

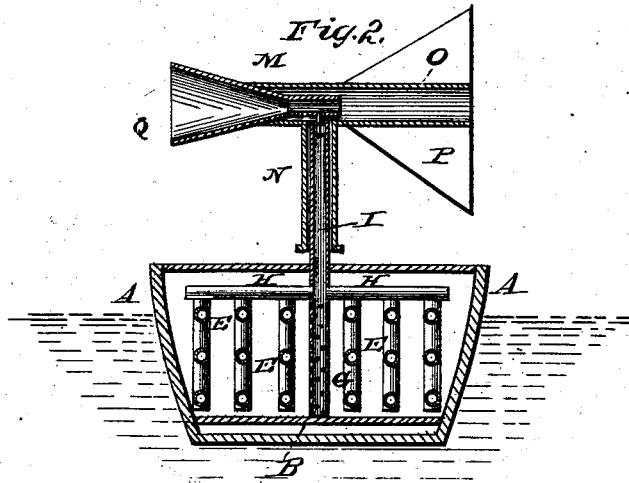
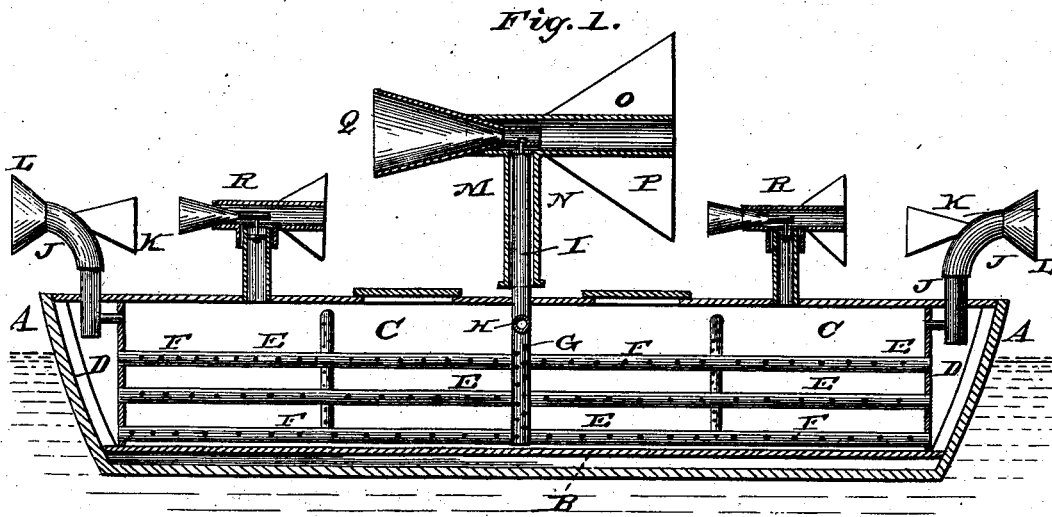
(No Model.)

J. M. FENNERTY.

MEANS FOR VENTILATING GRAIN IN BULK.

No. 260,011.

Patented June 27, 1882.



WITNESSES:

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JOHN M. FENNERTY, OF MEMPHIS, TENNESSEE.

MEANS FOR VENTILATING GRAIN IN BULK.

SPECIFICATION forming part of Letters Patent No. 260,011, dated June 27, 1882.

Application filed February 25, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. FENNERTY, of Memphis, in the county of Shelby and State of Tennessee, have invented certain new and useful Improvements in Means for Ventilating Grain in Bulk; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

Figure 1 is a longitudinal vertical sectional view of a grain boat or barge to which my invention has been applied, and Fig. 2 is a vertical cross-section of the same.

Similar letters of reference indicate corresponding parts in both figures.

This invention relates to certain improved means for ventilating grain in bulk, whether it be stored in an elevator or warehouse, or in transit in a railroad-car, barge, or other vessel; and it consists in the construction and arrangement of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, which illustrate my invention as applied to a grain-barge, A represents the body or hull of said barge or vessel, which has a double or false bottom, B.

C is the hold, which is shown as extending throughout the length of the vessel, although this of course is immaterial, as by proper modifications in the arrangement of the operating parts of my invention it may be divided into two or more separate compartments or subdivisions suitably arranged and located.

At the ends of the hold are located air chambers or compartments D D, which are connected by pipes or tubes E, running longitudinally through the hold, and provided with perforations F. The said horizontal longitudinal tubes E are connected about the middle by vertical perforated tubes G, the upper ends of which are connected, either directly or by means of a transverse tube, H, with a vertical imperforate tube, I, extending above the deck of the vessel.

J J are ventilators consisting of swiveled tubes connected with the air-chambers D D, and carrying vanes K, by which they are turned to the wind, and funnels L, through which the

air enters and passes through the tubes J into the air-compartments.

M is a differently-constructed ventilator, consisting of a tube, N, swiveled upon the tube I, and carrying a transverse horizontal tube, O, provided at one end with wings or vanes P, by which it is turned to the wind. At its other end the tube O carries a funnel, Q, the inner end of which extends over the upper end of tube I, so that the air passing through funnel Q and tube O shall create a suction or draft in an upward direction in tube I.

Auxiliary ventilators R, constructed like the ventilator M and connected directly to the hold, may be employed.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation of my invention will be readily understood. The air entering the compartments D through the ventilators connected with said compartments passes through the perforated tubes E and partly escapes through the perforations in said tubes into the grain in the hold. The air is forced to take this course by the central ventilator, M, which, as stated, creates a constant suction, exhausting the air from the tubes E. The ventilators R exhaust the air which passes through the grain in the hold.

It will be easily understood how the principle of my invention may be applied to railroad-cars, warehouses, or other structures. It is simple, its construction and application are not expensive, and it insures a continuous access of pure air, by which deterioration of the grain, whether in store or in transit, is prevented.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination of a storage-chamber, air-chambers located at the ends of the same, perforated tubes passing longitudinally through the storage-chamber and connecting the air-chambers, and a suitably-constructed ventilating device connected centrally to the said longitudinal perforated tubes, and adapted to create a suction or draft therein tending to exhaust the air from said tubes, substantially as set forth.

2. The combination of a storage-chamber, air-chambers located at the ends of the same, perforated tubes passing longitudinally through the storage-chamber and connecting the air-

chambers, ventilators for admitting air into
said air-chambers, and a suitable ventilating
device connected centrally to the said longi-
tudinal perforated tubes, and adapted to create
5 a suction or draft therein tending to exhaust
the air from said tubes, substantially as set
forth.

3. The combination of a storage-chamber, air-
chambers located at the ends of the same, per-
10 forated tubes passing longitudinally through
the storage-chamber and connecting the air-
chambers, ventilators for admitting air into
said air-chambers, a suitable ventilating de-
vice connected centrally to said longitudinal

perforated tubes, and adapted to create a suc- 15
tion or draft therein tending to exhaust the air
from said tubes, and auxiliary ventilators con-
nected direct to the storage-chamber and
adapted to exhaust the air from the same, sub-
stantially as set forth. 20

In testimony that I claim the foregoing as
my own I have hereto affixed my signature in
presence of two witnesses.

JOHN M. FENNERTY.

Witnesses:

THOS. FLEMING,
A. K. HANCOCK.