No. 820,740. PATENTED MAY 15, 1906.

A. W. SCHMIDT.

VALVE FOR CONVEYER TUBES.

APPLICATION FILED FEB. 8, 1906.

Fig. 1.

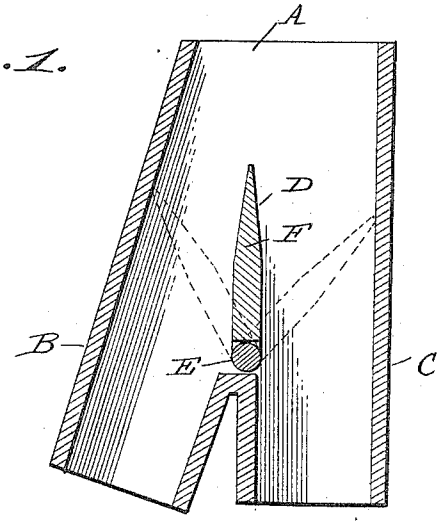


Fig. 4.

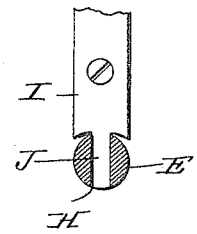
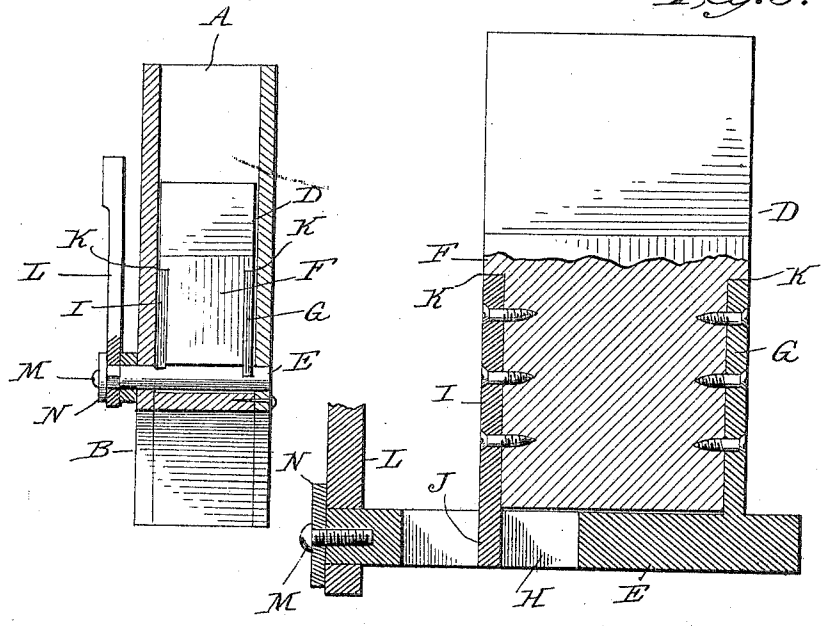


Fig. 2.

Fig. 3.



Witnesses

Edwin L. Yewell

Mary E. Bishop.

Inventor

Adolph W. Schmidt

By R. W. Bishop

Attorney

ANDREW B. GRAHAM CO., PHOTO-LITHOGRAPHERS, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ADOLPH W. SCHMIDT, OF LEWISTON, IDAHO.

VALVE FOR CONVEYER-TUBES.

No. 820,740. Specification of Letters Patent. Patented May 15, 1906.

Application filed February 8, 1906. Serial No. 300,184.

To all whom it may concern:

Be it known that I, ADOLPH W. SCHMIDT, a citizen of the United States of America, residing at Lewiston, in the county of Nez Perces and State of Idaho, have invented certain new and useful Improvements in Valves for Conveyer-Tubes, of which the following is such a full, clear, and exact description as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to the valve used in spouts or tubes whereby grain or another commodity is conveyed from a reservoir or storehouse to one of a series of bins or other receptacles. Heretofore these valves have been constructed entirely of wood, and it has been a tedious, and therefore expensive, operation to accurately fit the valve in the tube.

The object of the present invention is to provide a structure in which the valve-plate may be of wood, and consequently inexpensive, while at the same time there will be no loss of time in fitting the valve in the tube.

With this object in view the invention consists in providing a frame of metal which will be fitted on the frame of the tube or spout and to which the wooden valve-spout may be secured, the metallic frame being adjustable to accommodate valve-spouts of various widths.

An embodiment of the invention is illustrated in the accompanying drawings; and the invention consists in certain novel features of the same, as will be first hereinafter fully described and then particularly pointed out in the claims.

In the drawings, Figure 1 is a longitudinal section of a spout or conveyer-tube provided with my invention. Fig. 2 is a transverse section of the same, and Fig. 3 is a detailed longitudinal section of the valve. Fig. 4 is a detail transverse section through the rock-shaft.

The main spout or tube A, leading from the reservoir, and the branch tubes or spouts B and C, leading from the main tube A, to the different bins, are of the usual construction. At the junction of the several tubes or spouts the valve D is provided and arranged to be turned to one side or the other, accordingly as the material flowing through the main spout A is to be diverted into one or the other of the branch spouts, as will be readily understood. The valve consists of a rock-shaft or rod E, journaled in the walls of the spout, and a valve-plate F, carried by the said rod or rock-shaft and fitting snugly between the side walls of the spout, but at the same time free to move or oscillate between the walls. The rock-shaft or rod E is provided with an integral lateral arm G near one end and is also constructed with a longitudinal diametrical slot H, extending toward its opposite end. A lateral arm I, having a tongue J, is provided and has its said tongue J fitting on and movable along the slot H, so that the said arm may be adjusted along the rock-shaft, as will be readily understood. The wooden valve-plate F is provided on its side edges with recesses K, which receive the arms G and I, and are secured to said arms by means of screws or other suitable fastening devices inserted through the said arms into the valve-plate. In thus securing the the said arms to the valve-plate in recesses on the edges of the valve-plate I avoid projections on the edges of the valve-plate, which would prevent the same fitting closely against the side walls of the spout, and consequently leakage around the edge of the valve is prevented. In fitting the valve in place the wooden valve-plate is cut to the proper size to fit the spout and is secured to the fixed lateral arm of the rock-shaft, after which the movable arm is pushed up against the opposite edge of the valve-plate and secured thereto. On the outer end of the rock-shaft I removably secure a handle L, by means of which the rod may be rocked to turn the valve to one side or the other, as may be desired. The said handle is provided with a suitable opening by which it is fitted over the ends of the rock-shaft and is secured thereto by inserting a headed fastening M to a washer N into the end of the rock-shaft, as will be readily understood.

From the foregoing description, taken in connection with the accompanying drawings, it will be seen that I have provided a valve of simple construction which can be fitted in place without much trouble or loss of time and by the use of which the damage due to breakage will be reduced to a minimum. The slidable arm can be readily adjusted along the rock-shaft, so that a single frame may be utilized to fit a spout of any width, and the metallic frame is not exposed to the weight of the material flowing through the spout, so that there is little liability of the frame being broken. Should the valve-plate be broken under the weight of the material flowing against the same, the mill-

wright can very quickly cut out a new valve-plate, whereas with the old valves it would be necessary to make a new shaft as well as a new valve-plate, and several hours time would be lost.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A valve for conveyer-tubes comprising a rock-shaft having lateral arms and a valve-plate removably secured to and fitting between said arms.

2. In a valve for conveyer-tubes a frame comprising a rock-shaft having a fixed lateral arm and a second lateral arm adjustable along the rock-shaft, the said arms being arranged to be secured to a valve-plate.

3. In a valve for conveyer-tubes a frame comprising a rock-shaft having a longitudinal slot and provided with a fixed lateral arm near one end and a second lateral arm provided with a tongue at one end fitted on and movable along the longitudinal slot of the rock-shaft, the said arms being arranged to be secured to a valve-plate.

4. In a valve for conveyer-tubes the combination of a rock-shaft having lateral arms, a valve-plate provided on its edges with recesses to receive said lateral arms, and means for securing the said arms to the valve-plate.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ADOLPH W. SCHMIDT

Witnesses:

FRED. E. MOORE,

HARRY DUNDER.