J. E. Hooper.

Cotton Picker.

No. 52,289. Patented Jan. 30, 1866.

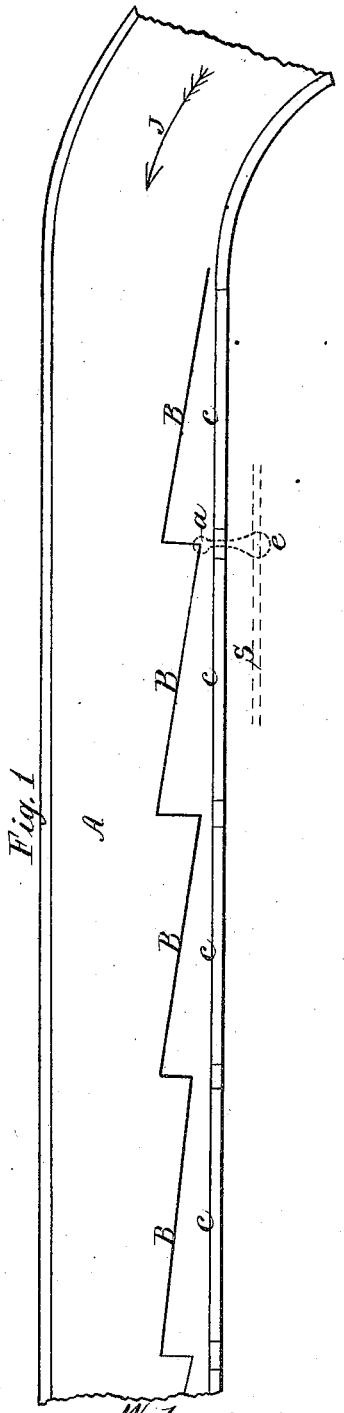

Fig. 1

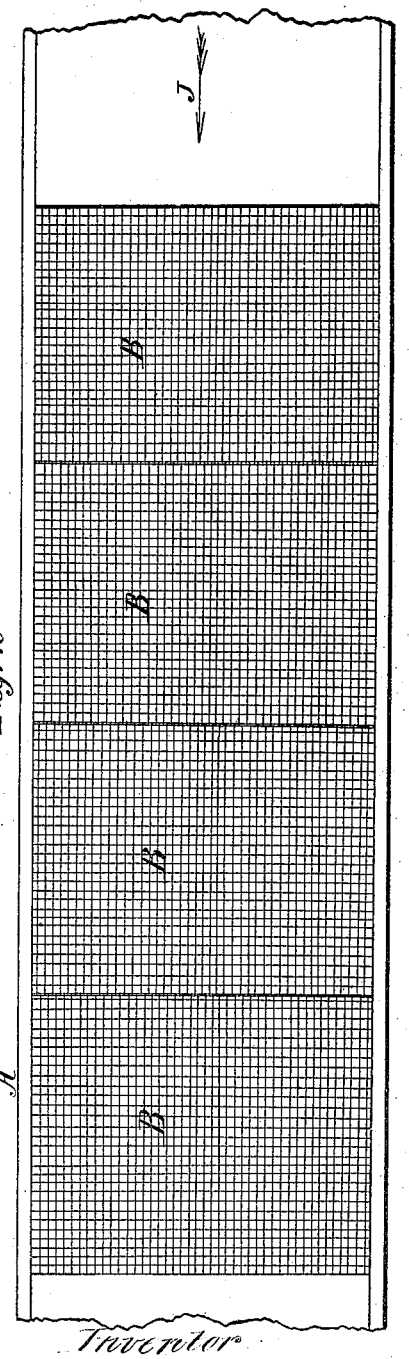

Fig. 2

Witnesses

Benjamin Arnold

James E Arnold

Inventor

James E Hooper

UNITED STATES PATENT OFFICE.

JAMES E. HOOPER, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN MACHINES FOR CLEANING COTTON.

Specification forming part of Letters Patent No. **52,289**, dated January 30, 1866.

To all whom it may concern:

Be it known that I, JAMES E. HOOPER, of Baltimore, in the county of Baltimore and State of Maryland, have invented new and useful Improvements in Machines for Cleaning Cotton; and I do hereby declare that the following is a full and correct description thereof, reference being had to the accompanying drawings, forming part of this specification, and to the letters of reference marked thereon.

The same letters denote similar parts in all the figures.

In opening and cleaning cotton preparatory to carding and spinning it a machine is used which is called a "willow." This machine is connected to a long trough, through which the cotton is driven from the willow by a current of air set in motion by the willow. A wire screen is placed in the lower part of the trough to allow the dirt separating from the cotton to pass through.

My improvement is mainly in the mode of arranging this screen or screens in the trough, for if laid in one plane, as is usual, it has but a partial effect in separating the dirt from the cotton, because they pass so readily over the screen. To obviate this difficulty I make a series of inclined planes of the screens, that the cotton in passing from one to another of these planes may receive a succession of shocks that will cause the dirt to fall from the cotton onto the screens and pass through in the receptacle below.

Figure 1 shows a vertical lengthwise section of a portion of the trough. Fig. 2 is a top view of the trough with the cover removed to show the screens.

A is the trough through which the cotton passes. B B B are the screens, placed so as to form a series of inclined planes sloping toward the willow. *c c c* are shutters, which are opened when it is necessary to remove the dirt that has collected in the bottom of the trough. The dotted lines *a e s* show an arrangement by which motion can be given to the screens by hanging them on pivots *a*, and putting arms *e* on the ends of the pivots, and connecting these arms together by a rod, *s*. The rod being put in motion by the machine will vibrate the ends of the screen up and down. The arrows J J show the direction in which the cotton passes from the willow.

The operation is as follows: The cotton passes up out of the willow into the trough in the directions of the arrows J J, when it strikes the first incline, and bounding up passes forward and strikes the next incline, shaking the dirt out, and passing on in this manner over all the screens, leaving the dirt behind in the screens and the cotton coming out of the trough thoroughly cleaned.

The screens are usually made of wire-netting; but I do not confine my arrangement to that material, but apply it to screens made of perforated sheet metal or to screens made of any other material.

I claim—

The combination of the screens, arranged as specified, with a willow for cleaning cotton.

JAMES E. HOOPER.

Witnesses:

BENJAMIN ARNOLD,

JAMES E. ARNOLD.