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EUROPEAN PATENT APPLICATION

21 Application number: 81200522.1

22 Date of filing: 11.05.81

51 Int. Cl.³: **E 04 B 1/82**
E 01 F 8/00, E 04 B 1/40
E 04 B 2/78

30 Priority: 09.05.80 NL 8002686

43 Date of publication of application:
 18.11.81 Bulletin 81/46

84 Designated Contracting States:
 AT BE CH DE FR GB IT LI LU NL

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54 Sound damping wall.

67 A sound damping wall often causes vibration hindrance unless a ditch of sufficient depth is dug at the rear side. This is not longer necessary if a wall according to the invention is used. Said wall consists of multiplex contained in azobé, while the connecting means, with which the panels are attached to posts, have in the case of loading parallel to the surface of the panels, a greater thickness in the direction perpendicular to the panels. The connecting means are preferably metal clamping frames having a bevelled U-shaped cross-section.

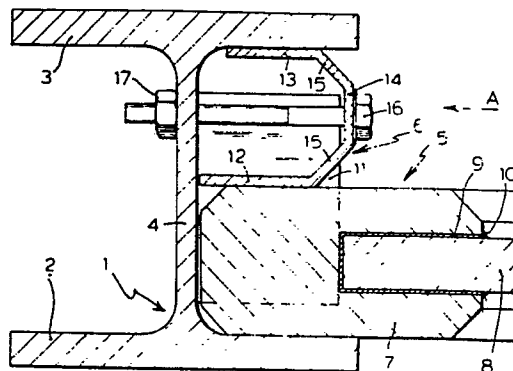


FIG. 1

- 1 -

A sound damping wall.

The invention is related to a sound damping wall consisting of wooden panels, which are attached by connecting means to posts having a H-shaped cross-section and being mutually spaced.

- 5 A similar wall is known from Dutch patent application 75 00811. The attachment of the panels is dealt with in this publication by reporting that "if necessary" they have to be connected with the posts.
- 10 Nevertheless, this attachment is of the greatest importance, for the panels can start vibrating under the influence of wind and the traffic racing by. Not only can this lead in itself to noise pollution but the posts can also start to vibrate as a result. These vibrations can then travel through the floor to the dwellings
- 15 to be protected unless a ditch of adequate depth can be dug at the rear side of the wall. Of course, there is not always enough room for such a ditch and, furthermore, such a ditch entails extra digging and maintenance costs.
- 20 The invention now aims at producing a sound damping wall which abolishes the above-mentioned disadvantages and problems. Moreover, the invention aims at producing a wall, which can be manufactured and positioned simply and therefore cheaply, it being

taken into account that the reflection of the noise will not reach any unacceptable values if the massive panel has a minimum weight for every surface unit.

5 The invented panels now have as characteristic feature that they consist of multiplex contained in azobé and that said connecting means consist of elements, which when loaded parallel to the surface of the panels have a greater thickness in the direction perpendicular to the panels.

10

Said connecting means can be metal clamping frames having a bevelled U-shaped cross-section, a number of nut and bolt systems inserted through the clamping frame and post being able to produce a load parallel to the surface of the panels.

15

It is also possible that the connecting means are rubber plugs, a number of nut and bolt systems inserted through the plugs and post being able to produce a load parallel to the surface of the panels.

20

The invention will be elucidated in more detail below with the aid of the drawing in which, by way of example, some details of a sound damping wall according to the invention are shown.

In the drawing there is shown:

25

fig. 1 a horizontal section through a post, a panel and a connecting means, and

fig. 2 a view in the direction of arrow A of fig. 1.

30

Most of the sound damping walls placed along busy thoroughfares are constructed by placing posts 1, having a H-shaped cross-section at a certain mutual distance, such as 3 m. The parallel legs 2 and 3 of this profile are parallel to the thoroughfare and the centre

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piece 4 is perpendicular thereto. The distance between the parallel legs 2 and 3 is so great that a panel 5 easily fits inbetween, so that enough room remains for a connecting means 6.

- 5 Panel 5 consists of a border 7 of azobé, and a multiplex plate 8 of preferably 18 mm thickness, which is contained in grooves of the border. The azobé border parts of preferably the dimension 50 x 100 mm are connected to one another in a known manner by wooden pins and preferably the cooperation between the border and
10 the plate is improved even more with the aid of kit 9 in the grooves and/or kit 10 in the connection corners. As shown in fig. 2 an extra recess can be placed in the border parts 7 for the benefit of kit 10. The panels are manufactured in a number of standard heights and are placed as a unit between the posts 1. To support the
15 panels, corner profiles 11 are welded firmly to the posts on a level with the land.

- The connecting means 6 consist in fig. 1 of U-profiles extending over the height of a panel, leg 12 of said U-profiles possibly
20 being somewhat longer than the other leg 13. The base part 14 of the U-profile is connected to the legs by means of bevelled edges 15. If the screw connection consisting of bolt 16 and nut 17 is now tightened, the base part 14 and the bevelled edges 15 will, at a given moment, want to come in each other's path, which will
25 lead to a strong clamping action. If the left-hand space in fig. 1 between legs 2 and 3 of the H-profile is also occupied by a panel, one should dispose of longer bolts 16.

- Instead of the illustrated connecting means other means can also
30 be applied, which can produce the clamping action aimed at, such as rubber strips or blocks which are compressed by a screw connection and become thicker as a result.

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CLAIMS:

1. A sound damping wall comprising wooden panels, which are
attached by connecting means to posts having a H-shaped cross-
section and being mutually spaced, characterized in that the
panels consist of multiplex contained in azobé and in that said
5 connecting means consist of elements, which when loaded parallel
to the surface of the panels have a greater thickness in the
direction perpendicular to the panels.
2. A wall according to claim 1, characterized in that the
10 connecting means are metal clamping frames having a bevelled
U-shaped cross-section, a number of bolt and nut systems inserted
through the clamping frame and post being able to produce a
load parallel to the surface of the panels.
- 15 3. A wall according to claim 1, characterized in that the
connecting means are rubber plugs, a number of bolt and nut
systems inserted through the plugs and post being able to produce
a load parallel to the surface of the panels.
- 20 4. A wall as shown in the drawing and/or described with the aid
thereof.

HV/cdw/LvdM



FIG. 1

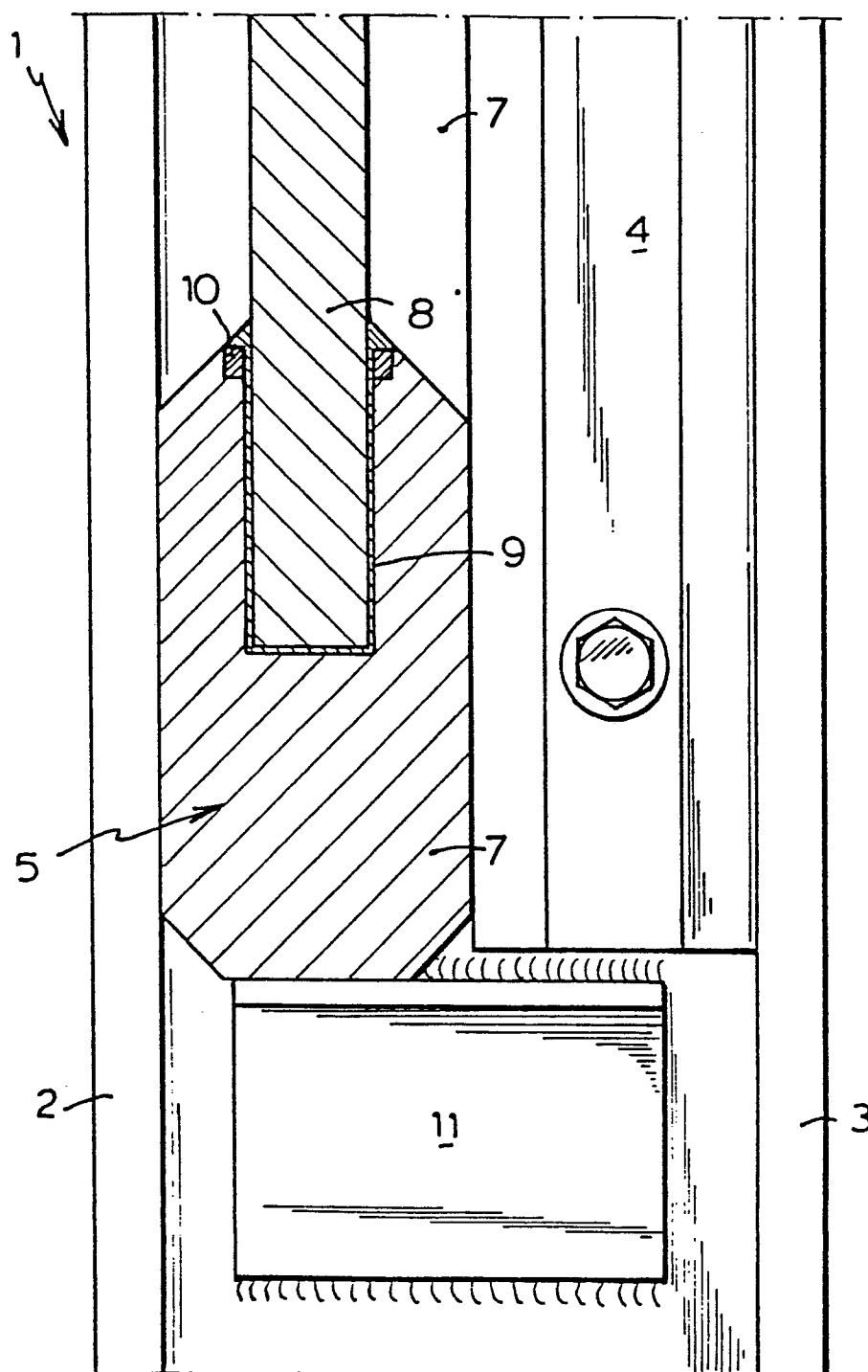


FIG. 2