

are most needed on a given soil for a given crop. It will be generally found that the best plan is to buy the fertilizers separately and apply them to the soil according to one's judgment, until the results can be compared.

Spraying Pumps.

554. SIR,—In your February No. I notice the "Little Dandy" spraying pump. It seems to me to be lacking an important point, viz., an arrangement for agitating the water and mixing the ingredients. The new Lockport sprayer has added a stirring hose in the rear of spout which agitates completely. I have an old one without an agitator, and I managed to fit one to it. My plan of arranging my spraying apparatus was to place a barrel on its side in the wagon. I made a frame with four pieces, 3x4, crossed and bolted at the corners. I then raised four legs from the sills to the top of the barrel, and then placed a plank on these. I placed my pump in position, bolted it to the plank, running the main pipe through the bung hole. I then bored a 5x8 hole for the agitator pipe, and in this way you have the spraying frame, pump and all attached and always ready for business. It can be put in a cart or wagon in a few minutes, and there is no danger of upsetting. This plan is safer than having the pump on the end of the barrel, which might cause it to upset.

M. A. BAYLY, *Niagara.*

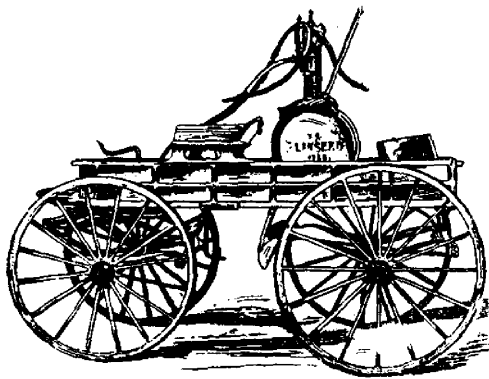


FIG. 530.

shown having two hose, and a wooden agitator, the latter to be used as often as thought necessary. The frame described by our correspondent seems commendable.

The liquid used for spraying can be easily agitated with a long stick, but an agitator which works continuously is more convenient, and one could easily be attached to the "Little Dandy," or to any other of the pumps. The plan of laying down the barrel on its side is an advantage, being safer from tipping. We give an engraving of this way of placing the barrel in a spring wagon, the pump here

Hybridizing Apples.

555. SIR,—Will you please tell at what precise moment the pollen on apple blossoms is best fitted for hybrids? Years ago I experimented with apparent success, but during four consecutive days I could never see any pollen on my brush, neither could I see any on the blossoms.

Reply by J. A. Morton, Wingham, Ont.

At the opening of the anther cell under natural conditions, is the most potential period of the pollen for fertilization. How long after that the pollen