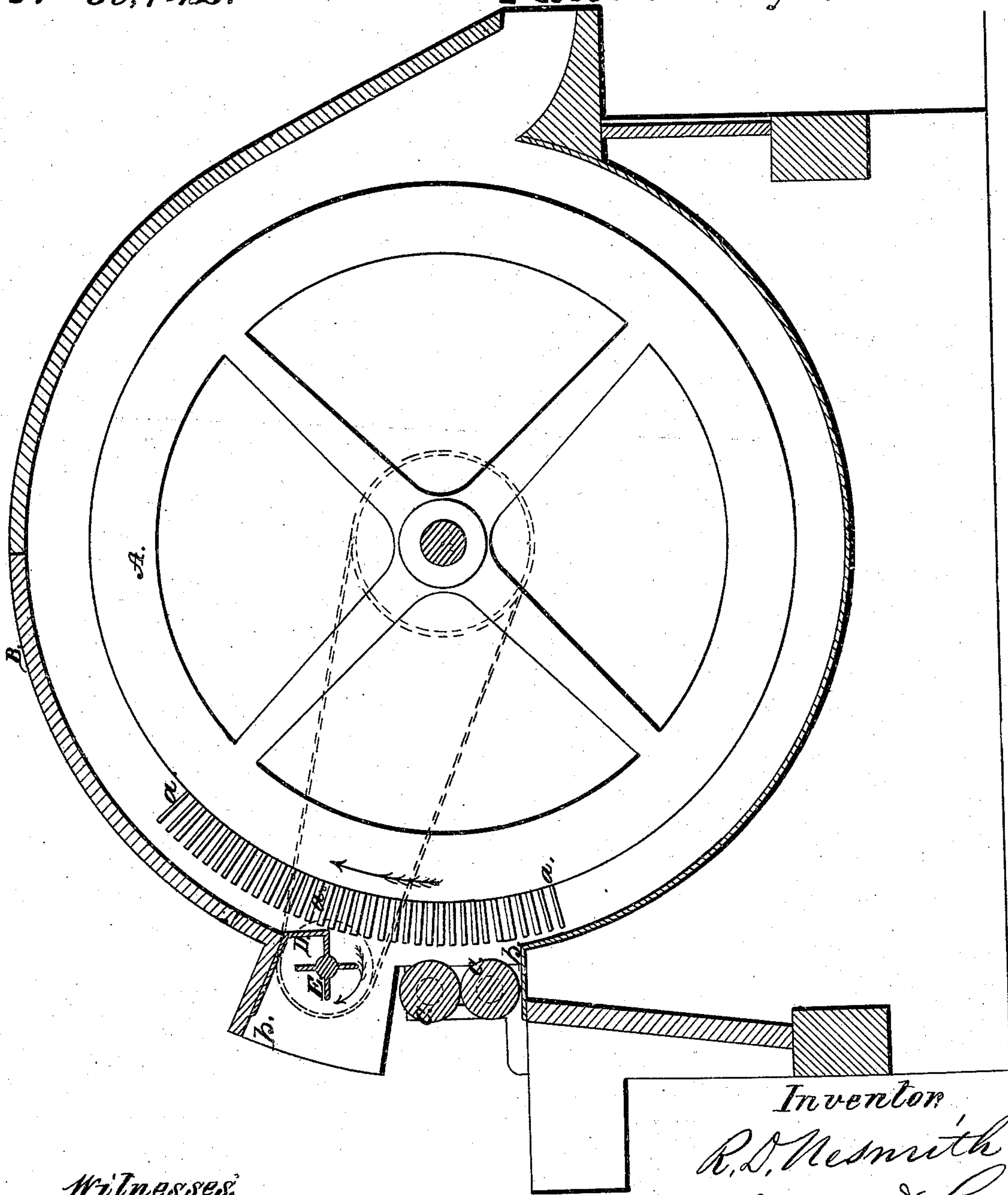


*R. D. Nesmith.*  
*Picking and Burring Cotton,*  
*Wool, &c.*

*Nº 39,742.*

*Patented Sep. 1, 1863.*



*Witnesses:*  
*J. W. Coombs*  
*G. W. Rees*

*Inventor*  
*R. D. Nesmith*  
*per Wm. Co*  
*attys.*



# UNITED STATES PATENT OFFICE.

R. D. NESMITH, OF FRANKLIN, NEW HAMPSHIRE.

IMPROVEMENT IN MACHINES FOR BURRING AND PICKING WOOL, COTTON, &c.

Specification forming part of Letters Patent No. 39,742, dated September 1, 1863.

*To all whom it may concern:*

Be it known that I, R. D. NESMITH, of Franklin, in the county of Merrimack and State of New Hampshire, have invented a new and useful Improvement in Machinery for Picking and Burring Cotton and Wool or other Fibrous Substances; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, said drawing representing a vertical section of a picker with my improvement, taken at right angles to its several shafts.

This invention consists in the combination of a stationary guard and a revolving guard, arranged above the feed-rolls of a picker or burring-machine for the purpose of throwing back onto the feed-apron the small pieces and lumps which pass the feed-rolls without being reduced to fiber, and which would otherwise pass round the cylinder and out from the casing with the picked fiber.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A is the main cylinder, furnished all round with teeth *a a* of any well-known or suitable kind. B is the casing, having an opening, *b b*, in the lower part of which are arranged the feed-rolls C C, and in the upper part of which are arranged the stationary guard D and the revolving guard E. The stationary guard D is substantially like what is used in some other pickers and burring machines, consisting of a plate extending all across the opening *b b*, and arranged so that points of the teeth *a a* will nearly touch it in their revolution. The revolving guard E is also substantially like the revolving guards used in some other pickers and burring-machines, consisting of a shaft with wings or blades, but, instead of being arranged to operate directly in connection with the teeth *a a* of the main cylinder, it is arranged outside of the stationary guard, so that the edges of its wings or blades revolve nearly in contact with the edge of the stationary

guard. The revolution of the said revolving guard is in the contrary direction to that of the main cylinder, as indicated by arrows in the drawing.

In the operation of the machine the pieces and small lumps which pass the feed-rolls without being picked or opened are carried by the teeth *a a* to the edge of the guard D, by which they are detached from the said teeth, and the revolving guard knocks off the said pieces or lumps from the edge of the stationary guard, and throws them back upon the feed-apron to be returned to the feed-rolls, and thereby redelivered to the teeth of the main cylinder. When the stationary guard is used alone, it soon gets dirty, and the fiber adheres to it and forms a fringe over its edge, which prevents the pieces from being thrown out. When the revolving guard alone is used, it throws out but a small quantity of the pieces, because it is not all the time presented to the cylinder, but only intermittently, as the wings come round. By combining the stationary and revolving guard the latter is caused to keep the former clean, and will not fail to return all the pieces or lumps to the apron, from which they will pass to the rolls till sufficiently reduced.

The invention is applicable with particular advantage to machines for working up cloth into shoddy, throwing back the patches or pieces upon the apron like snow, to be returned to the feed-rolls.

I do not claim, separately, either the stationary guard or revolving guard; but

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

The revolving guard, applied to operate in combination with the stationary guard, and in relation to the main cylinder, in the manner and for the purpose substantially as herein specified.

R. D. NESMITH.

Witnesses:

GEO. W. NESMITH,  
ABNER C. HASTINGS.