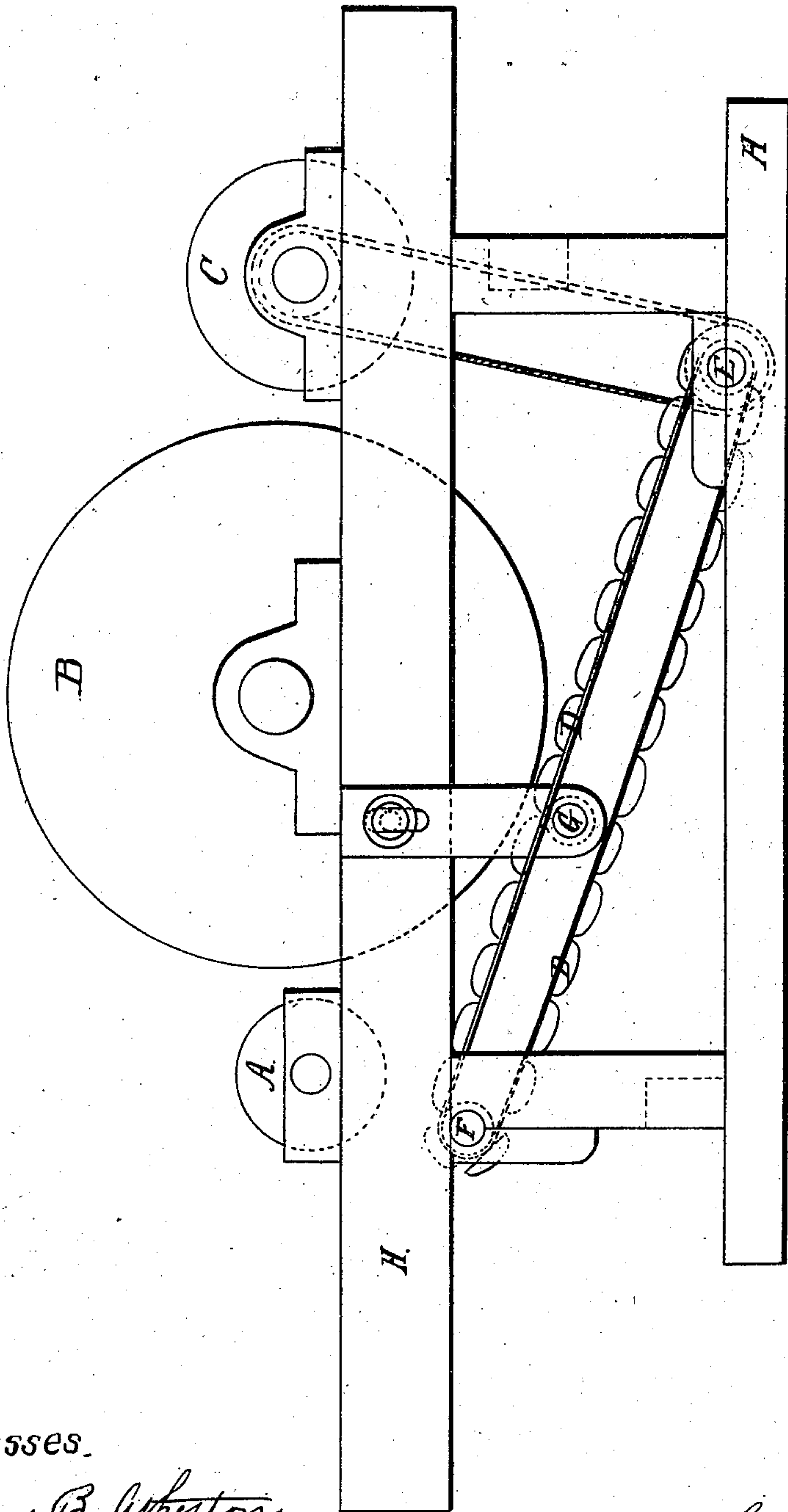


No. 30,875.

PATENTED DEC. 11, 1860.

J. FITTON.  
CARDING ENGINE.



Witnesses.

*Henry B. Whetton*

*John A. Deane*

Inventor.

*James Fitton*

# UNITED STATES PATENT OFFICE.

JAMES FITTON, OF CAVENDISH, VERMONT.

## CARDING-ENGINE.

Specification of Letters Patent No. 30,875, dated December 11, 1860.

*To all whom it may concern:*

Be it known that I, JAMES FITTON, of Cavendish, in the county of Windsor and State of Vermont, have invented a new and  
5 useful combination of mechanism with a carding-engine for the purpose of returning to the action of the carding mechanism, the droppings of fibrous material therefrom, and separating from those droppings a large  
10 portion of the foreign matter which is mixed with them; and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description  
15 of my invention so full and exact as to enable those skilled in the art to practice it.

The drawing is a side view, or elevation, illustrating so much of the ordinary carding engine as is necessarily referred to in describing my invention, and the addition  
20 which I make to the carding engine.

A represents the tumbler roll, B the card clothed cylinder, and C the doffer roll. These are mounted as usual upon a suitable  
25 frame H, to which also rolls E and F are connected, over which passes the apron D, the first of these rolls being the driving roll which actuates the apron and which receives its rotation from the doffer roll shaft by  
30 means of a band, or it may be rotated in any other convenient manner. The apron consists of wooden slats, which are made somewhat convex on the surface which comes next to the card cylinder, and which  
35 are secured, at small intervals apart, to bands which pass around the rolls E and F. The apron is best made of such length and width as to extend under the entire space occupied by the tumbler and doffer rolls and  
40 the card cylinder, so that any droppings from these will fall upon the apron. A gage roll G passes under the apron at the line where the latter comes nearest into contact with the teeth of the card cylinder.

This roll is connected to the frame by hang- 45  
ers or bearings which admit of raising or depressing the roll G so as to gage the distance from the convex surface of the slats to the card teeth. It is well known that the  
fiber of wool is bearded, which enables it 50  
to be felted, and to cling to any body with which it may come into contact. It is the latter property which enables me to make use of the endless apron in connection with  
a carding engine for the purpose before 55  
named. As the fibers and locks of wool fall upon the slats the strong current of air produced by the rotation of the card cylinder forces them upon the slats, where they cling  
till they come into contact with the card teeth 60  
which removes them from the slats and subjects them to the action of the carding mechanism. The fibers not only lay on the parts of the belt which are uppermost, but cling  
to them in their inverted position. The par- 65  
ticles of foreign matter, which are lacking in the bearded formation, and are of greater specific gravity than is the wool, drop from the apron through the spaces between the  
slats, or fall off of them as they pass around 70  
the rolls, or as they move in the inverted position. It is best to cause the cylinder and the apron to move in different directions, and at widely varying rates of speed. The  
position of the apron is a matter of little or 75  
no importance as to whether it is horizontal or inclined, so long as there is one point in it which can be adjusted to the proper distance from the teeth of the card cylinder.

I claim— 80

The combination of an endless traversing apron, with the cylinder of a carding engine, operating substantially in the manner set forth.

JAMES FITTON.

Witnesses:

HENRY B. ATHERTON,  
JOHN F. DEANE.