

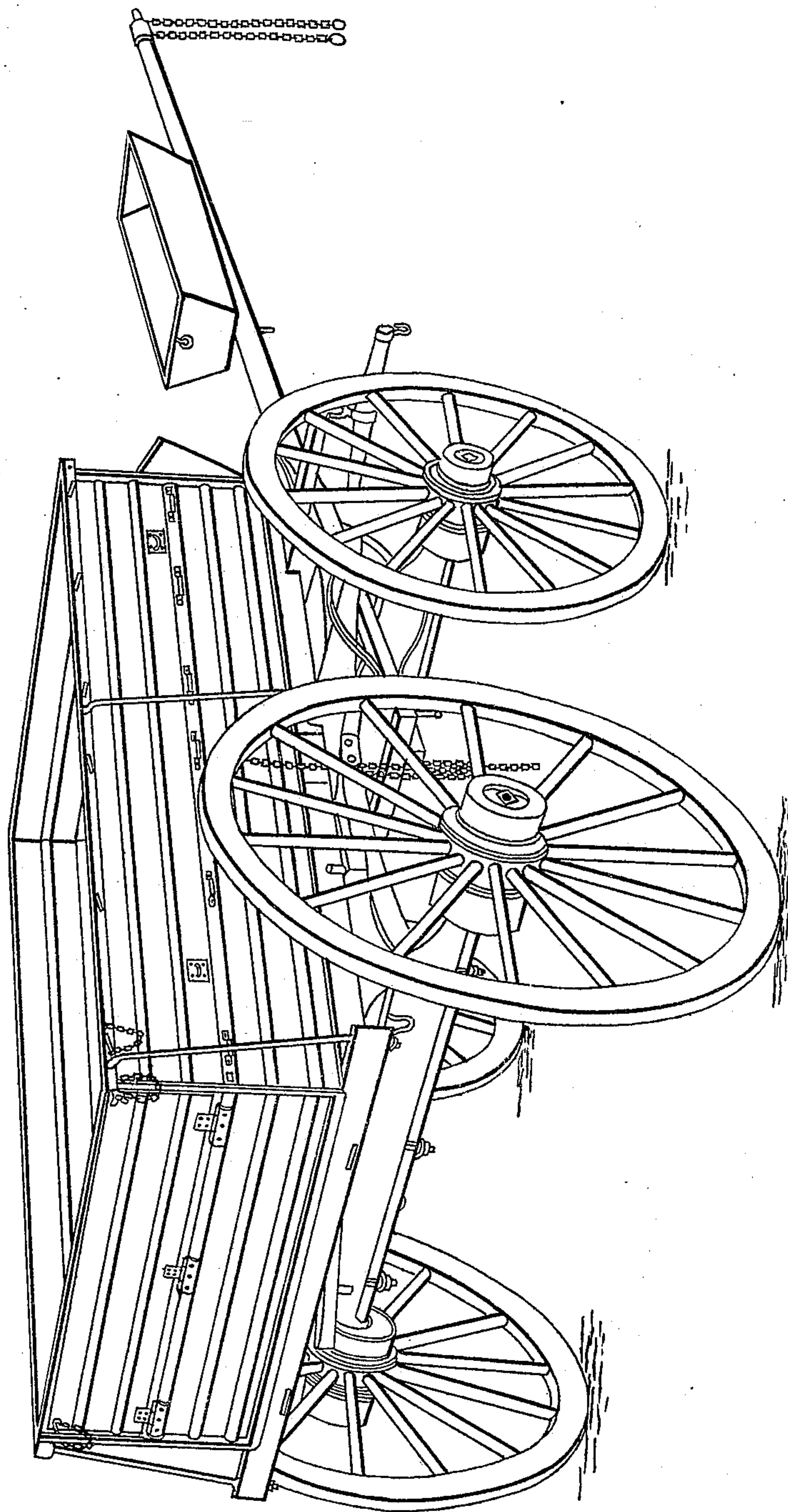
2 Sheets—Sheet 1.

J. FRANCIS.

Wagon.

No. 13,872.

Patented Dec. 4, 1855.

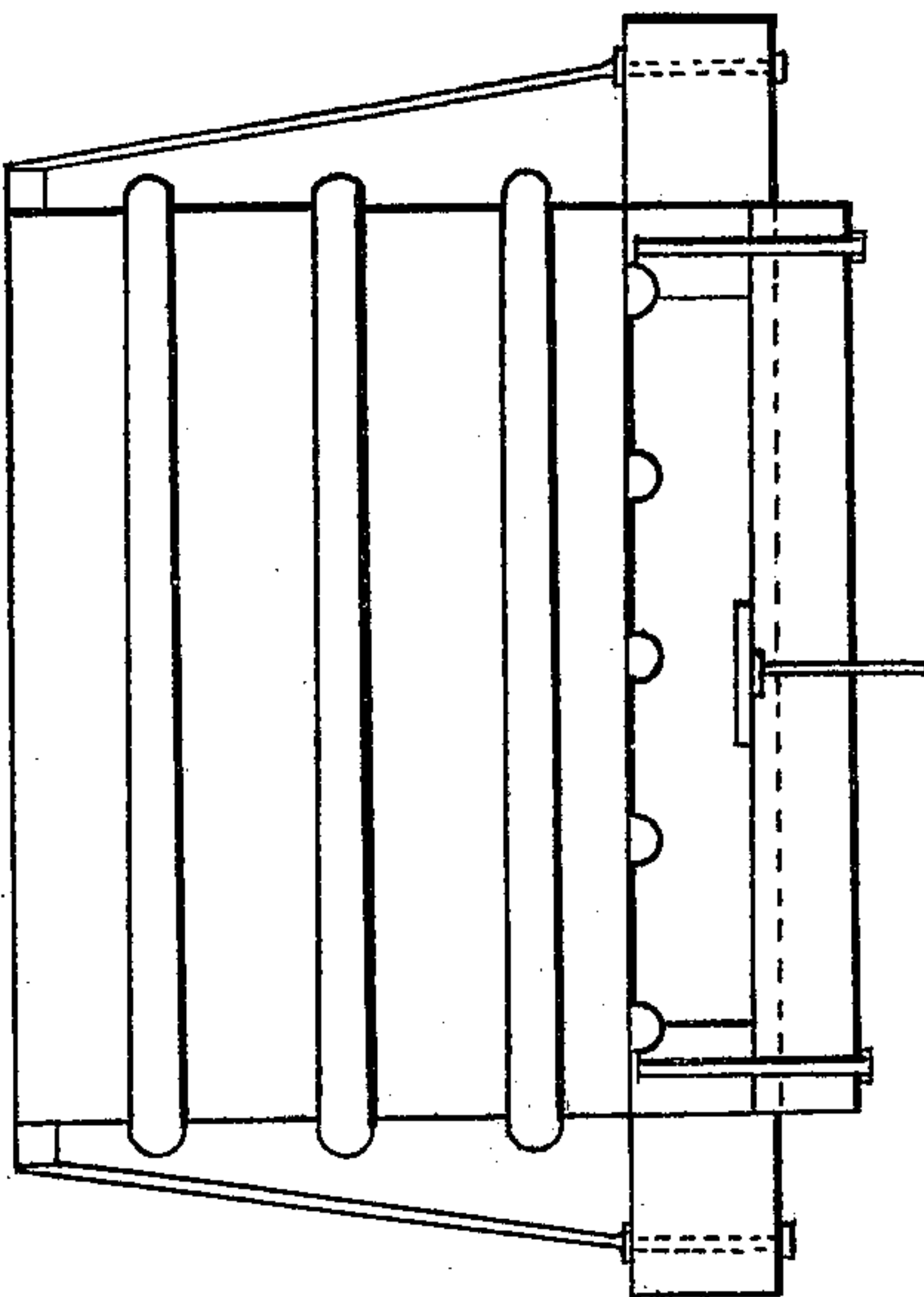
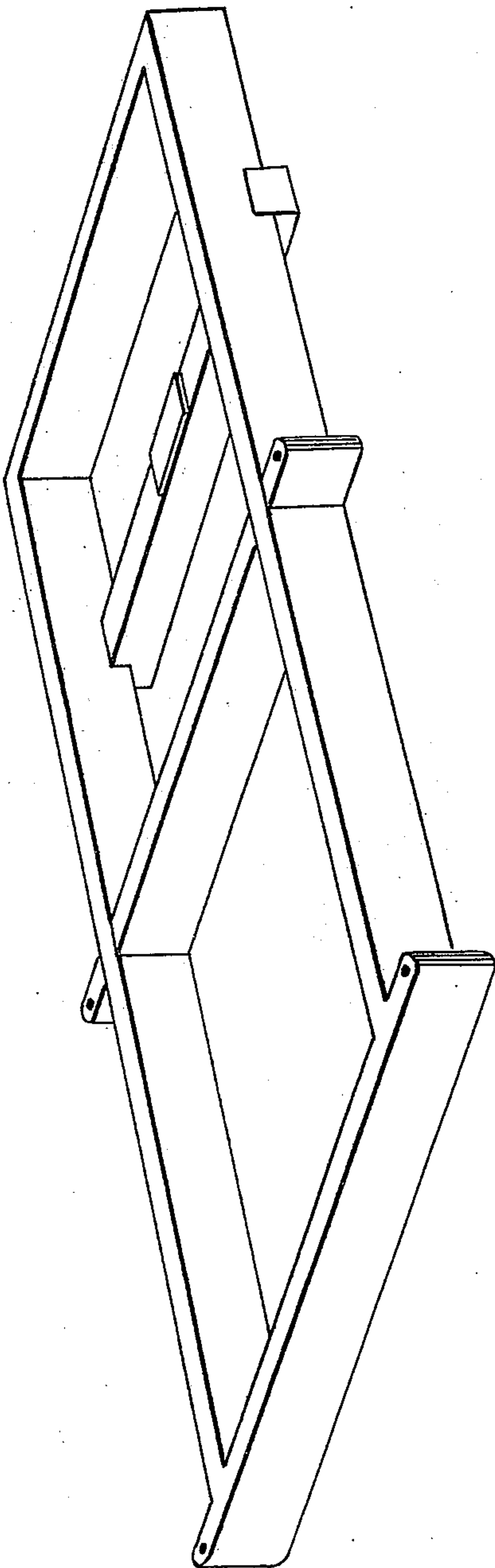


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# UNITED STATES PATENT OFFICE.

JOSEPH FRANCIS, OF NEW YORK, N. Y.

## MILITARY WAGON.

Specification of Letters Patent No. 13,872, dated December 4, 1855.

*To all whom it may concern:*

Be it known that I, JOSEPH FRANCIS, of the city, county, and State of New York, have invented certain new and useful Improvements in Military and Road Wagons, Caissons &c., for Transportation; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, in which—

Figure 1 is a perspective view. Fig. 2, shows the bottom frame to which the superstructure is affixed; Fig 3, a cross section showing the manner of bolting the running gear to the frame so as to avoid passing the bolts through the water tight body.

My improvement consists in forming the body of a wagon or other like vehicle for transportation out of corrugated metal plates, so formed and put together as to be water tight to be able to float with its load contained in it by means of which I am enabled to transport any article on land with the same facility and ease as in common wooden structures, with the additional advantage of being able at once, without unloading to cross streams wherever they occur and without any change or shifting thereof for that purpose by sustaining the whole superstructure of iron upon a stiff frame of wood, the side pieces of which serve as runners, thus giving facility for launching the wagon and defending it at all times from racking and warping as well as other injury and enabling it to be dragged up or down a bank of a river when off its wheels, the lower frame being permanently attached to the body and forming a part thereof but without any bolt passing through the iron body to fasten it. My improvement thus constitutes a more perfect vehicle for transportation on land and water than ever before devised. It is more durable, weighs no more, and is less liable to injury and destruction than the common wooden road wagon and military structures, and at the same time it affords all the facilities of pontoons and other cumbersome appendages to military or emigrant trains for crossing water courses in the route traveled and can be substituted for bateaux and other like purposes when required temporarily therefor without increasing the size of wagon trains beyond what is absolutely necessary to transport stores and goods.

The wagon body is formed in the usual shape of military or other transportation wagons according to its purpose. As represented in Fig. 1, its bottom sides and ends are made of corrugated iron, with water-tight joints at the corners and junction of the plates. The running gear and other appendages are like the ordinary fixtures for military wagons. There can be a rave around the top to stiffen it, and at the bottom there is a frame work consisting of two or more longitudinal rails *a* connected at each end and in the center with cross pieces. The center and rear ones project beyond the line of the sides and support braces against the sides as shown at *b*, *b*. The bolster is affixed to the front bar and the running gear is attached in the usual way. The king bolt is only passed through the bolster with a plate *x* over the king bolt between, on the under side of the cross piece of the frame, to which the bolster is fastened. On coming to a stream the running gear can be easily unshipped and the wagon launched into the water the side pieces of the frame which project below the cross pieces acting as skids or runners to drag it on. After it is floated over the side runners serve a like purpose to draw it up without damage. The rear end of the wagon has a tail board *t* that lets down a third, more or less, of the depth from the top, which can be made to shut with a water tight joint if required. Caissons can be made on the same general plan and powder wagons may be made double with any material between the two cases. For this purpose water even may be introduced to make it more surely fire proof. Other devices and modifications will suggest themselves to any practical engineer for special service embracing the general features of my plan.

Having thus fully described my improvements in wagons, &c., I wish to be understood as not claiming the transportation of boats or segments thereof in cradles on roads or railroads, as that has before been done. My invention is distinct from this, and to it I make claim as follows:

1. Constructing the bodies of road wagons and like vehicles of corrugated plate metal supported by a bottom frame permanently attached thereto so as to serve to support the iron body at all times and be used as a sled upon which to drag the super-

structure when taken off its wheels as above set forth and made water tight for transportation as herein specified.

2. I also claim the mode of attaching and  
5 detaching the running gear so as not to pass any bolts which are liable to wear and cause a leak through any part of the water tight body but simply to connect the same with

the frame as shown at Fig. 3 by the outside connections and braces so as to securely 10 brace the iron body in proper form and be permanently united therewith.

JOSEPH FRANCIS.

Witnesses:

JACOB HATZEL, Jr.,  
W. S. PENDLETON.