

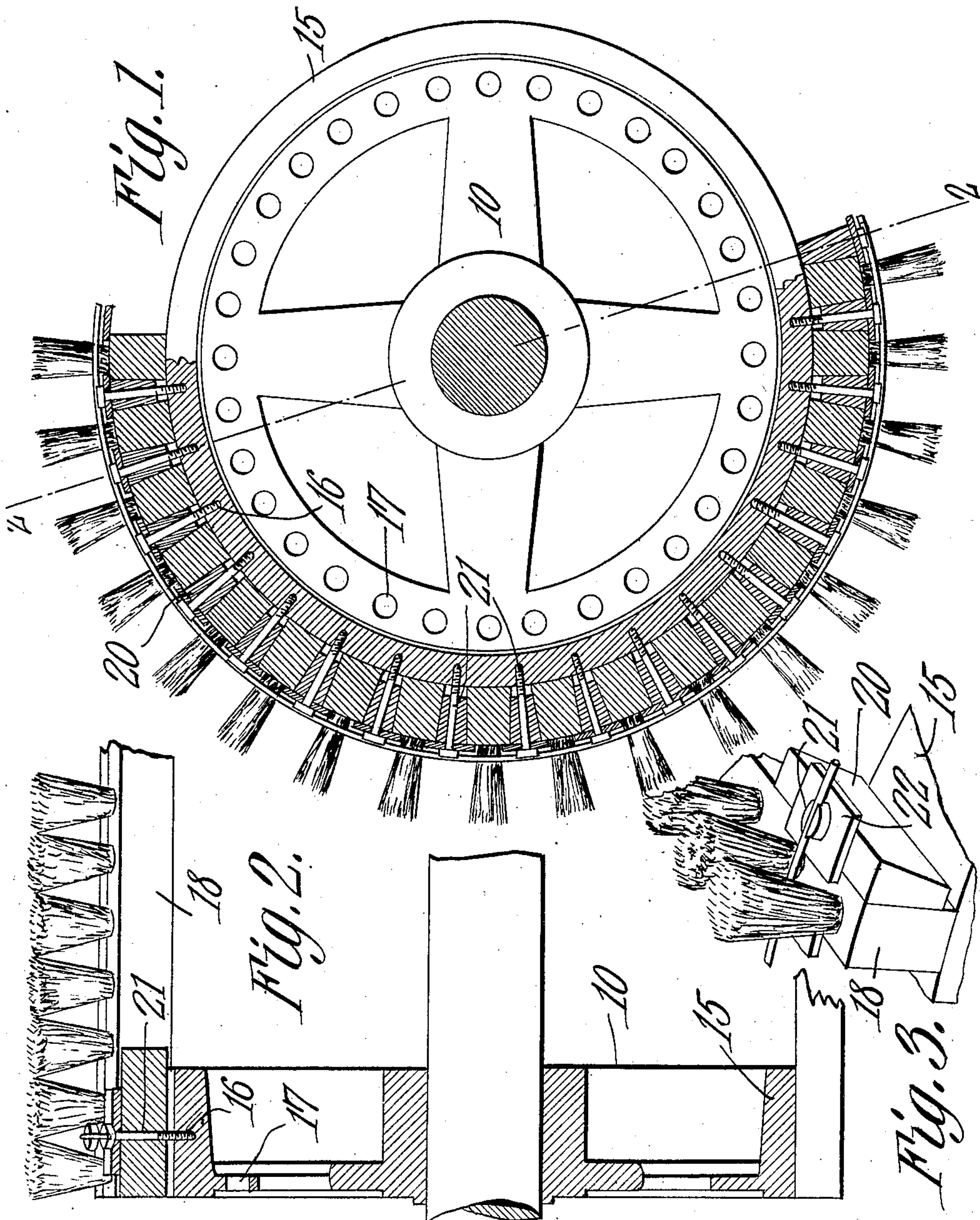
No. 887,780.

PATENTED MAY 19, 1908.

T. C. EBERHARDT.

GIN BRUSH.

APPLICATION FILED MAY 31, 1907.



WITNESSES:

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THEOPHILUS CHARLES EBERHARDT, OF FORT VALLEY, GEORGIA.

GIN-BRUSH.

No. 887,780.

Specification of Letters Patent.

Patented May 19, 1908.

Application filed May 31, 1907. Serial No. 376,549.

To all whom it may concern:

Be it known that I, THEOPHILUS CHARLES EBERHARDT, a citizen of the United States, residing at Fort Valley, in the county of Houston and State of Georgia, have invented a new and useful Gin-Brush, of which the following is a specification.

This invention relates to revoluble cylindrical brushes, which, while intended more especially for use in connection with the saw cylinders of cotton gins, are equally well adapted to other devices where cylindrical revolving brushes are required.

Heretofore it has always been the practice to construct cotton gin brushes with solid heads attached rigidly to rotating shaft passing through their centers. Into these heads brush sticks carrying the bristles have been inserted in tight fitting gains which are cut in the periphery of the heads, and then securing the sticks in place by the use of glue and fastening screws which are passed through the sticks and into the main body of the revoluble heads, thus making it practically impossible to remove the brush sticks from the head for the purpose of refilling them with bristles without breaking them, or in any way moving the sticks longitudinally for readjustment when that portion of the bristles which come in contact with the saws become worn away from use. A further objection and serious defect in this mode of construction is found in the fact that it is impossible to build a cylindrical revoluble brush of any considerable length in running balance, while in the course of construction, it being necessary after the brush is completed to place it in running balance at a largely increased expense. This is usually done by running the brush experimentally at very high speed and adding such weights after numerous repeated tests at such points of the brush as in the judgment of the builder may be found necessary to insure a practically running balance.

The principal object of the present invention is to overcome the objectionable features noted in the construction of revoluble cylindrical brushes, and to provide a cheap, more efficient, and durable device of this class.

A further object of the invention is to construct a revoluble cylindrical brush which when the construction is complete will be in perfect standing and running balance without the necessity of further testing, or the addition of balancing weights.

A still further object of the invention is to provide a brush of such construction that the sticks may be readily removed for the purpose of inserting new bristles and may be readily adjusted in the direction of their lengths for the purpose of bringing fresh or unused portions of the bristles in contact with the saws.

With these and other objects in view, as will more fully hereinafter appear, the invention consists in certain novel features of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings:—Figure 1 is an end elevation, partly in section, of a revoluble cylindrical brush constructed in accordance with the invention. Fig. 2 is a longitudinal sectional view of the same on the line 2—2 of Fig. 1. Fig. 3 is a detail perspective view of a portion of the brush.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

Each of the heads 10 is provided with a central hub carrying set screws or keys by which it may be secured to the shaft. The body of the head may be solid or spoked, and at its periphery is formed or cast an annular flange 15, said flange being provided with an annular series of equi-distantly spaced threaded openings 16.

Each head 10 is first put into perfect standing balance in the ordinary way, but preferably by inserting the necessary weights in the perforations 17 as shown. The balanced heads are then secured to the carrying shaft by means of set screws or keys, the openings in the flanges 15 being in alinement with each other in the two or more heads.

The brush sticks 18 are formed of wood or other material to which the bristles are secured in any ordinary manner. The brush sticks are all made of equal weight and balanced on their longitudinal centers. These sticks are placed on the flanges 15, and between adjacent sticks are inserted wedge blocks 20 having openings for the passage of securing bolts 21 that pass into the threaded openings 16 in the flange 15. The bolts are,

also, made to pass through openings formed in clamping plates 22, which plates are slightly wider than the distance between the approximately radial edges of adjacent brush sticks, so that they will lap over the outer faces of the brush sticks to an extent sufficient to firmly hold the sticks in place.

The locking screws 21 are turned home for the purpose of forcing the wedges and clamping plates tightly in place, and thus securing the brush sticks from independent movement in any direction.

When completed, it will be found that the cylindrical brush will be in running balance, as well as standing balance, without the necessity of running at high speed and putting in balance weights, as has been the practice heretofore.

By removing the attaching bolts or screws, the clamps, wedge blocks and brush sticks will be released and can be readily removed without injury either for refilling them or for any other purpose. By merely loosening the bolts or screws, the brush sticks may be adjusted in the direction of their lengths for the purpose of bringing new or unused portions of the bristles in contact with the gin saws, thus materially increasing the wearing life of the brush, as well as its general efficiency.

The screws may all be turned so that the slots in their heads will be in alinement and then by placing a wire around the brush in such manner as to fit within all of the slots, the screws will be firmly and securely locked in place.

I claim:—

1. In a cylindrical brush of the class described, a plurality of circular heads, endwise adjustable bristle bearing members, and separately adjustable clamping and spacing

means arranged between and holding said members in any position to which they may be adjusted.

2. In a cylindrical brush of the class described, a plurality of circular heads, endwise adjustable bristle bearing members mounted on the heads, clamps for holding said members against the heads, and wedges for spacing and clamping said members.

3. In a cylindrical brush of the class described, a plurality of circular heads each having a peripherally disposed annular flange provided with bolt receiving openings, bristle bearing sticks, wedge blocks serving as spacing and clamping means between said sticks, clamp plates arranged over the wedge blocks and extending partly over the edges of the sticks, and securing bolts passing through the plates and blocks and into the openings of the flanges.

4. In a cylindrical brush for a cotton gin, a plurality of circular heads, each having a series of openings formed in their webs near the periphery for the insertion of balancing weights, bristle bearing sticks, wedge blocks arranged between the sticks, clamping plates resting against the outer faces of the wedge blocks and having their edges projecting over the outer edges of the bristle bearing sticks, and securing bolts or screws extending through the plates and blocks and secured to the periphery of such circular heads.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

THEOPHILUS CHARLES EBERHARDT.

Witnesses:

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