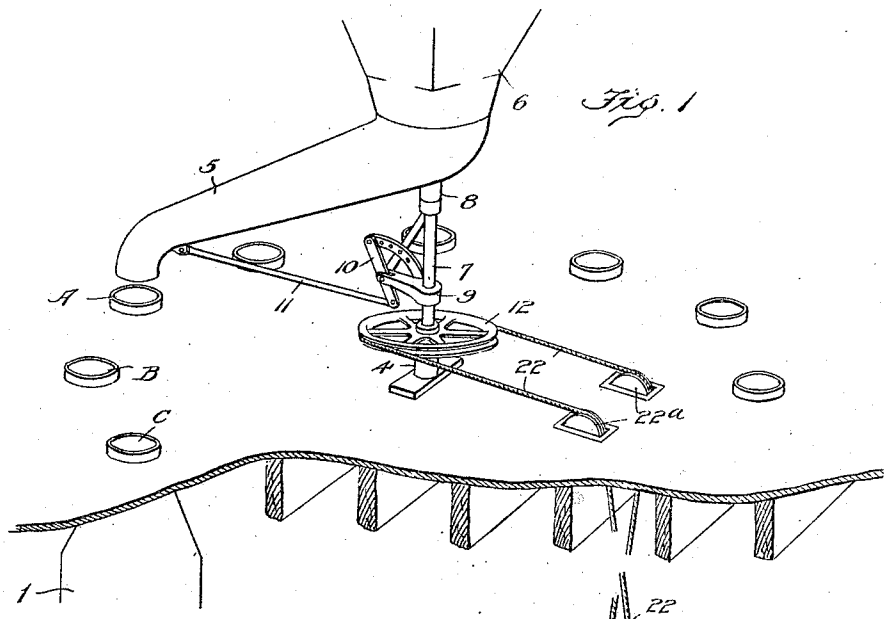
Aug. 19, 1924. 1,505,676

G. STROHMAIER

INDICATING SYSTEM FOR GRAIN ELEVATORS

Filed March 1, 1924

Fig. 1



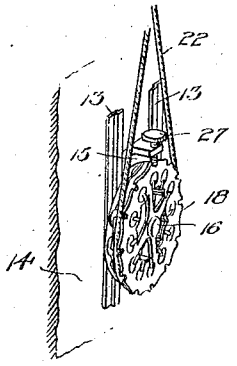


Fig. 2

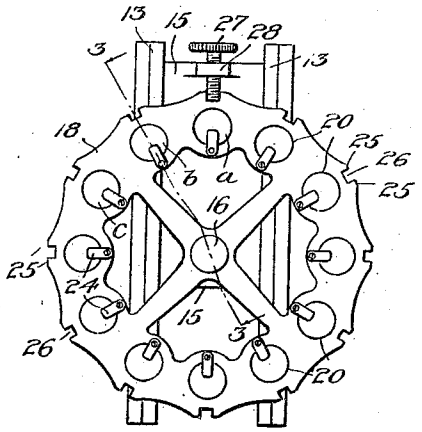
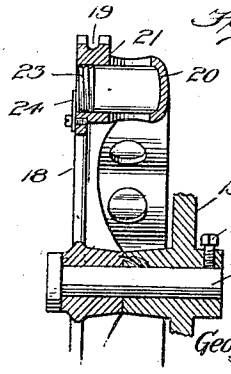


Fig. 3



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Patented Aug. 19, 1924. 1,505,676

UNITED STATES PATENT OFFICE.

GEORGE STROHMAIER, OF ELGIN, NORTH DAKOTA.

INDICATING SYSTEM FOR GRAIN ELEVATORS.

Application filed March 1, 1924. Serial No. 696,373.

To all whom it may concern:

Be it known that I, GEORGE STROHMAIER, citizen of the United States, residing at Elgin, in the county of Grant and State of North Dakota, have invented certain new and useful Improvements in Indicating Systems for Grain Elevators, of which the following is a specification.

This invention relates to an indicating system which serves to inform the operator in a grain elevator of the contents of the various bins, in order that he may distribute the different kinds of grain to their proper bins.

One object of this invention is to provide a hand-wheel which gives an indication of the contents of the various bins in a direct and positive manner, and which makes it possible for the operator to readily swing the spout to any desired bin according to the indication given on the wheel. A further object of the invention is to provide an indicating hand-wheel which is simple, strong, and of slight encumbrance, and which does not unduly complicate the equipment of a grain elevator.

With these and other objects in view as will appear during the course of the following specification, I have shown in the accompanying drawings one construction of my invention.

Fig. 1 is a perspective view showing the use of the system and handwheel.

Fig. 2 is a view of the hand-wheel on a larger scale.

Fig. 3 is a cross-section of the hand-wheel on line 3—3 of Fig. 2.

The grain elevator is conventionally represented as having twelve bins 1 arranged with their upper ends or inlet funnels A, B, C, D, etc., disposed in a circle on the upper floor 3 of the elevator. At the center of the circle is the lower bearing 4 for the rotating shaft 7 of the grain distributing spout 5. This spout 5 is suspended beneath the hopper 6 which feeds the bins, and it may be freely rotated in any direction about its supporting shaft 7. A step bearing or support 8 secures the shaft to the spout. The sleeve 9 on the shaft carries a lever 10 which in turn carries a link 11 serving to adjust the height of the spout 5 with regard to the ends or funnels A, B, C, D, etc., of the various bins. This shaft is rotated by a rope pulley wheel 12 keyed to it.

On the lower or operator's floor of the grain elevator, and customarily in the receiving office, is disposed a stationary frame composed of angle irons 13 fastened to the walls 14 of the building. On these angle irons is adjustably supported a sliding bearing member 15 which carries a stub shaft 16, this latter being held in place by a setscrew 17. On this shaft is mounted an indicating handwheel 18, which has a rope pulley groove 19 formed on its periphery. The indicating hand-wheel 18 has a number of chambers 20 formed in its rim 21 and presenting pockets equal in number and disposed at similar angles, to the number and position of the funnels A, B, C, D, etc., of the bins: in the present case, twelve such pockets are used, at equal angles apart.

Into each of these pockets in the wheel 18 is inserted a glass cup or jar *a*, *b*, *c*, *d*, etc., having a screw top 23 and held in place by a spring finger 24. The rim 21 of the wheel is cut away as much as possible to expose a large extent of the jar, so far as is consistent with mechanical strength.

On the periphery of the wheel opposite each of the cups are formed double stop members 25, 25 which leave between them a notch 26 which cooperates with a locking pin and indicator 27 held in the boss 28 on the sliding bearing 15. The flanges on the rim are continued between adjacent pairs of the stop members, to form the rope groove 19.

The two pulleys 12 and 18 are of the same diameter, so that when rotated they have an equiangular movement. The two wheels are connected by a rope drive 22 which passes over the necessary pulleys 22^a. In disposing the hand-wheel 18 on the lower floor, it may be necessary to reverse the rope drive, as shown, since it is preferable to have the wheel appear as a chart of the upper floor, that is, the position of the funnels and of the cups are not reversed with regard to each other.

The operation of this device is as follows: Each of the glass jars may be filled with a variety of the grains being currently handled, such as #1 winter wheat in cup *a* for bin A, #2 winter wheat in cup *b* for bin B, #1 spring wheat in cup *c* for bin C, and so on. The operator inspects and grades a load of wheat, etc., as received; and on the basis of this grading, he moves the hand-wheel 18 until the cup containing a similar sample of grain is opposite the indicator 27

and then secures the system in this position by the use of the locking pin. The usual conveyer equipment of the elevator, not shown on the drawings, then is started to deliver the grain from the car or wagon into the feeding hopper 6, from which it runs down the spout and into one of the bins. Thus, if cup *a* is in position beneath the indicator 27, the grain will run into bin A, and so on.

It will be seen that the operator does not rely on memory or notes as to the contents of the bins, and that even an operative who is relatively unskilled in the art of judging grains of various qualities may, by comparing a specimen handful with the contents of the various jars, distribute the load to its proper bin.

An empty bin may at any time be used for another grain, by discharging the contents of the corresponding jar and substituting a specimen of the new grain.

I claim:

1. In a grain elevator having a feeding spout selectively feeding a plurality of bins, means including a handwheel for moving said spout to the selected bin, and means for presenting a specimen of the contents of the bin to an indicator during the movement of said handwheel.

2. In a grain elevator having a spout serving a plurality of bins, a handwheel, a plurality of glass vessels on said handwheel to display specimens of the grain in the respective bins, an indicator to designate the specimen corresponding to the bin being served, and means for correlating the movement of said handwheel and said spout.

In testimony whereof I affix my signature.

GEORGE STROHMAIER.