Claims

1. A cable trough unit, comprising:

a bottom trough, which has a bottom and two lower sidewalls extending from opposite sides of the bottom towards a top direction;

a top trough, which has a top and two upper sidewalls extending from opposite sides of the top towards a bottom direction;

a locking assembly;

wherein the two lower sidewalls of the bottom trough and the two upper sidewalls of the top trough are disposed opposite respectively, and the locking assembly fixedly connects the lower sidewalls and the upper opposite sidewalls,

wherein the locking assembly comprises a fastener pair and a locking member, the fastener pair comprises two fastener units located on inner and outer sides of a junction of the lower sidewalls and the upper sidewalls respectively, the locking member is fixedly connected to the two fastener units,

wherein the lower sidewalls and the upper sidewalls both comprise inner flanges extending to insides of the corresponding sidewalls and outer flanges extending to outsides of the corresponding sidewalls, the fastener units are provided with a lower boss portion and an upper boss portion corresponding to the inner flanges or outer flanges, the lower boss portion and the upper boss portion cooperate with the inner flanges or the outer flanges to prevent the separation of the bottom trough and the top trough.

2. The cable trough unit according to claim 1, wherein back surfaces of the inner flanges and the outer flanges facing the corresponding lower boss portion or upper boss portion are first inclined surfaces, and the first inclined surfaces are inclined towards the top direction of the lower or upper sidewalls connected thereto, surfaces of the lower boss portion, upper boss portion facing the upper boss portion or the lower boss portion are second inclined surfaces, the second inclined surfaces are substantially parallel to the first inclined surfaces.

3. The cable trough unit according to claim 1, wherein the locking member comprises a screw and a nut, a rod portion of the screw passes through the two fastening units of the fastener pair, and the two fastening units are locked by the nut.

4. The cable trough unit according to claim 1, wherein the locking member further comprises a limiting block, and the rod portion of the screw passes through the limiting block.

5. The cable trough unit according to claim 1, wherein the locking member further comprises an elastic member, and the rod portion of the screw passes through the elastic member.

6. The cable trough unit according to claim 1, wherein the fastener units are further provided with a middle boss portion located between the upper boss portion and the lower boss portion.

7. The cable trough unit according to claim 1, wherein there is a height difference between the two lower sidewalls of the bottom trough, and there is also a height difference between the two upper sidewalls of the top trough.

8. The cable trough unit according to claim 1, wherein the top trough comprises a variable radial size segment.

9. The cable trough unit according to claim 1, wherein the cable trough unit further comprises a support member fixed to the bottom trough.

10. The cable trough unit according to claim 9, wherein ribs are provided on the inner sides of the two lower sidewalls of the bottom trough, and the ribs and the lower sidewalls form grooves for fixing the support member.

11. The cable trough unit according to claim 10, wherein both ends of the bottom trough have inward contracted portions without the ribs.

12. The cable trough unit according to claim 1, wherein the cable trough unit further comprises extending side plates, which are provided between the lower sidewalls of the bottom trough and the upper sidewalls of the top trough, the locking

assembly is fixedly connected to the lower sidewalls and the opposite extending side plates, and the locking assembly is fixedly connected to the upper sidewalls and the opposite extending side plates.

13. A cable trough unit, comprising:

a bottom trough, which has a bottom and two lower sidewalls extending from opposite sides of the bottom towards a top direction, an upper end of each of the lower sidewalls is provided with a lower fixing portion;

a top trough, which has a top and two upper sidewalls extending from opposite sides of the top towards a bottom direction, a lower end of each of the upper sidewalls is provided with an upper fixing portion;

a locking assembly;

wherein the locking assembly is fixedly connected to the upper fixing portion and the lower fixing portion to form a complete trough with the bottom trough and the top trough and limit a generated explosive force to an interior of the trough when cables inside the trough explode,

wherein the lower fixing portion is a lower hook-shaped groove provided on outer edges of the lower sidewalls, and the upper fixing portion is an upper hook-shaped groove provided on outer edges of the upper sidewalls, the lower hook-shaped groove is open towards to the bottom, and the upper hook-shaped groove is open towards to the top, the lower hook-shaped groove and the upper hook-shaped groove are hooked to each other, the locking assembly restricts the lower hook-shaped groove and the upper hook-shaped groove from separating.

14. The cable trough unit according to claim 13, wherein the lower fixing portion and the upper fixing portion are one and the other of a slot and a inserting portion, respectively, the inserting portion is located in the slot, and the locking assembly restricts the inserting portion from being released from the slot.

15. The cable trough unit according to claim 13, wherein the lower fixing portion is a lower fixing plate extending outwardly from the lower sidewalls, and the upper fixing portion is a upper fixing plate extending outwardly from the upper sidewalls, the locking assembly is fixedly connected to the lower fixing plate and the

upper fixing plate.

16. The cable trough unit according to any one of claims 13 or 14, wherein the locking assembly further comprises a trough strap, which is located on outer sides of the bottom trough and the top trough and fixes the bottom trough and the top trough.

17. A cable trough system comprising a trough unit and an inner lining, the inner lining is located at a junction of adjacent trough units, locking assembly and multiple trough units are connected to each other through the inner lining, wherein the trough unit comprises the cable trough unit according to any one of claims 1 to 16.