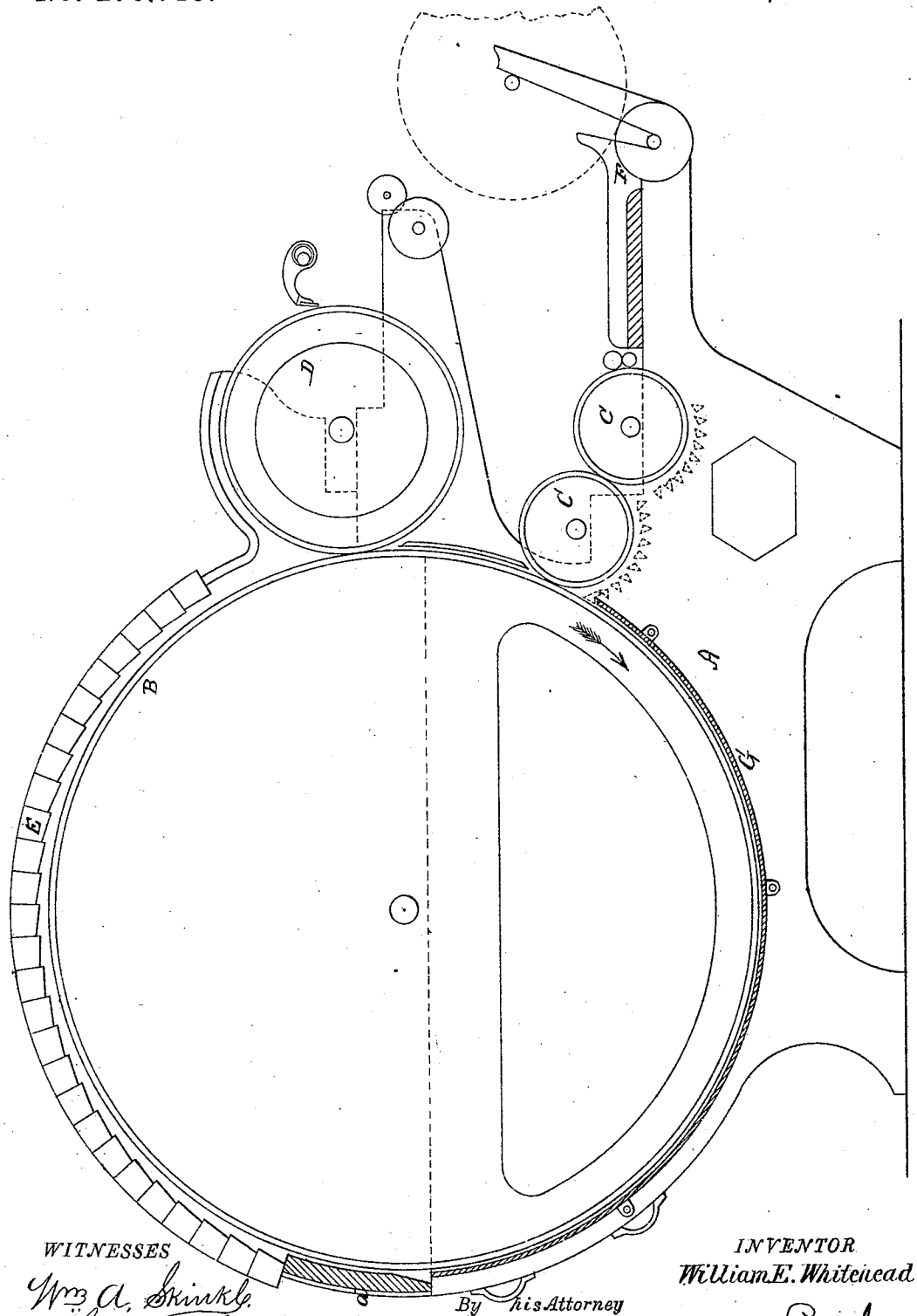
(No Model.)

W. E. WHITEHEAD.

CARDING MACHINE.

No. 270,715. Patented Jan. 16, 1883.



WITNESSES

Wm. A. Skinkle.

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UNITED STATES PATENT OFFICE.

WILLIAM E. WHITEHEAD, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO THE WHITEHEAD & ATHERTON MACHINE COMPANY, OF SAME PLACE.

CARDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 270,715, dated January 16, 1883.

Application filed October 20, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. WHITEHEAD, of Lowell, Massachusetts, have invented a certain new and useful Improvement in Carding-Machines, of which the following is a specification, reference being had to the accompanying drawing, which represents a side elevation, partly in section, of a carding-machine embodying my invention, so much only of the machine as needed for the purpose of explanation being illustrated.

In the drawing, A is the frame of the machine. B is the carding-cylinder. C are the lickers-in. D is the doffer. E are the top-flats. F is the lap-roll. The lickers-in and doffer are on one and the same side of the machine, and the carding-cylinder revolves in the direction indicated by the arrow.

The arrangement of the elements thus far described is well known and requires no detailed description.

Extending from a point where the lickers-in approach most nearly the cylinder to the board *a*, which is below the top-flats, is a casing, G, which surrounds and incases peripherally the cylinder between these points. It is in this combination and arrangement of the cylinder, top-flats, lickers-in, doffer, and casing that my invention is confined.

In this machine, the doffer and the lickers-in being upon the same side, the cotton taken by the cylinder from the lickers-in must be carried around underneath the cylinder to the top-flats. Consequently, were it not for the casing, the cotton would be thrown off from the cylinder down under the card.

I have tried the experiment of running the machine without a casing, and the result invariably has been to immediately fill up the entire space under the carding-cylinder with good cotton; but by using the casing the cotton carried around under the cylinder is not thrown off, but is caused to cling to the wire teeth of the card-clothing of the cylinder, and this result is obtained by the use of a peripheral casing only, it being unnecessary to incase both sides and bottom of the cylinder.

I have used in machines of the kind represented a series of bars extending around under the cylinder; but these bars do not serve the same purpose, and offer disadvantages in working certain grades of cotton. For instance, in working sea-island cotton, which has a very long fiber mixed with a short fiber, the fiber, by passing over the bars, is injured by being "knitted" in consequence of rubbing over or against the knives or bars, while in working the grade of cotton with the casing G all of the cotton is kept confined to the cylinder, and by its passage over or against the casing the leaf is loosened and is put in condition to be easily removed from the staple by the top-flats.

I am aware that casings have been put underneath the cylinders of carding-machines. The state of the art in this respect is sufficiently well set forth in Letters Patent No. 127,985, of June 18, 1872; but in this patented machine, as well as all others known to me in which a casing is employed, the doffer and the lickers-in are on opposite sides of the machine, the cotton is carried upward from the lickers-in to the top-flats, and is stripped from the cylinder by the doffer before it can reach the casing, thus leaving that part of the cylinder which is surrounded by the casing bare of good cotton. In my machine, on the contrary, all the cotton that goes through the machine passes underneath, between the casing and cylinder, from the lickers-in before it can reach the top-flats and doffer, and thus the conditions of the machine as well as the function of the casing are materially different.

What I claim, and desire to secure by Letters Patent, is—

In a carding-machine, the combination of a carding-cylinder which revolves in the direction hereinbefore specified, top-flats, a doffer and lickers-in, both of which are on one and the same side of the machine, and a casing extending beneath the cylinder and surrounding it peripherally from the lickers-in to the top-flats, the combination being and acting as hereinbefore set forth.

In testimony whereof I have hereunto set my hand this 12th day of October, 1882.

WILLIAM ED WHITEHEAD.

Witnesses:

A. T. ATHERTON,

E. E. RIPLEY.