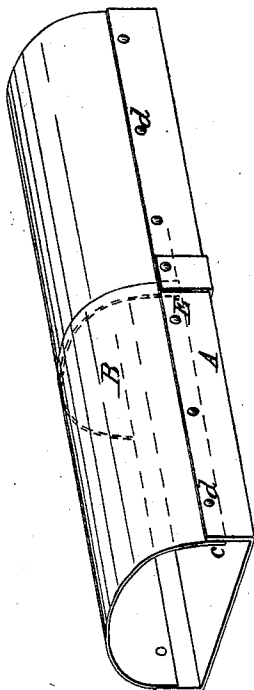


G. H. Johnson,

Feed Regulator.

No. 86,925.

Patented Feb. 16, 1869.



Witnesses,

Geo. J. Bonner
W. H. Becker,

Inventor,

Geo. H. Johnson
by Forbush & Hyatt
Attys

United States Patent Office.

GEORGE H. JOHNSON, OF BUFFALO, NEW YORK, ASSIGNOR TO HIMSELF, AND GEORGE W. TIFFT, SONS, AND COMPANY, OF SAME PLACE.

Letters Patent No. 86,925, dated February 16, 1869.

IMPROVEMENT IN GRAIN-SPOUTS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, GEORGE H. JOHNSON, of the city of Buffalo, county of Erie, and State of New York, have invented an Improved Construction for Grain-Spouts; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification.

In grain-elevators and store-houses, the receiving, distributing, and discharging-spouts constitute important features, not only in respect to the functions which they perform, but also as a very material item in the cost of such structures.

In fire-proof structures, they require to be made of metal, and their cost is, therefore, greatly enhanced.

Grain, moving through spouts at a high velocity, creates excessive friction upon the bottom and sides thereof, which, in time, abrades and cuts through the same, while the top, which is not subject to such friction, will last for a much longer time.

My invention has for its object the construction of metallic grain-spouts, which shall possess the greatest durability, with the least weight of material, and, consequently, least cost of construction; and

It consists in the combination of a metallic trough, of suitable thickness, for the bottom and sides of the spout, in view of the friction and wear to which they are subjected, with a light sheet-metal covering, to prevent

the escape of grain and dust from the trough, whereby the above-mentioned objects are fully accomplished.

The accompanying drawing shows, in perspective, a section of my improved grain-spout.

The trough, which is preferably made of cast-iron, is shown at A, and the sheet-metal covering at B.

The trough, as represented, is rectangular in cross-section, but it may be made oval or semicircular.

The sheet-metal covering may also be either rectangular, oval, or semicircular in cross-section, though represented in the drawing as oval.

The covering, in either case, laps inside of the trough, as shown at *c*, and is secured thereto by rivets, *d*.

The spout may be made in sections of any desired length, and connected together, as shown at E, after the manner of a stove-pipe joint, except that the trough-sections are rebated at one end to receive the end of the contiguous section, so that the bottom of a spout, composed of several sections, may be flush and smooth.

Having thus described my invention,

What I claim, and desire to secure by Letters Patent, is—

A metallic grain-spout, composed of the parts A and B, substantially as herein described.

Witnesses:

GEO. H. JOHNSON.

W. H. FORBUSH,
JAY HYATT.