(No Model.) 2 Sheets—Sheet 1.

DE WITT C. THOMAS.

BUTTER PACKER.

No. 508,191. Patented Nov. 7, 1893.

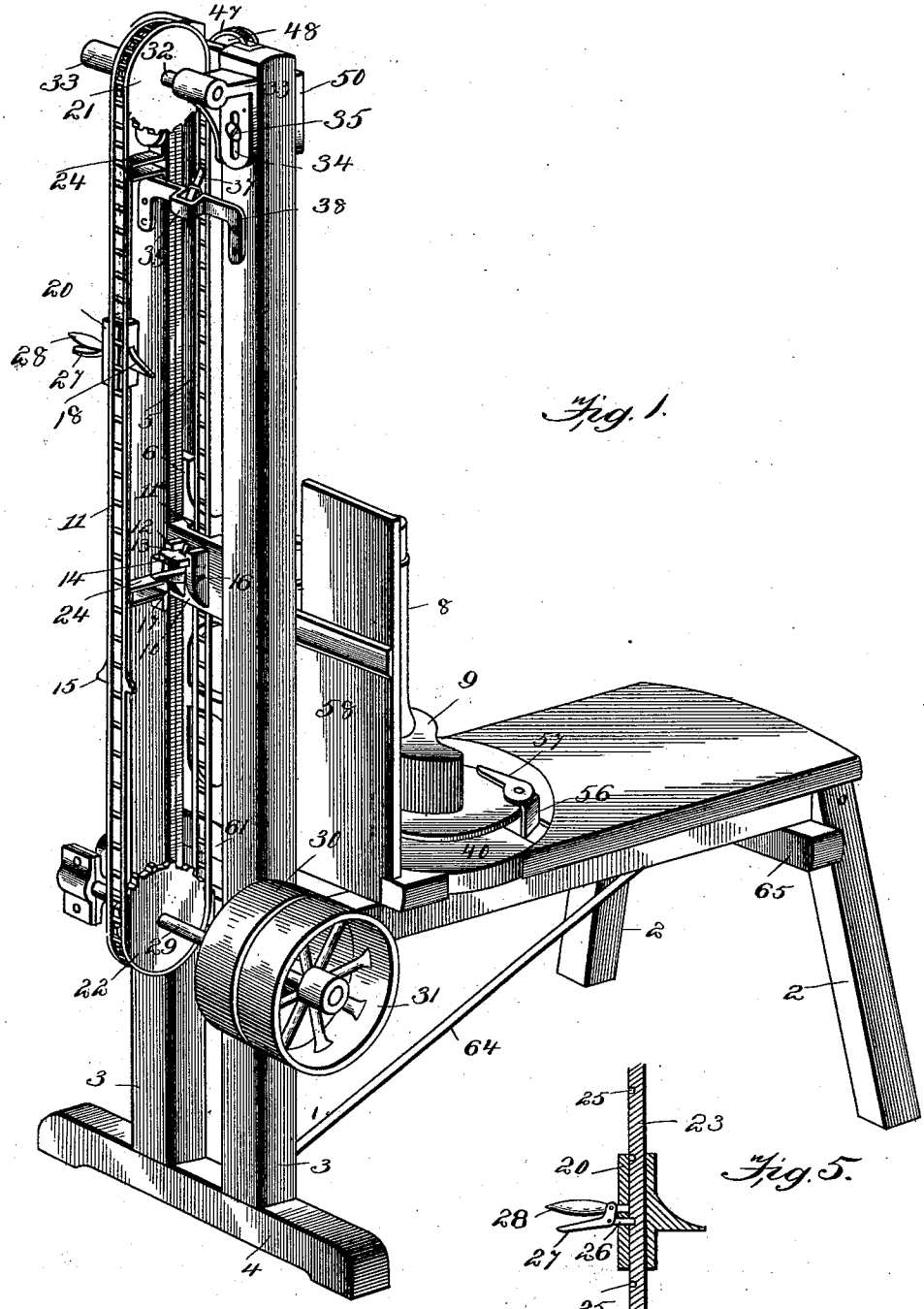

Fig. 1.

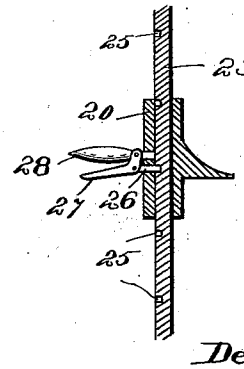

Fig. 5.

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De Witt C. Thomas.

Witnesses

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By his Attorneys.

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THE NATIONAL LITHOGRAPHING COMPANY,
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(No Model.) 2 Sheets—Sheet 2.

DE WITT C. THOMAS.

BUTTER PACKER.

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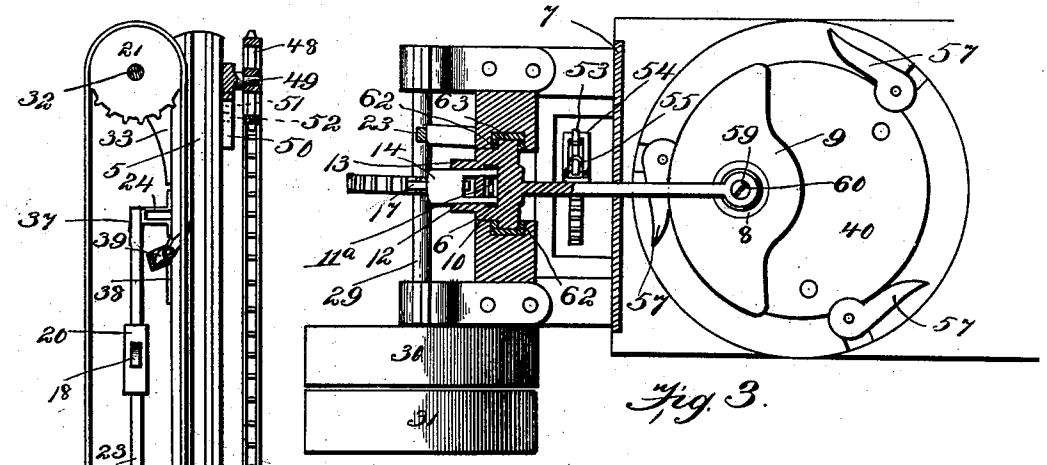

Fig. 3.

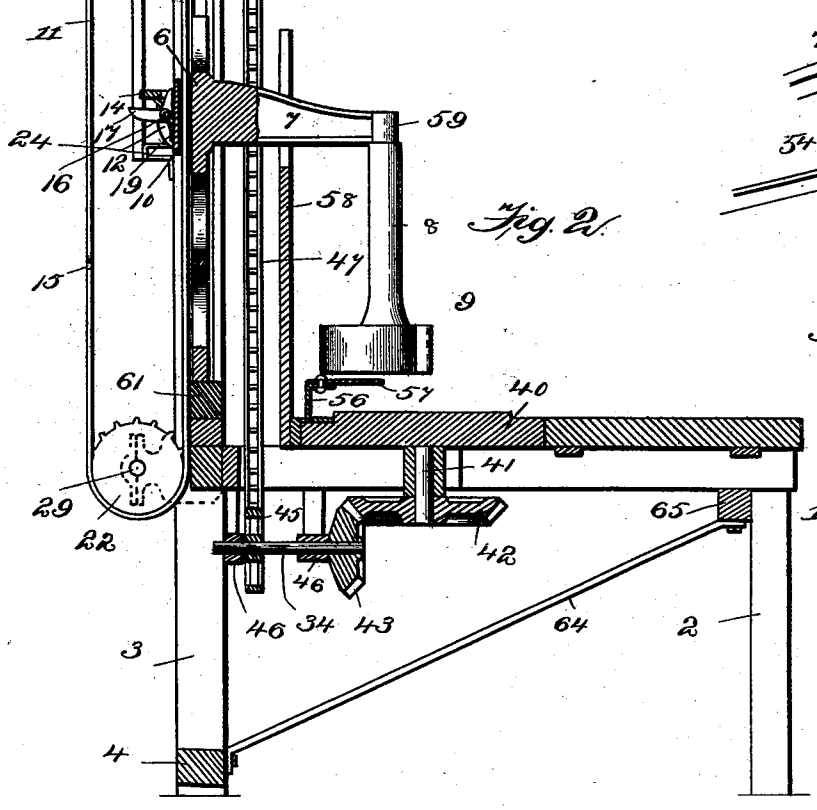

Fig. 2.

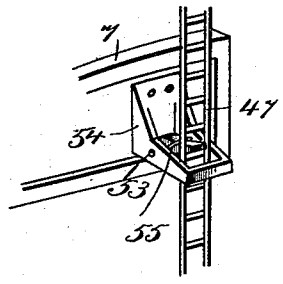

Fig. 4.

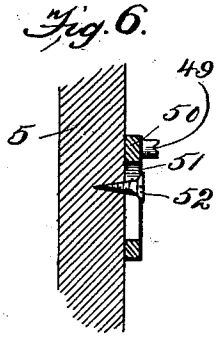

Fig. 6.

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UNITED STATES PATENT OFFICE.

DE WITT CLINTON THOMAS, OF KENSETT, IOWA.

BUTTER-PACKER.

SPECIFICATION forming part of Letters Patent No. 508,191, dated November 7, 1893.

Application filed June 13, 1893. Serial No. 477,468. (No model.)

To all whom it may concern:

Be it known that I, DE WITT CLINTON THOMAS, a citizen of the United States, residing at Kensett, in the county of Worth and State of Iowa, have invented a new and useful Butter-Packer, of which the following is a specification.

The invention relates to improvements in butter packers.

The object of the present invention is to improve the construction of butter packers and to provide a simple and comparatively inexpensive one by which butter may be equally packed in a tub or other receptacle with a uniform pressure.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings—Figure 1 is a perspective view of a butter packer constructed in accordance with this invention. Fig. 2 is a vertical longitudinal sectional view. Fig. 3 is a horizontal sectional view. Fig. 4 is a detail perspective view of a portion of the arm of the follower and showing the dog and the supplemental chain. Fig. 5 is a detail sectional view of the adjustable trigger. Fig. 6 is a detail sectional view of the adjustable plate having the stub shaft.

Similar numerals of reference indicate like parts in all the figures of the drawings.

1 designates a bench, having supporting legs 2 at its outer end and secured at its inner end to a pair of uprights 3, which are mounted upon a foot-piece 4, and which are provided on their inner opposite faces with vertical ways 5. The vertical ways 5 receive a slide 6, which has secured to it a forwardly-projecting arm 7; the latter has attached to its front end a stem 8, of a segmental follower 9. The slide is provided on its rear face with an integral casing 10, having an opening to receive a sprocket chain 11, and having rearwardly-extended ears or flanges 12. The sprocket-chain opening 11^a is arranged vertically and the flanges 12 are provided with horizontal ways 13, formed by grooves and receiving a sliding catch 14, adapted to engage the sprocket-chain to connect the slide 6 therewith for the purpose of raising the follower. The sliding catch 14 has its inner end bifurcated and extends on opposite sides of the sprocket-chain 11, and adapted to be engaged by laterally-extending lugs 15, of one of the links of the sprocket-chain. A bell-crank trip-lever 17 is fulcrumed between the flanges 12, by a pivot 16, and has one of its arms arranged in the bifurcation of the slide and having its other arm extending outward and adapted to be engaged by an adjustable trigger 18 to withdraw the sliding catch from engagement with the lugs of the sprocket-chain to cause the follower to fall. The sliding catch is returned to its initial position by a spring 19, which is provided with opposite coils arranged on the pivot 16, and is provided with upwardly-extending arms engaging perforations of the sliding catch, and has a depending loop bearing against the casing 10. The adjustable trigger is formed integral with a sleeve 20, and causes the sliding catch to be withdrawn sufficiently to disengage the lugs 15 of the sprocket-chain 11, which is an endless drive-chain; and the follower descends before the lugs 15 of the chain come around again to engage the sliding catch. After the follower descends the lugs 15 again engage the sliding catch and carry the follower upward until the trip-lever again engages the trigger, causing the follower to again descend. By this construction the operation of the follower is automatic, and while the follower is ascending the operator has sufficient time to place butter into the tub.

The sprocket-chain 11 is arranged on upper and lower sprocket-wheels 21 and 22; and the sleeve 20 is slidingly mounted on a rod 23, secured by brackets 24, to one of the uprights 3, and provided with a series of perforations or recesses 25, adapted to be engaged by a latch-bolt 26. The latch-bolt 26 is arranged in an opening of the sleeve and has its outer end pivoted to a handle-lever 27, which is fulcrumed on a handle 28 of the sleeve. The trigger may be moved up and down on the rod 23 to trip the follower at the desired elevation to regulate the force of the blows of the follower.

The lower sprocket-wheel 22 is mounted on a drive-shaft 29, which is journaled in suitable bearings and which carries at one end a fixed pulley 30 and a loose pulley 31; and a

belt (not shown) may be shifted from one pulley to the other for operating and stopping the packer, as will be readily understood. The upper sprocket-wheel is mounted on a shaft 32, which is journaled in suitable bearings of brackets 33, and the latter are provided with longitudinal slots 34, receiving clamping-screws 35, which enable the brackets to be secured at the desired adjustment in order to maintain the sprocket-chain at the necessary tension.

The follower may be held elevated, when the packer is not in operation, by a pivoted spring-actuated dog 37, in order that the operator may examine the contents of a keg, or place butter therein, and for analogous purposes. The dog 37 is pivoted in a bracket 38, approximately U-shaped and inverted; the bracket is secured to the uprights and it is provided with a rectangular bend 39, in which the dog and the spring thereof are mounted. The dog is adapted to swing upward above a horizontal position but is prevented moving below a horizontal position by its heel engaging the back of the bend. This arrangement enables the chain in moving upward to pass the dog but prevents that portion of the chain between the uprights being moved downward and backward by the weight of the follower.

The segmental follower strikes the butter at one side of a tub, and in order to bring different portions of the tub beneath the follower so that the entire contents of the tub will be packed, a rotary table 40 is provided. The rotary table 40 is arranged at the top of the bench and forms a portion thereof and is mounted upon a vertical shaft 41, which is journaled in suitable bearings of the bench and carries a horizontal cog-wheel 42 arranged beneath the bench. The horizontal cog-wheel 42 is a bevel-gear and meshes with a bevel-pinion 43 of a horizontal longitudinally-disposed shaft 44, which carries, at its rear end, a sprocket-wheel 45, and which is journaled in suitable hangers 46. The sprocket-wheel 45 has arranged on it a sprocket-chain 47, which also passes around a sprocket-wheel 48, arranged at the top of the uprights. The sprocket-wheel 48 is mounted on a stub-shaft 49, of an adjustable plate 50, which is provided with vertical slots 51, receiving clamping-screws 52. The sprocket-chain 47 is intermittently operated by an upwardly-swinging spring-actuated dog 53, which is mounted in a bracket 54, secured to the arm 7 of the slide 6. The spring 55, of the pawl or dog 53, forces the latter downward upon the bracket 54; and as the follower is lifted the dog 53 engages a link of the sprocket-chain 47, actuating the same, as the follower moves upward to turn the table to bring a different portion of the contents of a tub beneath the follower. As the follower descends the dog 53 moves upward against the action of the spring and passes over the intermittently-operated sprocket-chain 47 without actuating the same. The follower is intermittently and automatically operated as above explained, and as it moves upward each time the sprocket-chain 47 is operated. A tub is clamped on the table by cam-levers 56, which are fulcrumed on rectangular brackets 57, secured to the upper face of the table at the edge thereof which is rabbeted.

The bench is provided at its back with a vertical shield 58, which is provided at its top with a vertical slot to permit the passage of the arm 7. The follower has its stem secured to the outer end of the arm 7, which is provided with an eye or opening 59, receiving an attachment screw 60. The slide 6 is prevented from striking the bench at the lower ends of the ways by a cushion 61, consisting of a block of rubber or other elastic material. The ways 5 are formed by strips 62 of metal, which form the sides of the grooves, and strips 63 forming the backs of the grooves or ways. The front portion of the top of the bench is removable, and the frame of the bench is supported by an inclined brace 64, extending from a cross-piece 65, of the legs 2 to the foot-piece 4 of the uprights.

It will be apparent that the butter packer is simple and comparatively inexpensive in construction, that the follower is automatically elevated and tripped, and that the contents of a tub are continually shifted to bring different portions beneath the follower.

It is to be understood that changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What I claim is—

1. In a butter packer, the combination of a bench, uprights provided with ways, sprocket-wheels mounted on the uprights, a sprocket-chain arranged on the sprocket-wheels and provided with a lug, a slide arranged in the ways, a follower connected with and carried by the slide, a catch mounted on the slide and arranged to be engaged by said lug, a trip connected with the catch, and a trigger arranged to be engaged by the trip, substantially as and for the purpose described.

2. In a butter packer, the combination of a bench, uprights provided with ways, sprocket-wheels mounted on the uprights and arranged at the ends of the ways, a sprocket-chain arranged on the uprights and provided with laterally-extending lugs, a slide arranged in said ways and having a sprocket-chain opening receiving the sprocket-chain, a spring-actuated bifurcated sliding catch mounted on the slide and arranged to be engaged by said lugs, a trip-lever fulcrumed on the slide and connected with the catch, and a trigger arranged to be engaged by the trip-lever, substantially as described.

3. In a butter packer, the combination of a bench, uprights provided with ways, a slide mounted in the ways, a follower connected with and carried by the slide, sprocket-wheels mounted on the uprights, a sprocket-chain ar-

ranged on the sprocket-wheels, a catch mounted on the slide for engaging the sprocket-chain, a trip-lever mounted on the slide and connected with the catch, brackets secured to one of the uprights, a vertical rod attached to the brackets and provided with perforations, an adjustable sleeve slidingly mounted on the rod and provided with a trigger, a handle extending from the sleeve, a latch-bolt arranged on the sleeve for engaging the perforations of said rod, and a handle-lever fulcrumed on said handle and connected with the latch-bolt, substantially as described.

4. In a butter packer, the combination of a bench, uprights provided with ways, a slide mounted in the ways, a follower connected with and carried by the slide, sprocket-wheels mounted on the uprights, a sprocket-chain arranged on the sprocket-wheels, a catch arranged on the slide and connecting the latter with the sprocket-chain, and a pivoted upwardly-swinging dog engaging the sprocket chain and preventing backward movement of the same, substantially as and for the purpose described.

5. In a butter packer, the combination of a bench, uprights provided with ways, a slide mounted in the ways, a follower connected with the slide, sprocket-wheels arranged at the ends of the ways, a sprocket-chain arranged on the sprocket-wheels, a bracket secured to the uprights and provided with a rectangular bend, an upwardly swinging dog pivotally mounted in the bend and having a heel engaging the bracket and preventing it from moving downward, said dog engaging the sprocket-chain to prevent the latter from moving backward, and a spring engaging the dog and forcing the same downward, substantially as described.

6. In a butter packer, the combination of a bench, uprights provided with ways, a slide arranged in said ways, means for raising and tripping the slide, a follower connected with and carried by the slide, sprocket-wheels, a vertically-disposed intermittently operated sprocket-chain arranged on the sprocket-wheels, a dog carried by the slide for engaging and actuating the sprocket-chain, a rotary table mounted on the bench, and gearing for communicating motion from the sprocket-chain to the table, substantially as described.

7. In a butter packer, the combination of a bench, uprights provided with ways, a slide arranged in the ways and provided with a forwardly-extending arm, means for raising and tripping the slide, a follower connected with the arm, a vertically-disposed intermittently-operated sprocket-chain, sprocket-wheels receiving the chain, an upwardly-swinging spring-actuated dog mounted on the slide-arm for engaging and actuating the sprocket-chain, a rotary table mounted on the bench, and gearing for communicating motion from the sprocket-chain to the table, substantially as described.

8. In a butter packer, the combination of a bench, uprights provided with ways, a slide arranged in the ways, a follower connected with and carried by the slide, a rotary table mounted on the bench, a vertical shaft journaled in suitable bearings of the bench and supporting the table, a horizontal shaft, beveled gearing connecting the shafts, sprocket-wheels, one being arranged at the top of the uprights and the other being mounted on the horizontal shaft, a sprocket-chain arranged on the sprocket-wheels, and a dog carried by the slide for engaging the sprocket-chain, substantially as described.

9. In a butter packer, the combination of a bench, uprights provided with ways, a slide arranged in the ways and provided with a forwardly-extended arm, a follower connected with the outer end of the arm, means for raising and tripping the slide, and a vertical shield arranged at the back of the bench and provided at its upper end with a vertical slot to permit the passage of the arm, substantially as described.

10. In a butter packer, the combination of a bench, uprights provided with ways, a slide mounted in the ways, a segmental follower connected with and carried by the slide, means for intermittently raising and tripping the slide, and an intermittently-rotating table mounted on the bench and arranged beneath the follower connected with and rotated by the upward movement of the latter and being stationary during the descent of the same, substantially as and for the purpose described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

DE WITT CLINTON THOMAS.

Witnesses:
A. C. FOSTER,
C. F. BILLINGS.