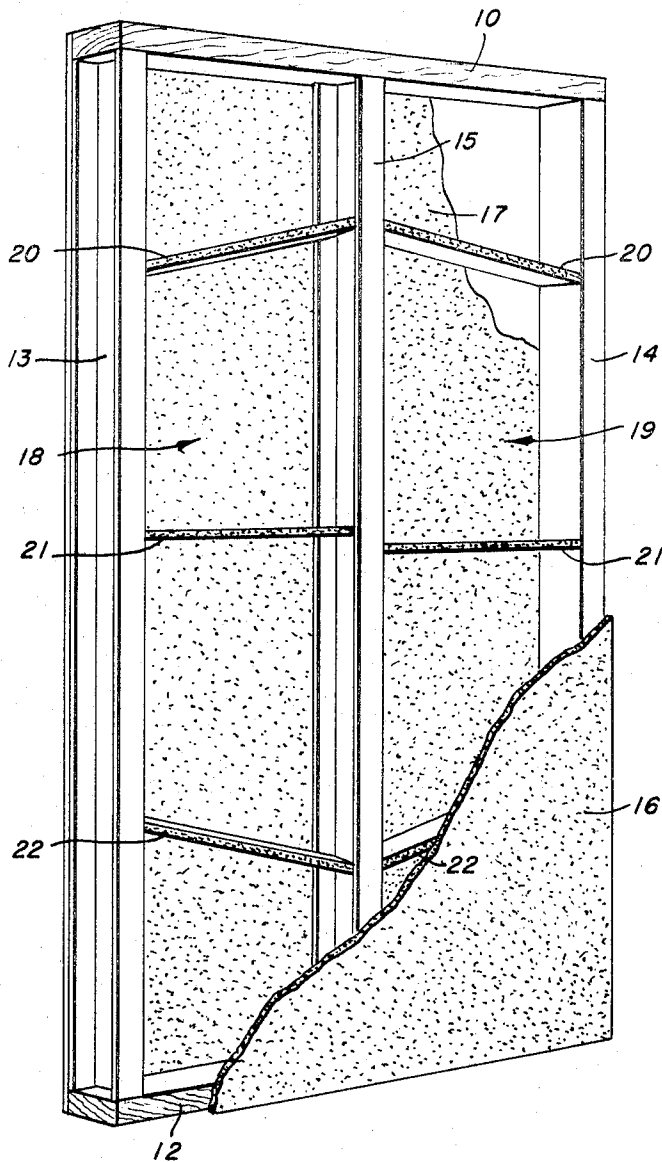


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J. E. SULEWSKY
SOUND-ABSORBING PANEL
Filed Sept. 8, 1967

3,483,947



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3,483,947

SOUND-ABSORBING PANEL

James E. Sulewsky, Morristown, N.J., assignor to United States Steel Corporation, a corporation of Delaware
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Int. Cl. E04b 1/99

U.S. Cl. 181—33

4 Claims

ABSTRACT OF THE DISCLOSURE

A sound-absorbing panel for use in a building. The panel includes conventional vertical studs and wallboards over said studs. Non-parallel baffles of sound-deadening material are mounted in the compartments between the studs and wall boards.

This invention relates to an improved sound-absorbing panel.

An object of the invention is to provide a wall panel which has improved sound-absorbing characteristics over conventional panels available for the purpose.

A further object is to provide a panel of the foregoing type which includes specially positioned baffles to overcome resonance and thus absorb reverberations within the panel.

In the drawing:

The single figure is a perspective view with parts broken away of my improved panel.

The figure shows a panel which includes top and bottom members 10 and 12, outside vertical studs 13 and 14 and a central vertical stud 15. Wall boards 16 and 17 are fixed over the back and front faces of the panel. The top and bottom members commonly are wood, the studs steel, and the wallboards a gypsum composition. The central stud 15 divides the interior of the panel into two compartments 18 and 19. Panels of such construction are known and commonly used to form sound-deadening interior walls of buildings.

In accordance with my invention, I mount a series of transverse sound-absorbing baffles 20, 21 and 22 within each compartment 18 and 19. The baffles are of a non-porous, non-metallic low sound transmission material, such as gypsum composition or equivalent, and preferably are attached to the front and back wallboards 16 and 17 with a suitable adhesive. Each baffle may have a thickness of about 1/2 inch. I position the three baffles within each compartment out of parallel. Preferably the uppermost baffles 20 slope downwardly away from the central stud 15, the intermediate baffles 21 are level, and the lowermost baffles 22 slope downwardly toward the

central stud, although other arrangements are possible. Preferably, the level baffles 21 in the two compartments are vertically offset. The non-parallel arrangement of baffles assures a maximum sound-absorbing effect, since there is no reverberation of sound waves between the baffles themselves.

I claim:

1. The sound-absorbing panel which includes top and bottom members, a pair of outside vertical studs and a central vertical stud joined to said members, and wallboards fixed over said members and studs, said central stud dividing the interior of the panel into two compartments, the combination therewith of sound-deadening mean comprising a plurality of baffles mounted in each of said compartments and extending transversely thereof and being positioned out of parallel, each of said baffles abutting an outside stud at one end and said central stud at the other end, said baffles dividing said compartments into shorter sub-compartments of varying vertical dimensions and being of a non-porous, non-metallic low-sound transmission material.

2. A combination as defined in claim 1 in which there are three baffles in each compartment, one of the baffles in each compartment sloping downwardly away from said central stud, another of the baffles in each compartment sloping downwardly toward said central stud, the third baffle being substantially level and located between the other two.

3. A combination as defined in claim 2 in which the level baffles of the two compartments are vertically offset.

4. A combination as defined in claim 1 in which the top and bottom members are wood, the studs steel, and the wallboards and baffles a gypsum composition.

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ROBERT S. WARD, Jr., Primary Examiner

U.S. Cl. X.R.

52—317

UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,483,947

December 16, 1969

James E. Sulewsky

It is certified that error appears in the above identified patent and that said Letters Patent are hereby corrected as shown below:

Column 2, line 8, "The" should read -- In a --.

Signed and sealed this 27th day of October 1970.

(SEAL)

Attest:

Edward M. Fletcher, Jr.

Attesting Officer

WILLIAM E. SCHUYLER, JR

Commissioner of Patents