Experience in field has shown that at the point of plow, where coulters cut 2 1/2 to 3" deep that the narrow blades burst up the beet row from the center folding back the dirt toward the outside, as they rise to the level of the field as the plow advances the dirt falls away from the shares while the upper chain with its lugs on the sides holds the beets on to the extended rear ends of the shares permitting a large percentage of the soil to fall away on either side, before the lower chain grasps the beets on the lower side.

The lower chain is carried high enough so the lugs do not drag on the ground and catch the beet as it leaves the end of the plow-shares. At this gap a lot of the loose soil is lost while the beets and such portion of the dirt as passes over is carried in a firm grasp between the upper and lower chains and held in place by the embracing lugs which are set so that they divide the spaces zigzag as the chains retreat and elevate the beets and clods to the end of the lower channel bar, a distance of about 3 feet and elevated about 2 ft. 6 in. where the lower chain passes over a sprocket to return to the point of plow-shares, the upper chain continuing about 3 ft. further to complete the circuit.

At the termination of the lower chain a gap of a few inches is left and a second lower chain a trifle lower than the first passing over a smaller pulley at the gap and a standard sprocket at the rear, carried between the pulley and sprocket in a 3" channel bar the same as the others picks up the beet as it passes the gap, and
carries it on to the loading elevator.

At the gap the beet is carried over by a spring standing on end and midway in the gap receives the end of the beet while it is still held on the first chain and carries the beet on to the second chain the upper chain still holding the beet, the beet being long enough to span the gap, the tail of the beet held on the first chain until the second chain catches it. The shape of the beet as well as its length makes this possible.

As the clods reach the end of the first chain their weight and shape cause them to drop between the spring and the end of the first chain. If they are very large they strike the spring which presses away and they fall below to the ground. If they are too large to drop they pass on with the beets and if necessary can be picked as they pass on the loading conveyor.

This works very well on the model and I consider that it will separate at least 90% of clods in any soil and in any fair condition fields will do satisfactory work.

Beets are not damaged in any degree.

C. E. Piatt, Inventor

Berkeley, California
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The upper chain extends beyond the lower to give margin for exceptionally large beets