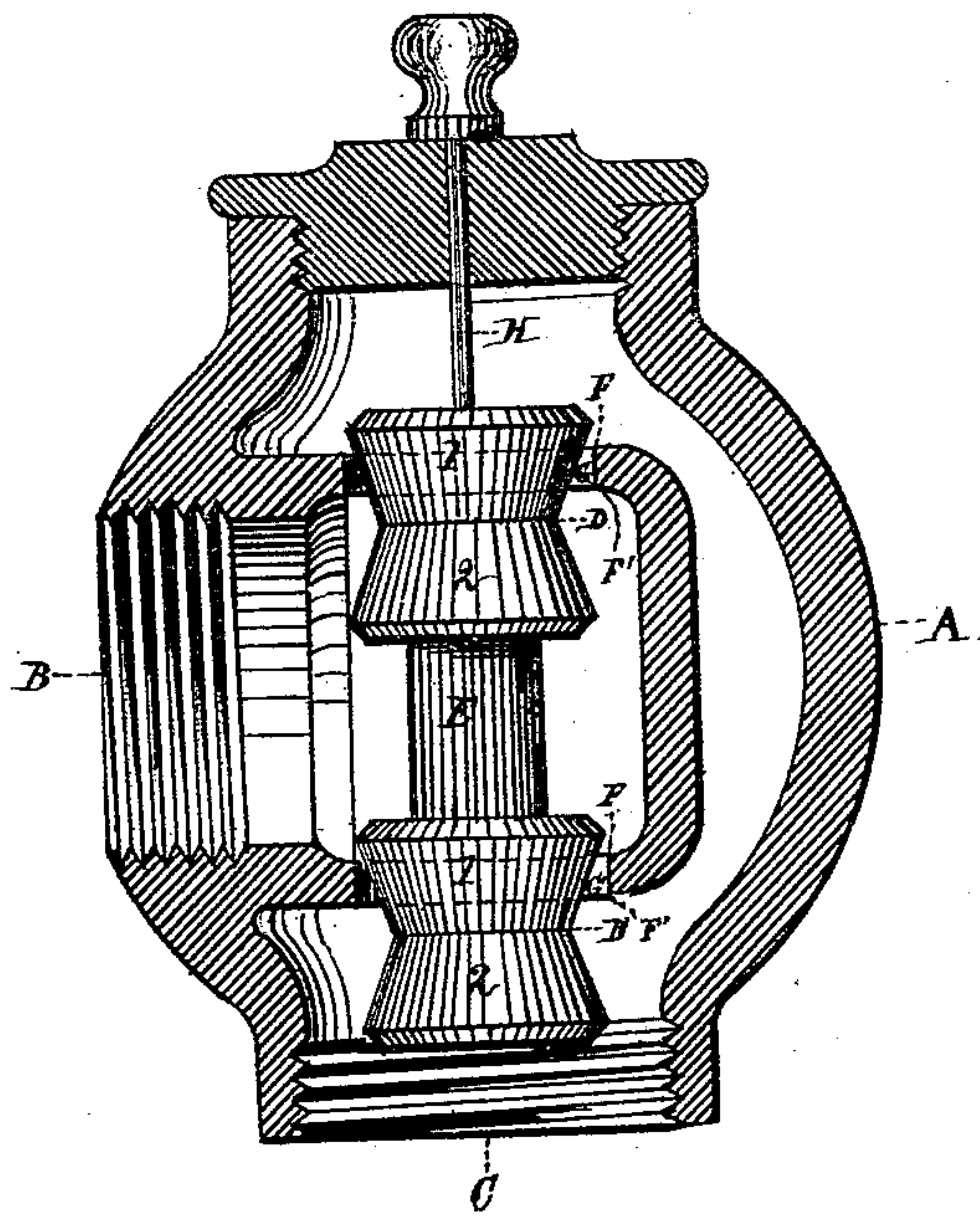


*W. Smith,*

*Governor.*

*No. 102,174.*

*Patented Apr. 19. 1870.*



*Witnesses.*

*Thomas J. Buckley*  
*Samuel H. Rummer.*

*Inventor.*

*William Smith,*  
*By his Atty.*  
*Stephen Ustick*

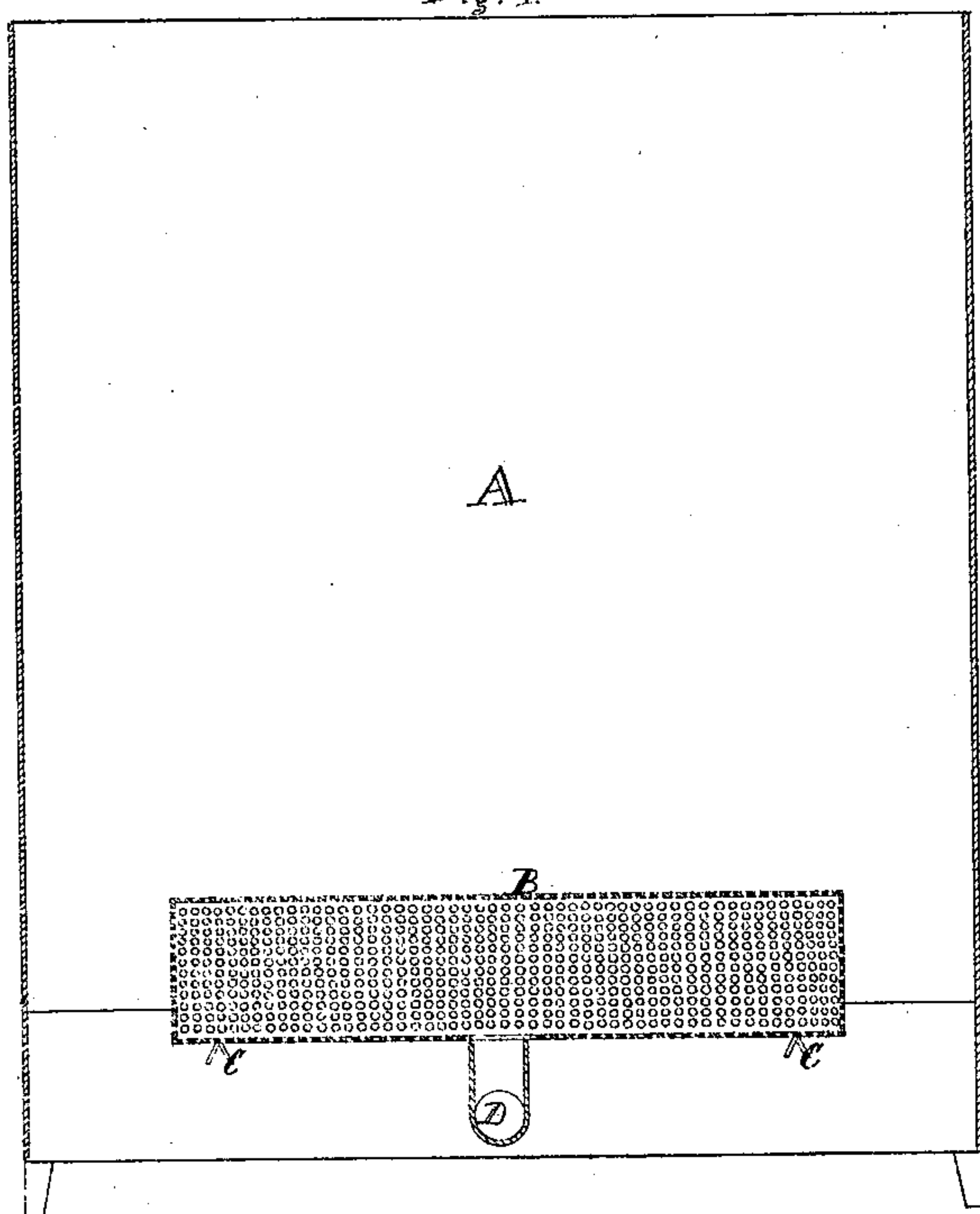
*S. A. Stebbins,*

*Cooling Grain.*

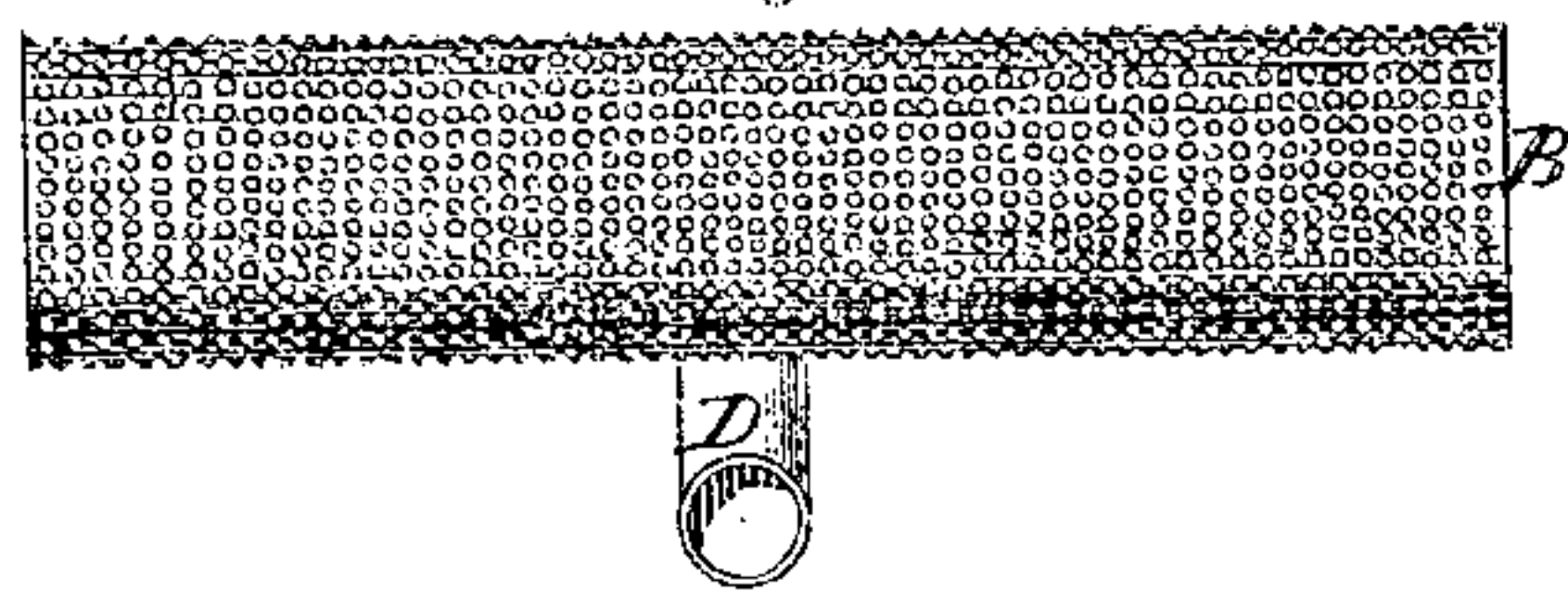
*No. 102,175.*

*Patented Apr. 19. 1870.*

*Fig. 1.*



*Fig. 2.*



*Attest*  
*John Richland*  
*James Cherry*

*Inventor*  
*Solomon A. Stebbins*

# United States Patent Office.

SOLOMON A. STEBBINS, OF TOLEDO, OHIO.

*Letters Patent No. 102,175, dated April 19, 1870.*

## IMPROVEMENT IN APPARATUS FOR COOLING GRAIN.

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

### *To whom it may concern:*

Be it known that I, SOLOMAN A. STEBBINS, of Toledo, Lucas county, Ohio, have invented a new and useful Improvement in Apparatus for Cooling Grain, or preventing grain in bulk from heating and spoiling, and, also, freeing it from must; and I hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings and to the letters and figures thereon, which are hereby made a part of this specification.

Like figures and letters represent like parts in the several drawings.

Figure 1 represents a sectional view of a grain-bin, with my improved cooling apparatus therein.

Figure 2 represents a view, in perspective, of my cooling apparatus detached.

A represents the general construction and shape of the bottom and sides of a bin.

B represents a perforated metal cylinder.

C represents the supports of the same.

D represents pipes which pass through the sides or bottom of the bin, and are attached to the cylinder B.

To enable others to make and construct my cooling apparatus, I describe its construction and operation, as follows:

G is a grain-bin or holder, or, it may be a boat or vessel, of the shape and size ordinarily used in grain warehouses, or for carrying grain, into which is placed the cylinder B, made of sheet-metal, with perforations in its periphery and ends, as closely together as the strength of the metal required for the support of

the grain will allow, and of such size as will not permit the grain to be cooled to pass through. This cylinder may be of any diameter or length required by the size of the bin or vessel and bulk of grain, and is placed upon the supports C, which are secured to the sides or bottom of the bin or vessel. One or more openings are made in the cylinder, wherever it may be most convenient, with suitable arrangement for attaching the pipes D, for the passage of currents of air through the pipes into the cylinder, which current of air is generated by means of bellows, or other apparatus. The air thus conveyed into the cylinder or reservoir is forced through its perforations into the grain, covering it and permeating its bulk, reaching every part thereof, cooling and freeing it from must, preserving it, and preventing its spoiling while kept in bulk without means of ventilation. The apparatus for forcing the air may be placed where convenient for connecting the pipes D therewith, and may be operated by means of hand, horse, steam, or other power.

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

The combination of the bin A or its equivalent, perforated cylinder B with perforated ends, supports C, and pipe D adapted to receive a current of air from the outside of the bin, substantially as and for the purpose hereinbefore specified.

SOLOMON A. STEBBINS.

Witnesses:

J. B. BLIVEN,  
C. E. BLIVEN.