be stopped and started so many times. It also makes for higher efficiency, since more volume can be handled and a better job done when the potatoes move through the house at a uniform rate.

In unloading the bulk bodies the boards over the conveyor should be removed regularly at a rate giving an even delivery suited to the capacity of the various conveyors and elevators.

6. Conveyors and elevators should have adequate capacity to carry the volume of potatoes needed to supply washing and grading equipment. Frequently conveyors and elevators are underdesigned with respect to capacity for a reasonable rate of speed. To make up for the low capacity, the speed is increased, with a resultant increase in physical injuries. Rod-type conveyors at the packinghouse should not exceed a speed of 50 feet per minute.

Elevators used for lifting potatoes should be designed to carry their maximum load with a minimum rollback. Excessive rollback causes skinning and bruising; bruising is especially serious in the tender Bliss Triumph and Red Pontiac potatoes. The elevators should be padded just as all other conveyors to keep down bruising.

7. Equipment at the packinghouse should facilitate the removal of dirt, vines, weeds, and grass in bulk loads. Very often, the rate of harvesting must be reduced by as much as one-half when bad digging conditions are encountered. Even then considerable extraneous material is often hauled to the packinghouse in the bulk loads (Fig 17). If adequate facilities were available for removing clods and trash at the packinghouse, more normal operating speeds could be maintained by the harvester. Such equipment would also help prevent trash from fouling the washer and other packing equipment.

If efficiency of separation is to be increased at the packinghouse, new equipment must be developed. In connection with this study, a variable-speed tilted-table separator for eliminating dirt and trash was designed and installed and tested in a commercial packinghouse in the Hastings area (Fig. 18). Bulk loads of potatoes dug with a mechanical harvester after a three-inch rain contained very large amounts of dirt, weeds and vines. It was estimated that 90 to 95 percent of the extraneous material was removed by the experimental separator as the potatoes were unloaded.[6]

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[6] A separate report giving data on the tests and details for constructing the separator is being prepared.