

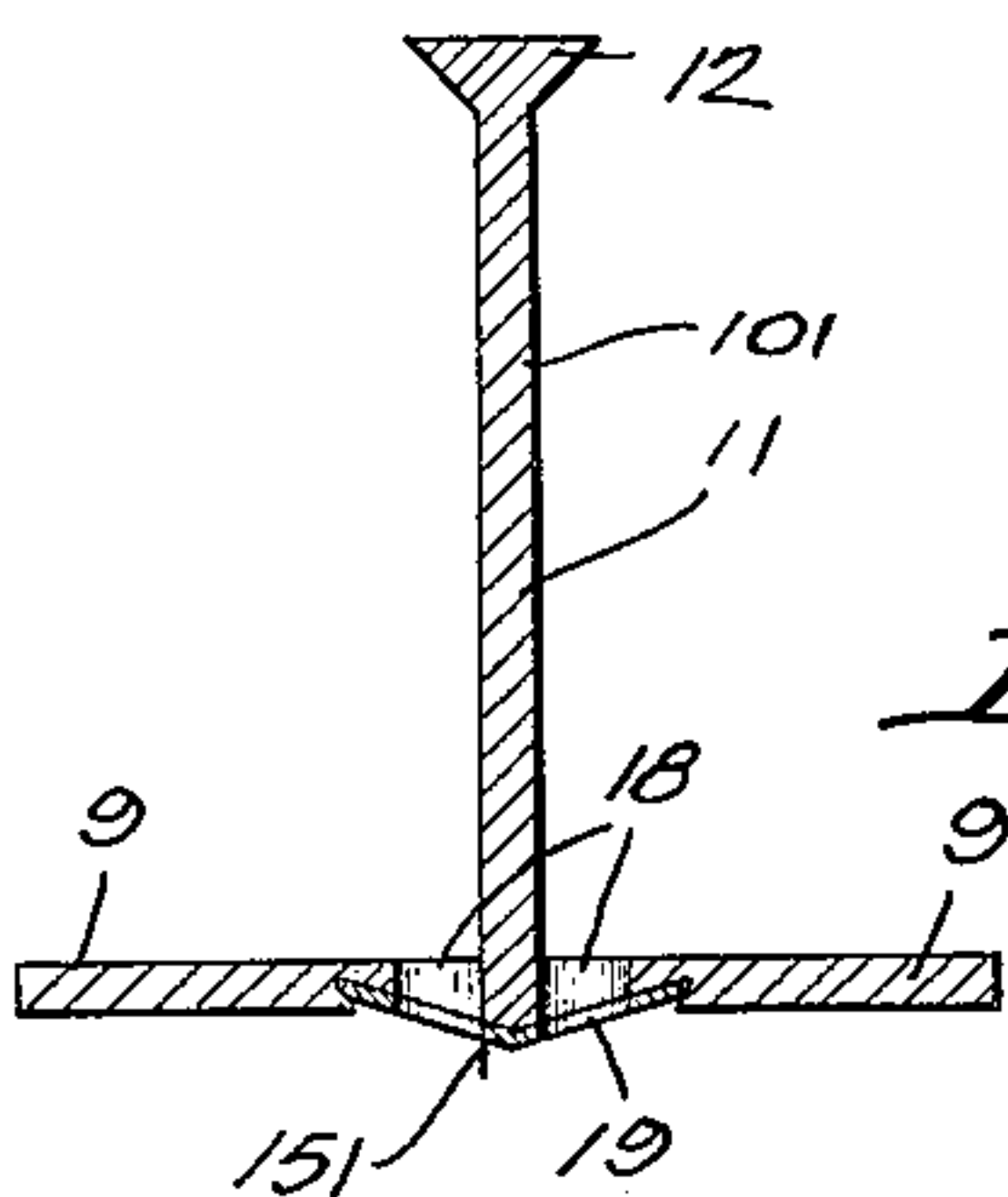
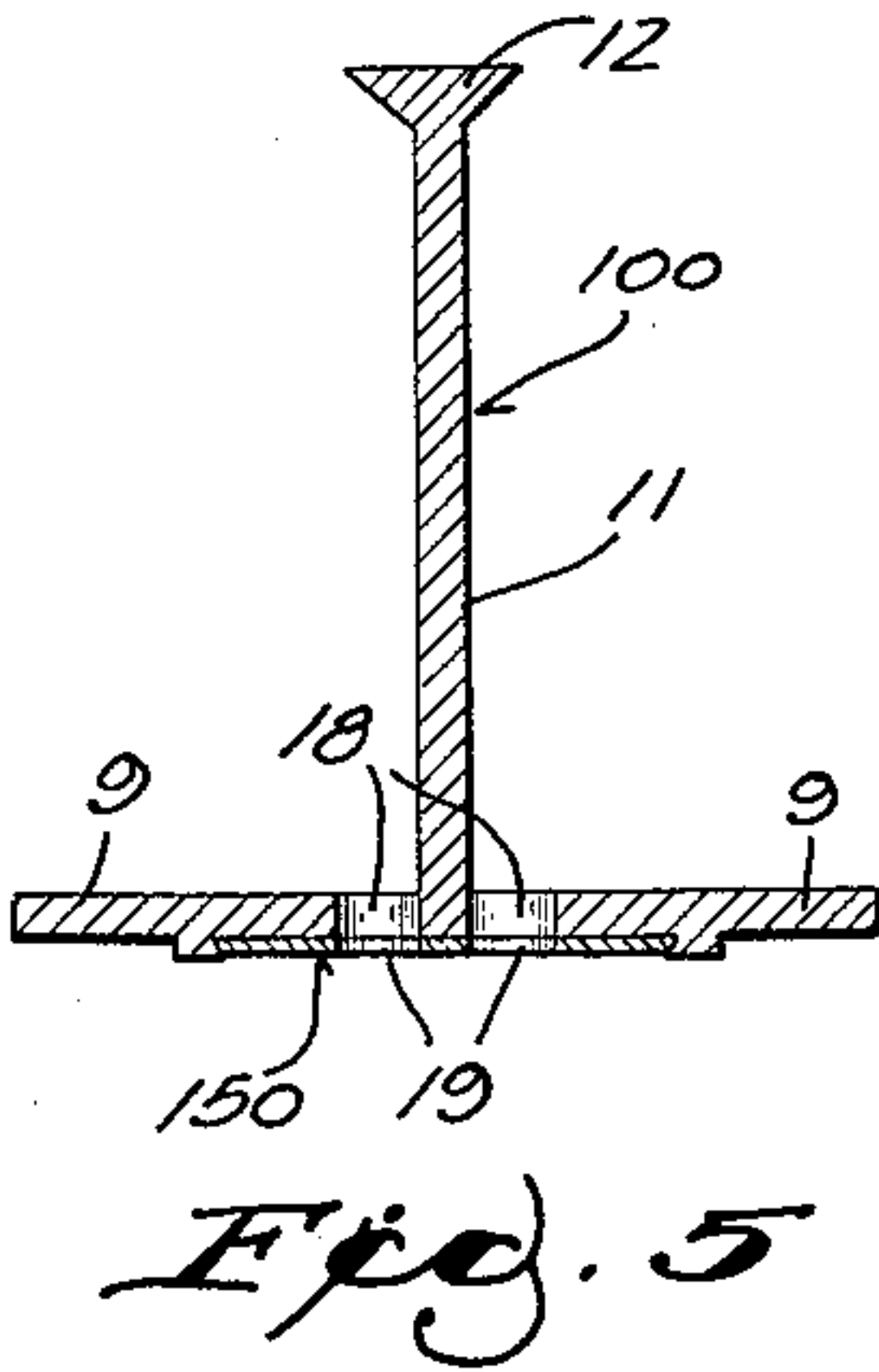
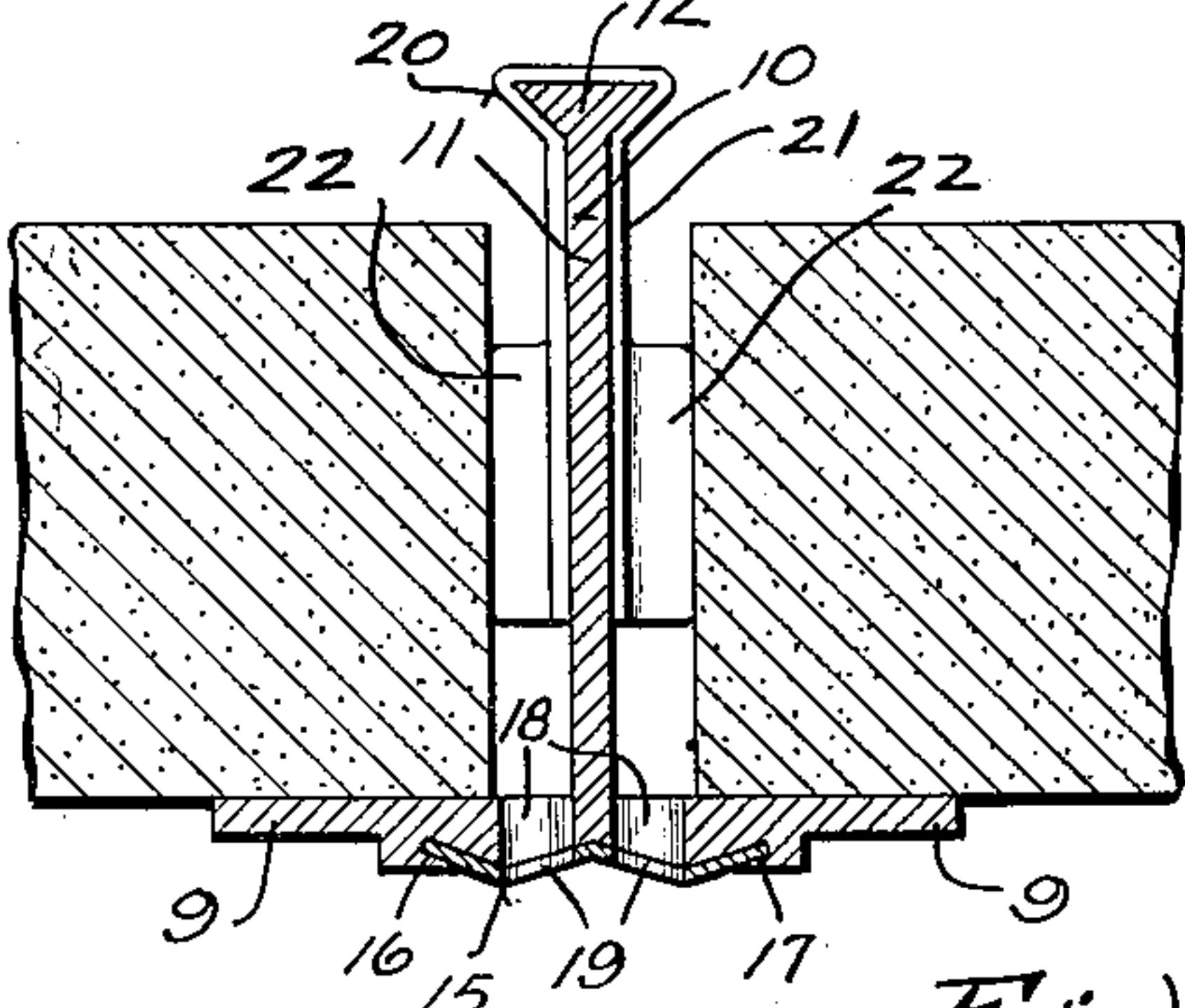
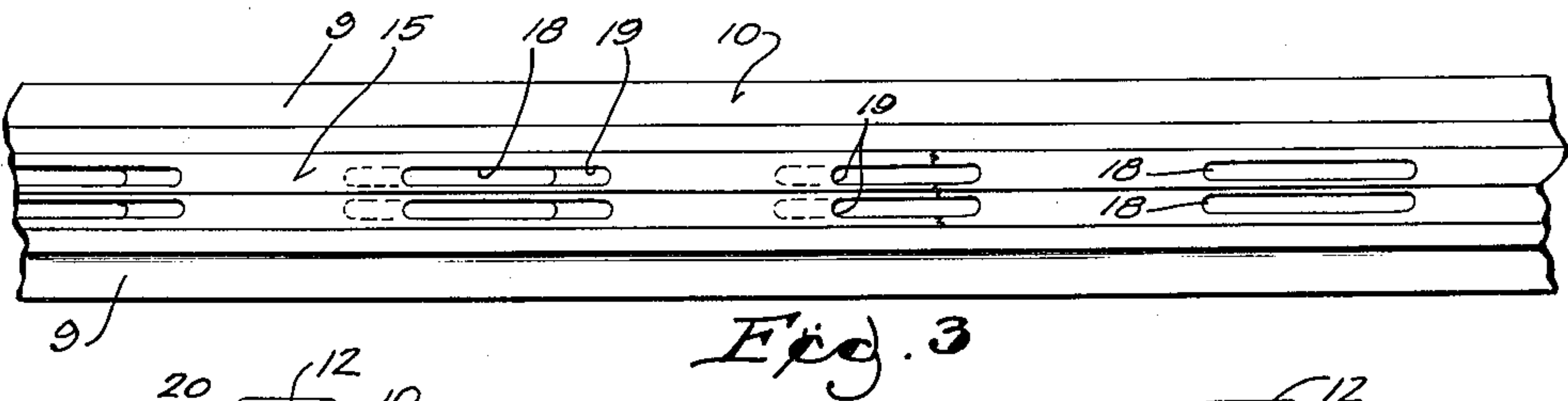
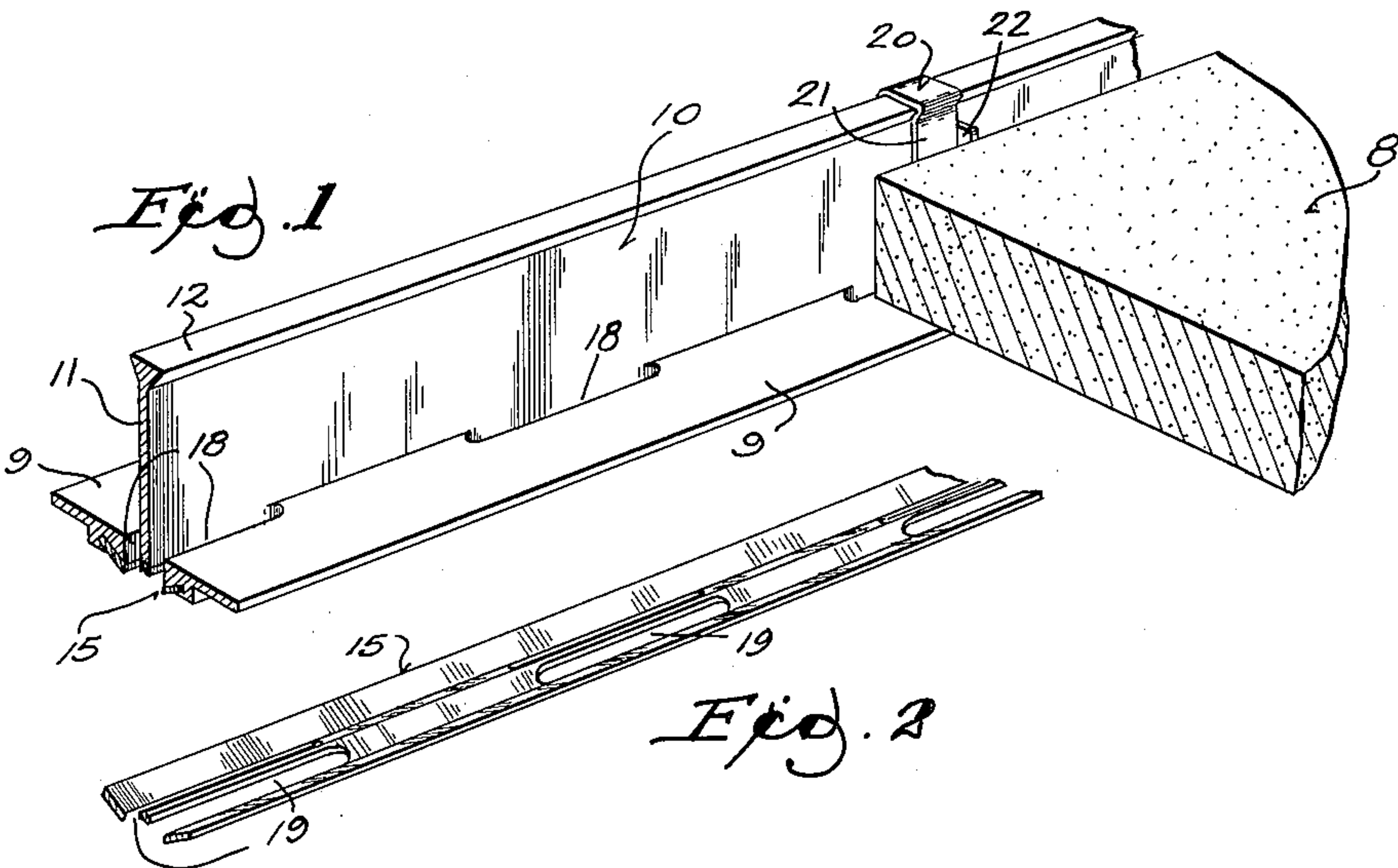
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T-RUNNER

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1

3,101,661

T-RUNNER

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7 Claims. (Cl. 98-31)

This invention relates to a T-runner for false ceilings or walls used in air-conditioned or ventilated rooms to control air flow to or from a plenum chamber.

As a ceiling the assembly comprises panels resting upon the T-runner of the present invention. Runners of T-section are conventional and are conventionally supported from above. Each includes a central web having lateral flanges which support the panels.

In accordance with the present invention, the flanges are slotted at points longitudinally spaced and slightly offset laterally from the central web. The slots are of predetermined length and spacing and the invention contemplates slide valve means for controlling air flow through these slots. Slide valve strips are provided which are reciprocable along the lower face of the runner with portions engaging the runner about the respective slots and other portions interlocked in ways extending along the respective flanges. In practice the runner is conveniently extruded, the ways comprising slots formed in the extruding operation at spacing such as to receive and retain the margins of the prefabricated valve strips.

When the apertures formed in the valve strip register with the openings provided in the flanges of the T, the ports will be wide open. By moving a given valve strip longitudinally of the T with which it is connected, its ports can be moved out of registry with the ports of the T whereby to reduce or shut off air flow through that portion of the T controlled by such strip.

The ceiling panels are, of course, spaced from the web of the T sufficiently to expose the aforesaid ports and accommodate such air flow therethrough as is permitted by the controller valves.

In the drawings:

FIG. 1 is a fragmentary view showing in perspective, a portion of a T-runner and a portion of a coacting valve strip, a portion of the ceiling panel also being illustrated.

FIG. 2 is a similar fragmentary detail view in perspective separately showing a portion of the valve strip.

FIG. 3 is a fragmentary bottom plan view of an assembled T-runner and valve strip.

FIG. 4 is an enlarged fragmentary detail view in transverse section through the T and valve and showing portions of two panels in assembled position on the T, a spacing clip being shown in end elevation.

FIGS. 5 and 6 are transverse sectional views showing modified embodiments of T and valve assemblies embodying the invention.

The ceiling panels 8 in appropriate sizes are supported on the flanges 9 of T-runners generally designated by reference character 10, each such runner or T including a vertical web 11 having a generally triangular head at 12, the web being integrally joined with lateral flanges 9. The T can conveniently be made by extrusion.

Slidable along the under surface of the runner in a position fully exposed to and accessible from the occupied portion of the room beneath the false ceiling is a valve

2

generically designated by reference character 15 and for which the T-runner is provided with a way comprising slots at 16 and 17 with which the side margins of the slide valve 15 are engaged. The valve is desirably freely slidable along the runner but it should be substantially in face contact with the lower surface of the runner between the slots 16 and 17 which outline the way. In the construction shown in FIGS. 1 to 4, the valve has roughly the form of a W in cross section. This gives the slide valve stiffness despite its thinness. The complementary surface of the lower face of the runner is correspondingly shaped.

In the construction shown in FIG. 5, the valve 150 and the complementary face of the runner are flat. In the construction shown in FIG. 6, the valve 151 has the form of a V. In each instance, the lower surface of the runner 10 or 100 or 101 is complementary to the upper surface of the slide valve in the area of the way along which the slide valve operates.

The flanges 9 of the runner have longitudinally spaced slots providing ports 18 on both sides of the central web 11, and the valve strip is provided at like spacing with complementary ports 19 which may be registered with the ports 18 to any desired extent by moving the valve strip along the way provided on the under surface of the runner. FIG. 1 shows the valve strip substantially closing the opening 18, while FIG. 3 shows the port 18 partially open, and FIG. 4 shows it fully open. Desirably the valve strips are relatively short so that each of them will control a relatively small number of ports through the false ceiling. This facilitates accurate control of air flow through all portions of the ceiling.

It is desirable to keep the ceiling panels 8 spaced from the web 11 of the runner sufficiently so that the panels cannot cover the openings 18. For this purpose it is convenient to employ the clips 20 which straddle the portion 12 of each runner. The legs 21 of each clip have outwardly turned flanges at 22 which project from the web 11 for a distance which is desirably greater than the width of the ports 18. As clearly appears in FIG. 4, the flanges 22 about the margins of the ceiling panels 8, thus precluding them from approaching the web of the runner so closely as to obstruct air flow through any of the ports 18.

I claim:

1. For use in a ceiling or the like, a T-runner having a central web and oppositely projecting lateral flanges provided with ports between which said web is disposed at one side of said flanges, the runner having means at the other side of the flanges for providing a slide valve way, and slide valve means reciprocable along said way in engagement with said flanges and having ports movable to and from registry with the ports of the flanges.

2. The device of claim 1 in which the slide valve means comprises an elongated strip having a cross section in the form of a W and to which the surfaces of said flanges conform.

3. The device of claim 1 in which the respective flanges are provided at opposite sides of said way with means providing channels extending longitudinally of the respective flanges, the slide valve means comprising an elongated strip having its margins engaged with said channels.

4. The device of claim 3 in which the strip is substantially flat between said channels.

3

5. The device of claim 3 in which said strip has the shape of a V in cross section between said channels.

6. The device of claim 1 in which the respective flanges have longitudinal channels at the sides of said way, the slide valve means comprising a strip having its margins reciprocable in said channels, the ports of said slide valve means being in separate rows registering with the ports of the respective flanges.

7. In a ceiling or the like, the combination with a T-runner having a central web and oppositely projecting lateral flanges provided with ports, of panels engaged with said flanges and marginally spaced from said web free of

4

said ports, and clip means spanning said web and having portions in marginal engagement with said panels to maintain said panels in the said spaced relation to said web.

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