(No Model.)

O. KUTSCHE.

DUST ARRESTER.

No. 296,758. Patented Apr. 15, 1884.

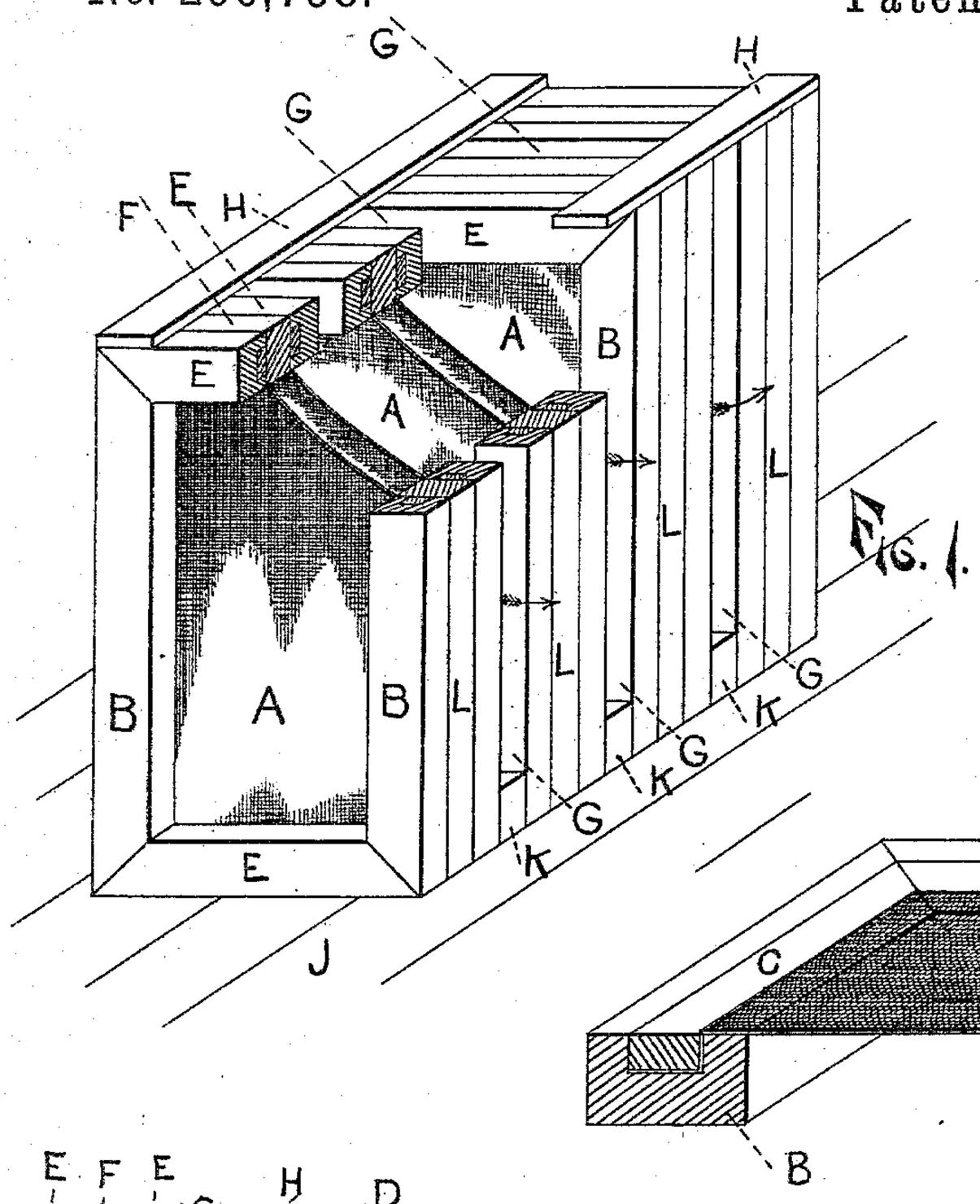

FIG. 1.

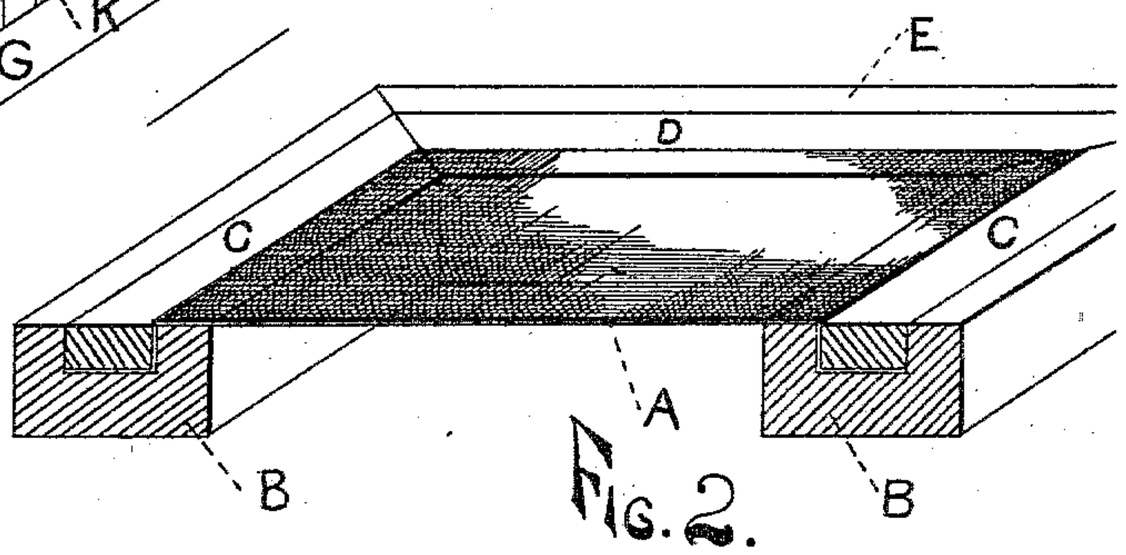

FIG. 2.

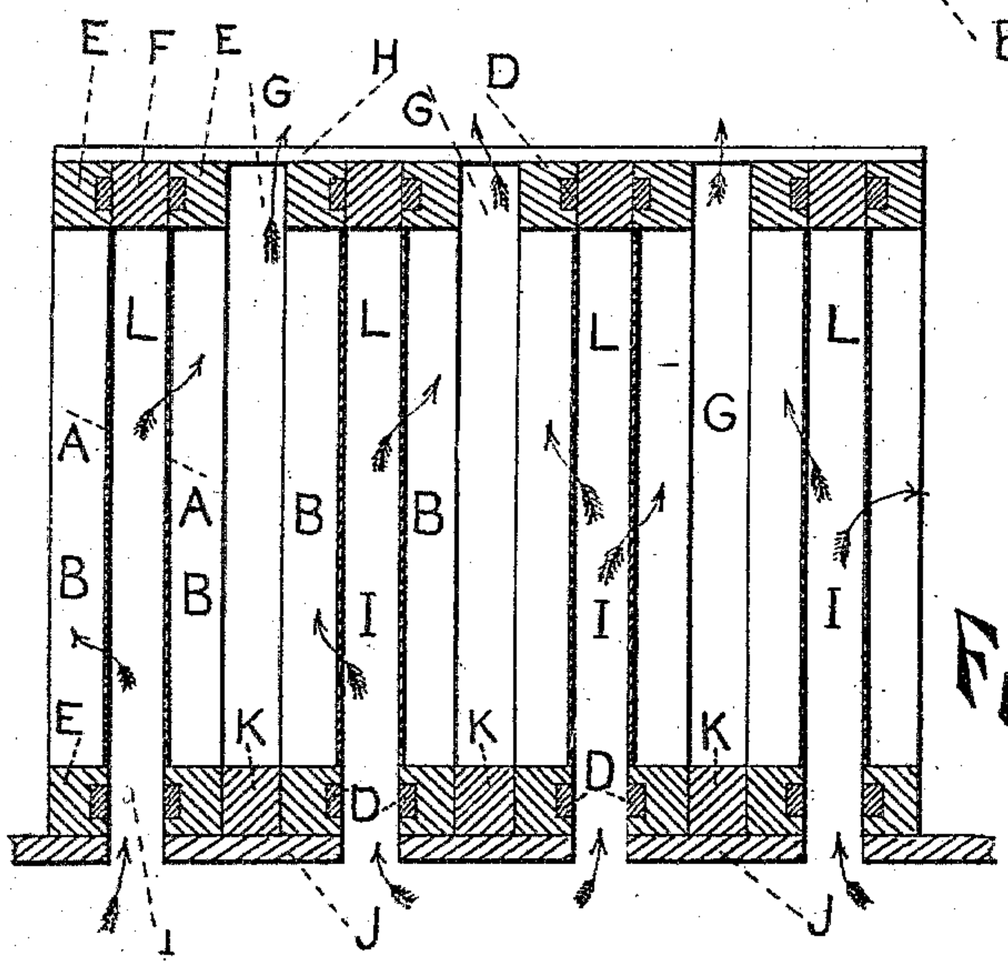

FIG. 3.

WITNESSES:
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UNITED STATES PATENT OFFICE.

OSWALD KUTSCHE, OF GRAND RAPIDS, MICHIGAN.

DUST-ARRESTER.

SPECIFICATION forming part of Letters Patent No. 296,758, dated April 15, 1884.

Application filed January 29, 1884. (No model.)

To all whom it may concern:

Be it known that I, OSWALD KUTSCHE, a citizen of the United States, residing at the city of Grand Rapids, in the county of Kent and State of Michigan, have invented a new and useful Dust-Arrester, of which the following is a specification.

The invention relates to a dust-arrester to be used in connection with fan-blowers in factories; and the object of my invention is to separate the dust from the air and arrest it without producing a back-pressure on the fan-blower, as described below. This object I accomplish by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my dust-arrester, with a portion cut away in order to show the inner construction of the same. Fig. 2 is a perspective view of a portion of one of the screen-frames, showing the method of attaching the screen to the frame; and Fig. 3 is a vertical sectional view of Fig. 1.

Similar letters refer to similar parts throughout the several views.

In the drawings, A represents the screen, which is made, preferably, of bolting-cloth or other similar material.

B B are the side pieces of a screen-frame, and E E the end pieces of the frame. The side pieces and end pieces may be grooved, as shown in Fig. 2, and the screen laid upon the frame, so as to extend over or partially over the grooves, and the strips C D C pressed into the grooves, holding securely the screen-cloth. Each screen-frame may be constructed in the same manner.

H H are slats, which hold in place the series of frames. The screen-frames, constructed as described, are placed together, as shown in Figs. 1 and 3, and placed above the shaving-room, and may rest on the floor forming the ceiling of said room, (shown by J in Figs. 1 and 3.)

I I I are chambers opening into the shaving-room.

G G are chambers opening at the top into the garret or other room above the shaving-room, and may open to the outer air, if desired.

L L are side pieces of chamber I, and F F the top pieces of the same chamber, and K K are the bottom pieces of chambers G G. The number of chambers may be increased or decreased, according to the pressure from the fan-blower.

I deem my invention especially adapted to factories manufacturing wooden articles, where the shavings and refuse are carried by fan-blowers to a room commonly called a "shaving-room."

The operation of my invention is as follows: The shavings and dust being driven or carried by a fan-blower to the room beneath floor J, the air heavily laden with dust passes through the floor into chambers I I, in the direction shown by the arrows, and from thence through the screen A A into the chambers G G, and from thence out at the top of these chambers into an upper room or out of doors almost entirely freed from dust. The pressure of the air from the fan-blower will press outwardly the screens on either side of the chamber I when in operation, and the dust gathering on the screens within chambers I I will crack and drop off as soon as the pressure of the wind from the fan-blower ceases. If the screens should not clear themselves sufficiently in this manner, a sharp, quick jar on the frames or cloth, applied in any manner, would clear them. There should be a sufficient number of chambers to allow the air to pass off freely without back-pressure on the fan-blower.

Instead of having the openings into the chamber I at the bottom, as shown in the drawings, the sides L L may be removed and the dust-laden air let in at the sides, which may in many cases be found desirable, and the dust-arrester may be placed on the side of the dust-room instead of above it, as shown. Each screen being attached to an independent frame, the capacity of the dust-arrester can be increased or decreased by increasing or decreasing the number of frames; and in case the screen on any frame becomes broken or injured, the frame can be readily removed and the screen repaired or replaced by a new one.

Having thus described my invention, what I

claim to have invented, and desire to secure by Letters Patent, is—

In a dust-arrester, screens A, attached independently to the frames B C D E, which frames are arranged in series and connected together, substantially as shown, in combination with the inlet-chambers I, provided with closed tops F, and the outlet-chambers G, having closed bottoms K, as herein set forth.

OSWALD KUTSCHE.

Witnesses:
EDWARD TAGGART,
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