ONE-HORSE BAGGAGE WAGGON.

In this design we present to our readers a variation from the regular express body, which, until now, has always been made with straight sills. In this cut the rockers are curved similar to those of trucks, and the rear end of the body is thereby brought five inches nearer to the ground than the front. In loading heavy freight, such as trunks, this is considered of some importance.

This style of waggon is usually made with three springs, for the reason that platform springs would make it too heavy for one horse, and add to the expense.

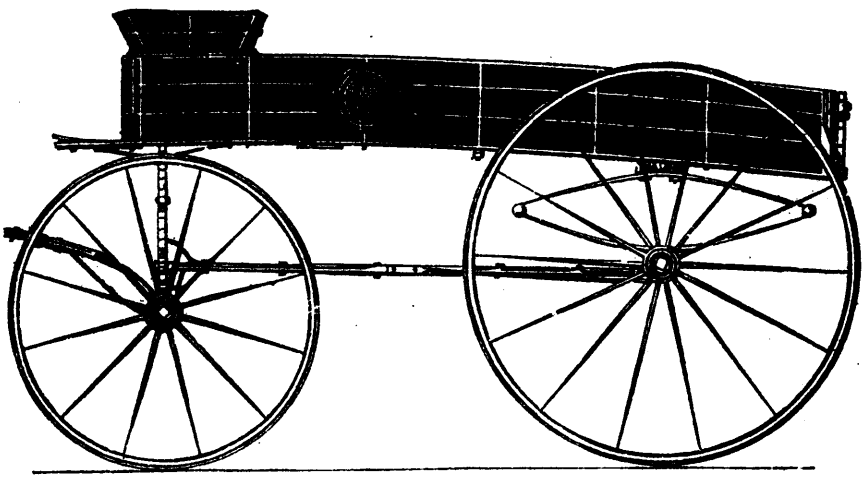
We show a wooden name-plate on the side, which is attached to the rave covered by it.

The general dimensions are as follows: Outside length of body, exclusive of toe-boards, 7 ft. 6 in.; width on top of box, 3 ft 8 in. The sides are to have ⅜-in. turn-under on each side; track, 5 ft., out to out; wheels, 3 ft. 3 in. and 5 ft. 1 in.; hubs, front, 6½ in. diameter, 9½ in. long; back 7 in. diameter, 9½ in. long; spokes, 1⅜ in. full; rims, 1 15-16 in.; tires, 1⅝ in. tread, ⅝ in. thick; axles, 1⅜ in.; springs, front, 7 plates, 1¼ in. wide; back, 6 plates, 1½ in. wide.—*Blacksmith and Wheelwright.*

SKIN GRAFTING FROM THE DEAD.

Dr. J. H. Girdner, house surgeon at Bellevue Hospital, has obtained some remarkable and valuable results in skin grafting during the past year. One patient who required such treatment refused to furnish grafts from his own arms or body. owing to the pain involved; and unwilling to ask another to subject himself to a pain which the person to be benefited was unwilling to submit to, Dr. Girdner tried the experiment of taking skin grafts from a corpse. The doctor says:

"I cut a piece of skin from a patient who died in the wards a few hours before, first taking care to enquire whether the cause of death was due to a poisonous disease or not. I then cut the cuticle into small pieces, which I laid on the granulated surface of the ulcers, and bandaged the leg up very firmly. In three days the graft began to show signs of life, a perfect union having taken place, and in a week a splendid skin, smooth and elastic, had grown over the ulcerated part, making a complete cure and leaving no scar behind. Since that time I have treated upward of fifty cases with invariable success. I have grafted the skin of an Irishman on a negro, and I have grafted the skin of a negro on an Irishman with ease. In both cases the skin lost its original color and changed its hue to suit the wearer."



ONE-HORSE BAGGAGE WAGGON.

THE HOLLWAY PROCESS IN NEW SOUTH WALLS.

The Sydney *Morning Herald* of April 22nd says: The article relating to a new discovery of a method for smelting without fuel, which we published on Tuesday, should commend itself to the attention of all persons interested in mining. Briefly stated, the principle brought into play is the evolution of heat by rapid oxidization of certain mineral substances, and notably of pyrites. In treating the pyritic ores of copper, which have been in this colony and in Queensland the principal sources of the metal, all that is requisite is to start the charge fairly in an appropriate furnace till it becomes molten. Thenceforward fuel, in the ordinary acceptation of the word, becomes unnecessary. All that is required is to feed the molten bath with more ore, which is itself fuel, provided a current or blast of air be continually forced through the fluid metal. Oxidization at a rapid rate is so maintained and enormous heat evolved, while waste products, such as sulphur, may be condensed and collected if they be found worth saving, a point only to be determined by the cost of carriage to a market. No one who has any knowledge of the history of copper mining in these colonies can doubt the influence which such a discovery should have upon the future of that branch of enterprise, if the promises made are fulfilled. At the first opening of a mine, it ordinarily happens that timber abounds close at hand. But the enormous consumption of furnaces rapidly denudes even the most densely wooded country, and it has followed in actual experience that by the time a mine has been so long worked that the attainment of considerable depths has enhanced the expenses of extracting ore, and increased economy becomes desirable in other departments, the supply of fuel has become inaccessible in the same proportion as the ore. It is an ascertained fact, for example, that a chief obstacle to renewal of operations at the Peak Downs mine is the dearness of fuel, consequent upon the distance it has now to be carted. Even at Mount Perry, where operations had been comparatively of brief continuance, the same growth of expense had begun to make itself felt. The profitableness of extensive operations, in many instances, depends upon a small margin, and in the case of mines turning out their thousands of tons of ore weekly or monthly, a few shillings one way or another in the cost per load of fuel may decide the balance of profit or loss. But the foregoing is only one, and it may be for Australia a minor, application of the discovery. The process is said to be suitable for the treatment of auriferous pyrites. If a practical application to this use be indeed attainable, the future of many goldfields in these colonies will be entirely changed. There are rich mines in scores lying abandoned because the "mundic has come in," and although the pyrites is proved by assay to be rich in gold, no profitable method of separating the precious metal from its base association has hitherto been devised which is available for application on the spot.

THE Secretary of the American Iron and Steel Association reports 697 blast furnaces in the United States, with an annual capacity of 6,500,000 tons of pig iron; 382 rolling mills, with an annual capacity of 4,000,000 tons, the capacity of the rail mills being 2,150,000 tons; 11 Bessemer steel works, with an annual capacity of 1,750,000 tons, besides 11,800 miscellaneous works.