

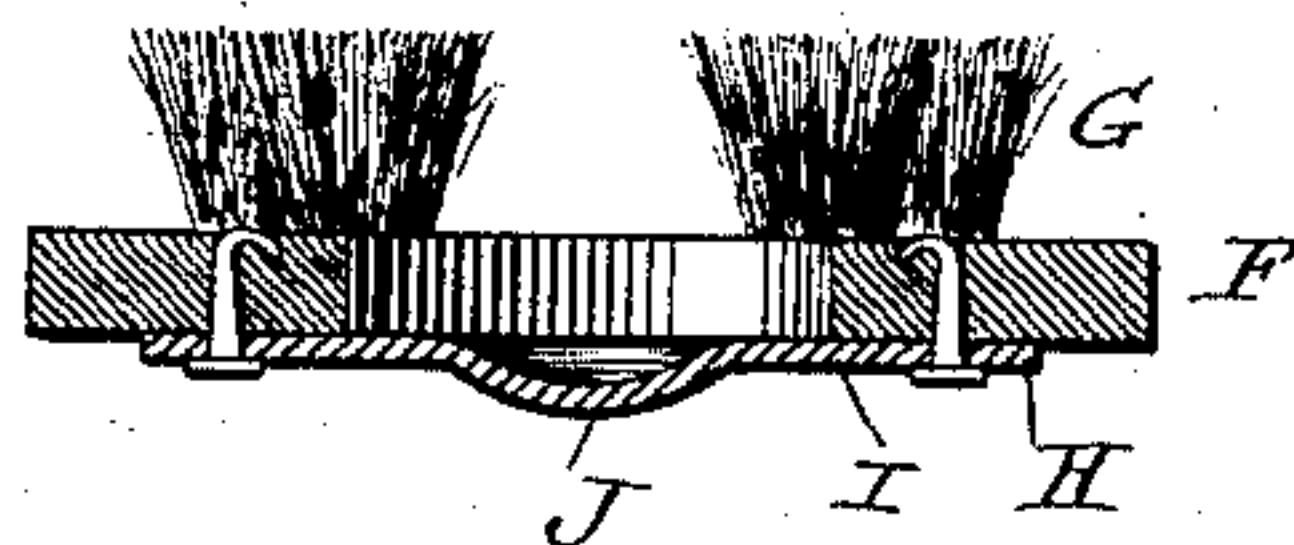
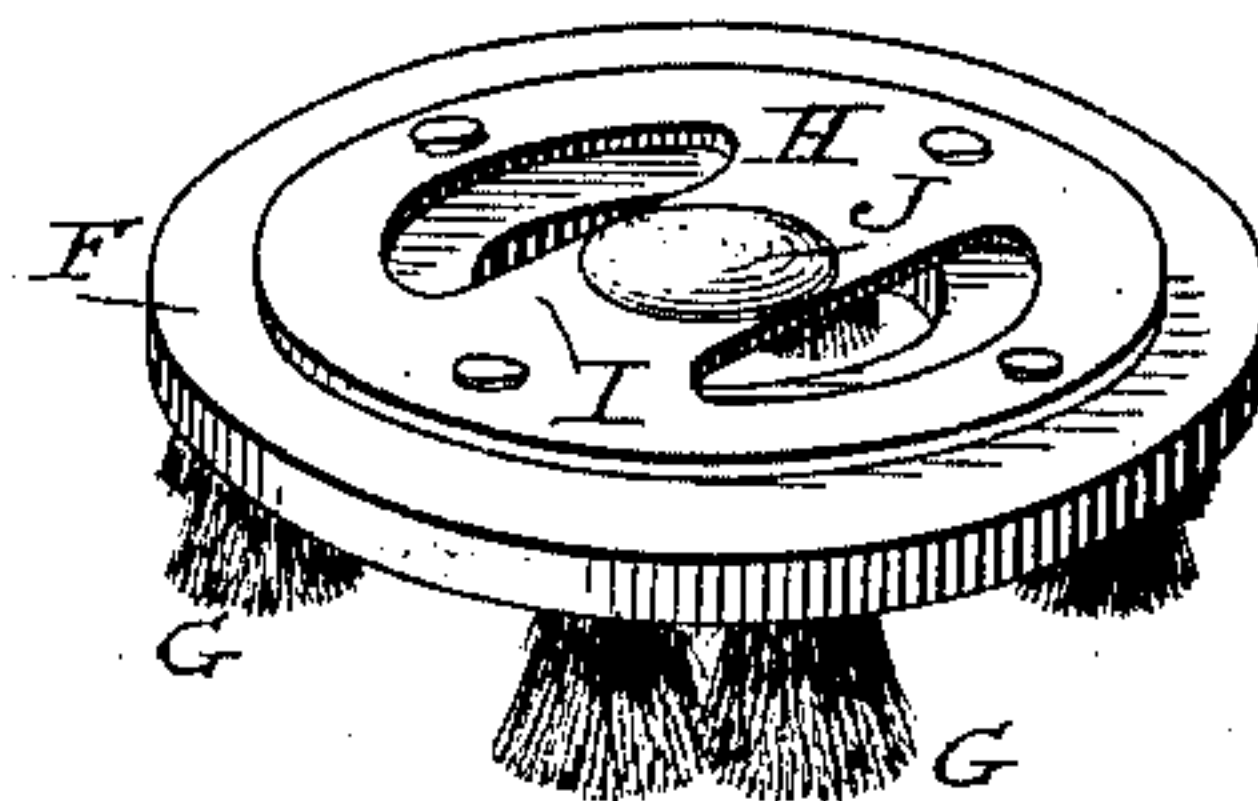
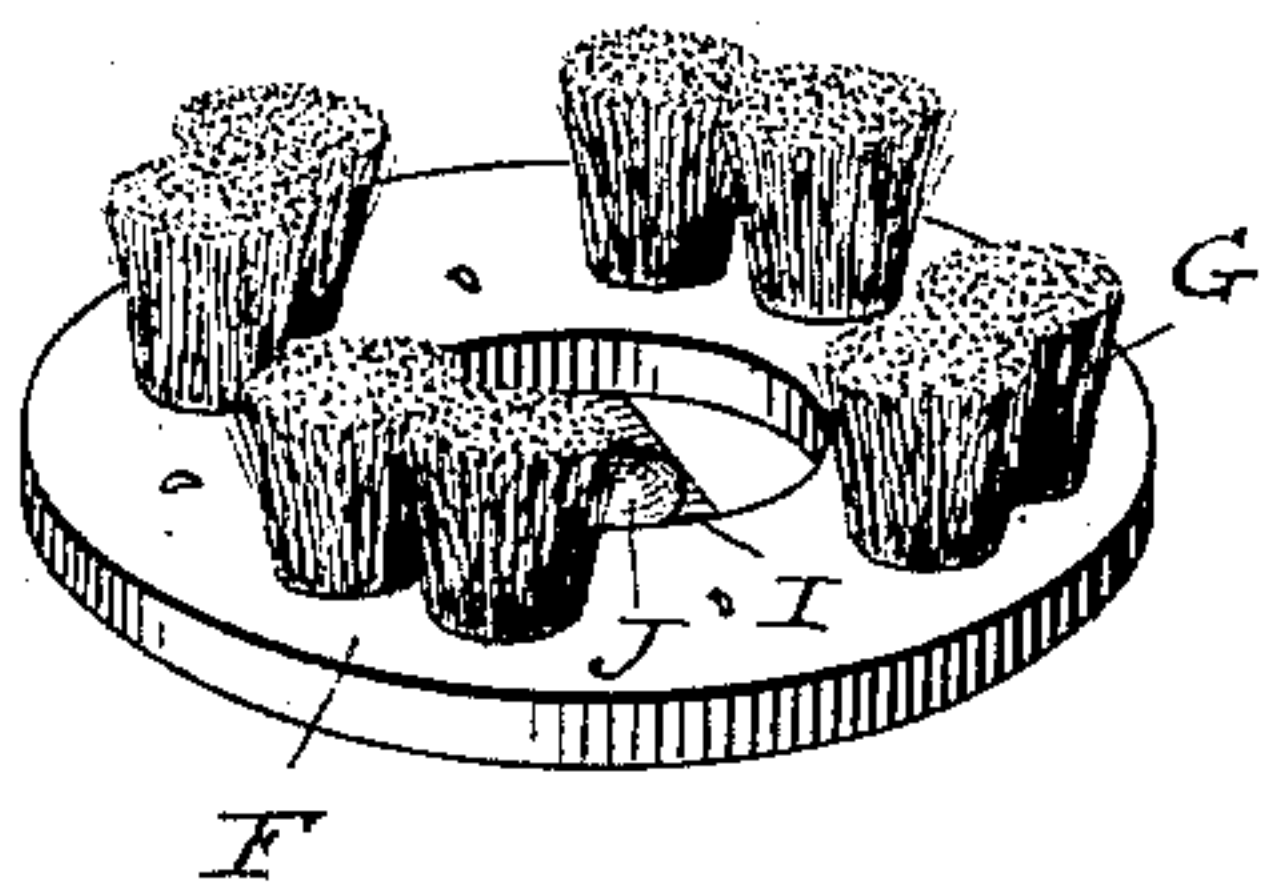
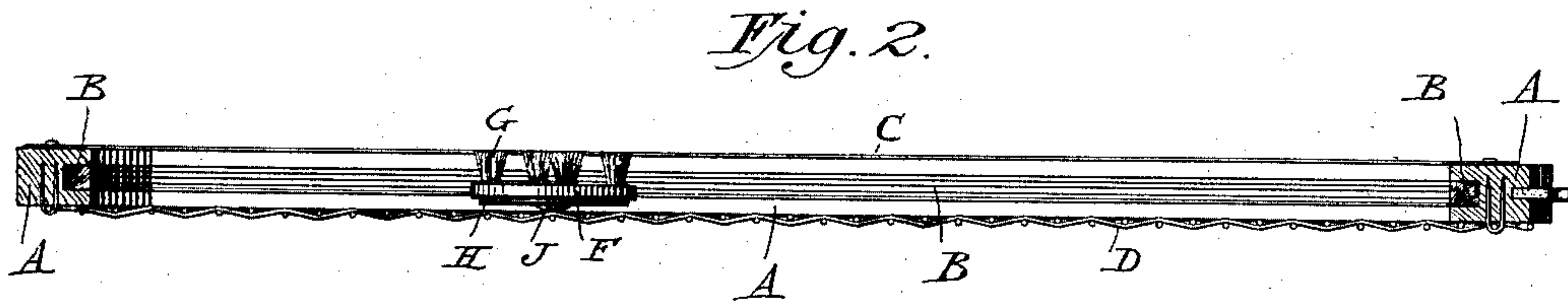
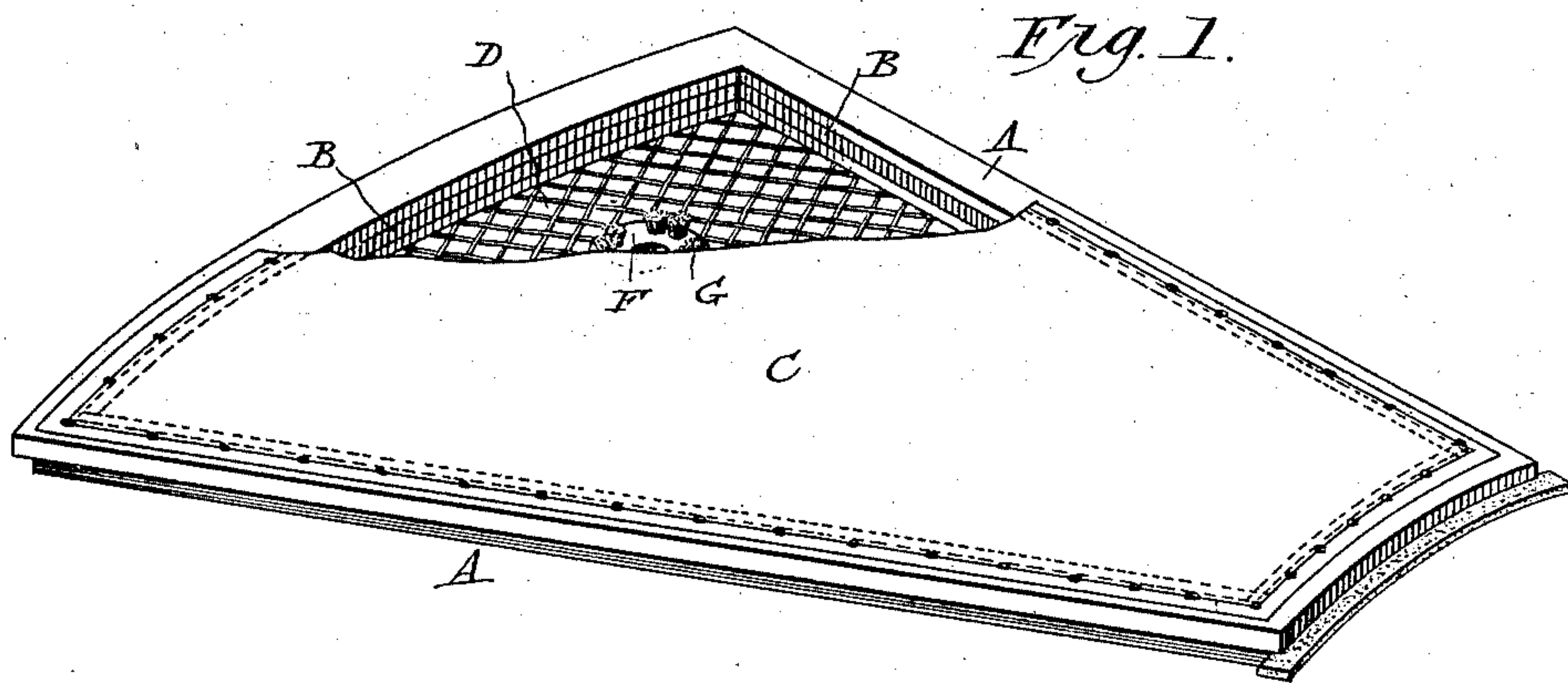
No. 660,569.

Patented Oct. 30, 1900.

W. D. GRAY.
CLEANER FOR SHAKING SIEVES.

(Application filed Dec. 1, 1899.)

(No Model.)



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UNITED STATES PATENT OFFICE.

WILLIAM D. GRAY, OF MILWAUKEE, WISCONSIN, ASSIGNOR TO THE
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CLEANER FOR SHAKING-SIEVES.

SPECIFICATION forming part of Letters Patent No. 660,569, dated October 30, 1900.

Application filed December 1, 1899. Serial No. 738,906. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM D. GRAY, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Cleaners for Shaking-Sieves, of which the following is a specification.

My present invention pertains to improvements in cleaners for shaking-sieves, the construction and advantages of which will be hereinafter set forth, reference being had to the accompanying drawings, wherein—

Figure 1 is a perspective view of a sieve-section, a portion of the bolting-cloth being omitted to show the interior construction of the section; Fig. 2, a longitudinal sectional view of Fig. 1; Fig. 3, a perspective view of the brush; Fig. 4, a similar view showing the under face of the brush, and Fig. 5 a transverse sectional view of the brush.

The objects of my invention are to provide a simple and efficient cleaning device for shaking-sieves and to so construct the framing of the sieve-sections that the cloth may be readily attached thereto, while at the same time such a surface will be presented to the edge of the brush as will prevent the brush from wearing or cutting away the framing of the sieve.

Referring to the drawings, and more particularly to Figs. 1 and 2, a sieve-section is shown which is designed to be used in a sifting-machine similar to that shown in Patent No. 559,378, granted to me under date of May 5, 1896, this form, however, being simply used for the purpose of illustration, as it will be apparent that any form of frame may be employed in conjunction with my invention.

The main body of the side frames A of the sieve is made of a comparatively soft wood and is provided with a channel or groove, within which is placed and secured a strip B of hard wood or a similar substance which will resist the action of the brush and prevent the frame from being cut or worn away as the brush is thrown against it in the operation of the machine.

It is essential to a proper securing of the sieve-cloth C upon the frame that the edges of the frame be made of a soft wood or material into which the tacks for securing the

cloth may be readily driven. The employment of the soft wood, however, is objectionable where a loose cleaner is used, and by the construction which is here shown—namely, the employment of a hard strip B—the advantage of the soft portion is retained, while the disadvantage of having the sides cut away by the brush is obviated.

To the under side of the sieve-section there is secured a wire-net or similar foraminous surface D, the wire-netting, however, being preferable. A net of relatively large mesh is also advisably used in order to impart the necessary tilting or tipping of the brush toward and from the bolting-cloth C.

The brush employed is of the form illustrated in Figs. 3, 4, and 5. It consists of a leather washer F, to which are secured tufts of bristles or hairs G, preferably placed in pairs of two around the disk, as is clearly shown in Fig. 3. Secured upon the under face of the washer F is a metallic disk H, provided with a connecting member or cross-bar I, having pressed out of it a rounded projection J. The aggregate height of the brush, including the projection J, to the ends of the tufts of bristles is approximately equal to the distance between the sieve-surface C and the wire-net D. The sifting-screen thus made is designed to be used in a shaking-sieve, and the shaking or gyratory motion imparted to the sieve-body causes the brush to traverse over the entire surface of the sieve or screen, the bristles working through the meshes of the cloth and keeping them free and open.

By reason of the rounded projection J working over and dropping down between the wires of the screen the brush is given a tipping or tilting motion, thereby more effectually cleaning the sieve-surface than would otherwise be the case. For instance, were the under surface of the brush made entirely flat or provided with a flat bearing-surface the brush would simply slide around over the wire mesh and not be given that tipping or tilting motion which takes place with the construction herein described. The tipping or tilting motion is also increased by reason of the bristles being disposed in the manner illustrated and described. Were the bristles continuous around the brush, then, of course,

there would be more resistance to the tilting motion of the brush-body, and consequently not such a degree of movement secured as takes place with the present construction.

5 In the course of its travel the brush will be thrown against the edges of the sieve; but as that portion of the side bars or members of which the frame is formed is provided with a hard wearing-surface the brush cannot and
10 does not cut them away, as is the case where a soft or relatively soft material is employed.

It is manifest that other forms of brushes may be employed in conjunction with the hard wearing-surface, and I do not therefore
15 desire to limit myself to the use of the particular brush shown in connection with this feature of my invention.

While it is preferred to form the wearing-surface of a hard wood, still it is apparent
20 that any substance which will resist the wearing action of the brush may be employed, so long as it does not affect the material being treated.

Having thus described my invention, what
25 I claim is—

1. In a sieve for a sifting-machine and the like, the combination of a frame formed of a relatively soft wood; a wearing-surface of a relatively harder material for the inner face
30 of the frame; a sieve-surface secured to the frame; and a cleaner for the sieve-surface working in the frame and adapted to contact with said relatively hard material as the brush is thrown or moved about in the frame, substantially as and for the purpose described.

2. A brush for cleaning the sieves of a sifting-machine and the like, comprising a main body portion of circular contour; and a series of distinct and separated tufts of bristles extending up therefrom, the tufts being disposed in pairs, substantially as shown and described.

3. A brush for cleaning the sieves of a sifting-machine and the like, comprising a main
45 body portion of circular form having a series of separated and independent tufts of bristles extending up therefrom; and a metallic disk or washer secured to the under face of said body portion, said disk being formed with a
50 rounded bearing-surface or projection J, substantially as described.

4. In a sieve for a sifting-machine and the like, the combination of a frame formed of a relatively soft wood, said frame having a
55 groove or channel formed in its inner face; and a wearing-strip of harder material secured in said groove or channel.

5. In a sieve for a sifting-machine and the like, the combination of a suitable frame
60 formed of relatively soft wood and having a channel or groove formed in its inner face; and a strip or strips of hard wood secured in said channel, substantially as described.

6. In a sieve for sifting-machines and the
65 like, the combination of a suitable frame formed of a relatively soft wood and provided with a groove or channel in its inner face;

strips of hard wood secured in said groove or channel; a bolting-surface secured upon one side of the frame; a foraminous surface secured upon the opposite side of the frame; and a cleaning-brush for said sieve, working intermediate said surfaces. 70

7. In a sieve for sifting-machines and the like, the combination of a suitable frame; 75 bolting-cloth secured to one side thereof; a foraminous surface secured to the opposite side thereof; and a brush working intermediate said surfaces, said brush being provided with a rounding projection extending from
80 that side next to the foraminous surface and adapted to work down into the openings in the foraminous surface, substantially as described, whereby a rocking or tilting motion is imparted to the brush as it is caused to
85 travel intermediate the cloth and foraminous surface.

8. In a sieve for sifting-machines and the like, the combination of a suitable frame; bolting-cloth secured to one side thereof; a
90 wire-netting secured to the opposite side thereof; and a cleaning-brush working intermediate said bolting-cloth and said wire-netting, said brush being provided with a rounding projection adapted to rest upon and work
95 over and down between the wires composing the netting, substantially as and for the purpose described.

9. In a sieve for sifting-machines, the combination of a suitable frame; bolting-cloth secured to one side thereof; a wire-netting secured to the opposite side of said frame; and a brush working intermediate said bolting-cloth and the netting, said brush being provided upon that side next to the netting with
105 a rounded projection and having its bristles arranged in a series of separated tufts, substantially as and for the purpose described.

10. In a sieve for sifting-machines and the like, the combination of a suitable frame; 110 bolting-cloth secured upon one side thereof; wire-netting secured upon the opposite side of said frame; a brush working intermediate said cloth and netting, said brush being provided with a rounded projection upon that
115 side adjacent to the netting and having its bristles upon the opposite side arranged in separated tufts; and a hard wearing-surface for the sieve-frame with which the brush comes in contact during its course of travel, 120 substantially as and for the purpose described.

11. In a sieve for sifting-machines and the like, the combination of a suitable frame provided with a hard wearing-surface upon its
125 inner face; bolting-cloth secured upon one side of the frame; wire-netting secured upon the opposite side thereof; and a brush working intermediate said cloth and netting, said brush comprising a leather body portion having a series of separated tufts of bristles extending up therefrom and having secured to its under face a metallic disk or washer H provided with a cross-bar or member I, hav- 130

ing formed integral therewith a rounded bearing-surface or projection J, substantially as described.

5 12. In a sieve for sifting-machines, the combination of a suitable framework; a sieve-surface; a brush for cleaning said surface; and means for imparting to said brush a constant tipping or tilting movement as it traverses the sieve-surface, whereby its bristles are protruded or projected through the meshes of
10 the sieve-surface, substantially as and in the manner set forth.

13. In a sieve for sifting-machines and the like, the combination of a frame; a wearing-
15 surface secured to the inner face of the frame;

a sieve-surface secured to the frame; and a cleaner for the sieve-surface working in the frame and adapted to contact with the wearing-surface as the brush is thrown or moved about in the frame beneath the sieve-surface, substantially as and for the purpose described. 20

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM D. GRAY.

Witnesses:

JOHN PHELPS,
WM. BANNEN.