May 19, 1931. R. F. SMITH 1,806,508

SHIP CONSTRUCTION

Filed July 20, 1929

Fig. 1.

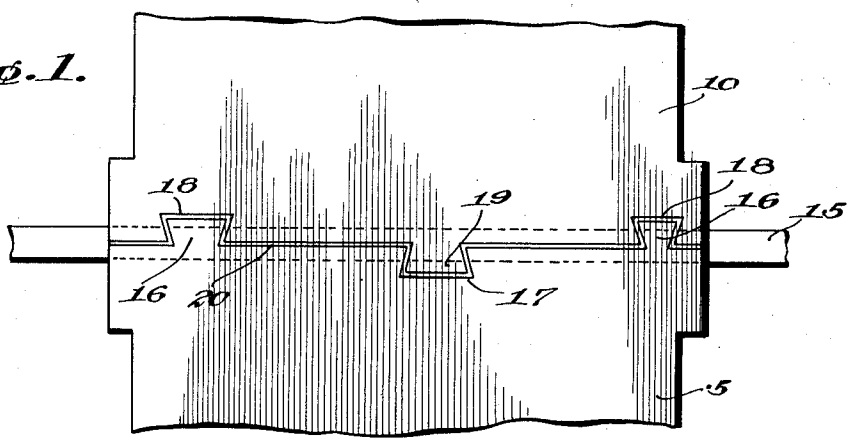
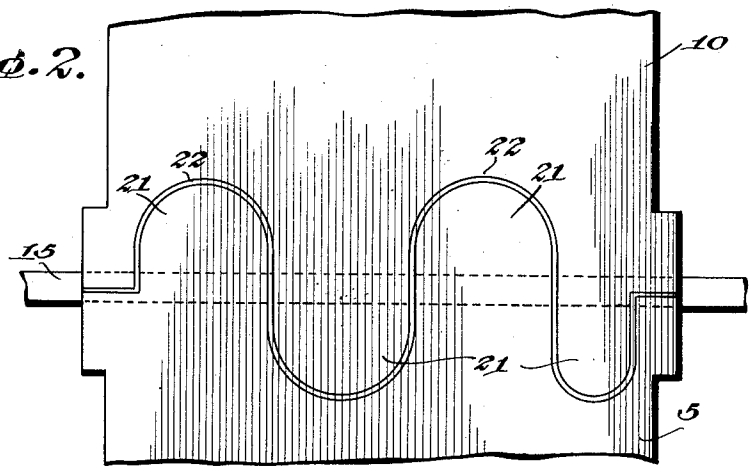


Fig. 2.



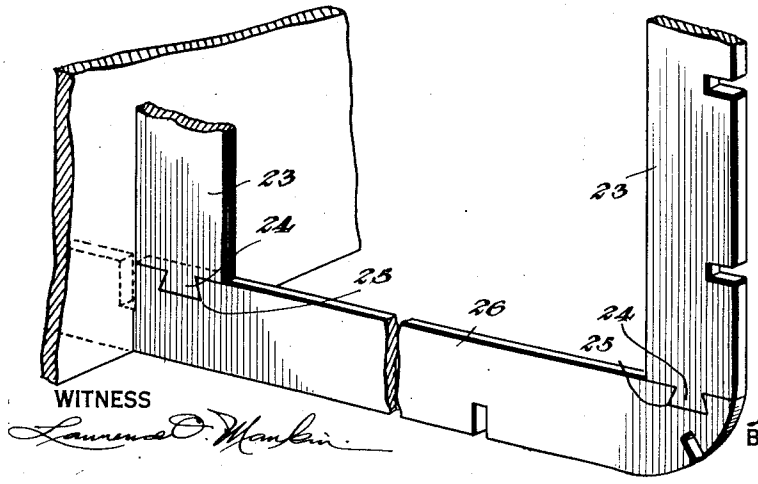


Fig. 3.

WITNESS

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UNITED STATES PATENT OFFICE

RICHARD F. SMITH, OF CHARLESTON, SOUTH CAROLINA, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, OF ONE-FOURTH TO RAYMOND D. SULLIVAN, OF SAVANNAH, GEORGIA, AND ONE-HALF TO CHARLESTON DRY DOCK AND MACHINE COMPANY, OF CHARLESTON, SOUTH CAROLINA, A CORPORATION OF DELAWARE

SHIP CONSTRUCTION

Application filed July 20, 1929. Serial No. 379,819.

My invention relates to ship constructions and more particularly to a lock joint for the adjacent edges of the shell plating.

An object of the invention is to provide a lock joint for the adjacent edges of two shell plates which in addition to serving to lock the plates together provides a maximum weld surface.

More specifically the invention provides a pair of shell plates having irregularly shaped interfitting edges along which a weld is formed to connect the plates together, the weld thus produced extending over a substantially greater area than if the adjacent ends of the plates were straight.

With the preceding and other objects and advantages in mind, the invention consists in the novel combination of elements, constructions and arrangements of parts and operations to be hereinafter more fully described, claimed and illustrated in the accompanying drawings, wherein:

Figure 1 is a fragmentary front elevation of a pair of shell plates having my improved lock joint associated therewith;

Fig. 2 is a similar view of a slightly modified form of the lock joint; and

Fig. 3 is a fragmentary perspective of part of the ship frame construction and illustrating the use of the lock joint shown in Fig. 1.

Referring to the invention in detail and particularly to the construction disclosed in Fig. 1, a pair of shell plates 5 and 10 are arranged with their adjacent ends upon one of the supporting beams 15 of the ship hull construction.

The inner edge of the plate 5 is formed with an upstanding dove-tail tongue 16 adjacent each of its longitudinal edges.

A dove-tail recess 17 is formed in the inner end of the plate 5 at a point between the tongues 16.

A dove-tail recess 18 is formed in the inner end of the plate 10 adjacent each longitudinal edge thereof to receive one of the tongues 16. Also a single dove-tail tongue 19 is formed on this end of the plate 10 between the recess 18 and is adapted for interlocking engagement in the dove-tail recess 17.

After the plates have been interlocked a continuous weld 20 is formed between the adjacent edges of the plates and around the edges of the tongues and walls of the dove-tail recesses. It will be seen that the interlocking tongues and recesses not only serve to lock the plates together but an irregular weld surface is attained which is substantially greater than if the straight abutting edges of the two plates were welded together. In the modification disclosed in Fig. 2 the plates are provided with spaced rounded tongues 21, and rounded recesses 22 between each two adjacent tongues. The tongues and recesses of each plate are alternately disposed so that the tongues of one plate will interfit within the recesses of the other plate. It will be observed that the edges of the tongues and recesses define an irregular or sinuous surface between the plates which are welded as at 22.

In the construction disclosed in Fig. 3 the locking joint disclosed in Fig. 1 is utilized to connect the parts of one of the frame members of a skeleton frame together. In this instance the parallel bars 23 of the transverse frame member are formed with dove-tailed tongues 24 at their lower ends which are welded within dove-tailed recesses 25 in the horizontal bar 26 of the frame member.

From the disclosure it will be manifest that I have provided an efficient lock joint for the shell plate which in addition to locking the plates in assembled relation provides a weld having a maximum area.

What is claimed is:

1. In a ship construction, a supporting beam, plates abutted at a joint line approximately centered along one edge of the beam, said plates having interfitting portions ex-

tending in alternating directions and beyond the sides of the beam, and a weld along said interfitting portions and the joint line.

2. In a ship construction, a supporting beam, plates abutted at a joint line approximately centered along one edge of the beam, said plates having interfitting portions extending beyond the sides of the beam, and a weld along said interfitting portions and the joint line.

RICHARD F. SMITH.