T. TRAVIS

FUR SCREEN.

APPLICATION FILED JAN. 10, 1920.

1,339,240.

Patented May 4, 1920.

2 SHEETS—SHEET 1.

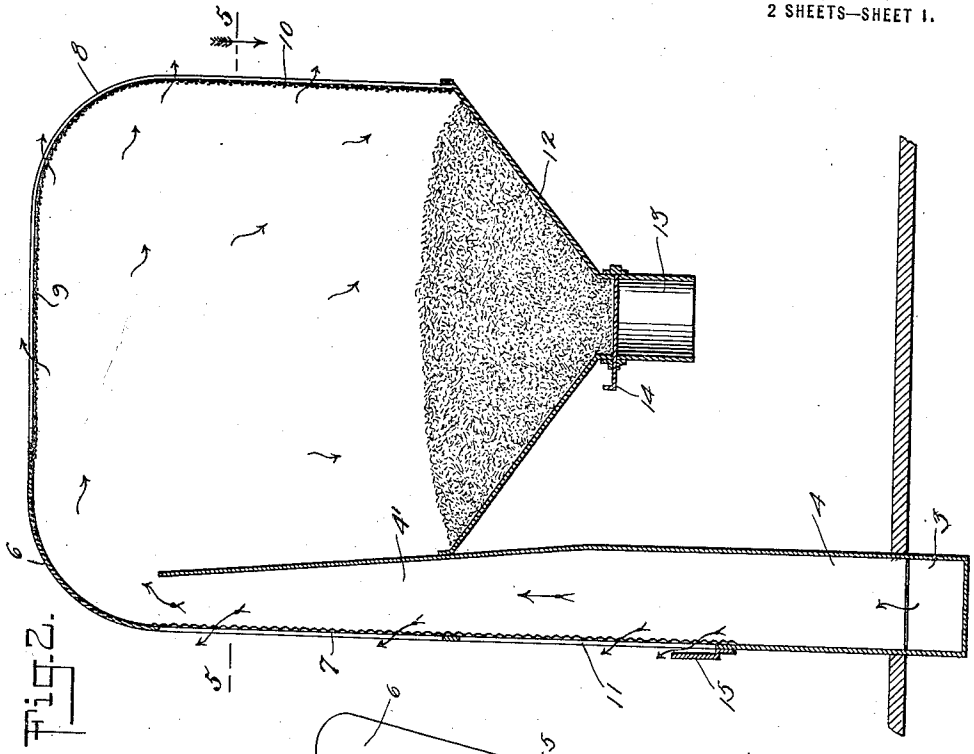


Fig. 2.

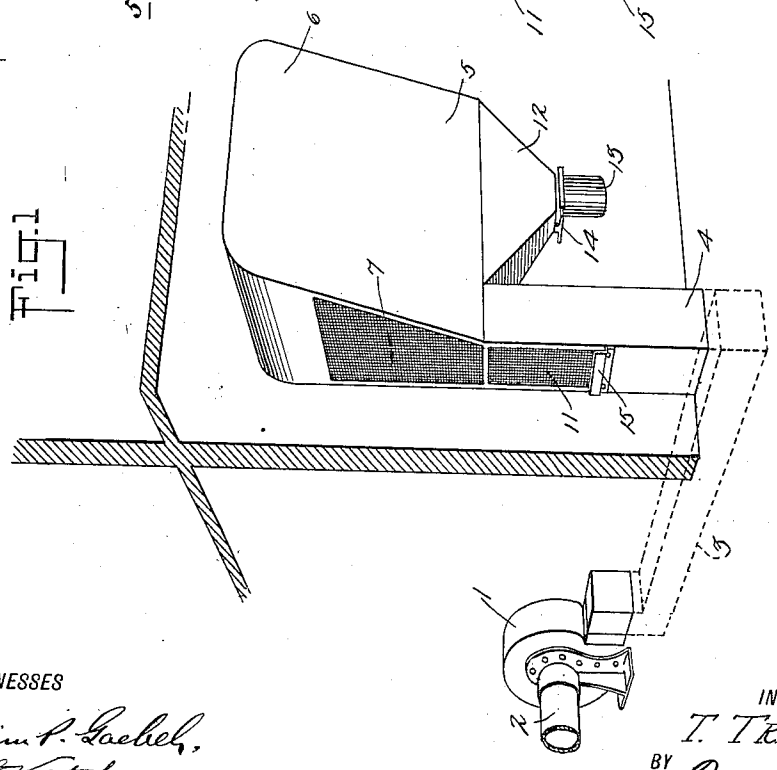


Fig. 1.

WITNESSES

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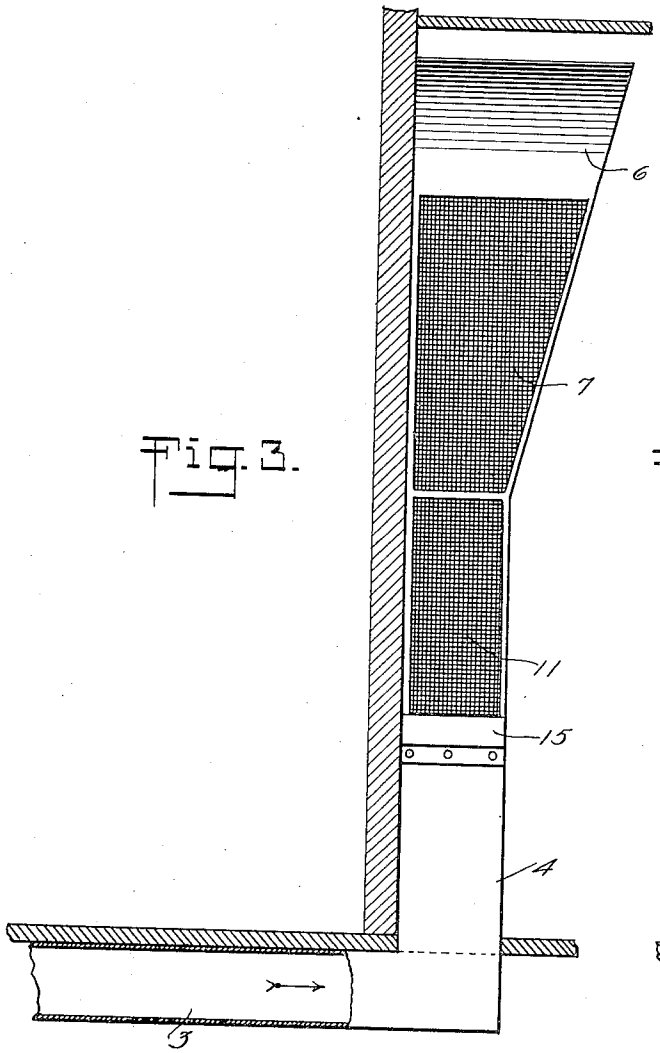


Fig. 3.

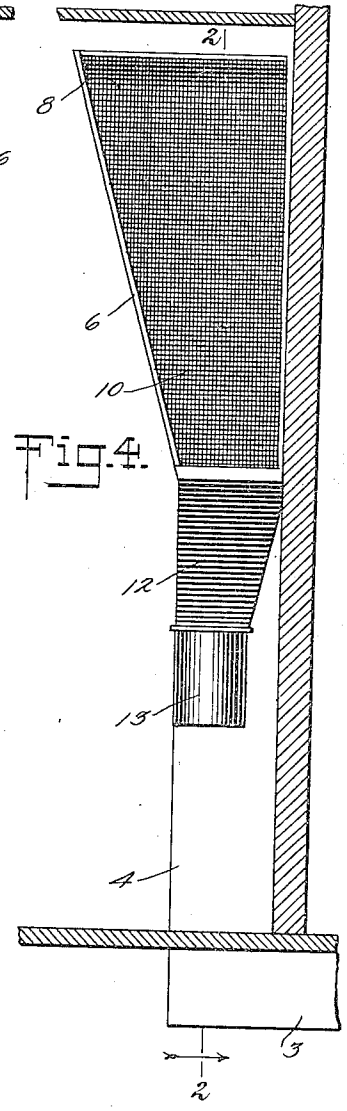
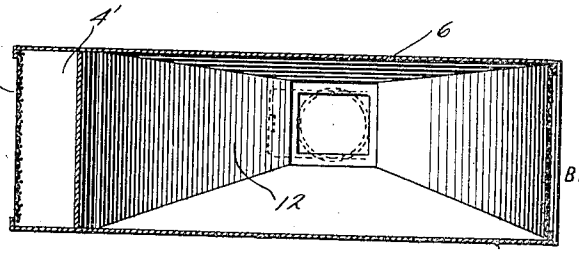


Fig. 4.

Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

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FUR-SCREEN.

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To all whom it may concern:

Be it known that I, THURLOW TRAVIS, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Fur-Screen, of which the following is a full, clear, and exact description.

This invention relates to screens for receiving fur from felt hat forming machinery, and has for an object to provide an improved construction which will continuously operate and thereby obviate the necessity of shutting down at any time.

Another object of the invention is to provide a fur screen for separating automatically fur from the blast of air carrying the same.

A still further object more specifically is the provision of a fur screen in which an arrangement is provided whereby air may keep the screen clean and at the same time escape as the fur matter passes a receiving container.

In the accompanying drawings:

Figure 1 is a perspective view showing an embodiment of the invention.

Fig. 2 is a sectional view through the screen and associate parts as shown in Fig. 4.

Fig. 3 is an edge view of the screen shown in Fig. 1.

Fig. 4 is an edge view of the screen shown in Fig. 1, looking at the same from the opposite side to that illustrated in Fig. 3.

Fig. 5 is a transverse sectional view through Fig. 2 on line 5—5.

In the construction of felt hats the fur is fed through a suitable pipe to a container and as it is fed into the container it is separated or picked so as to, in a certain sense, produce a shower. In the container a foraminous cone is provided which is connected with a suction pump so that the air and fur is drawn into or against the cone. Most of the fur is stopped in the cone and consequently forms a cone-shaped felt body, but some of the fur passes through the openings in the screen and is received by the fan and discharged at a given point. Heretofore this discharge was made into a wire mesh casing. However, the discharge into the wire mesh casing would produce a lining which would resist the passage of air and consequently produce a back pressure, to overcome this objection it was necessary to shut off the fan and have someone remove the inside covering of the wire mesh container or housing. This stoppage of operation is more or less objectionable, as it shuts down the plant or part of the plant an appreciable part of the working hours. The present invention is intended to overcome this objection and provide a fur screen or container which will continuously operate and thus obviate the necessity of shutting down the suction fan or any other part of the plant.

Referring to the accompanying drawings by numerals 1 indicates the suction fan above referred to, which receives the fur through the pipe 2 and discharges the fur into a conduit 3. This conduit may be of any desired length provided it opens into a down pipe or passageway 4 of the fur screen 5. Preferably the fur screen 5 is placed in a separate room from the other device, though this is not absolutely essential. The pipe 4 is connected to the casing 6 of the fur screen 5, said casing being of metal or other desired material, and provided with a vertical section 7 of wire mesh or other foraminous material, and a rear section 8 of wire mesh or other foraminous material, having a horizontal portion 9 and a vertical portion 10 through which the air is adapted to escape. Below the section 7 is a section 11 in the pipe or passageway 4, which provides a comparatively long wire mesh opening across which the blast of air from the pipe or passageway 4 passes. From Fig. 2 it will be observed that some of the air and the fur will pass through the passageway 4 and through the auxiliary passageway 4′ into the casing 6 where it falls by gravity into a hopper or container 12 which is preferably cone-shaped, so that it may be readily discharged out the pipe 13 when the gate 14 is opened. As the air and fur pass upwardly through the narrowing passageway 4′ the pressure is relieved by some of the air passing out through the screens 7 and 11 so that the air and fur are discharged into the casing 6 at a much reduced speed, thus permitting a ready precipitation of the fur. In addition to this action the stream of air passing along the screens 7 and 11 produces a cleaning or wiping action and prevents a deposit of fur thereon by reason of the angle at which the air strikes the screen.

At the bottom of the screen 11 a grate or

fender 15 is provided which is spaced a short distance from the lower part of the screen whereby the air passing out at comparatively high pressure near the bottom of screen 11 will strike the fender 15 and then pass upwardly. This arrangement has been found desirable, as without this grate a suction would be produced at this point, and a certain quantity of air drawn into the passageway 4'. This construction and arrangement, for instance as illustrated in detail in Fig. 2, presents a construction which will receive air under pressure laden with fur and will permit the air to escape while the fur is collected. This operation may be carried on intermittently or continuously, and by reason of the action of the air against the screens and relief of the pressure the vertical screens will remain clean, while the remaining screens will be substantially clean as the pressure of air is so reduced that an objectionable amount of deposit will not be made.

What I claim is:

1. A fur screen comprising a casing, a wire mesh section for part of the casing, a lead-in passageway or pipe, and an opening in said pipe for allowing some of the air to escape before the fur enters the casing.

2. A fur screen of the character described comprising a casing having certain of its walls foraminous, and a pipe connected with the casing arranged to discharge from the top of the casing, said pipe being formed with part of one wall foraminous.

3. A fur screen comprising a casing having a foraminous side and top, a hopper arranged at the bottom of said casing, a gate arranged at the bottom of the hopper, and a pipe positioned vertically leading to the upper part of the casing, said pipe having a foraminous construction in one side.

4. A fur screen of the character described comprising a casing formed with one wire mesh side, a top, and a vertically positioned pipe leading to the top of the casing provided with a wire mesh side wall.

5. A fur screen for receiving air and fur comprising a solid body formed with a wire mesh side, a pipe extending into said body along the side opposite the wire mesh side, said pipe extending to near the top of the casing, and a wire mesh construction arranged on one side of the pipe and extending in a plane parallel to the direction of movement of the air and fur whereby the air may escape and the pressure become reduced thereby while the fur is forced into the casing, the movement of the air parallel to the last mentioned wire mesh causing a cleaning action thereof.

6. A fur screen comprising a casing, a wire mesh structure forming one wall of the casing, a pipe extending into the casing at the opposite side to the wire mesh wall, said pipe extending to near the top of the casing, a wire mesh window arranged in one wall of the pipe and positioned parallel to the direction of air through the pipe, and a solid fender connected with said pipe and overlapping the lower part of said window for preventing a suction at that point.

THURLOW TRAVIS.