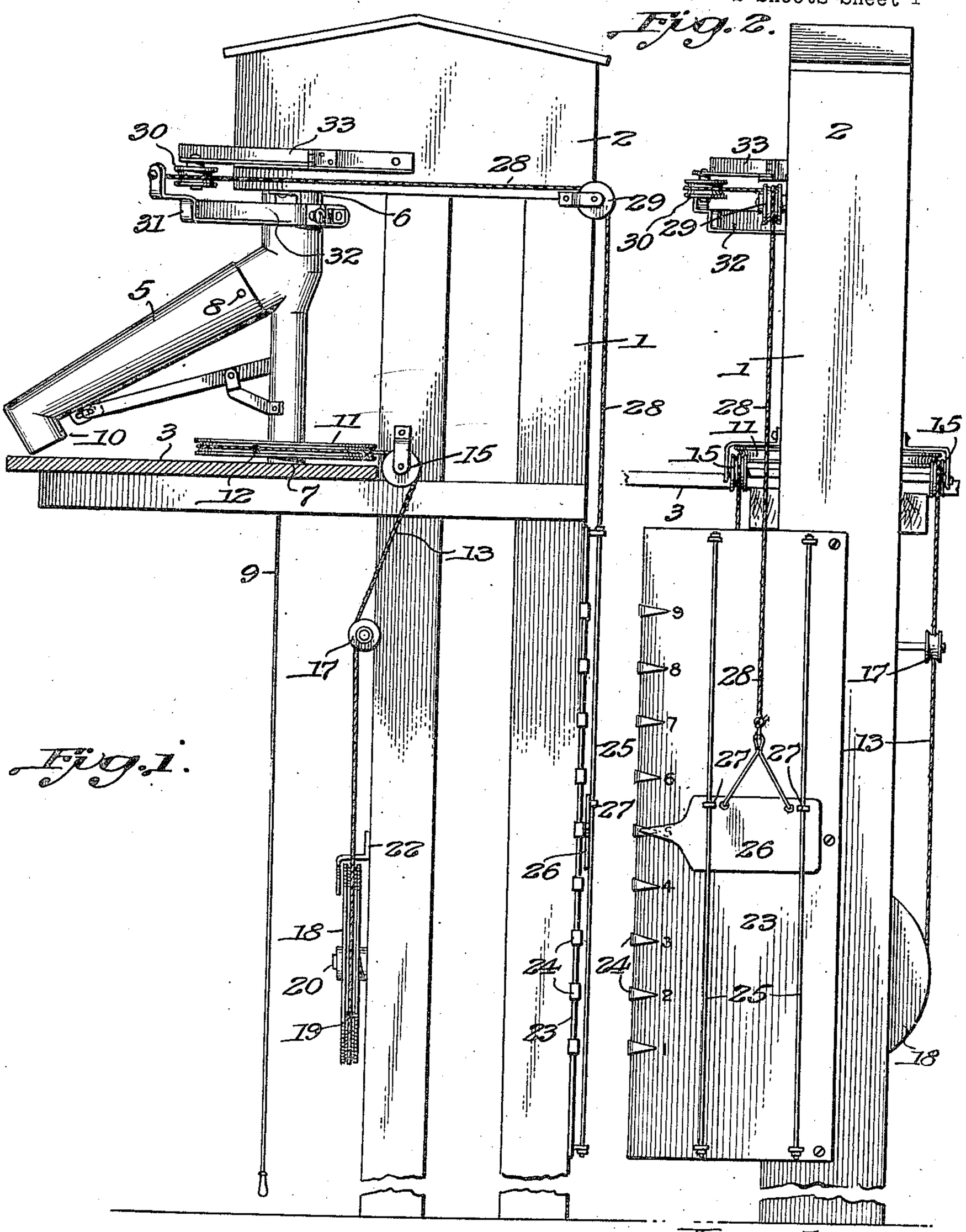

Fig. 2.

Inventor;
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By E. J. McDaniel Atty.

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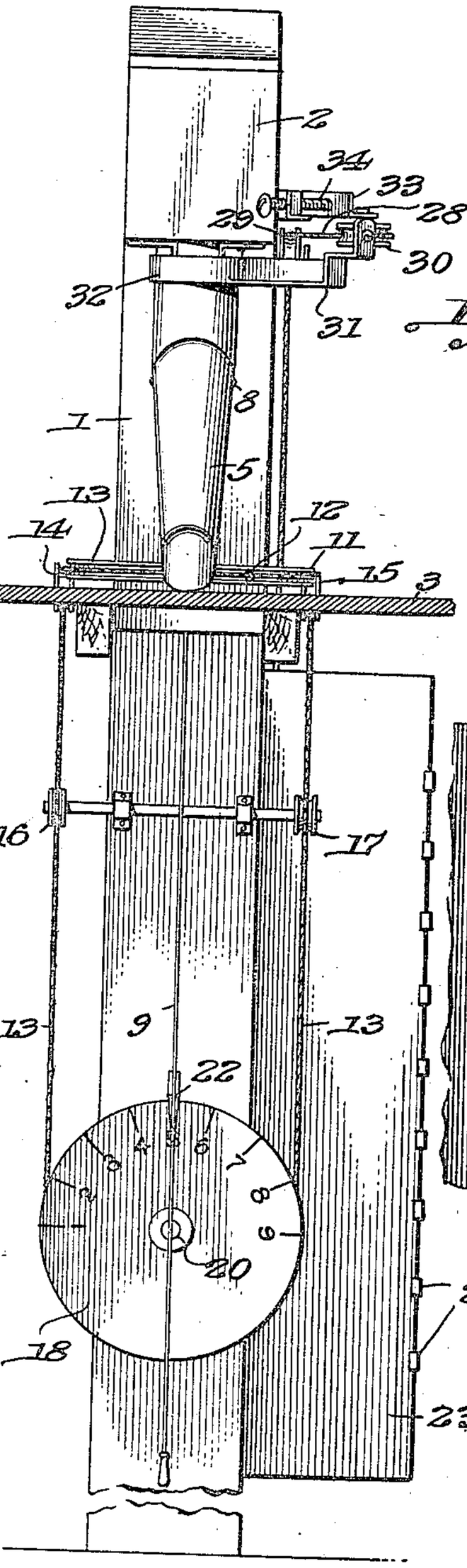

Fig. 3.

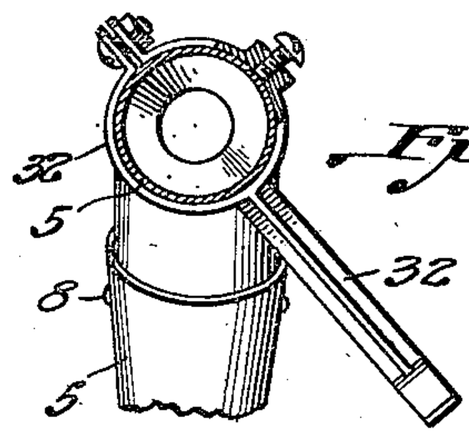

Fig. 5.

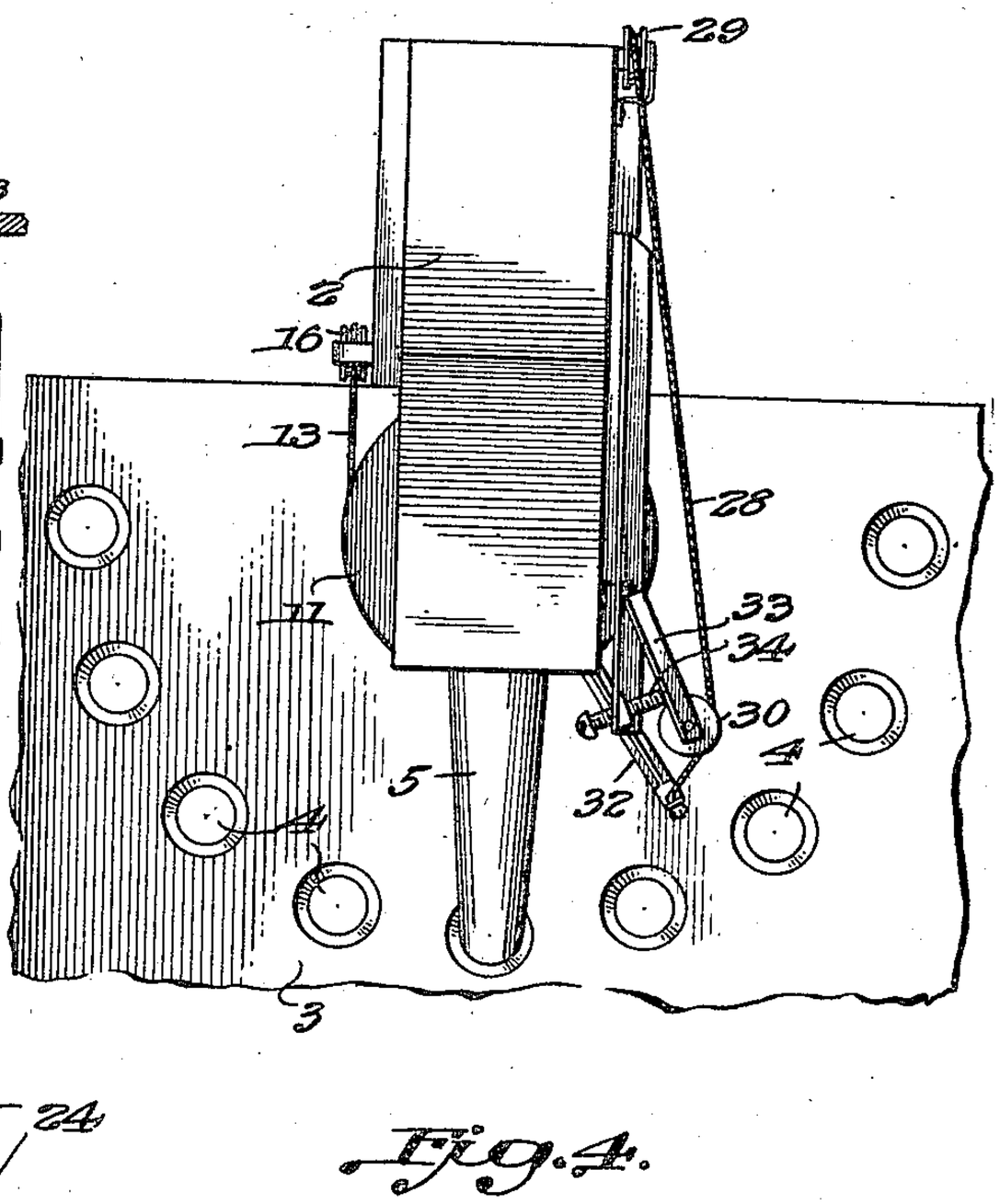

Fig. 4.

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Patented June 19, 1923. 1,459,463

UNITED STATES PATENT OFFICE.

MARINUS BOBELDYK, OF ARMOUR, SOUTH DAKOTA.

INDICATOR FOR GRAIN SPOUTS.

Application filed September 25, 1922. Serial No. 590,336.

To all whom it may concern:

Be it known that I, MARINUS BOBELDYK, a citizen of the United States, residing at Armour, in the county of Douglas and State of South Dakota, have invented certain new and useful Improvements in Indicators for Grain Spouts, of which the following is a specification.

This invention relates to indicators which show the position of a grain distributing spout so that the operator may be apprised of the bin that is being filled with grain from a grain elevator.

Mechanical indicators, such as have been commonly used for this purpose, embodying a rotatable dial operated by a cable from a sheave carried by the grain spout, are inaccurate, as the cable is liable to slip and the spout is then thrown out of proper position, resulting in mixing of the grain; they are, also, so located as to be capable of inspection only from the rear of the elevator, causing much waste of time consumed in walking to the point where they may be seen.

My object is to provide a novel mechanical indicator for the foregoing purpose which will be so constructed and arranged that it can be seen by the operator from any of the usual positions where he may be working, and make it unnecessary for him to walk to the back of the elevator to determine the exact position of the spout and to learn into which bin the grain is being delivered and, if the spout has slipped out of proper position, to become acquainted with the situation.

A further object is the provision of an indicator of the class set forth having a novel operative connection to the grain spout, insuring indication of the exact position of the spout and preventing faulty indication from slippage or lost motion.

My invention consists of a novel indicator and novel operating means therefor, of which a practical embodiment is hereinafter described and shown in the accompanying drawings. I am aware that changes may be resorted to and it is to be understood that the disclosure of the invention is not intended to limit the invention to the precise means set forth.

In the accompanying drawings: Figure 1, is a side elevation; Fig. 2, is a rear elevation; Fig. 3, is a front elevation; Fig. 4, is a detail plan view; and Fig. 5, is a cross-section through the spout.

The upper part of the elevator is shown at 1 and the head thereof at 2.

The platform 3 is provided with the various mouths or holes 4 from which the grain flows to the different bins, these being numbered "1"; "2"; "3"; etc., and there being as many holes as there are bins.

The swinging grain distributing spout 5 is carried by the mountings 6, 7, in the head 2 and platform 3, respectively, and said spout is mounted on a pivotal connection 8 so that it may be raised and lowered by the usual lever and pull rope or cable means 9 to cause its mouth 10 to disengage, or engage, the holes 4 when it is desired to change the feed of the grain from one hole 4 to another such hole.

Secured to the vertical, rotatable stem of the spout is a pulley or sheave 11 to which is connected at 12 a rope or wire cable 13 which then passes over pulleys 14 and 15, thence downwardly over pulleys 16 and 17 and then around a grooved, pulley-like dial 18 to which said rope 13 is connected at 19.

The dial 18 is mounted to freely turn on a short stud, screw, or pin 20 connected to the elevator 1 and it bears a scale or graduations 21 corresponding to the different holes or mouths 4 and arranged so that a given graduation or number will come in line with an indicating device or pointer 22 to show exactly the position of the spout 5. Thus, if the spout 5 is over the hole which is numbered "3", the indicating device 22 will register with the number "3" on the dial 18 and show to the operator the exact position of the spout.

The indicator previously described, embodying the dial 18, sheave 11, and cable 13, heretofore used, is inaccurate and unsatisfactory due to slippage of the cable 13 and for other reasons.

My invention, now to be described, has no relation to, or cooperation with, said indicator but may be used on an elevator already equipped with the old indicator, as shown in the drawings, and previously described.

Secured to the rear of the elevator is a plate 23 to whose edge is adjustably fastened each of a plurality of clip-like pointers 24 which may be slid up and down on said edge to set them properly in relation to the nu-

merals "1", "2", "3", "4", etc. which correspond to the numbering of the holes or mouths 4.

Vertical guides 25, which may be wires or rods, are secured to the plate 23. A weighted pointer 26 has eyes 27 which slide on the guides 25 and is adapted to indicate on the scale composed of the pointers or markers 23, the position of the spout 5. The pointer 26 is operated by a rope or cable 28 which runs upwardly over a pulley or sheave 29 carried by a bracket secured to the grain elevator, thence horizontally to a pulley or sheave 30 and is connected to an arm 31 carried by a collar 32 which is adjustably secured to the stem of the spout in such manner that it may be turned thereon and fastened by screws in its adjusted position.

The pulley or sheave 30 is carried by a hinged arm 33 which is settable to different positions by a screw 34.

By means of the screw 34 and the collar 32, the pointer 26 can be adjusted so that it will indicate on the scale in exact similarity to the indication of the pointer 22 on the graduations 21.

The dial 18 may be provided with additional graduations to correspond to any additional holes 4 that may be used. Likewise, there may be additional pointers 24 provided on plate 23 as they are easily attached.

My novel indicator cannot register inaccurately as it is directly connected to the grain spout and rises and falls according to the extent of turning of the latter. Furthermore, the indicator is of such a nature and so located that it can be observed by the operator from the various positions he takes while performing his duties.

What I claim, is:—

1. The combination with a grain distributing spout, of a mechanical indicator for showing the position of the spout, an operating connection between the spout and the indicator, and means for adjusting said connection.

2. The combination with a grain distributing spout, of a mechanical indicator for showing the position of the spout, a flexible operating connection between the spout and the indicator, and means for adjusting said connection.

3. The combination with a grain distributing spout, of a plate having adjustable markers, a movable pointer adapted to cooperate with the markers, and an operative connection between the movable pointer and the spout.

4. The combination with a grain distributing spout, of a vertical plate having a scale, a weighted pointer adapted to cooperate with the scale, means for guiding said pointer in its up and down movements, and an operative connection between the pointer and the spout.

5. The combination with a grain distributing spout, of a vertical plate having a scale, a weighted pointer adapted to cooperate with the scale, means for guiding said pointer in its up and down movements, an operative connection between the pointer and the spout, and means for adjusting said operative connection.

6. The combination with a grain distributing spout, of a vertical plate having a scale, a weighted pointer adapted to cooperate with the scale, means for guiding said pointer in its up and down movements, a cable connecting the pointer to the spout, a movable arm having a sheave over which the cable runs, and a set screw for adjusting said arm to take up or let out the cable.

In testimony whereof I affix my signature.

MARINUS BOBELDYK.