

No. 768,409.

PATENTED AUG. 23, 1904.

A. A. SWEET.
GRID BAR FOR COTTON PICKERS.

APPLICATION FILED MAY 5, 1904.

NO MODEL.

Fig. 1.

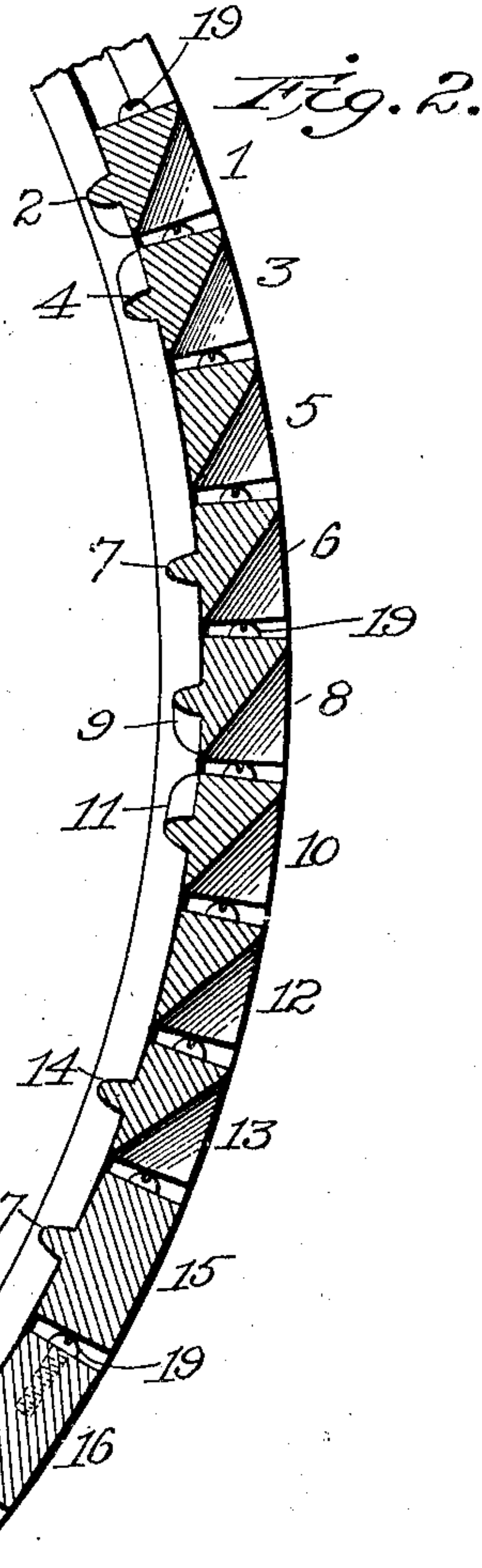
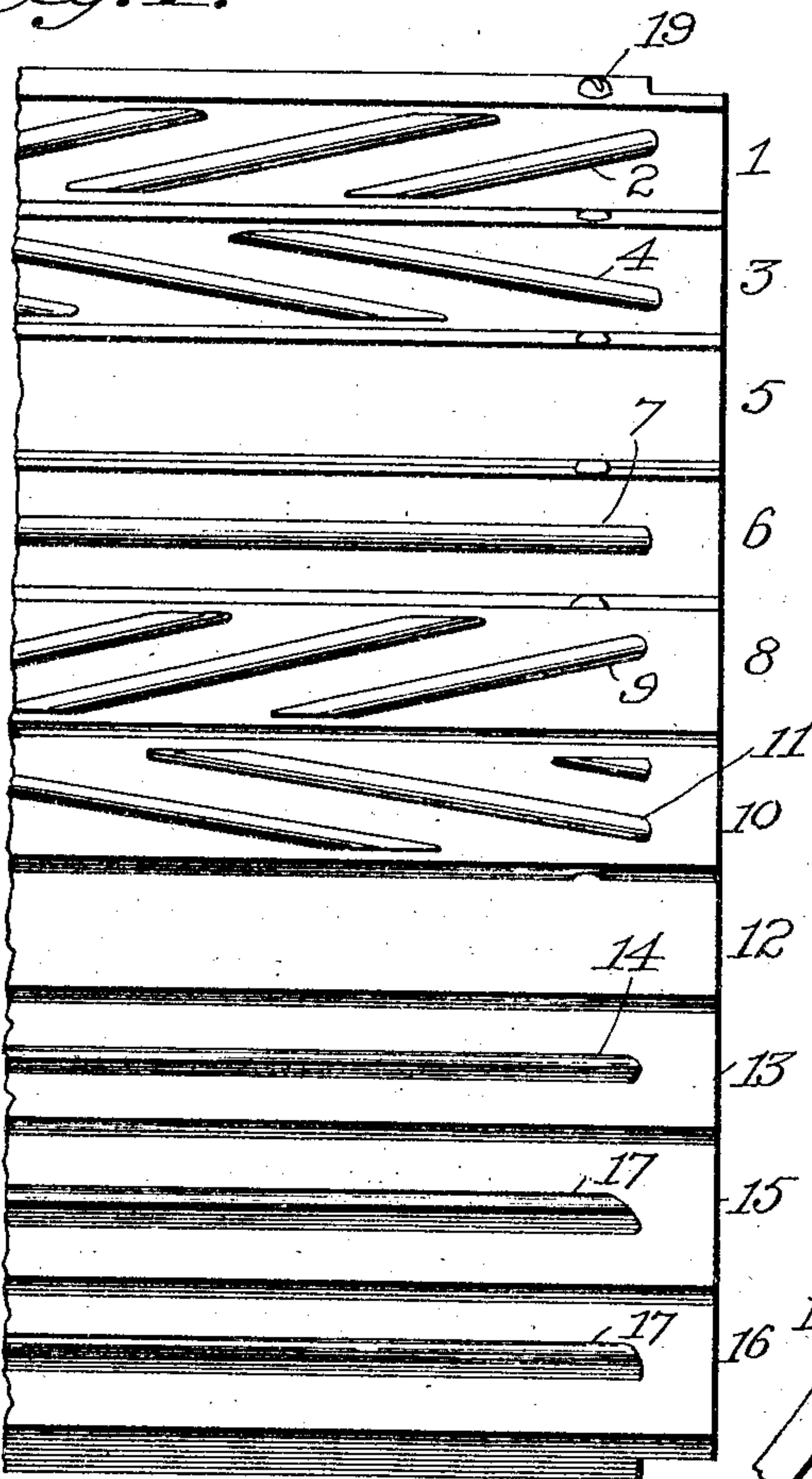


Fig. 4.

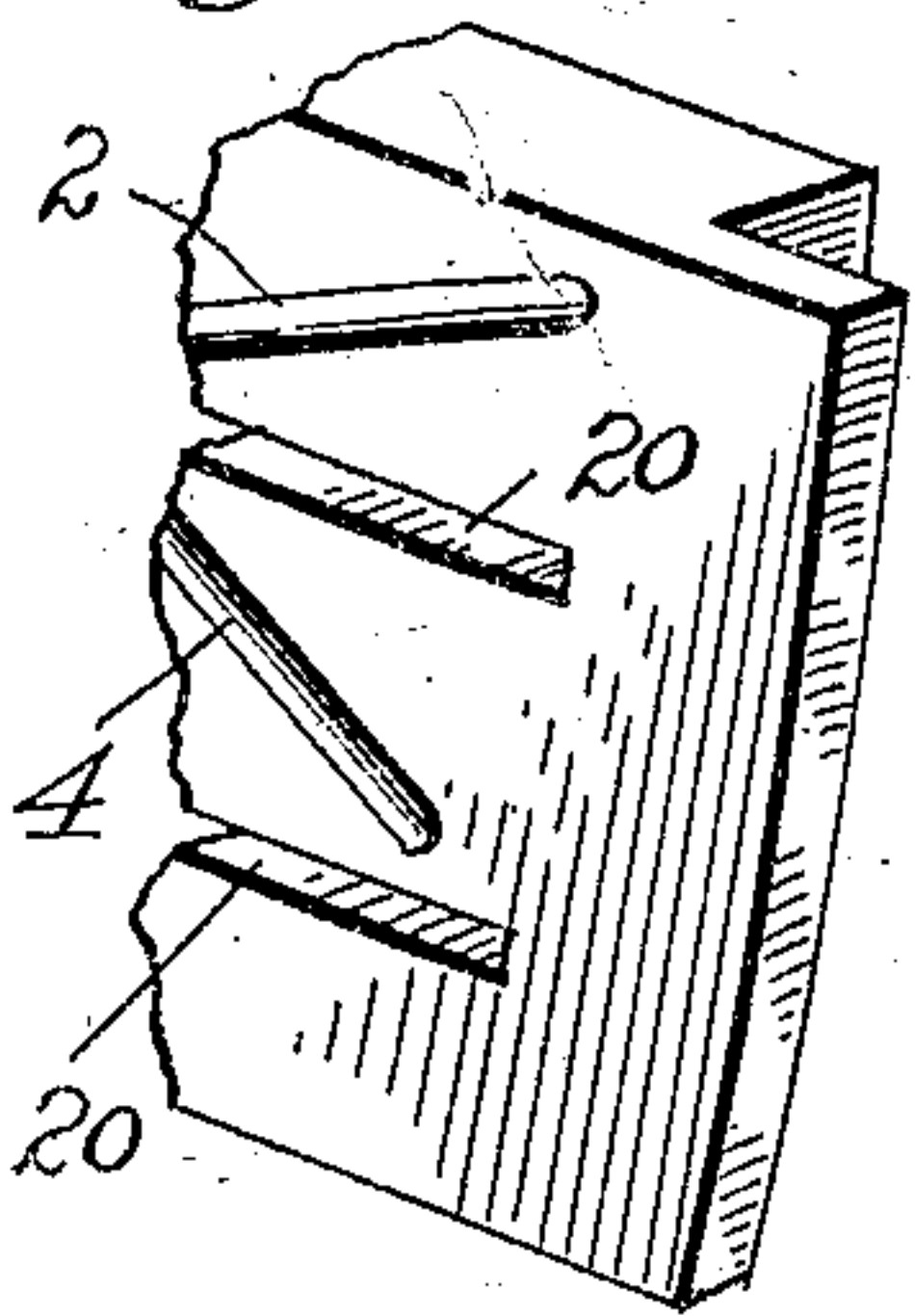
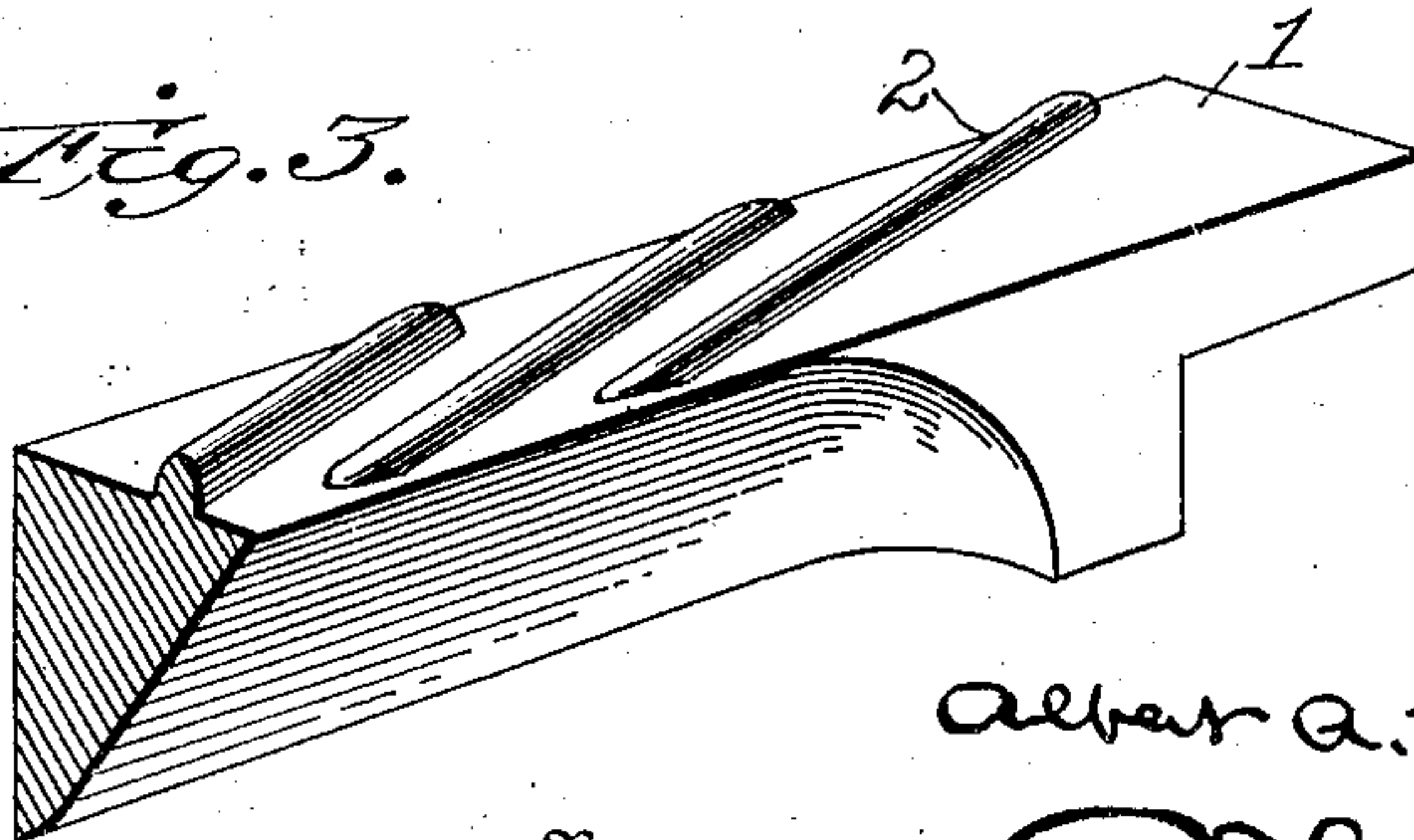


Fig. 3.



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GRID-BAR FOR COTTON-PICKERS.

SPECIFICATION forming part of Letters Patent No. 768,409, dated August 23, 1904.

Application filed May 5, 1904. Serial No. 206,597. (No model.)

To all whom it may concern:

Be it known that I, ALBERT A. SWEET, a citizen of the United States, residing at Fall River, in the county of Bristol and State of Massachusetts, have invented new and useful Improvements in Grid-Bars for Cotton-Pickers, of which the following is a specification.

This invention relates to cotton pickers or openers; and its object is to provide a grid for such a machine composed of bars of improved configuration for the purpose of removing a greater quantity of dirt and refuse from the cotton than is possible with bars of the customary construction.

As is well known, the first process in the manufacture of cotton cloth consists in picking up the cotton and cleaning out the dirt and then winding it in laps on a large roll, from which it goes to the carding-machine. The picker or opener comprises a cylinder made up in part of parallel bars set slightly apart and so shaped as to afford a retarding effect as the cotton is swept past them by beater-arms revolving rapidly inside the cylinder. The result is to pull the cotton open and loosen up the fibers, so that the dirt can be beaten out and expelled through the spaces between the grid-bars. My invention aims to expedite this cleaning effect by providing the bar with ribs which extend along the inner faces of the bars in a lengthwise direction, sometimes parallel with the edges of the bars and sometimes diagonal thereto, but always in a direction transverse to the line of movement of the cotton, so as to cause it to move this way and that way and be well shaken up.

In the accompanying drawings, Figure 1 is an inside face view of a set of my improved grid-bars, partly broken away. Fig. 2 is a cross-section of the same. Fig. 3 is a perspective view of one end of one of said bars on an enlarged scale. Fig. 4 shows a modification.

It will be observed that I have illustrated ten bars, though the precise number is of course immaterial. The first eight bars of those shown are triangular in cross-section. The first bar, 1, has on its inner flat face a plurality of diagonal ribs 2, parallel with each other, with their ends overlapping. The sec-

ond bar, 3, has a similar set of ribs 4, running downward in the opposite direction to those on the bar 1. The third bar, 5, has a plain inner face. The fourth bar, 6, has a straight rib 7 running lengthwise thereof, parallel with its top and bottom edges. The fifth bar, 8, has a plurality of diagonal ribs 9 like those on the bar 1. The sixth bar, 10, has a set of diagonal ribs 11 like those on the bar 3. The seventh bar, 12, is plain like the third. The eighth bar, 13, has a straight longitudinal rib 14 like the fourth bar. The ninth bar, 15, and the tenth, 16, are rectangular in cross-section and each has a straight longitudinal rib 17 along its middle. The bars are slightly separated by suitable means—such, for instance, as the screws 18 with projecting heads, each next upper bar resting on the heads of the screws in the bar immediately beneath.

The ribs 2 and 9 cause the cotton to be deflected laterally to the left as it is dragged over them, while the ribs 4 and 11 give it a slant in the other direction. The plain bars 5 and 12 permit the fibers to straighten out in natural order, and the bars 6 and 13 give it a simultaneous rub the entire length of the cylinder. This action is repeated three times by the bars 13, 15, and 16. The cotton is thus thoroughly shaken up and moved about, so that all dirt is readily expelled through the narrow spaces between the bars. The width of these spaces can be adjusted by means of the screws 19 or other spacing devices.

The bars may be made separate, as shown in Fig. 3, or two or more may be combined in one integral structure, as shown in Fig. 4, proper spaces 20 being left between the members which serve as bars.

Having thus described my invention, what I claim is—

1. A grid for a cotton-picker, composed of bars provided with diagonal ribs.
2. A grid for a cotton-picker, composed of bars provided with parallel diagonal ribs.
3. In a grid for a cotton-picker, the combination with a bar having ribs running in one direction, of a bar having ribs running in the opposite direction.
4. In a grid for a cotton-picker, the combination with a bar having ribs running diago-

nally downward across the face of the bar in one direction, of a bar having similar ribs running downward in the opposite direction.

5 In a grid for a cotton-picker, the combination with a bar having ribs running diagonally downward, of a bar having a rib running lengthwise thereof.

6 In a grid for a cotton-picker, the combination with a bar having ribs running diagonally downward, of a bar having a plain face.

10 7 In a grid for a cotton-picker, the combination with a bar having a rib running lengthwise thereof, of a bar having a plain face.

8 In a grid for a cotton-picker, the combination with bars having ribs running diagonally, of a bar having a rib running lengthwise, and a bar having a plain face.

15 9 In a grid for a cotton-picker, the combination with bars triangular in cross-section

and provided with ribs on their inner faces, 20 of bars rectangular in cross-section and provided with longitudinal ribs on their inner faces.

10 In a grid for a cotton-picker, the combination with a bar 1 having the diagonal ribs 25 2, the bar 3 having the diagonal ribs 4, the bar 5 having a plain face, and the bar 6 having the longitudinal rib 7, of the bars 8, 10, 12 and 13, respectively provided with ribs similar to the bars 1, 3, 5 and 6.

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

ALBERT A. SWEET.

Witnesses:

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