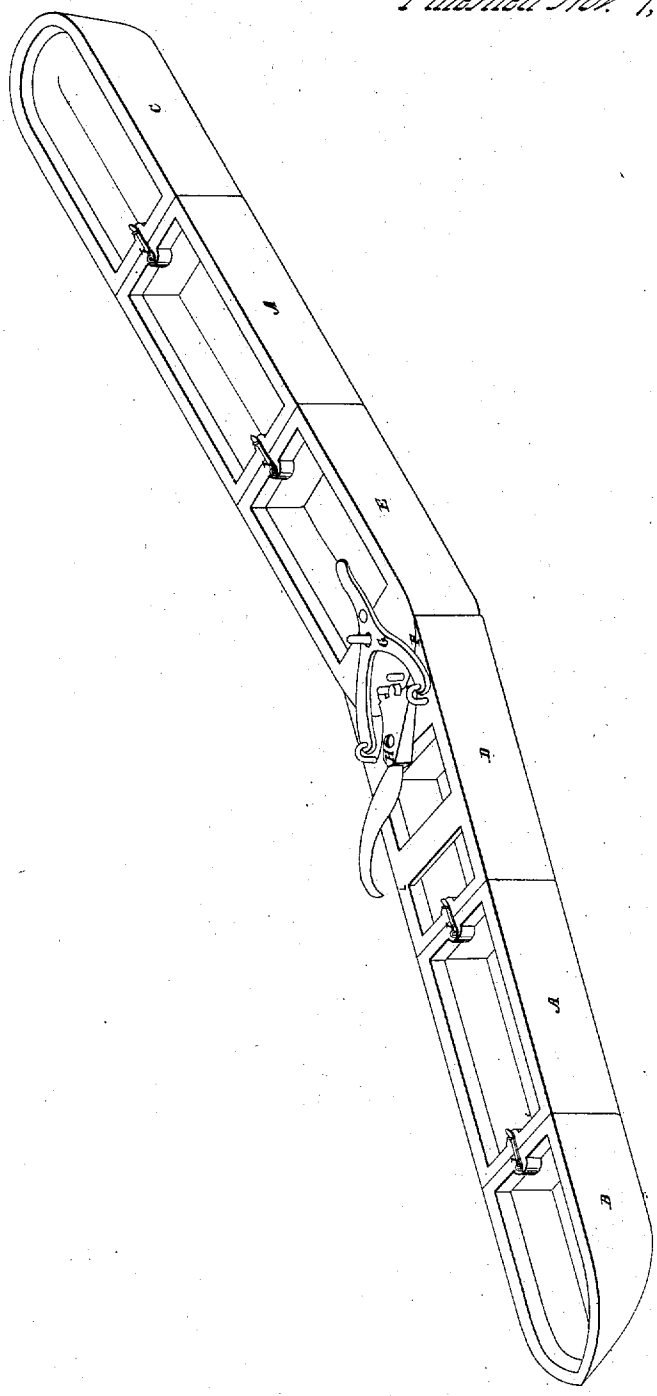
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9226X

J. Elgar.

Touring.

Patented Nov. 7, 1835.



N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

9226 X 2 (Extended for 7 years from 7 November 1849.)
(Re-issued 25 December 1842.) PATENT. 1835

John Elgar of the City of Baltimore and State of Maryland

The schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said John Elgar himself of his Improvement in the Art of, and apparatus for, the transportation of goods on Canals and rail roads.

To all whom it may concern.

Be it known that I John Elgar of the City of Baltimore in the State of Maryland, have invented certain improvements in the art of, and in the apparatus for the conveyance or transportation of Goods on a line where Canals and Rail Roads form alternate links in the chain of communication, as for example on the great Pennsylvania Line from Philadelphia to Pittsburg, a part of which invention or improvement may be applied to the construction of and transportation in Canal Boats on those lines in which the mode of conveyance is by water alone, and I do hereby declare that the following is a full and exact description of my said improvement or invention. The object which I have in view in the first instance is to prevent the necessity of removing the goods from the vehicle within which they are first loaded, by constructing cases which serve on Rail Roads as car bodies and on Canals as boats. This I effect by making such vehicles, or car bodies, of sheet iron in the manner of iron tanks, riveting them up water tight in the same way. The dimensions of these bodies must be determined by that of the Canal Locks through which they are to pass when used as boats. If for example the lock will admit a boat of fourteen feet in width and eighty in length, the bodies may be made seven feet wide and twenty feet long so that eight bodies lie abreast and four in length may pass at the same time. I intend sometimes to make the bodies wholly of sheet iron, but they may be made of that material to the height of about three feet only with an additional height say of three feet made of wood. The bodies when made of this length are to be carried upon eight wheeled cars. If four wheeled cars are preferred the bodies must be made of a length

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suitable sheets, and a greater number of them will then of course be connected together when in the water. ——— As these bodies are by their combination to form Canal Boats, the requisite number of them are to be so formed at one end as to constitute a well shaped bow, and the same number are to be so shaped as to constitute a stern, the other ends are to be made square so that when connected by proper fastenings they will be in one continuous inflexible line to the length of the lock through which they are to pass. ——— It is a well known fact that the resistance to a boat moving thro' the water is nearly as the cross section of the part immersed, without regard to length, and I contemplate the obtaining a great advantage from the application of this principle in the combination of Car bodies into Canal Boats, as they are to be made but half the width of an ordinary boat, their draught being the same their cross section will be but one half. I contemplate therefore the coupling of these bodies together in one continuous line, without placing them side by side excepting when they are passing through locks by which means but one half the power of traction ordinarily required will be found necessary the foremost and hindmost bodies constituting a stem & stern. ——— The great length given to the combined boat in this case, will render it necessary to make provision for passing along those parts of the canal where there is any considerable curvature. To that purpose I construct a certain number of the bodies in such a manner as that when coupled so as to constitute a Canal boat they will form a rule joint, which will allow of the requisite lateral motion to conform them to the curvature of the canal. To make such a joint the end of one of the bodies coupling it must terminate in the concave arc of a semicircle and that of the corresponding one in a convex semicircle adapted to each other. The distance apart of these flexible joints should be equal to that of an ordinary canal boat, so that when detached they will pass side by side through locks. These rule joint sections are to be coupled together by a connecting bar which falls or is fitted on a strong upright pin fixed in the centre of the circumference of the joint or in any other con-

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-anical mode ——— To cause the boat to conveniently conform to the curvature of the canal, and to steer them, by making one act as a rudder to the other, I fix a wheel and pinion, or adapt a lever, or other power to each rule joint so as to communicate the requisite degree of flexure. A compound boat of any desired length may thus be formed and managed, — the first of the series of sections only being bow formed and the last only stern formed. ——— The bodies may be transferred from the cars to the water, and from the water to the cars by means of powerful cranes, but the mode which I intend in general to adopt is, to extend the rail way down into the canal basin in the manner practiced in marine rail ways, the bodies may thus be made to float from and on to the cars with the utmost facility ——— The rule joint and mode of steering I also intend to apply to Canal Boats of the ordinary construction and length but reduced in breadth to one half, so that in passing through locks the Boats may be disconnected at the joints, and pass through in pairs side by side, thus obtaining the advantage before alluded to as resulting from the diminution of the cross section and admitting of an increased velocity with a decreased injury to the banks of the Canal, ——— What I claim as my invention in the within described Art of, and apparatus for the conveyance or transportation of loads on lines of canal and rail road, is the constructing of car bodies in the manner set forth, so that they may be converted into canal boats upon the principle and for the purposes herein fully described and specified. I also claim the connecting of such, or other canal boats by rule joints, for the purpose of adapting them to the curvature of the canal, and of steering them by their action upon each other, upon the same principle with that by which a rudder, is made to steer an ordinary boat.

Witnesses
C. H. H. Wharton
Henry Stone

Jno. Elgar

Patented November 1st 1838.

Drawing

(200 words)