Claims

1. Wall structure (1) working as a noise barrier for railways, which comprises at least a plurality of wall elements (2) placed consecutively end-to-end with each other, which wall elements are hinged by means of hinge pieces (3d) at their bottom edge for toppling downwards from their vertical position, **characterized** in that the wall elements (2) are disposed inside the width reach (W) of the wagons or cargo space of a train and for toppling by means of the hinge pieces (3d) to below a wagon or a load that is lower than normal and/or is overwide.

2. Wall structure (1) according to claim 1, **characterized** in that the wall elements (2) are hinged at one of their lower edges to the top edge of a base profile (4) that is constructed to be essentially continuous and is supported on its mounting.

3. Wall structure (1) according to claim 1 or 2, **characterized** in that one wall element structure is a door element (2a), which is e.g. essentially similar in its structure to a wall element (2), but is shorter.

4. Wall structure (1) according to claim 1, 2 or 3, **characterized** in that the base profile (4) is fixed to be supported by piles, such as screw piles (5), disposed at intervals of freely selectable length.

5. Wall structure (1) according to any of the preceding claims, **characterized** in that the base profile (4) is a profile open at essentially one of its walls, such as at its top wall, which profile together with the wall element (2) disposed above it is fitted to form an openable and closable hollow space (4i) e.g. for a cable channel for railways.

6. Wall structure (1) according to any of the preceding claims, **characterized** in that each wall element (2) of the

wall structure (1) comprises a plurality of profile elements (3) that are essentially similar to each other and are fixed with shape locking one on top of another.

7. Wall structure (1) according to any of the preceding claims, **characterized** in that at least the base profile (4) and the profile elements (3) are manufactured by extruding from aluminium, aluminium alloy or some other suitable material.

8. **Use** of a wall structure (1), comprised of wall elements (2) placed consecutively end-to-end with each other and hinged at their bottom edge for toppling, as a noise and/or passage barrier for railways, said barrier being disposed inside the width reach (W) of the wagons and/or cargo space of a train.

9. Use of a wall structure (1) according to claim 8, **characterized** in that the wall structure (1) is disposed on both sides of a railway such that the wall structure can be turned downwards one wall element (2) at a time by means of hinge pieces (3d) on the bottom edge of a wall element, either in the direction of the railway or away from it, for servicing or for a train to run over.

10. Use of a wall structure (1) according to claim 8 or 9, **characterized** in that when using the wall structure (1) as a noise barrier for railways, the wall elements (2) are arranged to be toppled by means of their hinge pieces (3d) onto the ends of the railway sleepers such that an overwide wagon or carrying can drive over the toppled wall elements (2).

11. Use of a wall structure (1) according to claim 8-10, **characterized** in that the wall structure (1) is founded on piles (5), such as on screw piles, via a base profile (4) such that when necessary the wall structure (1), the base profile (4) and the piles (5) can be removed and reinstalled.

12. Use of a wall structure (1) according to claim 8-11, **characterized** in that the base profile (4) comprises a hollow space (4i) e.g. for the cable entries of railways, one wall of which hollow space (4i) is the wall structure (1), which when lowered down opens access and when raised up closes access to the hollow space (4i).

CLAIMS

The invention claimed is:

1. Wall structure working as a noise barrier for railways, which comprises: a plurality of wall elements placed consecutively end-to-end with each other, each wall element is made up of a plurality of profile elements, where one profile element is hinged to a base by means of a hinge piece at its bottom edge and rotatably engaging with a locking mechanism of said base when toppling downwards from a vertical position, wherein the wall elements are disposed inside the width reach of the wagons or cargo space of a train and for toppling by means of the hinge pieces to below a wagon or a load that is lower than normal and/or is overwide.

2. Wall structure according to claim 1, wherein the wall elements are hinged at one of their lower edges to the top edge of a base profile (**4**) that is constructed to be essentially continuous and is supported on its mounting.

3. Wall structure according to claim 1 or 2, wherein one wall element structure is a door element, which is essentially similar in its structure to a wall element, but is shorter.

4. Wall structure according to claim 1, wherein the base profile is fixed to be supported by piles, such as screw piles, disposed at intervals of freely selectable length.

5. Wall structure according to claim 1, wherein the base profile is a profile open at essentially one of its walls which profile together with the wall element disposed above it is fitted to form an openable and closable hollow space for a cable channel for railways.

6. Wall structure according to claim 1, wherein each wall element of the wall structure comprises a plurality of profile elements that are essentially similar to each other and are fixed with shape locking one on top of another.

7. Wall structure according to claim 1, wherein at least the base profile and the profile elements are manufactured by extruding from aluminium, aluminium alloy or some other suitable material.

8. Use of a wall structure, comprised of wall elements placed consecutively end-to-end with each other and hinged at their bottom edge for toppling, as a noise and/or passage barrier for railways,

said barrier bring disposed inside the width reach of the wagons and/or cargo space of a train, each wall element is made up of a plurality of profile elements, where one profile element is hinged to a base by means of a hinge piece at its bottom edge and rotatably engaging with a locking mechanism of said base when toppling downwards from a vertical position.

9. Use of a wall structure according to claim 8, wherein the wall structure is disposed on both sides of a railway such that the wall structure can be turned downwards one wall element at a time by means of said hinge pieces on the bottom edge of said wall element, either in the direction of the railway or away from it, for servicing or for a train to run over.

10. Use of a wall structure according to claim 8 or 9, wherein when using the wall structure as a noise barrier for railways, the wall elements are arranged to be toppled by means of their hinge pieces onto the ends of the railway sleepers such that an overwide wagon or carrying can drive over the toppled wall elements.

11. Use of a wall structure according to claim 8, wherein the wall structure is founded on piles, via a base profile such that when necessary the wall structure, the base profile and the piles can be removed and re-installed.

12. Use of a wall structure according to claim 8, wherein the base profile comprises a hollow space for the cable entries of railways, one wall of which hollow space is the wall structure, which when lowered down opens access and when raised up closes access to the hollow space.

13. Wall structure according to claim 2, wherein the base profile is fixed to be supported by piles disposed at intervals of freely selectable length.

14. Wall structure according to claim 3, wherein the base profile is fixed to be supported by piles disposed at intervals of freely selectable length.

15. Wall structure according to claim 2, wherein the base profile is a profile open at essentially one of its walls which profile together with the wall element disposed above it is fitted to form an openable and closeable hollow space for a cable channel for railways.

16. Wall structure according to claim 3, wherein the base profile is a profile open at essentially one of its walls which profile together with the wall element disposed above it is fitted to form an openable and closable hollow space for a cable channel for railways.