

No. 646,055.

Patented Mar. 27, 1900.

F. MALINSKY & J. PROKOP.
APPARATUS FOR PULPING POTATOES.

(Application filed June 29, 1899.)

(No Model.)

FIG. 1.

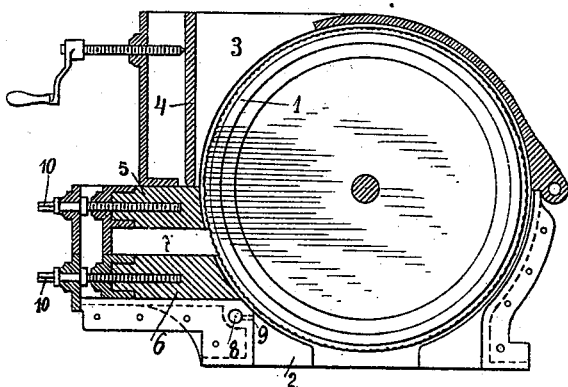
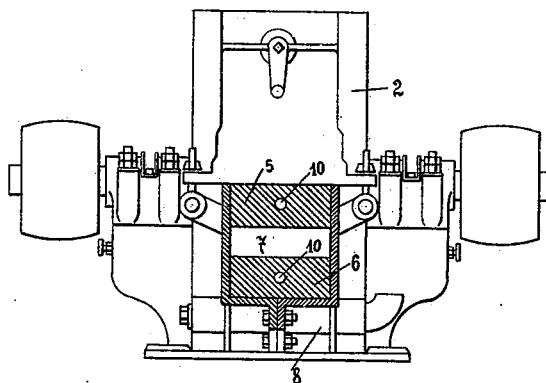


FIG. 2.



WITNESSES:

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FRANCIS MALINSKY, OF RONOY, AND JAROSLAV PROKOP, OF PARDUBICE,
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APPARATUS FOR PULPING POTATOES.

SPECIFICATION forming part of Letters Patent No. 646,055, dated March 27, 1900.

Application filed June 29, 1899. Serial No. 722,328. (No model.)

To all whom it may concern:

Be it known that we, FRANCIS MALINSKY, manufacturer, of Ronov, and JAROSLAV PROKOP, engineer, of Pardubice, in the Kingdom of Bohemia, Austria-Hungary, subjects of the Emperor of Austria-Hungary, have invented a new and useful Improvement in Apparatus for Pulping Potatoes, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

Our invention relates to graters for potatoes and similar pulps or stuffs; and the object is to divide or disintegrate such pulps or stuffs as completely as possible, principally for the manufacturing of starch and similar products.

Our machine consists in the usual rotary grater mounted in an appropriate casing and provided with two or more wooden wedges, while till now only one such log was and is still in use. These two or more wedges or logs are placed near each other, leaving, however, an empty space, which is opened only toward the grating-cylinder's surface. This space or these spaces is or are instantly filled with disintegrated potato or other pulps, producing thus elastic or yielding wedges.

In the accompanying drawings, Figure 1 is a cross-section, and Fig. 2 is a side elevation and partly a sectional view, of the machine.

Referring to the figures in the accompanying drawings, 1 is the grating-drum, 2 its casing, and 3 is the hopper where the potatoes are put, being pushed with the shover 4, more or less, onto the grating-surface of the rotary cylinder 1. All this is well known, representing the usual arrangement of potato-grating apparatuses. These graters in all their different varieties, may they produce such a fine pulp as they like, possess one considerable disadvantage, all of them without exception. They leave at the end small parts of the pulps in undivided condition, causing thus a considerable loss of material. Such remainders are to be afterward disintegrated in special mills, which require a new amount of power and a careful supervision. For the purpose of obviating such complication and losses we use two or more wooden parallel wedges 5 and 6, which can be pushed against

the cylindrical rotary grating-cylinder 1, as much as required. They all are guided in an appropriate way and so disposed as to leave between each other a free space 7 or several such spaces. The logs 5 and 6 are pushed toward the revolving cylinder by means of screws 10 or by any appropriate regulating device. Their number is by no means limited to only two if the free spaces, like the space 7, are left between them, opening only toward the rotating surface of the grater 1.

The surface of the grating-cylinder 1 being covered with teeth or similar devices, the friction or grating logs, however they may be arranged, must in every case leave a certain distance between themselves and the rotating surface, and therefore a space through which some particles or last remainders of the potatoes will slip. In the meantime the log is rubbed off and the space gets bigger and bigger till the moment when the attending workman pushes the log closer to the cylinder.

We preferably construct our log of three parts or layers—viz., the outer ones 5 and 6, consisting of wood or similar stuffs, preferably of different hardness and different fiber, one being more hard and the other more tough. The middle layer 7 is formed or the middle layers are formed by more or less disintegrated swart and peels, which slipped through between the upper wedge 5 and the rotating surface. This layer forms in a few moments, as soon as the grating is actually begun, and it closes elastically every space which otherwise would remain between any other log and the rotating grater-surface; but still it does not require a larger amount of work by friction than would be the case with any other elastically-closing log should such a one practically be possible. The particles which slipped through the free space between 5 and 1 into the space 7 are turned and pushed here anew against the cutter and hardly any such particles are able to escape without being thoroughly disintegrated; but should it through any cause slip through it will find between the log 6 and the grater 1 again different positions and different cutters, so that after passing through them the material comes out finely ground. It will be under-

stood that the space or pulp log 7 could also be arranged without a second log 6, if such a simplification should be preferred.

5 The space or potato log 7 will be preferably of such a size as required for the said purpose and its proportions in the drawings are by no means to be considered as a rule.

10 The disintegrated pulp fills the interstices between the teeth or blades of the grater and would practically prevent further cutting or disintegrating if not cleansed away with a strong jet of water. This has been till now generally let in on the upper part of the grating-cylinder. Thus the water acts as a brake 15 upon the quickly-revolving drum, which in consequence requires considerably more power than if no water were used; but this is practically impossible. We therefore apply the water jet or jets upon the power part of 20 the drum 1, beneath the log 6. The water being ejected from the tube 8 by orifice 9 against the grating-surface of the drum in the

direction of the movement it rather helps to revolve the drum, instead of producing any action like a brake, and the surface is washed 25 off completely and thoroughly. Thus a considerable saving of power is effected.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

30 In combination with the grating-surface, a plurality of logs arranged with a space between them in which a log of the grated material forms, and means for supplying water to the grated surface at a point below the logs, 35 substantially as described.

In witness whereof we have hereunto set our hands in presence of two witnesses.

FRANCIS MALINSKY.
JAROSLAV PROKOP.

Witnesses:

LBOJATEL,
RUDOLF LANG.