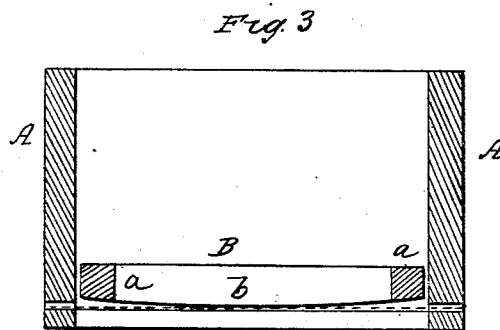
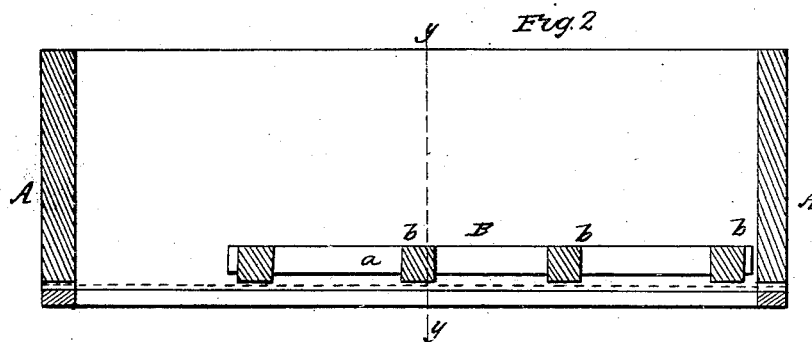
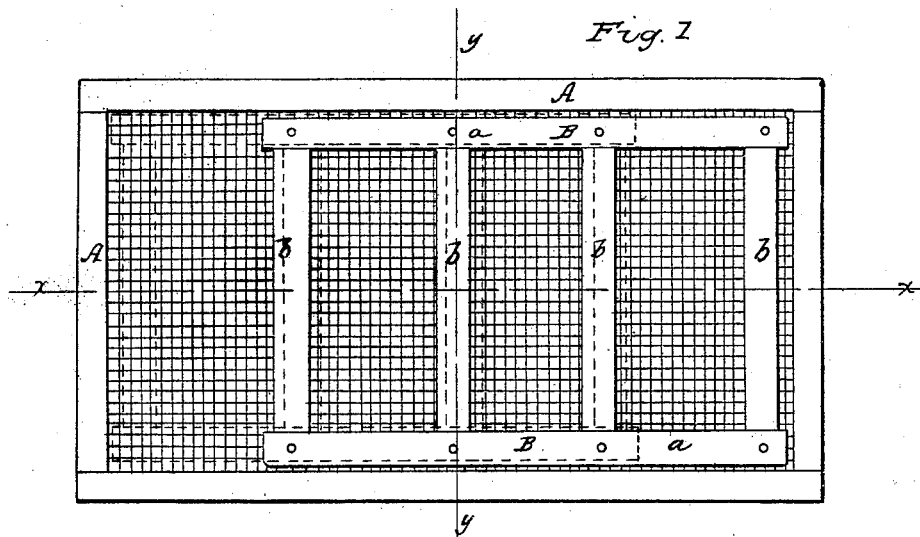


S. G. RICE.  
Snuff Sifter.

No. 44,974.

Patented Nov. 8, 1864.



Witnesses  
R. T. Campbell  
C. Schaefer

Inventor  
S. G. Rice  
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Mason & Munck, Lawyers

# UNITED STATES PATENT OFFICE.

S. G. RICE, OF ALBANY, NEW YORK.

## SNUFF-SIFTER.

Specification forming part of Letters Patent No. 44,974, dated November 8, 1864.

*To all whom it may concern:*

Be it known that I, S. G. RICE, of the city and county of Albany, and State of New York, have invented a new and useful Improvement in Snuff Disintegrators and Sifters; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top view of my invention. Fig. 2 is a longitudinal section of the same. Fig. 3 is a transverse section of the same.

The same letters of reference in the several figures indicate corresponding parts.

The main object of my invention is to sift snuff that has been dampened or moistened by the scenting-liquid that is used in its manufacture; but it may also be usefully employed for sifting anything for which a sieve is used, more particularly pulverized substances which have from moisture or dampness assumed a "lumpy" form in their removal from one vessel or receiver into another.

My invention consists in the combination with a screening-sieve of a free "breaker" in such manner that the breaker vibrates and acts with a sliding or both a sliding and rolling friction upon the screening-surface of the sieve, and in thus operating causes the particles of snuff or other substances to be disintegrated, and also facilitates the passage of the same through the meshes of the screen.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

A designates an ordinary rectangular sieve or screen. It may be vibrated by hand or by gearing, as deemed preferable.

B is a breaker formed of longitudinal and transverse bars *a a* and *b b b b*. This breaker in its transverse section on its under side may be the segment of a circle, so as to roll or rock in a direction at right angles to that in which it traverses the screen. The length of the breaker should be much less than that of the screen or sieve box, in order that it may have sufficient traverse on the sieve to produce the desired result. It may also be somewhat narrower than the sieve-box. So far as the longitudinal traverse is concerned, it is im-

portant that the amount of play allowed the breaker should be as great, if not greater, than the distance between each pair of transverse bars. By preserving these proportions the whole surface of the sieve or screen will be acted upon by the several transverse bars during each vibration of the breaker.

By examining the drawings it will be seen that the breaker is arranged upon the sieve or screening surface and is free of all suspending connections, and therefore, when the sieve-box is vibrated or tossed back and forward, it will also receive a similar motion, and, it being shorter than the sieve, will slide with a frictional contact upon the screening-surface until it is arrested by the ends of the sieve-box. It also will have a slight lateral movement as it traverses the sieve longitudinally, and in some instances it may roll back and forth toward the sides of the sieve-box. These actions of the breaker cause the accumulated particles of snuff or other pulverized substance to be disintegrated and the passage of the same through the screen to be facilitated. Further than this, the breaker causes the "scent" to be diffused more generally throughout the snuff. And finally, the breaker keeps the meshes of the screen free and open, its frictional contact and concussive force effecting this result.

I have found in practice that the same quantity and a better quality of snuff can be "made" or sifted in twenty minutes by one person with my improved sieve or screen as could be made in the old way in a whole day and with the attendance of two persons.

I deem it necessary for my protection to say that while I have particularly described one style of breaker, and which I believe the best for the purpose named, I do not limit myself to this particular form, as many equivalent forms of "free" breakers may be adopted and the same operate on the same general principle set forth.

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

1. The combination of a free breaker with a screen or sieve, substantially as and for the purpose set forth.

2. The constructing of the free breaker of longitudinal and transverse bars in such man-

ner that in its vibration over the screening-surface the whole of such surface shall be traversed, substantially as described.

3. Constructing the free breaker of segment form on its under side in a transverse direction, substantially as and for the purpose set forth.

4. So constructing a free breaker and using

it in a vibratable sieve or screen that it will traverse the screen longitudinally and laterally and also rock or roll transversely, substantially as set forth.

SAMUEL G. RICE.

Witnesses:

ROBT. STEWART,  
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