

Haupt & Smith.  
SCOWS.

N<sup>o</sup> 48,935.

Patented Jul. 25, 1865.

Fig. 1.

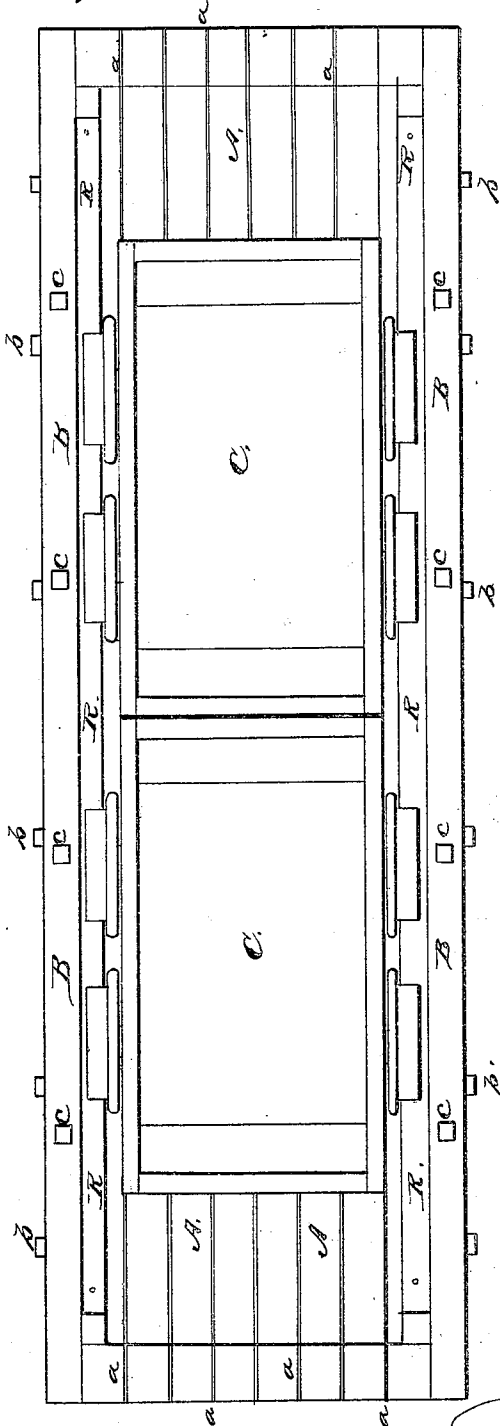
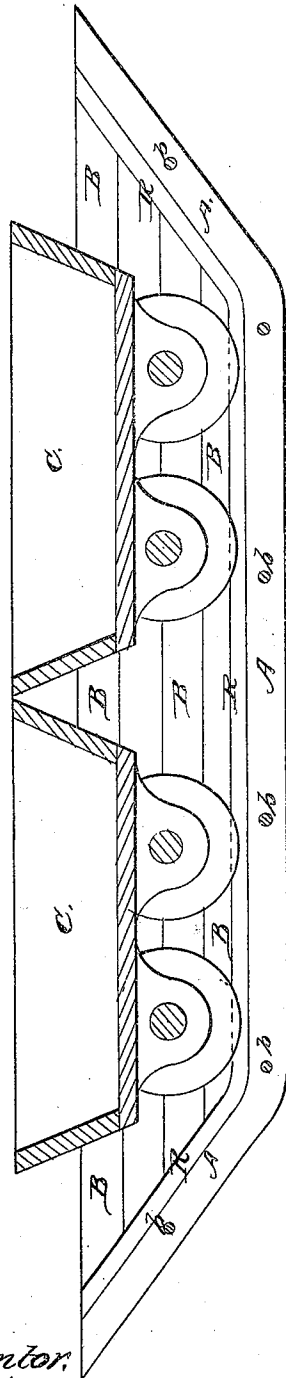


Fig. 2.



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Witnesses.  
Amos J. Hill  
Jos. A. Coombs

# UNITED STATES PATENT OFFICE.

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## IMPROVED CONSTRUCTION OF FLAT-BOTTOM BOATS.

Specification forming part of Letters Patent No. 48,935, dated July 25, 1865.

*To all whom it may concern:*

Be it known that we, HERMAN HAUPT, of Cambridge, in the county of Middlesex and State of Massachusetts, and JOHN Y. SMITH, of Alexandria, in the county of Alexandria and State of Virginia, have invented certain new and useful Improvements in the Construction of Boats, Barges, &c.; and we hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of a boat constructed in accordance with this our invention, and Fig. 2 a vertical central section of the same.

Our invention has for its object the expeditious and economical construction of boats or barges for the transportation of coal, ore, or other products or articles on navigable waters.

One of the principal elements of success in agricultural and mining operations is cheap transportation; hence most of such operations are carried on along navigable rivers, which afford the cheapest means of transportation known. Still in many localities it is difficult to procure timber of proper scantling suitable for the construction of boats. In such places the cost of transportation is greatly increased owing to the high price and scarcity of boats. An additional object we contemplate, therefore, is the utilization of inferior-sized timbers, such as abound in most counties along the river-shores, for the purpose of building boats or barges suitable for the transportation of coal or other articles, as before stated.

Our invention consists in constructing boats and barges of parallel timbers sawed of suitable dimensions to give the requisite strength for the purposes to which the boat is to be applied. The hull is composed of one layer of such timbers placed side by side and breaking joints. The timbers are in length of from twenty to forty feet, and the ends may be bent by steaming or other process known, so as to avoid joints and add to the strength. The joints between the timbers are made tight by pitching the sides of the timbers which come in contact, or by interposing between the surfaces which come in contact strips of felt or woven or other material saturated with pitch or other water-proof composition. As each layer of timber is added it is spiked or pinned to the preceding

layer, and when the bottom has been formed by the successive addition of a sufficient number of layers to give the required width the whole are secured by long bolts passing entirely through from one side to the other, and tightly screwed to compress the joints while the composition is yet in a plastic state, and thus render them water-tight without calking. The sides are built up, in the same manner as the bottom, by successive layers of timbers with composition in the joints, and compressed by a sufficient number of vertical bolts.

In the accompanying drawings, A are the timbers which form the flat bottom and the two ends of the boat or barge. These timbers are all of equal length, and are bent at their ends so as to be of a symmetric or other convenient form.

*a* are the layers of felt saturated with pitch, interposed between the timbers, and *b* the horizontal bolts which laterally unite the timbers. B are the side timbers, which are united by means of vertical bolts *c*.

For the transportation of coal or other mining products the boats may be constructed with a tramway, R—that is to say, a kind of rail—made of wood, located along and secured into the angle formed by the side walls or side timbers, and the bottom timbers. Upon this railway or tramway we propose to run and transport wagons or cars C, loaded with coal, ore, &c. By this means the loading and unloading are greatly facilitated, expedited, and cheapened. When the cars are loaded at the mine they are run onto the boat and floated or towed to the place of destination, where they are run out and dumped.

Having thus described our invention, and the manner in which the same is or may be carried into effect, we claim—

The construction of boats or barges substantially in the manner and for the purposes herein set forth.

In testimony whereof we have signed our names to this specification before two subscribing witnesses.

HERMAN HAUPT.  
J. Y. SMITH.

Witnesses:  
LEWIS L. HAUPT,  
JAMES McCALTUN.