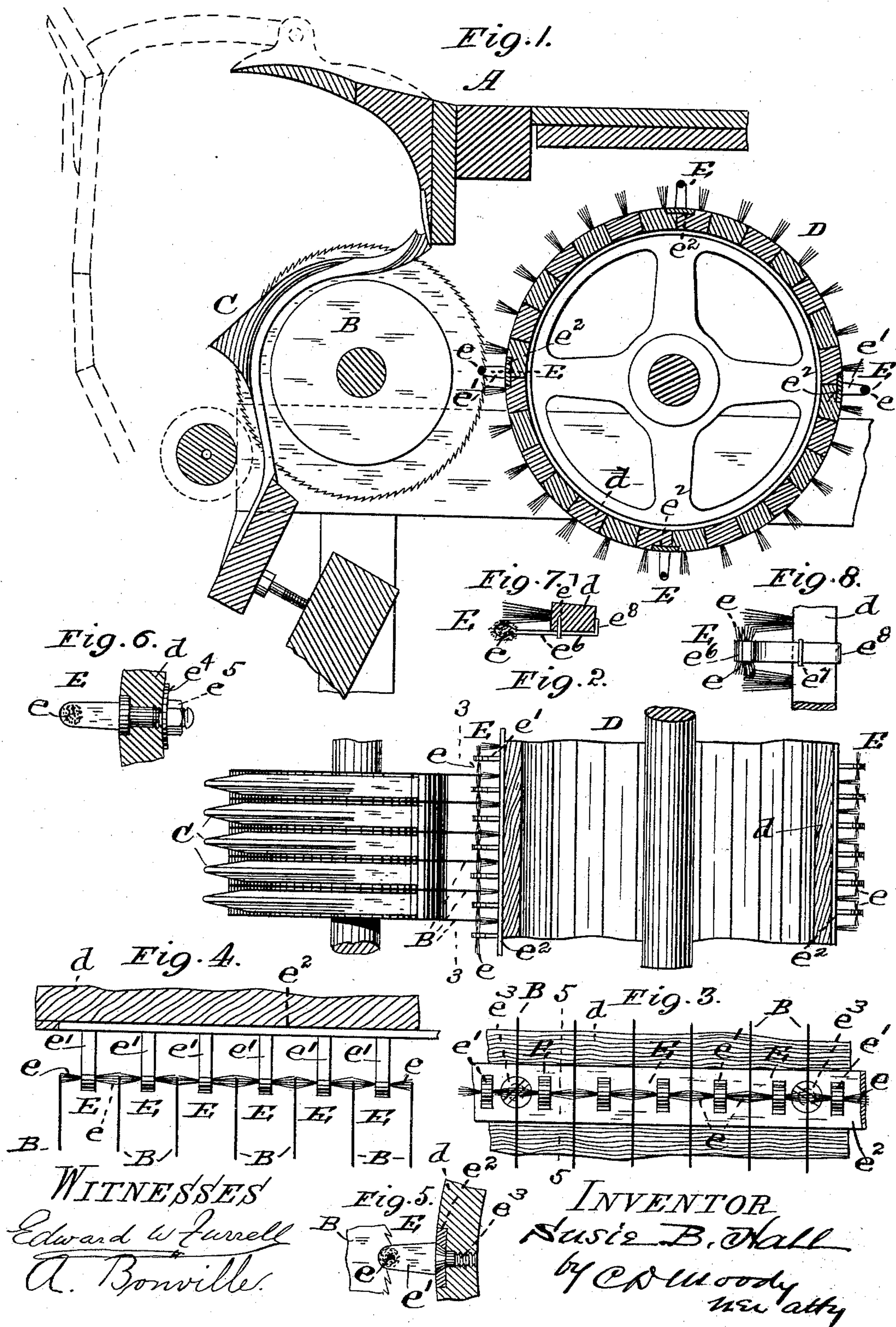


(No Model.)

S. B. HALL.
BRUSH FOR COTTON GINS.

No. 482,478.

Patented Sept. 13, 1892.



UNITED STATES PATENT OFFICE.

SUSIE B. HALL, OF LITTLE ROCK, ARKANSAS.

BRUSH FOR COTTON-GINS.

SPECIFICATION forming part of Letters Patent No. 482,478, dated September 13, 1892.

Application filed November 24, 1890. Serial No. 372,533. (No model.)

To all whom it may concern:

Be it known that I, SUSIE B. HALL, of Little Rock, Arkansas, have made a new and useful Improvement in Brushes for Cotton-Gins, of which the following is a full, clear, and exact description.

The object of this invention is to provide means whereby wet, damp, or green cotton is more effectually prevented from adhering to the teeth of the saws of a cotton-gin, and thus enable the gin to operate almost, if not quite, as effectually upon wet as upon dry cotton, for heretofore cotton-ginners have been considerably annoyed and hindered by having to stop to pick and remove the lint which accumulates in the saw-teeth. It has to be done by hand and it occasions expensive delays.

The difficulty referred to is obviated largely by means of the present improvement, which consists of a single rotary cylinder arranged in the rear of the saws and carrying two sets of brushes, one of which sets of brushes projects radially from the cylinder to contact with the peripheries of the saws and the other set of brushes lying parallel with the surface of the saws and operating with the radial brushes to bear against both lateral faces of the saws, and thereby remove the lint and motes which may have collected in or about the saw-teeth. These brushes are arranged and constructed substantially as hereinafter described and claimed, and may be readily understood from the description, aided by the annexed drawings, making part of this specification, in which—

Figure 1 is a vertical longitudinal section exhibiting that portion of a cotton-gin with which the improvement in question is more immediately connected; Fig. 2, a view showing the saws and grid in top view and the brush-cylinder in horizontal section; Fig. 3, a section on the line 3 3 of Fig. 2, showing one of the cleaning devices in question attached to the brush-cylinder; Fig. 4, a view analogous to that of Fig. 2, but showing the saws, the cleaning devices, and the brush-cylinder only, and not exhibiting the ordinary brush-tufts upon the brush-cylinder; Fig. 5, a section on the line 5 5 of Fig. 3, and showing one mode of attaching the cleaning devices to the brush-cylinder; Fig. 6, a view analogous to that of Fig. 5, exhibiting a modified means for secur-

ing the cleaning devices to the brush-cylinder; Fig. 7, another modification, and Fig. 8 a plan of the parts of Fig. 7. The views are not all upon the same scale.

The same letters of reference denote the same parts in all the figures.

A represents that portion of a cotton-gin which is needed for an understanding of the improvement. Its saws B B, its grid C, and its brush-cylinder D are constructed and arranged in the usual manner, saving as the last-named part is modified or supplemented by the cleaning devices under consideration.

The cleaning devices are shown at E E E E, Figs. 1, 2, 3, 4, and 5, and modifications are shown in Figs. 6, 7, and 8, respectively.

The object of the improvement is to provide, as stated, for cleaning the saw-teeth from the side thereof. To this end the cleaning devices take the form, preferably, of brush-tufts *e*, which are so supported from the brush-cylinder as to impinge upon the saw-teeth at the sides thereof, substantially as shown. It is better, as shown, for the tufts to be applied to both sides of the saw, although the improvement in a measure can be carried out when the tufts are applied to one side only of the saw-teeth. The tufts are attached to arms *e'*, and the arms in turn are connected with the brush-cylinder in various ways. In Figs. 1, 2, 3, 4, and 5 they are shown attached to a plate *e²*, which in turn is fastened to the brush-cylinder by means of the screws *e³*, substantially as shown. Another mode of attachment is illustrated in Fig. 6, in which the screws *e³* are long enough to pass through the brush-stick, rib, or stave *d* of the brush-cylinder and be secured by means of a washer *e⁴* and nut *e⁵*, substantially as shown, and another mode of attachment is to extend the arms to which the tufts are attached and attach them to the brush-stick *d*, as shown in Figs. 7 and 8, the modified arm *e⁶* being extended inward past the brush-stick and being secured thereto by means of a staple *e⁷*, and the inner end *e⁸* being clinched against the back of the brush-stick, substantially as shown. These cleaning devices E, which may be termed "strippers" or "gummers," may be arranged variously upon the brush-cylinder. In the drawings four sets are shown; but any desired number of sets

may be used, and the sets may be arranged longitudinally with the brush-cylinder, or they may be arranged spirally thereon, or in any suitable manner, and the strippers or gummerns may be made of any suitable material.

Among other advantages derived from the present improvement there is this special one. The stripper is practically a part of the gin proper. It does not involve extra expense for shafting, boxing, belting, &c., nor does it practically involve additional power to operate it. As the saws and brush-cylinder revolve at different speeds, the saws are swept by the strippers several times each revolution of the saws.

I am aware that it is not new to combine with the saws of a cotton-gin a brush-cylinder arranged in rear of the saws and adapted to contact with the peripheries or the saws and a separate independent cylinder situated below the saws and in advance of the primary brush-cylinder and provided with brushes which contact with the lateral faces of the saws.

I claim—

1. In a cotton-gin, the saws, the brush-cylinder, the series of longitudinal plates let into the surface of said cylinder, the arms projecting from said plates and alternating with the saws, and the brushes inserted in said arms and extending on each side thereof to engage

with the saws, substantially as and for the purpose set forth.

2. The combination, with the saws, of a single rotary cylinder arranged in the rear of the saws and carrying two sets of brushes, one of which sets of brushes projects radially from the cylinder to contact with the peripheries of the saws and the other set of brushes lying parallel with the surface of the saws and operating with the radial brushes to bear against both lateral faces of the saws, substantially as and for the purpose set forth.

3. The combination, with the saws, of a single rotary brush-cylinder arranged in rear of the saws and provided on its surface with two sets of brushes, one of which sets of brushes projects radially beyond the surface of the cylinder and the other set of brushes being parallel with the surface of the cylinder, two of the latter brushes being carried by a common support between a pair of radial brushes and arranged to contact with the lateral faces of the saws opposite to the teeth thereof, substantially as and for the purpose set forth.

Witness my hand this 7th day of November, 1890.

SUSIE B. HALL.

Witnesses:

H. GALLIL,
W. C. DENNEY.