Aug. 21, 1928. 1,681,593

K. PAHL

SHEET PILING

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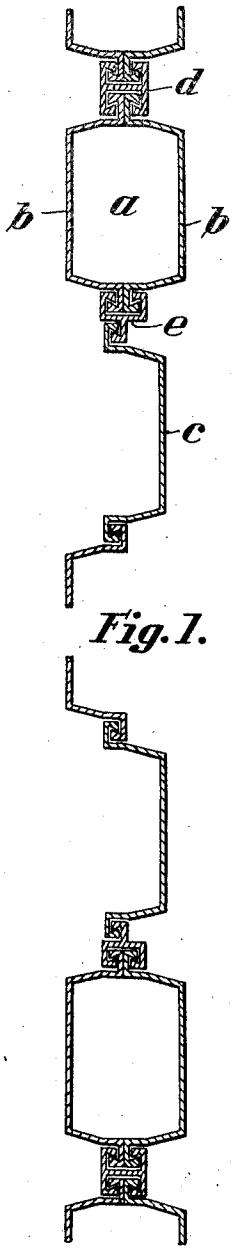
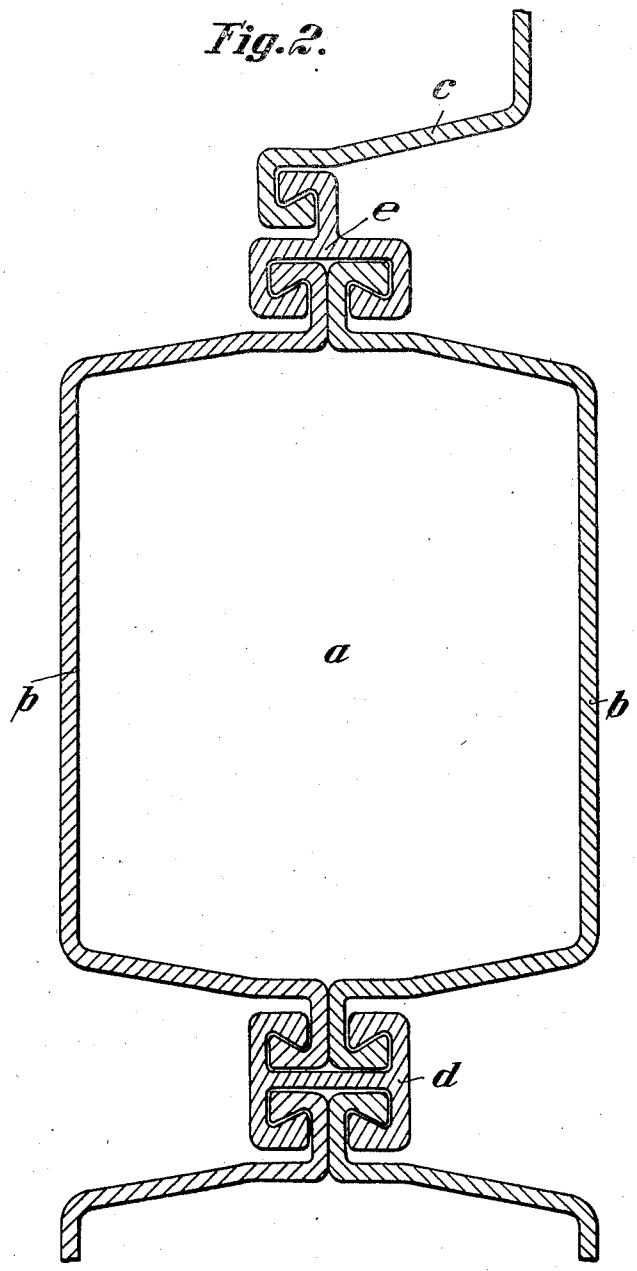



Fig. 1.

Fig. 2.




K. Pahl INVENTOR.

By: Marks & Clerk Attys

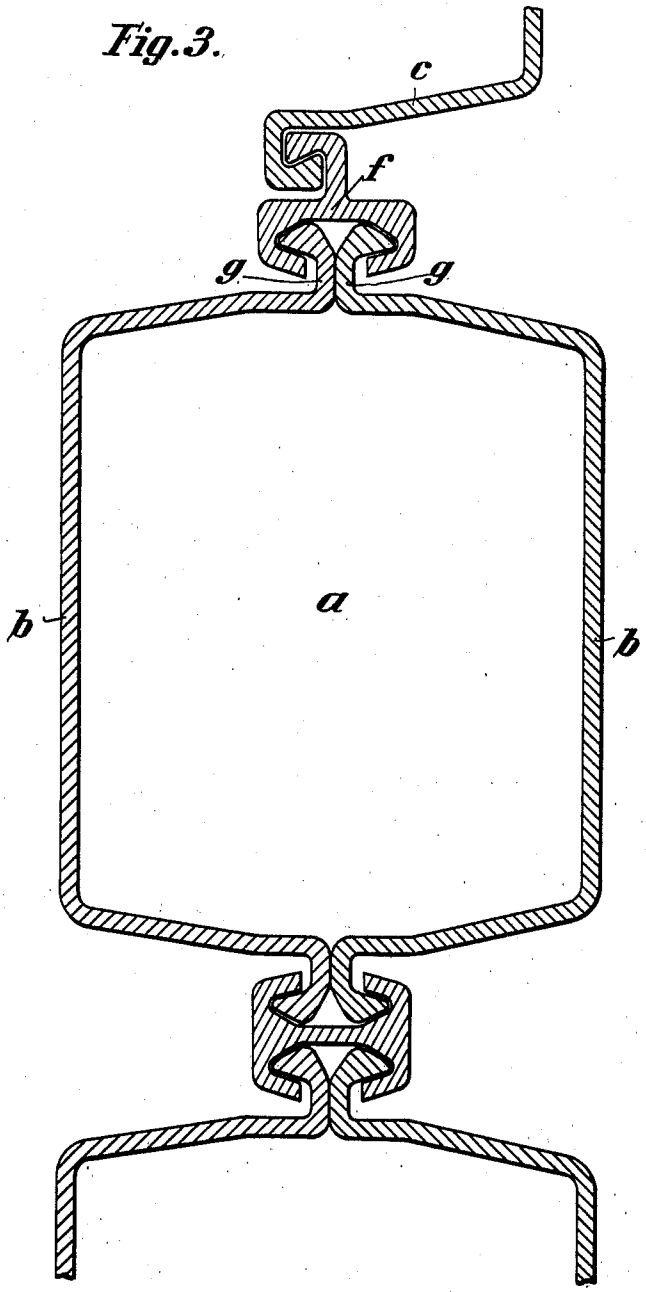
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*Fig.3.*




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# UNITED STATES PATENT OFFICE.

KARL PAHL, OF HEIDELBERG, GERMANY.

## SHEET PILING.

Application filed December 31, 1925, Serial No. 78,610, and in Germany March 3, 1925.

With walls constructed of iron sheet piling, concrete constructions have hitherto been introduced for the purpose of bearing heavy loads, such as shore reinforcements in the case, for example, of cranes, storage accommodation and the like.

In accordance with the present invention the necessity for this is eliminated by constructing the wall of box members and simple sheet pile members. Such a wall is adapted to stand the heaviest loads, and an important point in the construction is the possibility of building it up from the simplest rolled sections.

The simplest method of constructing the combined wall is to use for the connections between the sheet pile members and the boxes bars shaped in accordance with the connecting means or flanges of the sheet pile members. In such case, only a single type of section has to be rolled. For the connection of the box members, a simpler locking joint of any convenient shape can be employed, because a dual locking connection is effected at the box. Therefore, the connecting means and flanges for the sections of the box can be shaped in any simple manner; for example, the shapes produced by partial rolling may be used.

Embodiments of the invention are illustrated in the accompanying drawing.

Fig. 1 is a section through the new wall;

Fig. 2 shows one of the joints in cross section; and

Fig. 3 shows a joint similar to that of Fig. 2 but of the shape given by the first pass or rolling operation.

Each of the box members *a* of the wall is composed of two iron sections *b* corresponding to the sheet pile members *c*. The sections of adjacent boxes are connected together by a jointing or locking bar *d*, whilst locking bars *e* serve to connect the boxes to the sheet pile members *c*. It will be evident at once that the new wall is specially adapted to stand a heavy localized or total load. For localized loads, the box members will preferably be placed at the points where such loads occur; whereas for heavy total loads, the box members can be arranged at regular intervals, like the pillars of a wall, thus producing a hollow type of construction.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A pile wall of sheet piling comprising U-shaped piles having claws at each edge and cooperating with claws of the adjacent pile members, box-shaped pile members at distances apart in the said wall, comprising two U-shaped piles with their open side faced against each other and having the contact surface substantially in the neutral plane of the piling and locking bars having claws on one side embracing two claw members at one side of the said box comprising two piles faced against each other and one claw at the other side of a shape cooperating with one claw at one edge of the said U-shaped piles.

2. A pile wall of sheet piling comprising U-shaped piles having claws at each edge and cooperating with claws of the adjacent pile members, box-shaped pile members at distances apart in the said wall comprising two U-shaped piles with their open side faced against each other and having the contact surface substantially in the neutral plane of the piling, and locking bars having claws on opposite sides for embracing the claw members of the adjacent piles and box members.

In testimony whereof I affix my signature.

KARL PAHL.