

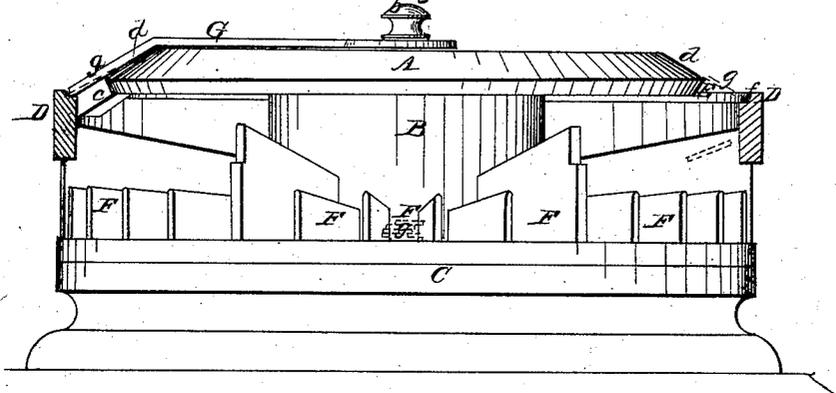
*Fosket & Stedman.*

*Comb Machine.*

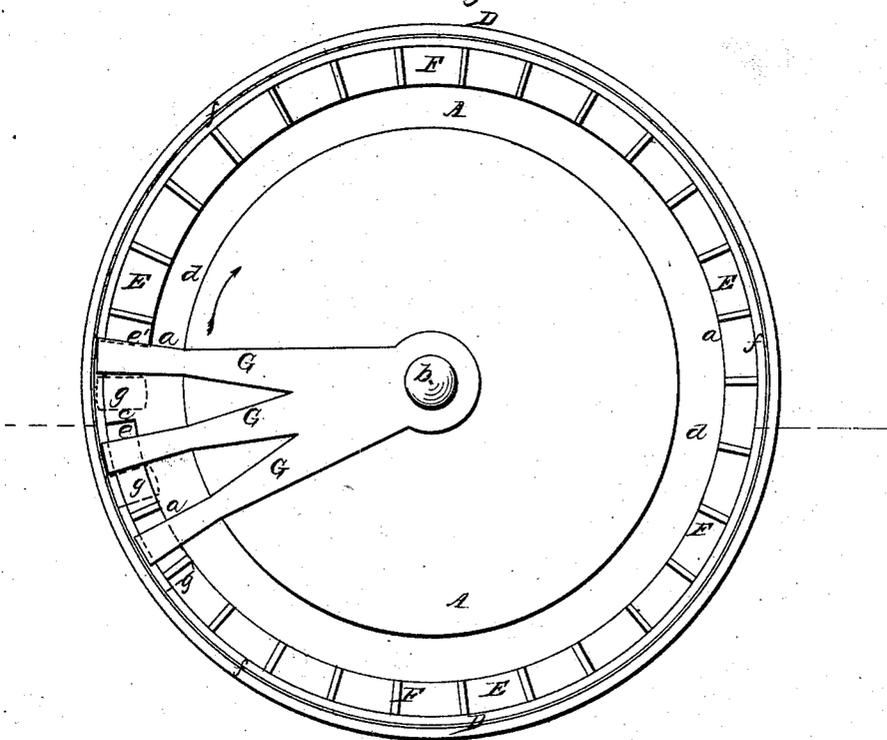
*N<sup>o</sup> 15,634.*

*Patented Aug 26, 1856.*

*Fig. 1.*



*Fig. 2.*



# UNITED STATES PATENT OFFICE.

WM. FOSKET AND BENJN. S. STEDMAN, OF MERIDEN, CONNECTICUT, ASSIGNORS TO JULIUS PRATT & CO., OF SAME PLACE.

## MACHINE FOR SIZING COMB-BLANKS.

Specification of Letters Patent No. 15,634, dated August 26, 1856.

To all whom it may concern:

Be it known that we, WILLIAM FOSKET and BENJAMIN S. STEDMAN, of Meriden, in the county of New Haven and State of Connecticut, have invented a new and useful Machine for Sizing Comb-Blanks or other Articles; and we 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, in which—

Figure 1, is an elevation of the machine, partly in section. Fig. 2, is a plan of the same.

Similar letters of reference indicate corresponding parts in the two figures.

In the manufacture of ivory combs, the blanks are generally cut of as great a length as the material admits of, and in a large number there will be a great variety of lengths and many will be so nearly of the same length that it will be difficult to detect any difference without comparing them closely side by side.

It is desirable in putting the combs up in packages of dozens or more or less to have all the combs in one package of the same size exactly, and as the only way of sorting them in sizes heretofore employed has been to pick them out by hand which has been a slow and tedious operation and has required great practice to acquire any degree of skill in the process. This machine is intended to perform the operation of "sizing," as it is termed, with great exactness and dispatch.

The machine may be in different forms, but the form represented in the drawing will serve to illustrate the principle of the invention as well as any other.

A, is a metal table supported by a stand B, upon a base C, and surrounded by a circular metal frame D, which is shown in section in Fig. 1. The edge  $a, a$ , of the table is made in the form of a spiral, gradually receding from the center  $b$ , to which center the frame D, is truly concentric. The spiral form of the edge of the table leaves a taper slit or opening E, between the table A and the frame D, and this should be so proportioned in width that the width of the narrowest extremity  $e$ , of the opening should be a trifle less than the length of the shortest blanks, and the width of the widest end  $e'$ , a trifle greater than the length of the longest blanks. The ends  $e, e'$ , of the opening E, do

not quite meet and unite, but the table is extended at part to meet the frame D, to form a resting place  $c$ , for the blanks to be laid on for introduction to the machine.

The table is beveled all around for some distance inward from its edge, as shown at  $d, d$ , Fig. 1, and the inner portion of the top of the frame D, has a rabbet  $f$ , turned in it, the angle of the said rabbet occupying such a position that it would be met by a straight line continued from the bevel  $d, d$  as will be understood by reference to the right hand side of Fig. 1, where a comb blank is shown striding across the opening E, from the table to the rabbet  $f$ .

F, F, are series of boxes or compartments arranged below the opening E.

G, G, G, are arms fitted to turn on the center pin  $b$ . Of these arms there may be as many, attached to one hub, as can be included in the circumference of the table, leaving spaces between them fully sufficient to admit the width of the comb blanks, said arms fitting down to the bevel  $d, d$ , of the table and extending all or nearly all across the opening E.

The operation of the machine is as follows: A continuous rotary motion at a moderate speed in the direction of the arrow shown in Fig. 1, is given to the arms G, G, G, by any convenient means and an attendant who occupies a position near the resting place  $c$ , takes up the blanks  $g$ , indiscriminately from a heap and places them one by one upon the resting place  $c$ , with the length of the blank running toward and from the center  $b$ , as fast as the arms G, G, severally pass the said resting place. The resting place  $c$ , has the same inclination as the bevel  $b$ , of the table, which is sufficient to cause the blank to descend by gravitation till its lower end is arrested by finding the bottom of the rabbet  $f$ . The arms, in passing the resting place, sweep the blanks off it and push them along partly supported by the rabbet F and partly by lapping over the edge of  $a$ , of the table, moving them from the narrowest toward the widest end of the opening E, until, in passing over the gradually receding edge  $a$ , they, sooner or later, according as they are shorter or longer, reach a point where they are no longer supported by the edge of the table and fall through the opening E, into the box or compartment below. This is illustrated in Fig. 1, where, on the

left side of the machine, a blank *g*, is shown over the narrowest portion of the opening, where it receives support for a considerable portion of its length, from the table, but on the other side of the machine the same blank is shown as having arrived at a point where the edge *a*, has receded so far from the frame D, as no longer to support the upper end of the blank which drops down and the whole blank falls bodily through the opening.

By making the table of large size so as to make room for a very large number of compartments or boxes F, F, the sorting may be effected with such nicety that no difference can be detected by the eye on a comparison between the blanks falling into any one box. But, by making a long table and frame of similar character to A and D, but of an oblong form with rounded ends, and attaching the arms G, G, to an endless belt or chain running around two pulleys on upright shafts a large machine can be brought into less space than if made of the circular form shown; as an instance of this, we will state that a machine on that plan, constructed by us, contains over three hundred

compartments F, F, while the difference between the longest and shortest blanks sized upon it seldom exceeds one inch and a half.

It may be remarked, that instead of having the beveled and gradually receding edge *a* on a table inside the rabbet *f*, the position of the parts may be reversed by making the rabbet on the central table and the beveled and receding edge on the frame D, but the former arrangement is preferable.

What we claim as our invention and desire to secure by Letters Patent, is—

The gradually-receding edge *a*, arranged within or around and inclining toward a rabbet *f*, so as to form a tapering opening E, between them, with a resting place *c*, at the narrowest end of the opening, when combined with a set of arms G, G, rotating or otherwise moving over the opening and with boxes, compartments or other receptacles below, to operate substantially as and for the purpose herein set forth.

WILLIAM FOSKET.  
B. S. STEDMAN.

Witnesses:

A. C. BRECKENRIDGE,  
HIRAM FOSTER.