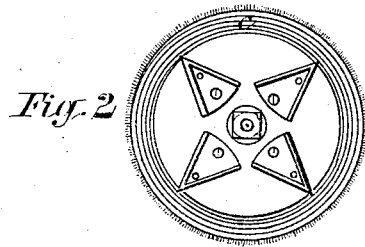
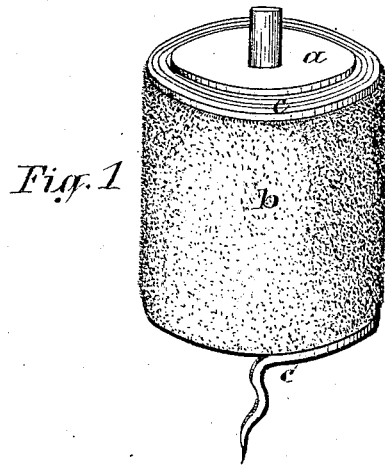


G. E. THROOP:

Brush for Grain-Cleaners.

No. 160,243.

Patented Feb. 23, 1875.



*Witnesses:*  
*H. J. Ford*  
*A. White*

*Inventor:*  
*Gardner E. Throop*  
*by J. J. Graman, Atty.*

# UNITED STATES PATENT OFFICE.

GARDNER E. THROOP, OF SYRACUSE, NEW YORK.

## IMPROVEMENT IN BRUSHES FOR GRAIN-CLEANERS.

Specification forming part of Letters Patent No. **160,243**, dated February 23, 1875; application filed January 27, 1875.

*To all whom it may concern:*

Be it known that I, GARDNER E. THROOP, of Syracuse, New York, have invented an Improvement in the Brushes of Grain-Cleaners, of which the following is a specification:

In my patent, No. 135,675, dated February 11, 1873, I have described a cylindrical brush for cleaning grain. Experience has shown that brushes for such purposes are liable to wear at their exposed ends from coming in contact with the grain on the sides of the fiber, at the exposed points at which the fiber can be cut away and destroyed, instead of wearing on the extreme ends. This weak point in the brushes of grain-cleaners is the only one where serious wear occurs. To obviate this difficulty is the object of my present device, of which the following is a description, referring to the accompanying drawing, in which—

Figure 1 is a view of the cylinder of my grain-cleaner with the upper guard-ring complete and the lower one partly wound on.

The brush-stock *a*, into which the fibers *b*, that form the brush, are set so as to present an even surface without break, may be cylindrical, conical, or other form, to suit the purpose of the manufacturer, although I deem the cylinder form preferable. The terminal edges of the brush which are exposed are liable to have their fibers cut and destroyed rapidly by the constant impact of the grain upon the sides thereof, instead of the ends. I pro-

tect by winding around the brush-stock at either end or space a narrow strip of leather, or any other suitable material, *c*, in layers or otherwise, so as to form a ring thick enough to protect the fibers on their exposed sides, and shield them from the action of the grain at that point; or a contracting metal flange may be substituted, and as the ends of the fiber are worn away the ring *c* can be reduced in size by contracting it if the protector is made of metal, or by removing the layers if of leather or the like, to conform to the wear aforesaid. In this way I protect the ends or edges of the brush from undue wear and greatly increase its durability. On the lower head of the brush (see Fig. 2) there is a series of V-shaped wings or scrapers for carrying the cleaned grain to the exit-pipe, the V shape being adopted to act properly, whichever way the machine runs, without alteration.

I claim—

1. The removable guard or rings *c*, for protecting the fibers of the brush at its edges in grain-cleaners, substantially as and for the purposes described.

2. The V-shaped scrapers on the lower head of the runner, as and for the purposes specified.

GARDNER E. THROOP.

Witnesses:

LAWRENCE T. JONES,  
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