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ARRANGEMENT IN DEVICES FOR SUPPORTING AND CONVEYING  
AIRBORNE MATERIALS  
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3,232,507

FIG. 1.

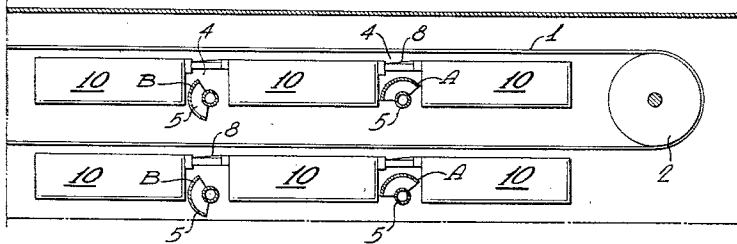


FIG. 2.

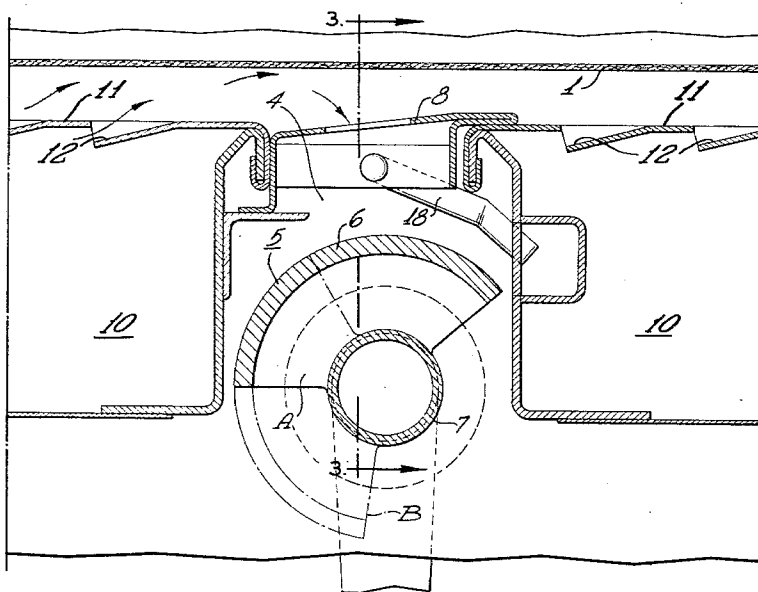
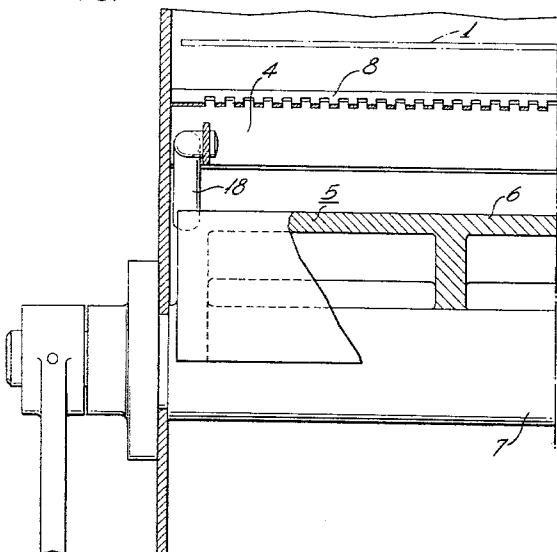


FIG. 3.



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**ARRANGEMENT IN DEVICES FOR SUPPORTING AND CONVEYING AIRBORNE MATERIALS**

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2 Claims. (Cl. 226—97)

The present invention relates to improvements in devices for supporting and conveying airborne materials by means of air blown against the lower surface of the material web, for instance in accordance with British Patent Number 689,963.

In devices of the above mentioned type it has proved that the theoretically calculated balance between the quantity of air supplied from the air supply boxes and that being discharged through the suction channels can not always be maintained but that instead a concentration of air appears under the material web at one or the other ends of the device. This has a tendency to move the material web at some points out of the calculated transport level and therefore constitutes a drawback with respect to the guiding of the material web and also means a risk of forming wrinkles at the turning of the material web between the different runs. It is an object of the invention to eliminate by simple means the above mentioned drawbacks and keep the material web under full control in a stable position. The arrangement according to the invention is characterized in that in the discharge channels situated between the air supply boxes especially those situated close to the respective turning ends, are provided with adjustable throttling means for the purpose of stabilizing the material web by an individual adjustment of the quantity of discharged air.

In the preferred embodiment, the throttling means comprises an arcuate damper blade journalled on a turnable shaft disposed in the discharge channel and placed parallel to the longitudinal direction of the discharge channel.

The invention is more fully described below with reference to the accompanying drawing which illustrates an apparatus constructed in accordance with the invention.

FIG. 1 is a fragmentary cross-section through a portion of a device constructed in accordance with the present invention;

FIG. 2 is an enlarged fragmentary end view of a suitable embodiment of the throttling means illustrated in FIG. 1; and

FIG. 3 is a fragmentary cross-sectional view taken along line 3—3 of FIG. 2.

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In the drawing a material web 1 is carried forward in a number of runs between turning rolls 2 situated at the ends of the devices. For the support and transport of the material web a plurality of air supply boxes 10 are provided with top walls 11 having perforations 12 therein and are arranged below the web from which the treatment medium is supplied, which treatment medium is blown against the lower surface of the material web. Discharge channels 4 are situated between the air supply boxes and lie substantially transverse to the direction of travel of the material web. In accordance with the invention individually adjustable throttling means 5 are arranged in each of the discharge channels. In the embodiment shown in FIG. 2 the throttling means comprises an arcuate damper blade 6 journalled on a turnable tubular shaft 7 in the discharge channel 4. The discharge channel is covered by a grill 8, and held in position by a lock 18. The throttling means 5 is made to be turned from the shown closed position A in FIG. 1 to the open position B thus providing a back pressure on the material web and preventing wrinkles and the like from appearing thereon.

What we claim is:

1. A device for supporting and conveying material webs, said device comprising a plurality of longitudinally spaced air supply boxes positioned transversely of the direction of travel of said webs and having perforated top walls for the supply of treating medium to the lower surface of said material web to support said web, discharge channels formed by the spacing between the supply boxes for receiving and discharging said treating medium, and adjustable throttling means pivotally mounted on an axis in at least some of said discharge channels to stabilize the material web by an individual adjustment of the quantity of discharge treating medium.

2. A device in accordance with claim 1 wherein said throttling means comprises an arcuate damper blade journalled on a turnable shaft disposed in the discharge channel parallel with the longitudinal direction of the channel.

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