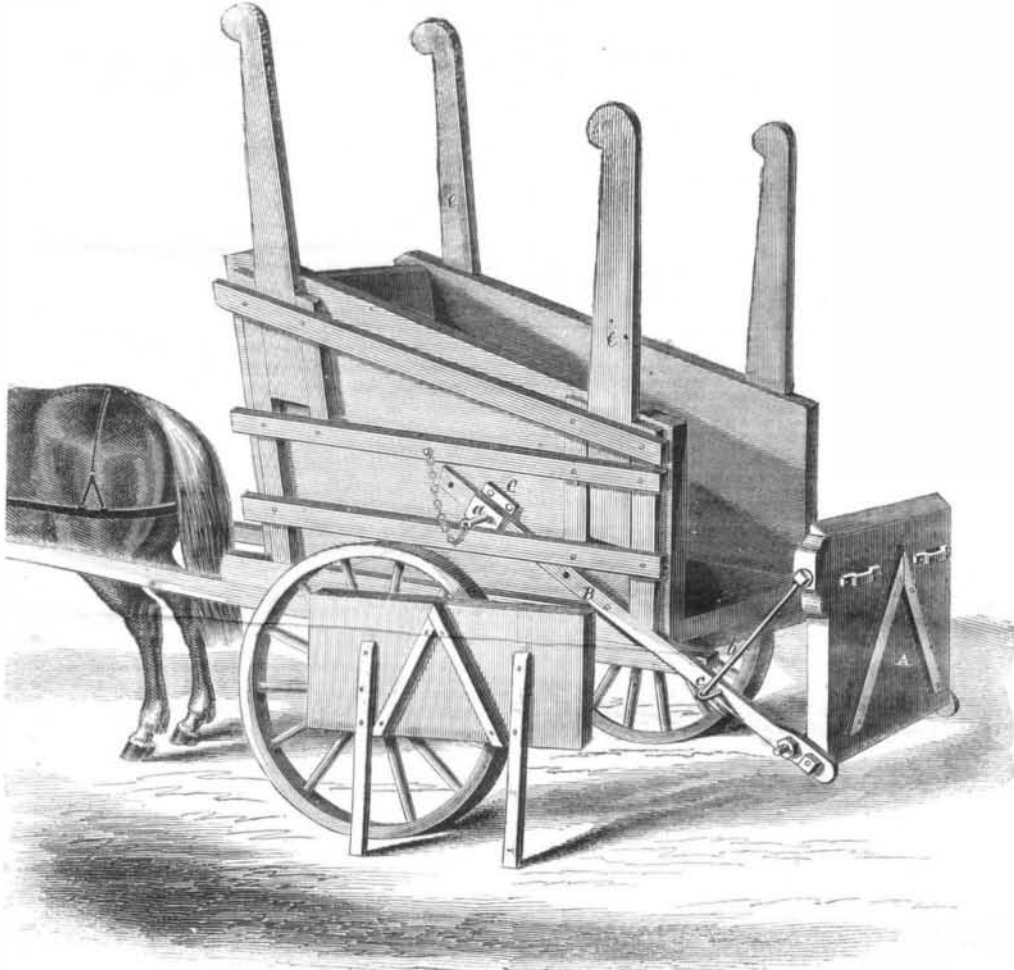


Improved Patent Cart.

The inconvenience and delay which those interested experience in loading timber, calls for some remedy, and we herewith illustrate an apparatus which is designed to facilitate this business. It consists, as will be seen, of a cart having a movable tail-board, A, to which are attached the iron bars, B. These bars are fastened to the tail-board at one end; the other extremity slides through an iron box, C, which is secured to the body of the cart. There are also several small holes at regular intervals, into which the pin,

charcoal, and half a dozen stone-hammers were taken out; and the eastern end of the mass shows plainly that a portion has been broken off.

The average dimensions are—length, 15 feet 7 inches; width, 3 feet 7 inches (it is full 5 feet in one place); thickness, 1 foot 6 inches; giving 87.135 cubic feet. All these measurements are rather under than over the average. One measurement gave 120 cubic feet, but we consider the first figures the most reliable. They would give the weight of the mass as 23 tons, 1,924 lbs. There is but little vein rock

**GRAMBO'S PATENT CART.**

α , is inserted through the box and bar, as shown very clearly in our engraving. Attached to the tail-board are the hooks, b , one on either side, these catch in the staples, c , provided for their reception in the bars, B. The operation of this apparatus will be very readily understood. When it is desired to secure the boards which may have been previously placed in the cart, the adjustable tail-board is drawn out to suit the required length, and the pin is then inserted in its place; the holes can be made at various distances so as to accommodate the different lengths to which timber is cut. By looking at the upper end of the tail-board on the cart, the reader will see two light iron cleats; these are provided for the reception of the tail-board seen resting against the cart wheel; this latter appurtenance, in connection with the uprights, e , permit a load as great as can be drawn by any ordinary pair of horses to be quickly and easily secured against the possibility of its working loose. This invention is a very useful one and can be made as strong as it is required to be.

A patent has been applied for through the Scientific American Patent Agency, and the patent is ordered to issue. Harrison Grambo, of No. 416 North Second street, Philadelphia, is the inventor, from whom further information can be obtained.

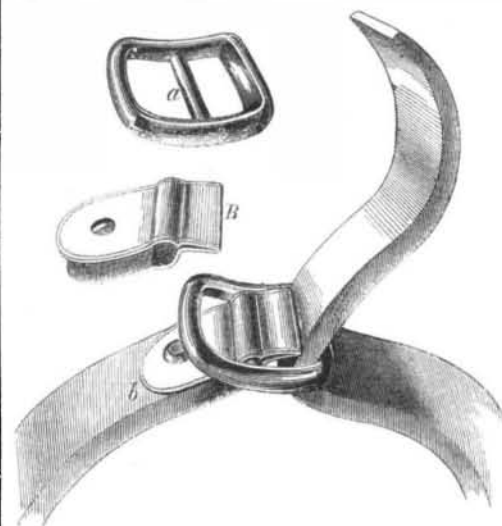
Large Masses of Copper.

The two great masses of copper recently discovered in the Mesnard district, Michigan, have excited considerable attention, as evidences of the inexhaustible and wonderfully productive nature of the Lake Superior copper region. Little of the first mass was above the surface when discovered, and that little was so covered by moss and small underbrush as to hardly attract attention. Upon being uncovered and the soil removed from around its sides, traces of Indian workings were found—pieces of

attached to the block. Two pieces, one from each end, have been cut off the mass. Where it is cut through, the mass is pure copper, and very compact. The two pieces have been taken to the smelting works, and weighed $5\frac{1}{2}$ tons. The second mass found was still larger, measuring 40 feet in length and 4 in breadth. It weighed about 50 tons.

SPRAGUE'S PATENT LEVER BUCKLE.

If there is any one class of the community who are under greater obligations to our inventors than the



skaters are, we have yet to learn that fact. We illustrate herewith a new lever buckle, which is certainly a great addition to the skater's repertoire. Our engraving explains itself very fully. The frame, A, (which can be made of any metal desired, usually

brass or cast-iron, however,) has a shaft, a , through its center, over which is sprung the lever or tongue, B; this tongue is then riveted to the strap, b , at one end. The other features of the invention are not peculiar, except in the absence of holes or other devices of the kind for maintaining a rigid position of the skate or other fixture that it is intended to confine with the strap. The advantages of such a fastening as this are self-evident: it can be quickly and easily applied, the leather is not cut by holes which soon destroy its strength, and the piece confined by it can be held with any required degree of tightness. Such qualities as these should make this buckle extremely popular with skaters, and it is equally well adapted for other purposes.

The patent for this invention was procured through the Scientific American Patent Agency, May 27, 1862. Charles Goodyear, Jr., is owner of the patent, and has the buckles for sale at 345 Broadway, New York City.

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FOR 1863

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