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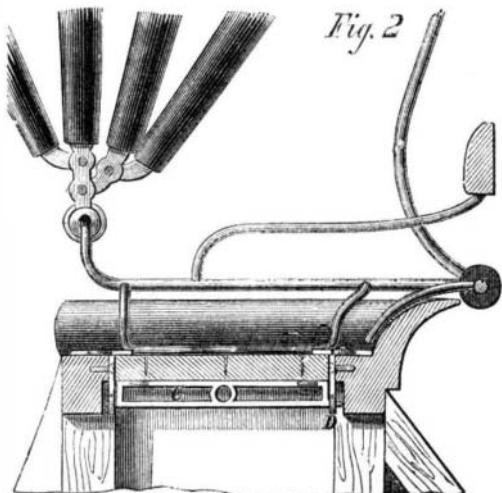
NEW YORK, OCTOBER 7, 1865.

{ \$3 PER ANNUM
{ IN ADVANCE.

Improved Carriage Top.

The seat of a buggy is usually made with a frame and a bottom fastened therein. In this improvement the frame is provided with two bottoms, but instead of being fastened permanently, fits loosely. The first or upper bottom is about an inch thick, and has the arms, which support the top, bolted or riveted to it; when the top is on the vehicle it is held in position by the buttons, B. The second or lower bottom, in Fig. 2, may be made of half-inch stuff, with pieces fastened across the under side to strengthen it. This bottom sinks below the level of the seat frame, the thickness of the first bottom, and has a piece of leather fastened upon it to form a handle by which to lift it out, which also forms a kind of spring for the first bottom to press upon and prevent rattling. This bottom rests on two metal bars, which are provided with journals or pivots, D, not in the center, but entirely on one side, and are suspended in hangers let in and screwed to the inside edge of the seat frame. The first or upper bottom, when on the vehicle, rests on the seat frame on the irons, which project over the ends and sides.

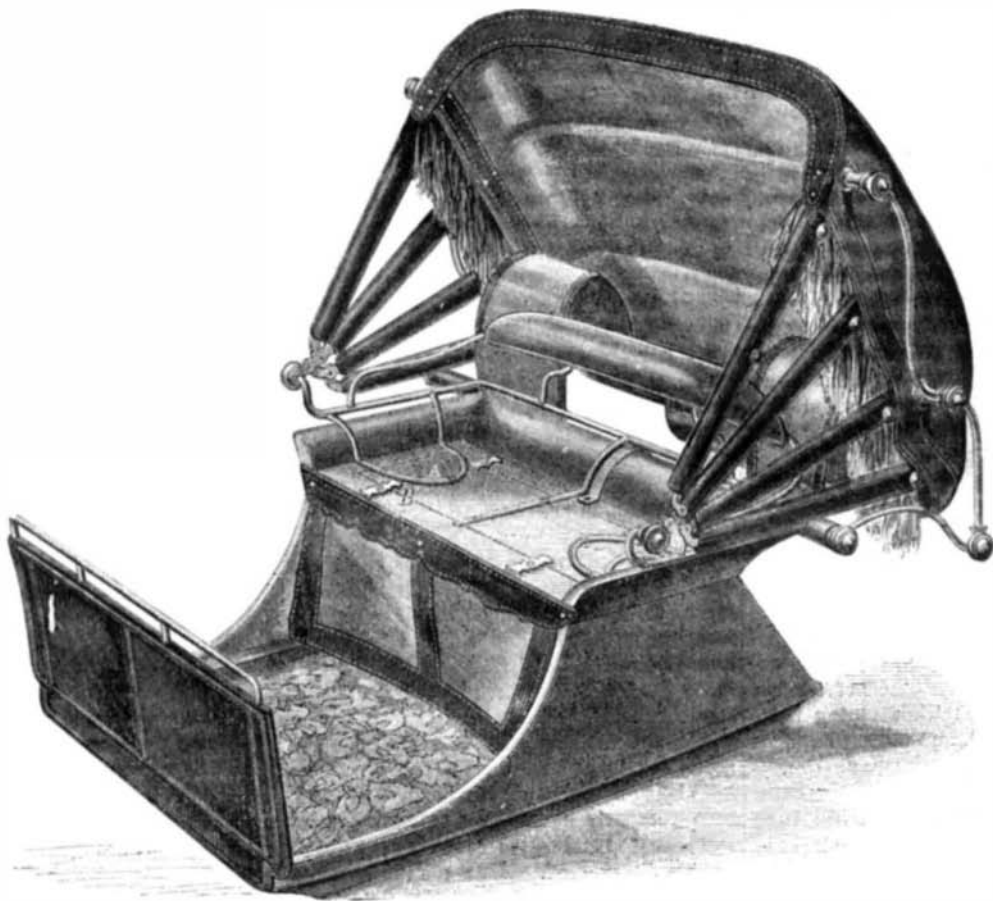
To remove the top, turn the buttons, lift it out of the frame and set it aside, then raise the lower bottom by means of the leather strap, turn up the bars, C C, which leaves a depth equal to the thickness of the bottom below the level of the seat frame; place the bottom on the bars—which are provided with flanges to prevent them from turning down—and turn the buttons. The



seat is now level and ready to receive the cushion. The ordinary mode of attaching and detaching the top is by means of a number of nuts; these are liable to be lost or have the threads stripped, besides

requiring some time and considerable patience to detach the top.

In this improvement the top can be taken off in a few minutes, and leaves no indication that there ever was one on the vehicle; besides, it is more substantial—taking all the weight and strain off the sides and back of the seat, which will, in the old plan, in a short time, break the joints in the corners.



KING & GARDNER'S CARRIAGE TOP.

These shifting tops can be made at the same cost as the old ones, except the expense of the two bars and their hangers, which are of malleable iron, and weigh about one pound and a half.

We regard this as a most convenient and durable arrangement. It was patented May 30, 1865. For further information or the purchase of rights, address the inventors, King & Gardner, Lexington, Ky.

Petroleum as Fuel.

A correspondent says:—At well No. 37 they were burning crude oil for fuel, and used two and one-half to three barrels per day. As oil is worth about \$2 net, the cost is \$5 to \$6 per day. Wood or coal would cost two or three times as much. A pan is placed on the ash-pit containing a layer of broken brick or other porous earthy material. A pipe with an elbow on the end, to turn the mouth up, leads from a reservoir and delivers the oil slowly over the middle of the pan, in suitable quantities, regulated by a cock.

THE Boston correspondent of the Springfield Republican reports that the Hoosac Tunnel workers have met with great obstacles at the west end, and that a hundred thousand dollars or more have been wasted there in attempts to excavate, which cannot succeed on account of soft rock and water.

Crayons.

Slender, soft, and somewhat friable cylinders, variously colored for delineating figures upon paper, usually called chalk drawings. Red, green, brown, and other colored crayons, are made with fine pipe or china clay paste, intimately mixed with earthy or metallic pigments, or in general with body or surface colors, then molded and dried. The brothers Joel,

in Paris, employ as crayon cement the following composition: 6 parts of shellac, 4 parts of spirit of wine, 2 parts of turpentine, 12 parts of coloring powder, such as Prussian blue, orpiment, white lead, vermilion, etc., and 12 parts of blue clay. The clay, being elutriated passed through a hair sieve, and dried, is to be well incorporated by trituration with the solution of the shellac in the spirit of wine, the turpentine, and the pigment; and the doughy mass is to be pressed in proper molds, so as to acquire the desired shape. They are then dried by a stove heat.

In order to make cylindrical crayons, a copper cylinder about two inches in diameter, is employed, and 1½ inches long, open at one end and closed at the other with a perforated plate, containing holes corresponding to the sizes of the crayons. The paste is introduced into the open end, and forced through the holes of the bottom by a piston moved by a strong press.

The vermicular pieces that pass through are cut to the proper lengths and dried. As the quality of the crayons depends entirely upon the fineness of the paste, mechanical means must be resorted to for effecting this object in the best manner.

General Lomet proposes the following composition for red crayons. He takes the softest hematite, grinds it upon a porphyry slab, and then carefully elutriates it. He makes it into a plastic paste with gum arabic and a little white soap, which he forms by molding, as above, through a syringe, and drying, into crayons. The proportions of the ingredients require to be carefully studied.

Various formulæ have been given for the formation of lithographic crayons. One of these prescribes, white wax, 4 parts; hard tallow soap, shellac, of each 2 parts; lamp black, 1 part. Another is, dried tallow soap and white wax, each 6 parts; lamp black, 1 part. This mixture being fused with a gentle heat, is to be cast into molds for forming crayons of a proper size.—Dr. Ure.

THE Polytechnic Association resumed its sessions on the 28th of September. The meetings are opened at 7½ P. M., every Thursday, and are free to all.

THE Fair of the American Institute closes on the 19th inst.