as the hind wheels project above the bed on the ordinary wagon the arrangement shown in Fig. 1 is necessary. The

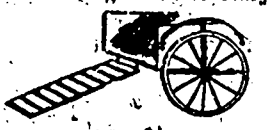


FIG. 2.

standard is brought above the wheel by a stick passed through the rings. Over the top of the stick, and secured to it by a nail, is bent a hoop, the ends passing through cleats driven into the box. This holds the fodder off the wheels. Loading fodder on a wagon, whether on the box or hay-rack, is very difficult, especially after the load is partly on, unless a ladder of some sort is provided. A very good one is shown in Fig. 2. It is simply a wide board, to which are nailed cleats at proper intervals, fastened to the rear of the wagon by two short pieces of ropes or chains. As the wagon is driven along it drags after and is at once ready for use.—American Agriculturist.

HORSE MANGERS.

A Handy and Efficient Plan for Feeding Horses.

I send you a plan of a rack for feeding horses, which we have had in use for over a year, and which has given good satisfaction both for feeding hay and grain. This rack is two and one half feet wide by ten feet long, and feeds four head of horses.

Fig. 1 shows a front view for one horse. It is in sections; each section combines a hay-rack on one side and a trough on the other side. Fig. 2 gives an end view of one section, showing the way the grain-spout comes into the trough, and the way the hay is put into the rack. This rack can be built by any person that can work with tools.

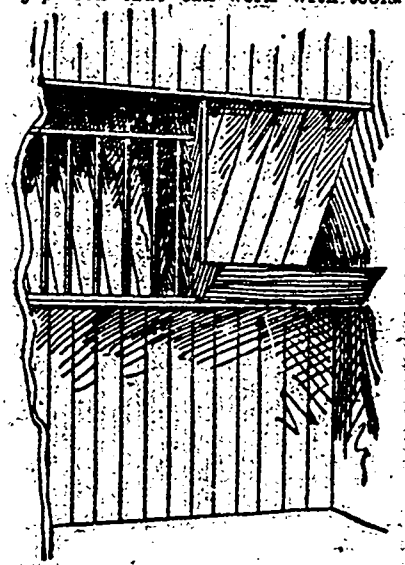


FIG. 1. MANGERS FOR HORSE STABLE.

The bottom of the rack should be three and one half feet from the stable floor.

For the bottom, use two planks 2x14 inches, which leaves a 2-inch space through which to let the lining boards down. Use a 2x4 scantling to nail the upper ends to, and make the trough eight inches deep. Cut the boards the slant you want the trough to be, and let them run clear through to the other side to make the end of the trough on the other side. Make the grain-spout 7x7 inside and cut it off even with the back of the rack, as shown in Fig. 2, dotted lines. Let the lower end of the spout stand out

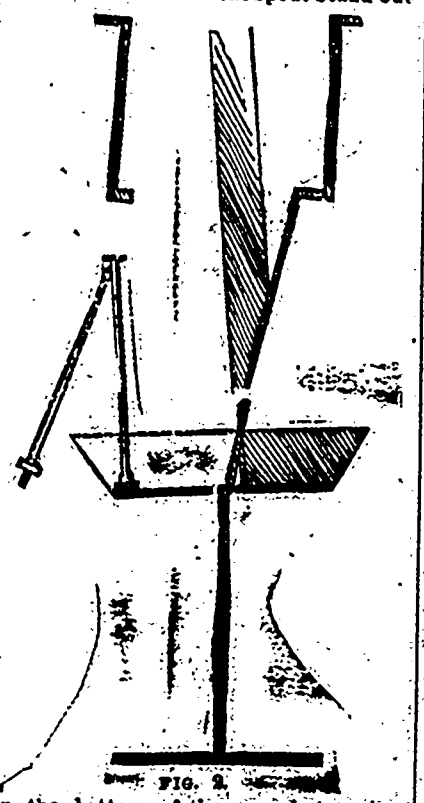


FIG. 2.

on the bottom of the trough to put a board in for the back of the trough, as shown in Fig. 2. Make tight partition between each section. For the rack use two scantlings, 2x3, for top and bottom pieces. The rungs can be either iron or tough wood. Bore a hole through the partition for the top piece to run through, so you can pull the lower end out for cleaning the rack and fasten the lower end with two pins.

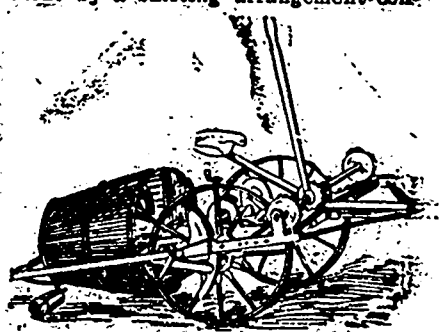
These racks can be used to a good advantage in a barn fifty feet long, with a barn floor eighteen feet wide. Divide the stable in four parts, and feed down at each side of the barn floor.—A. G. C. Shoemaker, in Farm and Fireside.

POTATO DIGGER.

An Australian Device Which Is Said to Do the Work.

As we have mentioned before now, the Victoria Government has offered a prize of one thousand two hundred and fifty dollars for improved potato diggers. In a recent issue the Australian Ironmonger illustrates the various classes of machines entered for this prize. The Farm Implement News finds only one of those implements which is new or particularly different from those now in use. A picture of this will be found herewith, with the description found in the Ironmonger: "The machine consists essentially of a rectangular bar-iron frame, the front portion of which carries the gearing, driver's seat and draft attachment, the rear portion carrying the rotary sifting cone. The driving-wheel axle is journaled in the segmental-shaped front ends of levers, the rear ends of which are pivoted to the inside of the frame, the segments being connected by chains to pulleys on a shaft in front, which is controlled by a hand-lever and ratchet-wheel with a foot catch, thus enabling the driver to raise or depress the frame at will.

On the driving axle is a loose sprocket wheel, which may be engaged at will by a feathered clutch, engagement being effected by a spiral spring coiled upon the axle, and disengagement by a shifting arrangement con-



AUSTRALIAN POTATO DIGGER.

trolled by a crank near the driver's seat. Motion is given to the sifting cage by a chain over the sprocket wheel, driving a smaller one on a rear shaft, which has a miter wheel gearing into another miter wheel on the cage shaft. In front of the cage is the share which lifts the potatoes, soil and all, and throws them in a cage. The rear end of the latter is carried by a caster. The cage is conical, and consists of a number of open bars or wires secured by rings, and has internal Archimedean screw blades, two of them running through, and two of them extending only a short distance from the front. The front of the cage has an adjustable shield, by which the opening may be made larger or smaller, and which pre-