B. DUNWIDDIE.

Ventilating Grain.

No. 139,126. Patented May 20, 1873.

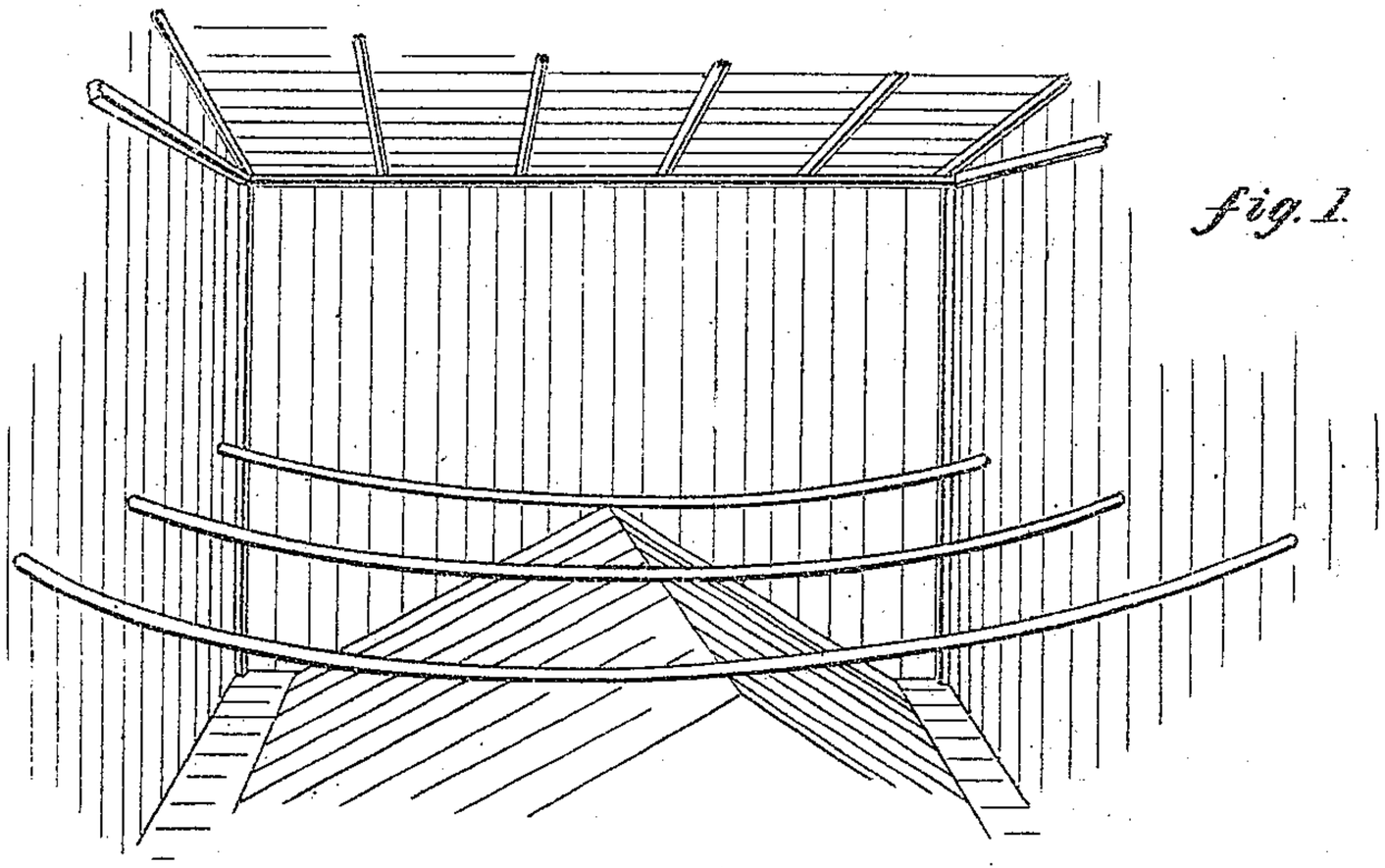
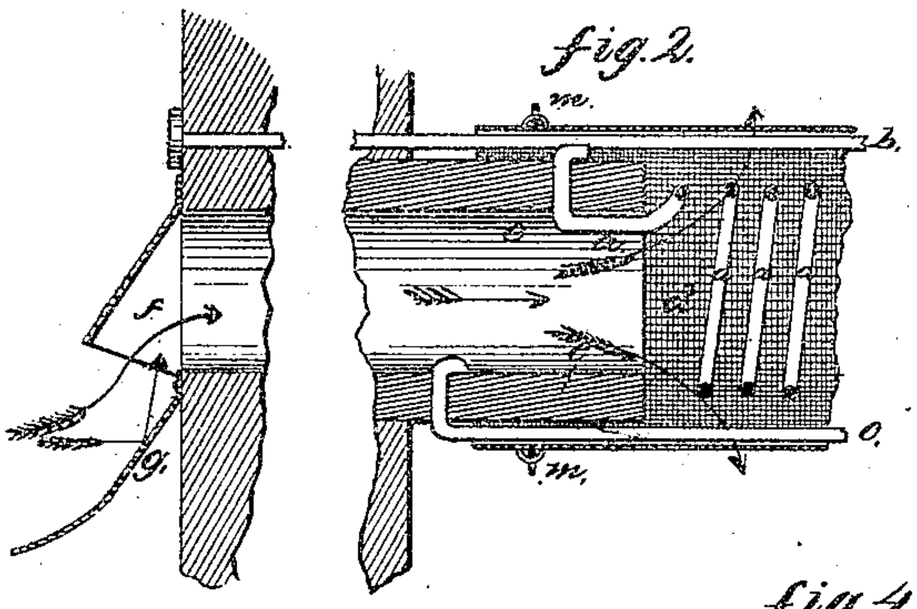


fig. 1.

fig. 2.



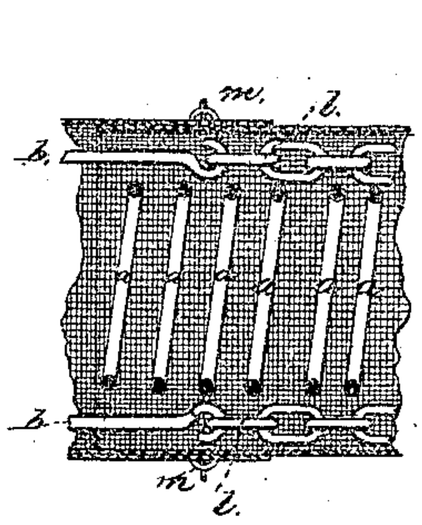


fig. 3.

fig. 4.

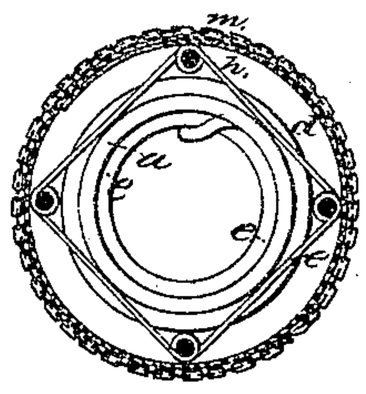
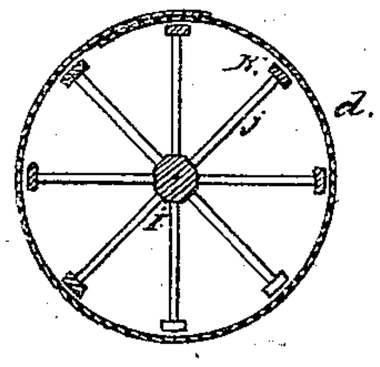


fig. 5.



Witnesses.

E. M. Bartlett

Wm. H. Wright.

Inventor.

B. Dunwiddie.

UNITED STATES PATENT OFFICE.

BROOKS DUNWIDDIE, OF MONROE, WISCONSIN.

IMPROVEMENT IN VENTILATING GRAIN.

Specification forming part of Letters Patent No. **139,126**, dated May 20, 1873; application filed February 11, 1873.

To all whom it may concern:

Be it known that I, BROOKS DUNWIDDIE, of Monroe, Green county, in the State of Wisconsin, have invented a new and improved mode of introducing cool air into large bodies of grain and other articles stored in bulk, and to prevent the same from spoiling for want of cool air; and I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification.

Figure 1 is a perspective view of the interior of the store-room and the instrument completed and put in position for use, ready to receive the grain. Fig. 2 is a longitudinal section of the instrument, and showing that portion that passes through the wall of the store-room to the open air. Fig. 3 is a longitudinal section of the instrument, showing connection of the cables with links. Fig. 4 is a transverse section of the instrument. Fig. 5 is a transverse section of the instrument, showing variation by use of reel instead of coil.

A is a wire coil. *b* is a cable extending along the outside of the coil from end to end, and fastened to the same tube with the coil; C, that portion of cable fastened into the tube. E is a tube through which the air is admitted through the wall. *f* is a weather-screen. *g* is a screen for diverting the air upward into the weather-strip. *h* is a cord or wire tie connecting the cables, to keep them from spreading or from drawing together. *i* is the spindle of a reel, through which braces *j* are run to support rods *k*; *k*, rods keeping the wire cloth from spreading and taking the place of the coil; *l*, chain in cables, to allow of depression of ventilation if desired.

The nature of my invention consists in constructing a hollow tube, of sufficient length to extend from the outer side of the building, through the building, to the outside of the opposite side, with perforations or holes extending from the inside to the surface of the tube, so that the atmosphere can pass through the tube freely and bring the grain in contact with the fresh cool air.

Construction.

First, a wire coil is made by wrapping it around a rod of the size of the desired tube, forming a coil, *a*. The ends of the coil are fastened to a hollow tube, made of wood or iron, of the same size of the coil when complete outside. Then four or more cable-wires are fastened to the tubes, extending along the outside of the coil, in such manner as to prevent the coil from stretching. At short intervals these cables are fastened around the coil with wire ties, so as to prevent the cables from spreading or coming together, and to allow of depression of the instrument when complete. If desired, links are placed in sections of the cable so as to admit of curving instrument without spreading the cables or bringing them together. The coils and cables thus being fastened at each end to the hollow tubes, the same are ready to be clothed with a wire screen or a wire cloth. The wire cloth is then lapped around the coil and tied on with small wires, cords, or chains, which completes the instrument ready for use.

Manner of Using the Same.

The iron or wooden tube to which the cable and coils are fastened must be of sufficient length to pass through the wall, and a small chain, cable, or cord, fastened to where the wires cross each other in the tube, and passing out of the tube to the outside and hooked into a staple, driven into the outside of the building, holds the machine in position; or the tube can be made with a wedged-shaped shoulder and let into a notch on the inside of the building, connected with a hole in the wall to admit the air. The weather-screen on the outside keeps out the wet and damp. In case it is desired to have the instrument curved or depressed, different sections of the wire cable are connected with two or three short links, and the wire-cord *h* is tied around the cables

at each end of the links, which admits the instrument to be depressed or curved without disturbing the position of the cables or coils.

Another method of forming the perforated hollow tube is to use a number of reels connected with short links and rods, which answer the place of the cable and coil, and, being fastened to the iron or wooden tubes in the same manner as the cable and coil, is then clothed with a wire cloth in the same manner as the other instrument; but for all ordinary purposes the coils and cables are the best.

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

The wire coil or reel, the extremities of which are provided with suitable tubes, in combination with the linked cables and wire-gauze cover, the whole being arranged to operate as set forth.

BROOKS DUNWIDDIE.

Witnesses:

E. M. BARTLETT,

WM. M. WRIGHT.