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NEW CAB.

The cab shown in the annexed engraving presents many points of novelty, among which are the iron frame, the peculiar form of the running gear, and the springs. The weight of the vehicle is only 775 lb.; this, together with the closeness of the coupling connections, renders the draught very light. It is capable of turning in its own length, and its body is so low and the step is so conveniently arranged that it is very easy to get into or out of the cab. The form of the springs and their connection with the body and with the running gear are well calculated to render it very easy riding.

The large perspective view shows the cab complete, while parts of the running gear are shown in detail in the other figures. Fig. 2 is a plan view, and Fig. 3 a side elevation of the running gear.

The forward axle, A, supports a pair of curved springs, B, which are at the ends, to opposite sides of the frame, C, which is stayed by crossed braces, D, attached to the axle and to the rear of the frame at the corners. The frame, C, is composed entirely of T and angle iron, and supports the fifth wheel, E. The frame which supports the front of the body is also made of T and angle iron riveted and bolted together, forming a very rigid yet very light support.

Perhaps the greatest novelty found in the cab is the method of supporting the body on the rear axle by means of the curved springs shown in Figs. 3 and 4. These springs are novel both as to their form and construction.

The main portion consists of a continuous blade or strip, which is bent so as to form an eye for attachment to the bar or rail secured to the cab body. The two leaves which are formed by bending the steel strip back upon itself are curved upward and forward, forming a loop for receiving the suspension stirrup supporting the vehicle body. The two leaves thus

formed are in close contact with each other at or near their junction with the rear axle, but they gradually separate as they extend rearward and upward, and then approach each other again, forming the loop for the suspension stirrup. The extremity of the upper portion of the spring is increased in thickness, forming a butt, which is engaged by a clip on the rear axle which prevents the upper leaf from sliding, and also secures the entire spring firmly to the axle. For light carriages the spring shown in Fig. 3 is used, but when the load is increased additional leaves are placed under it, as shown in Fig. 4.

The method of fastening together the bars forming the running gear is shown in Figs. 5 and 6, and the method of attaching the pole socket and thill fastenings is clearly

shown in Fig. 1. The vehicle is adapted for either pole or thills.

This cab is capable of carrying from four to six persons with their baggage. The heavy baggage is carried on the boot or front frame, which is 4 x 4 feet square and arranged so that the baggage can be readily strapped on. The lighter baggage may be carried on the top of the cab.

For simplicity, strength, lightness, and ease in riding, this cab is believed to be unexcelled. It is well adapted for common use and for hotels, and one horse can easily draw it anywhere with its load of five or six persons and their baggage.

The inventor has recently taken several patents for the improvements embodied in this vehicle.

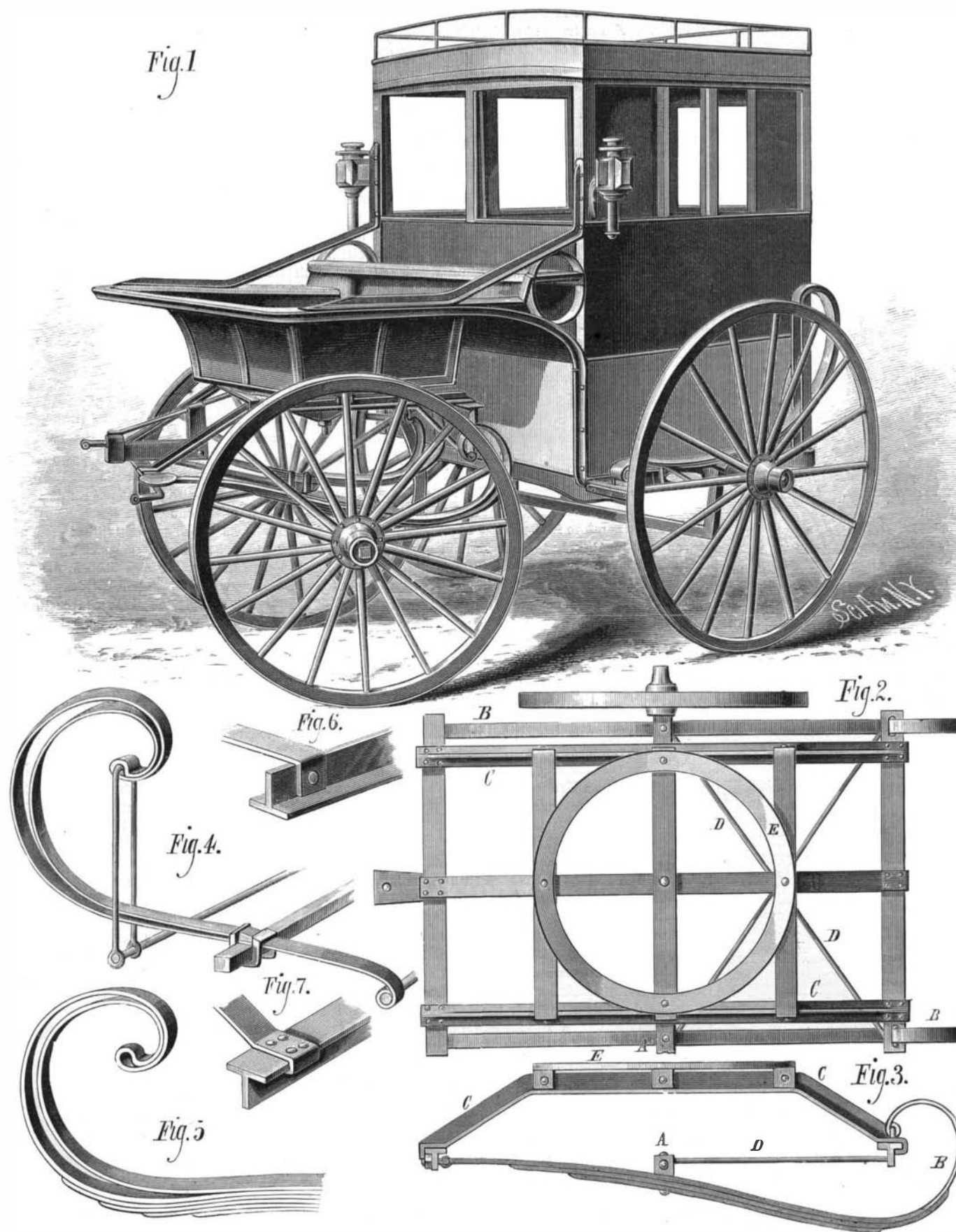
Further particulars may be obtained by addressing the patentee and manufacturer, Mr. C. M. Murch, of Cincinnati, O.

The Platts-mouth Bridge.

A fine steel bridge across the Missouri River, about a mile below Platts-mouth, Neb., on the Chicago, Burlington, and Quincy Railroad, was opened for business August 30. The whole length of the work is about three and a half miles, of which more than two miles is in the east approach, one mile is in the west approach, and the permanent steel bridge is just 3,000 feet long. Previous to the formal opening of this imposing structure it was subjected to a crucial test in the presence of a large number of civil engineers and bridge builders from all parts of the country. With a combined weight of eight heavy engines, 450 tons were run on the bridge. The measure showed a deflection of about three inches. This is considered a highly satisfactory test and a less deflection than was expected. The cost is \$600,000.

Welding Horn

Pieces of horn may be joined by heating the edges until they are quite soft, and pressing them together until they are cold.



MURCH'S CHARIOT CAB.