

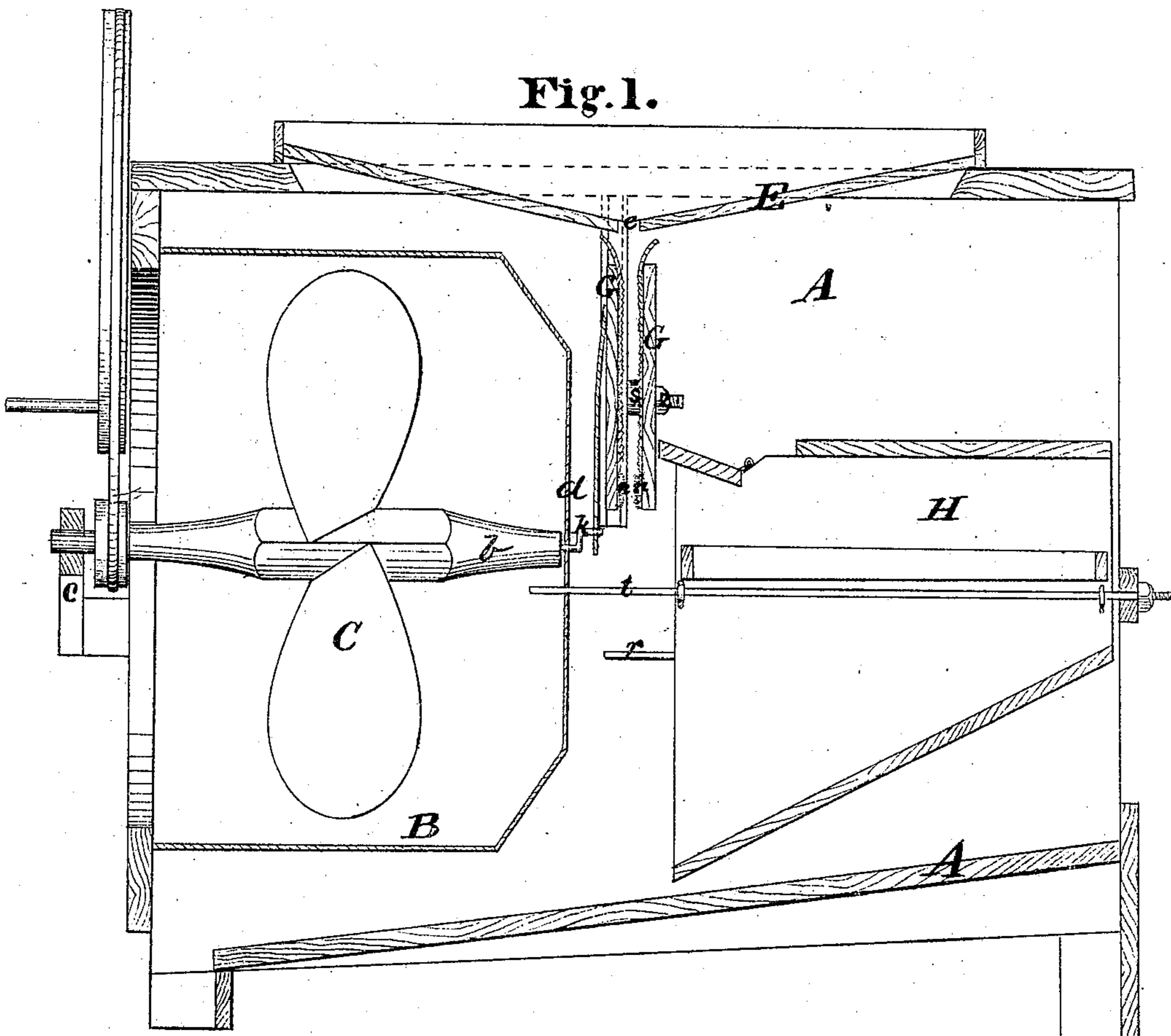
H. LITTLEFIELD.  
Fanning and Smut Mill.

2 Sheets—Sheet 1.

No. 100,908.

Patented March 15, 1870.

Fig. 1.



Witnesses.  
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Chas. Kenyon.

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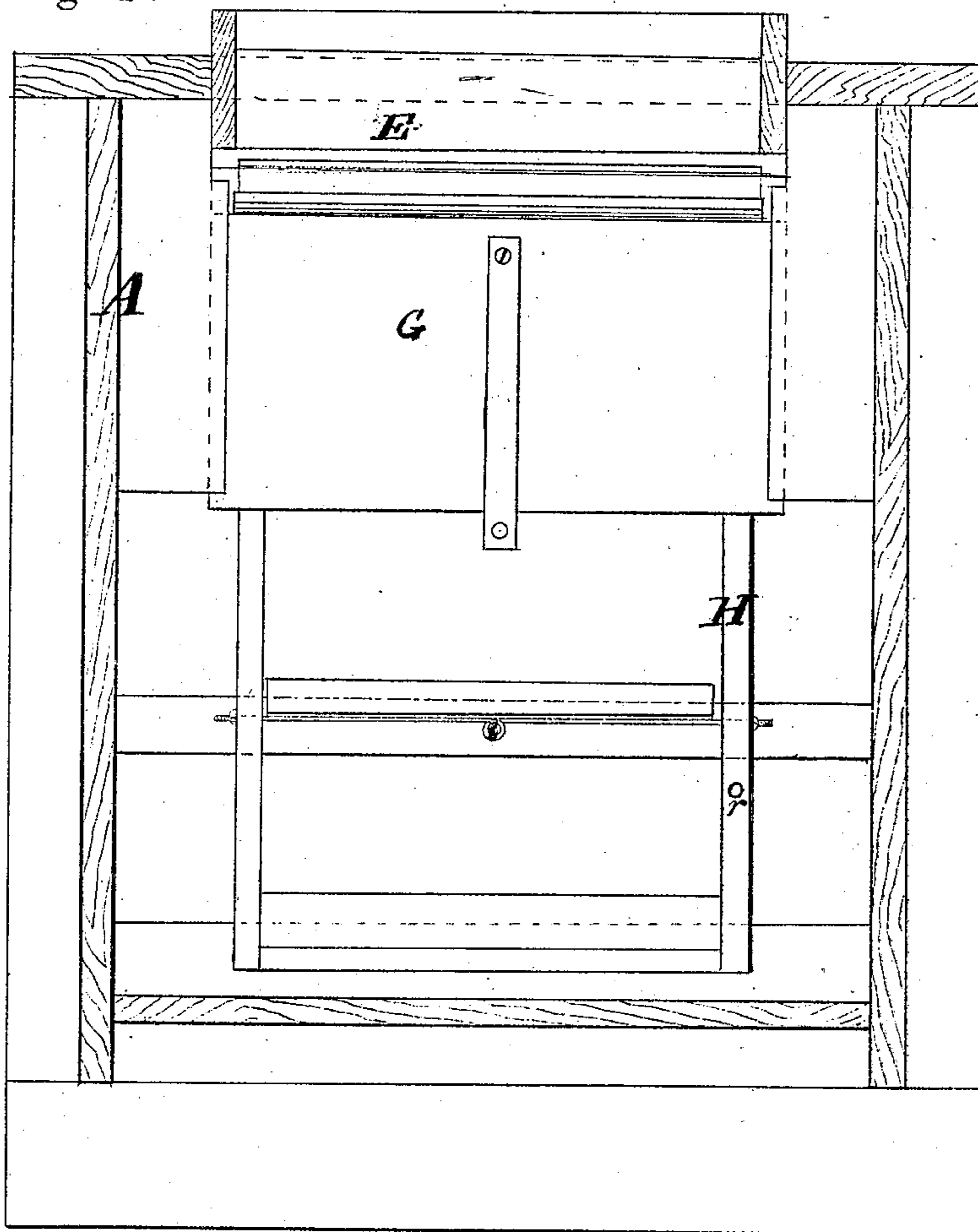
2 Sheets—Sheet 2

Fanning and Smut Mill.

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**Fig. 2.**



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# United States Patent Office.

HORACE LITTLEFIELD, OF LEWIS, IOWA.

Letters Patent No. 100,908, dated March 15, 1870.

## IMPROVED FANNING AND SMUT-MILL.

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, HORACE LITTLEFIELD, of Lewis, in the county of Cass, and State of Iowa, have invented a new and valuable Improvement in Smut and Winnow-Mills; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a central vertical longitudinal section of my invention.

Figure 2 is a central vertical cross-section of the same.

My invention relates to combined fanning and smut-mills, and consists mainly in the central bearing of the shoe, and in the construction and novel arrangement of the rubbers or graters.

The letter A of the drawings designates the frame of the mill. In one end thereof is placed the fan-case B.

C represents the fan, arranged to revolve transversely in the case, and having its shaft *b* bearing in the slanting bar *c* and perpendicular bar *d*.

E designates the hopper, whose bottom boards are arranged to slope toward a transverse opening, *e*, in the center thereof.

The grain falling through this opening drops between the graters or rubbers G G, which operate to remove the smut and hulls from the kernels. One of the graters or rubbers G G is fixed to the frame by screws. The other, placed abreast of it, is arranged to have a vertical motion up and down, which is communicated by the crank *k* on the end of the fan-shaft. Rubber springs *s* are placed around the set-screws *z z* between the rubbers and at the bottom of each rubber is arranged a brush, *u*, for cleaning the grain. By means of the set-screws the rubbers can be adjusted toward each other, and when the pressure of the screws is released the rubber springs will force them apart.

H designates the shoe of the winnowing-mill, pivoted at each end on the central bar *t*. When the winnowing-mill is in operation the rubbers are taken out, and the crank *k* on the end of the fan-shaft is connected with the pin *r* in the side of the shoe by a pitman.

Thus the rubbers will break the smut of the wheat, and the brushes will scour the same, and the wind from the fan will take the dust away. By hanging the shoe on the central rod but little friction is developed, and as the grain will lie evenly on both sides of the rod, the shaking will be accomplished with great ease.

My rubbers will also operate to hull rice. The graters will tear off the hulls, which will be scoured by the brushes below.

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

1. The combined smut and winnow-mill herein described, having shoe H pivoted on the central rod *t*, and removable and adjustable rubbers G G, provided with brushes *u u*, set-screws *z*, and rubber springs *s*, when constructed and arranged to operate in the manner as and for the purposes herein specified.

2. The shoe H, pivoted on a central horizontal supporting-rod, *t*, and operated by a pitman from the crank-shaft, as specified.

3. The removable and adjustable vertically-operating rubbers G G, separated by the rubber springs *s* on the set-screws *z*, and provided with the scouring-brushes *u*, as specified.

In testimony that I claim the above, I have hereunto subscribed my name in the presence of two witnesses.

HORACE LITTLEFIELD.

Witnesses:

JOHN ALLEN,  
FRANK HUNT.