

C. Maliphant.
Building.

N^o 19,737.

Patented Mar. 23, 1858.

Fig. 3.

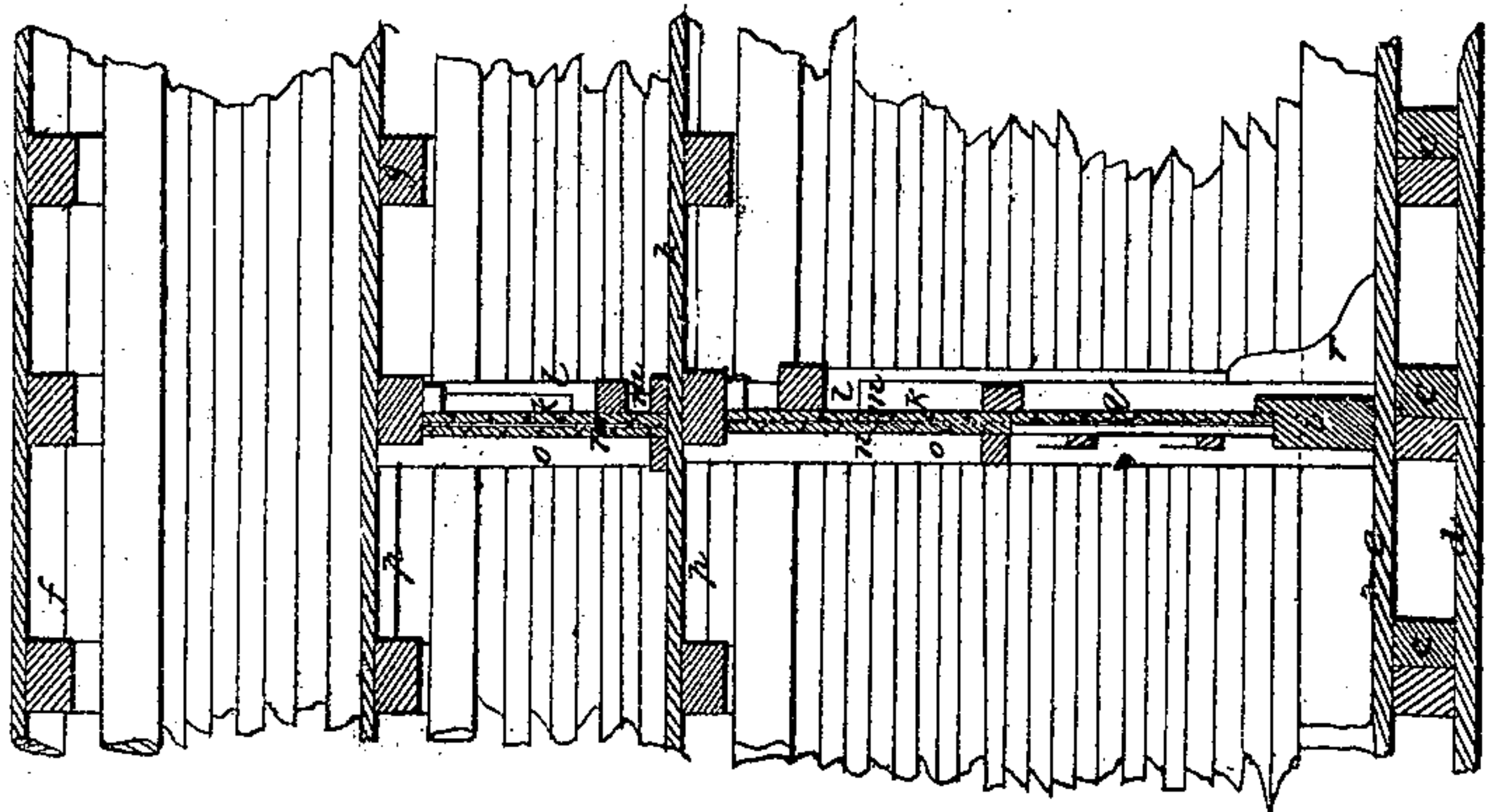


Fig. 1.

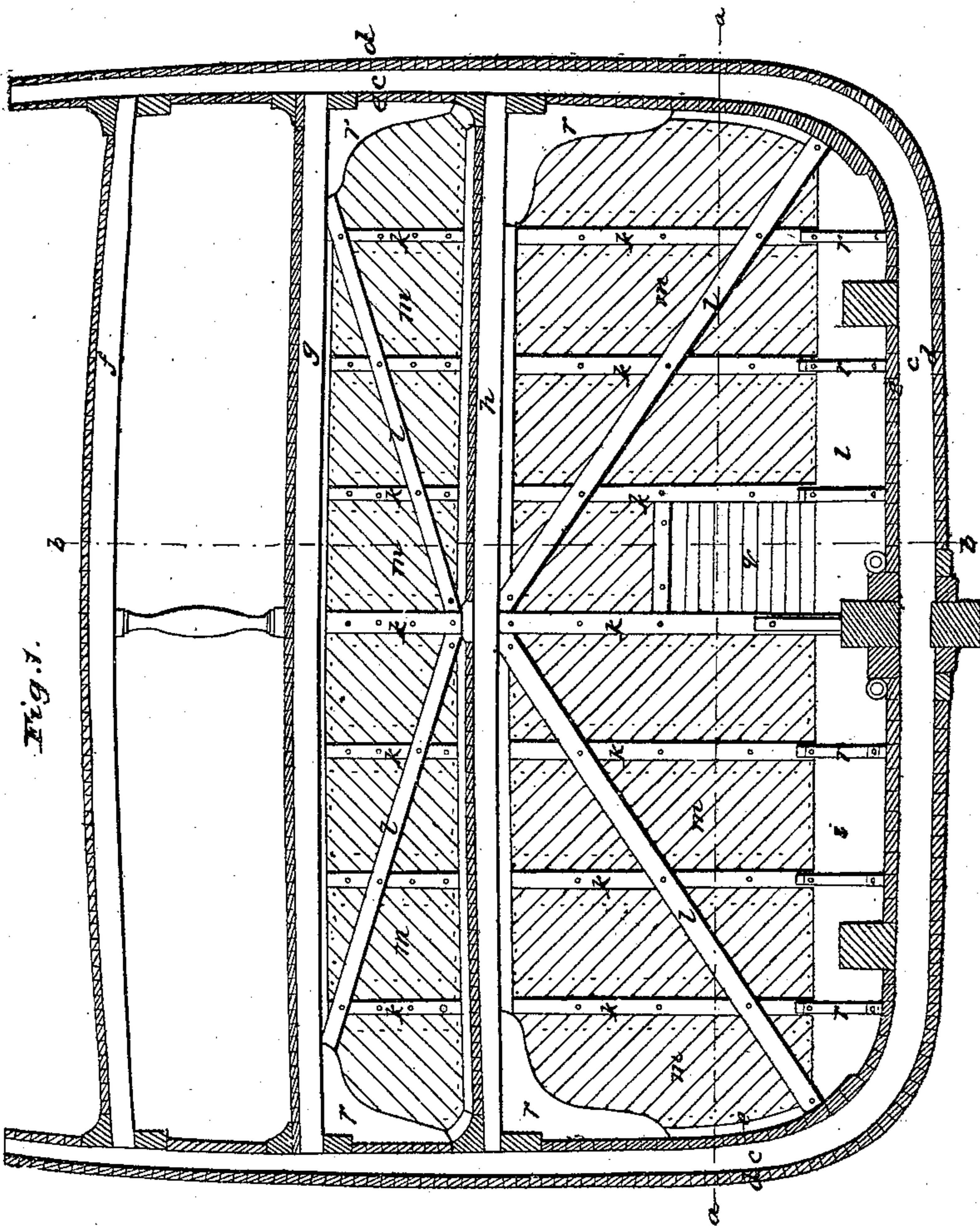
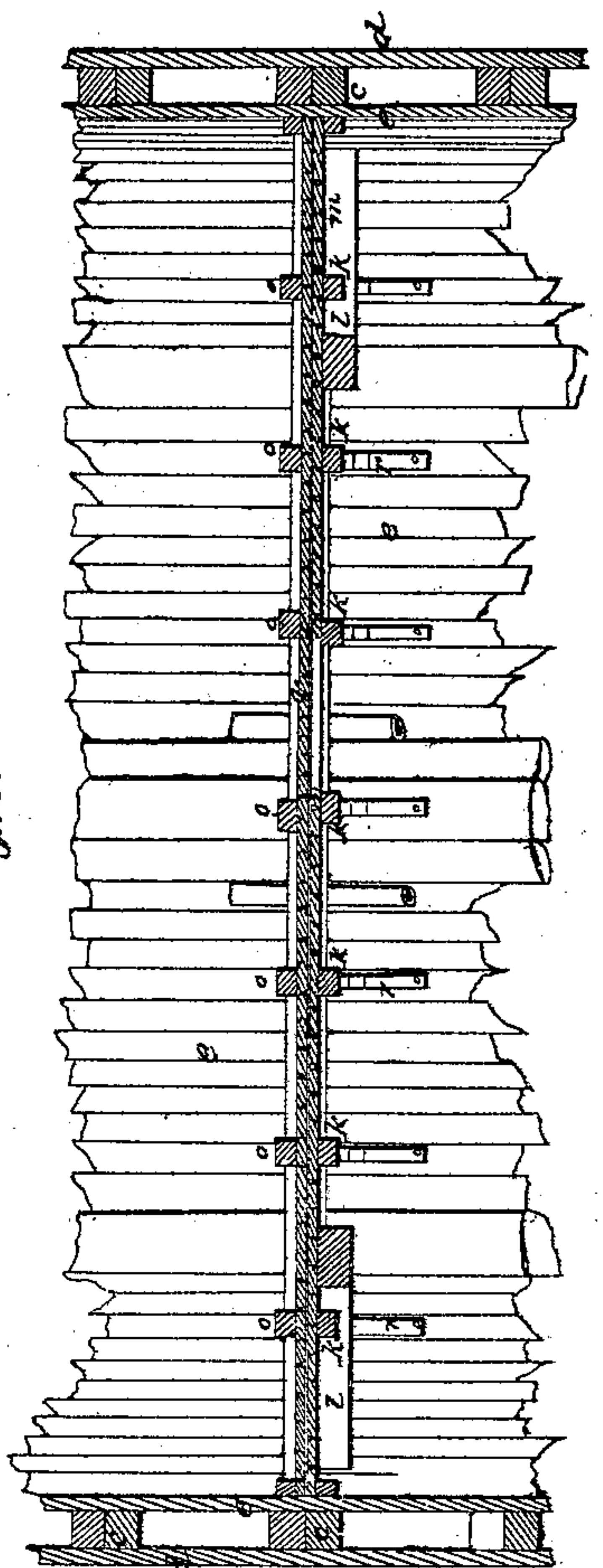


Fig. 2.



Witnesses.

Lemuel W. Cull
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UNITED STATES PATENT OFFICE.

C. MALIPHANT, OF NEW YORK, N. Y., ASSIGNOR TO THOS. WEST, OF SAME PLACE.

SHIP'S BULKHEAD.

Specification of Letters Patent No. 19,737, dated March 23, 1858.

To all whom it may concern:

Be it known that I, CHARLES MALIPHANT, of the city, county, and State of New York, have invented, made, and applied to use certain new and useful Improvements in Bulkheads for Vessels; and I do hereby declare that the following is a full, clear, and exact description of the nature of my said invention; reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1, is a cross section of a vessel showing my said bulkhead. Fig. 2, is a sectional plan at the line *a, a*, and Fig. 3, is a vertical section of the same at the line *b, b*.

Similar marks of reference denote the same parts.

In almost all vessels of any considerable size, particularly, the necessity of suitable bulkheads dividing the vessel up into sections, is generally admitted, so that in case of one portion of the vessel becoming injured the remainder may still float and preserve the lives of those on board. With this object in view various characters of bulkheads have been devised, some of iron, and other of wood; those formed of wood, prior to my present invention, and its application under my direction to the vessels of the Collins line of steamships, have been formed by planking on each side of suitable stanchions between the decks of the vessel and in the hold, in this case considerable room is lost because the stanchions are incased by the plankings on the sides, occupying twelve to sixteen inches in thickness, and another more serious inconvenience arose from the planking becoming leaky and open at the joints from the working of the ship added to the dryness of the bulkhead from being inside the ship.

The nature of my said invention as distinguished from all previous bulkheads consists in the use of double diagonal planking with felt or equivalent material, saturated with turpentine or similar material, between said plankings, and said plankings are placed between stanchions, whereby the bulkhead is rendered perfectly tight, and as little room as possible is occupied by said bulkhead and the shrinking of the planks, or the working of the vessel cannot cause the said bulkhead to leak even though a portion of the vessel might be broken away so that the waves came directly against said bulkhead.

In the drawing I have shown my bulkhead

as applied in a vessel having three decks but it will be apparent that my construction of bulkhead might be applied to any other character of vessel, and fitted lengthwise of the same, as well as transversely, if desired.

c, c, are the timbers of the vessel, *d, d*, the outer and *e, e*, the inner planking.

f, g, h, are the decks of the vessel.

i, is a sleeper fitted to the bottom of the vessel within the hold, and *k, k*, are vertical stanchions extending from said sleeper to the deck beams above or to a timber fitted in for the purpose, and these stanchions are also to be braced as at *l, l*, if desired. I then commence by attaching one thickness of tongued and grooved plank *m* to said stanchions. I prefer narrow plank, and that they be placed diagonally as shown. I then grave said planking with a coating of raw turpentine (or equivalent material) and lay a thickness or thicknesses of felt or similar fibrous material thereon, and grave the same with turpentine and lay up against it the second thickness of planking *n*, care being taken to have the joints of said planking run at right angles to the joints of the other planking or nearly so. After this has been done I erect the second range of stanchions *o, o*, corresponding in position with the stanchions *k, k*, and said stanchions may be sustained by blockings as seen at *p*, Fig. 3, and knees *r* may be used at convenient places to strengthen the bulkhead. The stanchions *k, k*, and *o, o*, are to be bolted together as often as necessary by bolts passing from side to side and through the planking *m, n*; and the two thicknesses of said planking *m, n*, I prefer to have riveted or nailed together at suitable points say about six inches apart.

For the purpose of passing cargo, coal, &c., through said bulkhead I provide one or more doors *q*, if required, made of two thicknesses of planking with intervening felt formed as aforesaid; and fit the same to rabbets in the bulkhead. I prefer that the door be hinged at the top side so as to be swung up, and provided with a cross bar or bars to be inserted between the stanchions to keep the door shut watertight, and to this end the door may shut against a strip of india rubber around the rabbet.

I would remark that the junction of the bulkhead with the vessel must be thoroughly calked and that the connections of the bulkhead to the vessel must be sufficiently strong, by bolts and spikes, &c.

What I claim as my invention, and desire to secure by Letters Patent, is—

5 The arrangement of two or more thicknesses of crossed planking, the interposed felt or other equivalent material, and the stanchions, with each other, substantially as specified, and for the purpose set forth.

In witness whereof I have hereunto set my signature this twelfth day of February, 1858.

CHARLES MALIPHANT.

Witnesses:

LEMUEL W. SERRELL,
THOMAS G. HAROLD.