No. 865,955. PATENTED SEPT. 10, 1907.

J. V. SOKUP.

CHEESE PRESS.

APPLICATION FILED FEB. 9, 1907.

Fig. 1.

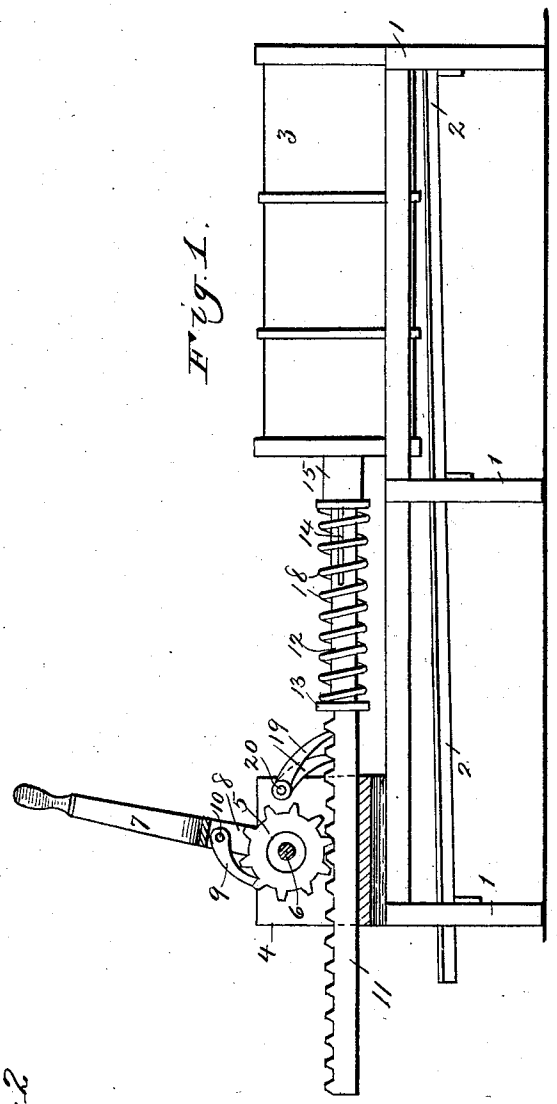


Fig. 3.

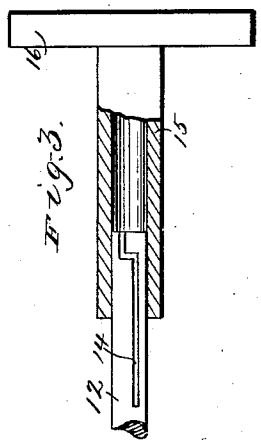


Fig. 4.

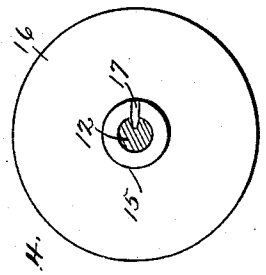
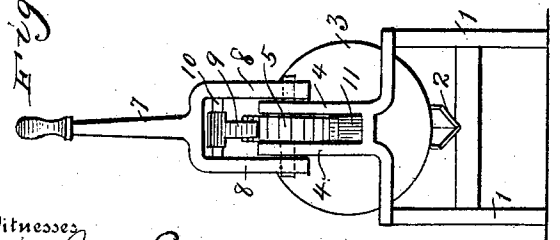


Fig. 2.



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UNITED STATES PATENT OFFICE.

JOSEPH V. SOKUP, OF RICE LAKE, WISCONSIN.

CHEESE-PRESS.

No. 865,955. Specification of Letters Patent. Patented Sept. 10, 1907.

Application filed February 9, 1907. Serial No. 356,580.

To all whom it may concern:

Be it known that I, JOSEPH V. SOKUP, a citizen of the United States, residing at Rice Lake, in the county of Barron and State of Wisconsin, have invented certain new and useful Improvements in Cheese-Presses, of which the following is a specification.

This invention relates to new and useful improvements in cheese presses and more particularly to a type in which a reciprocating plunger operating in a pressing cylinder is employed for compressing the cheese within said cylinder.

The primary object of the present invention is to provide a novel plunger and presser-head carried thereby, embodying an element for cushioning the stroke of the plunger to prevent disintegration of the cheese under too severe force of the plunger.

The detailed construction will appear in the course of the following description in which reference is had to the accompanying drawing forming a part of this specification, like numerals designating like parts throughout the several views, wherein,

Figure 1 is a side elevation, illustrating a cheese press constructed in accordance with my invention, Fig. 2 is a front end elevation thereof, Fig. 3 is a side elevation of the presser-head carried by the reciprocating plunger, part of said head being shown in section, and Fig. 4 is an end elevation thereof.

In the practical embodiment of my invention I employ a table 1 upon which the apparatus is supported. The table 1 is provided therebeneath with a longitudinal trough 2 inclined from its rear to its front end and serving as a conductor for the whey which is ejected from the cheese in the pressure cylinder 3. The table 1 is provided at its front end with a pair of vertical plates or standards 4 arranged in spaced parallel relation and between which a pinion 5 is mounted, free to rotate upon a supporting shaft 6. A lever 7 is employed for imparting movement to said pinion and to this end said lever is formed at its lower end with bifurcations 8 straddling the standards 4 and loosely encircling the projecting ends of the shaft 6. The lever 7 is provided with a forwardly depending pawl 9 loosely mounted upon a pintle 10 transversely disposed between the furcations 8.

The pinion 5 meshes with a rack bar 11 slidable upon the table 1 between the standards 4 and constituting an integral part of a plunger 12 formed at a distance from its end with an annular flange 13. The plunger 12 is formed at its inner end with a longitudinal bayonet groove 14. The inner end of said plunger is received in a tubular projection or sleeve 15 carried by the presser-head 16. The presser-head 16 is reciprocated within the cylinder 3, but the sleeve 15 projects through the end of said cylinder and is formed with an inwardly extending tang 17, designed to enter into locking engagement with the groove 14. An expansive spiral spring 18 surrounds the plunger 12 between the flange 13 and the sleeve 15 and serves to absorb or cushion the shock or force of said plunger which is transmitted to the head 16, said head being capable of yielding against the cushioning action of the spring by the relative movement of the plunger within the sleeve 15 in which movement the tang 17, engaging in the groove 14 serves as a guide.

Rearwardly extending pawls 19 disposed to lie at different angles to one another are pivotally mounted, as at 20, between the standards 4, and engage the rack bar 11 rearwardly of the pinion 5. In practical use, movement is imparted to the plunger 12 by swinging the lever 7 forwardly, in which operation the pawl 9 engages the pinion 5 and rotates said pinion, which meshing with the teeth of the rack bar 11, imparts a reciprocating movement to said rack bar, to the plunger 12 and to the head 16. When the pressure upon the lever 7 is released, the pawls 19 engage the rack bar 11 and prevent any backward movement thereof. The lever 7 after each operation, is restored to a substantially vertical position, the pawl 9 freely riding over the teeth of the pinion 5, and the operation above described is repeated until the head 16 shall have moved a sufficient distance in the cylinder 3 to exert the required pressure upon the cheese in extracting the whey therefrom. At this point the spring 18 comes into action and eliminates a direct blow or shock of the plunger, by making the pressure exerted upon the head 16 a gradual and not a sudden pressure.

From the foregoing description, it will be readily apparent that I have constructed a device simple in construction, inexpensive to manufacture and practical in operation.

While the elements herein shown and described are well adapted to serve the purpose for which they are intended it is to be understood that I am not limited to the exact construction set forth, but am entitled to make such changes in the proportions, shape and arrangement of the several elements as fall within the scope of the invention, as defined by the appended claims.

Having fully described my invention, I claim:

1. In a cheese press, the combination of a presser cylinder, a plunger provided with a slot therein, a head movably arranged within said cylinder, adapted to receive said plunger therein and having an element for engagement within said slot, and a cushioning element arranged between said plunger and said head, substantially as described.

2. In a cheese press, the combination of a presser cylinder, a plunger provided with an elongated bayonet slot, a head movably arranged within said cylinder adapted to receive said plunger therein and having an extending tang adapted for engagement within said slot to limit the relative movement of said head, and a cushioning ele-

ment arranged between said plunger and said, substantially as described.

3. In a cheese press, the combination of a presser cylinder, a plunger provided with an elongated bayonet slot and with a rigid element rearwardly of said slot, a head movably arranged within said cylinder, adapted to receive said plunger therein, and having an extending tang adapted for engagement within said slot to limit the relative movement of said head, and a coil spring surrounding said plunger and arranged between said element and said head, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH V. SOKUP.

Witnesses:
W. W. MUSSON,
J. B. PUTROW.