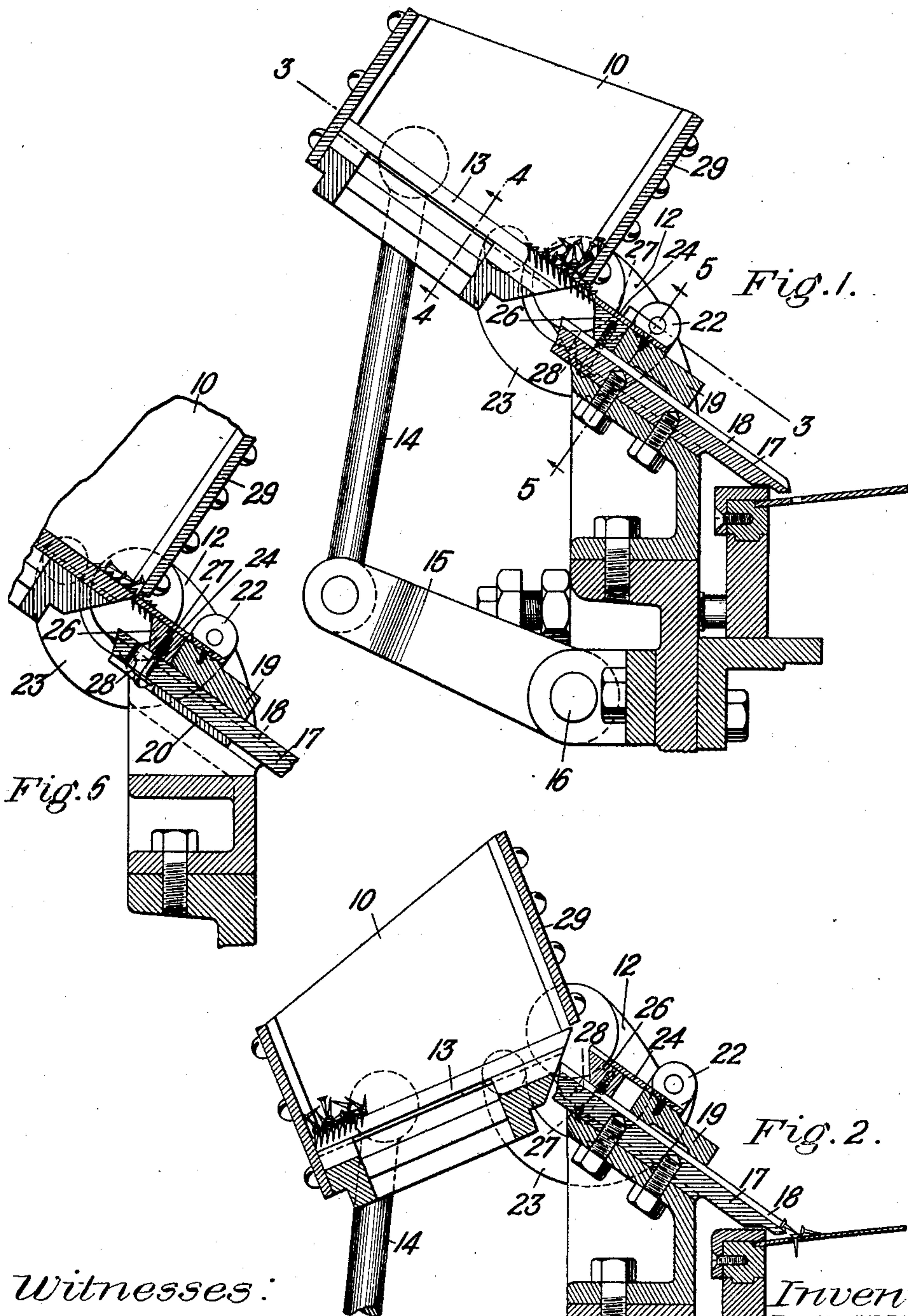


B. B. WATERMAN.
TACK FEEDING DEVICE.
APPLICATION FILED JUNE 15, 1908.

924,707.

Patented June 15, 1909.
2 SHEETS—SHEET 1.



Witnesses:
William C. Glass
Franklin E. Low

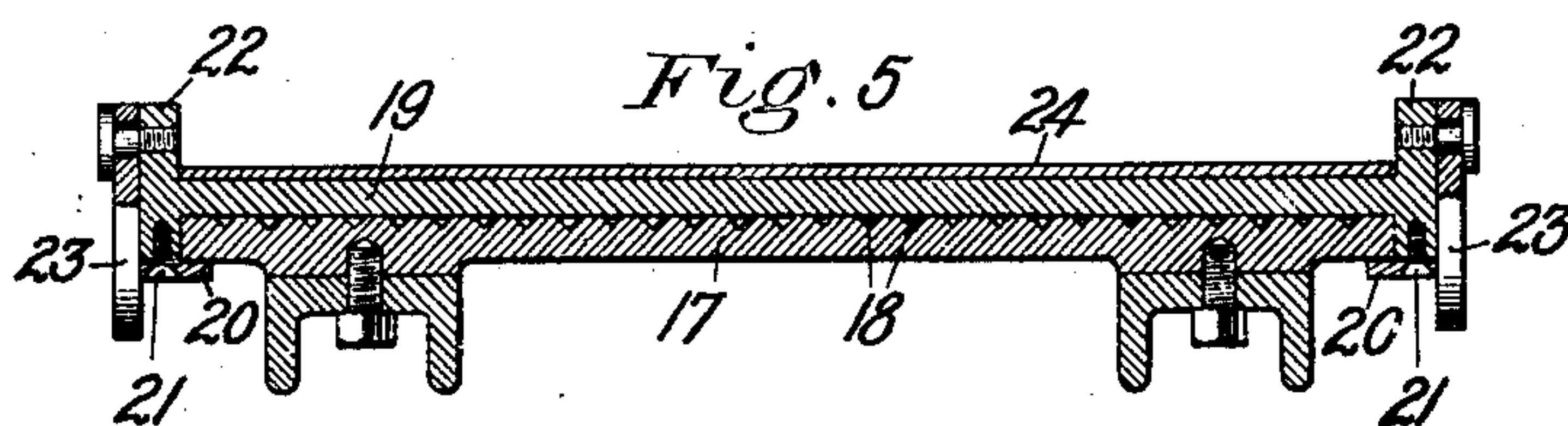
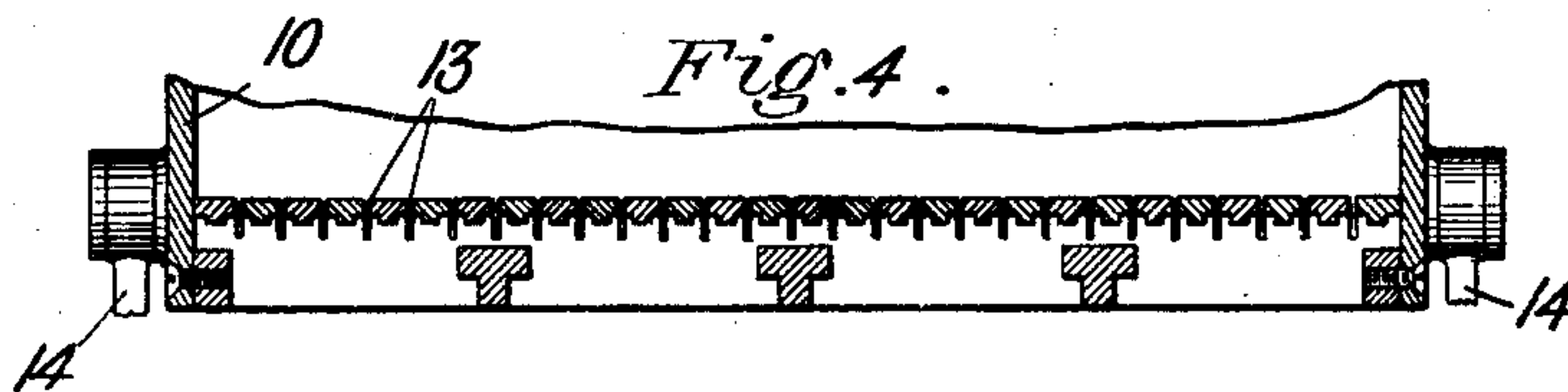
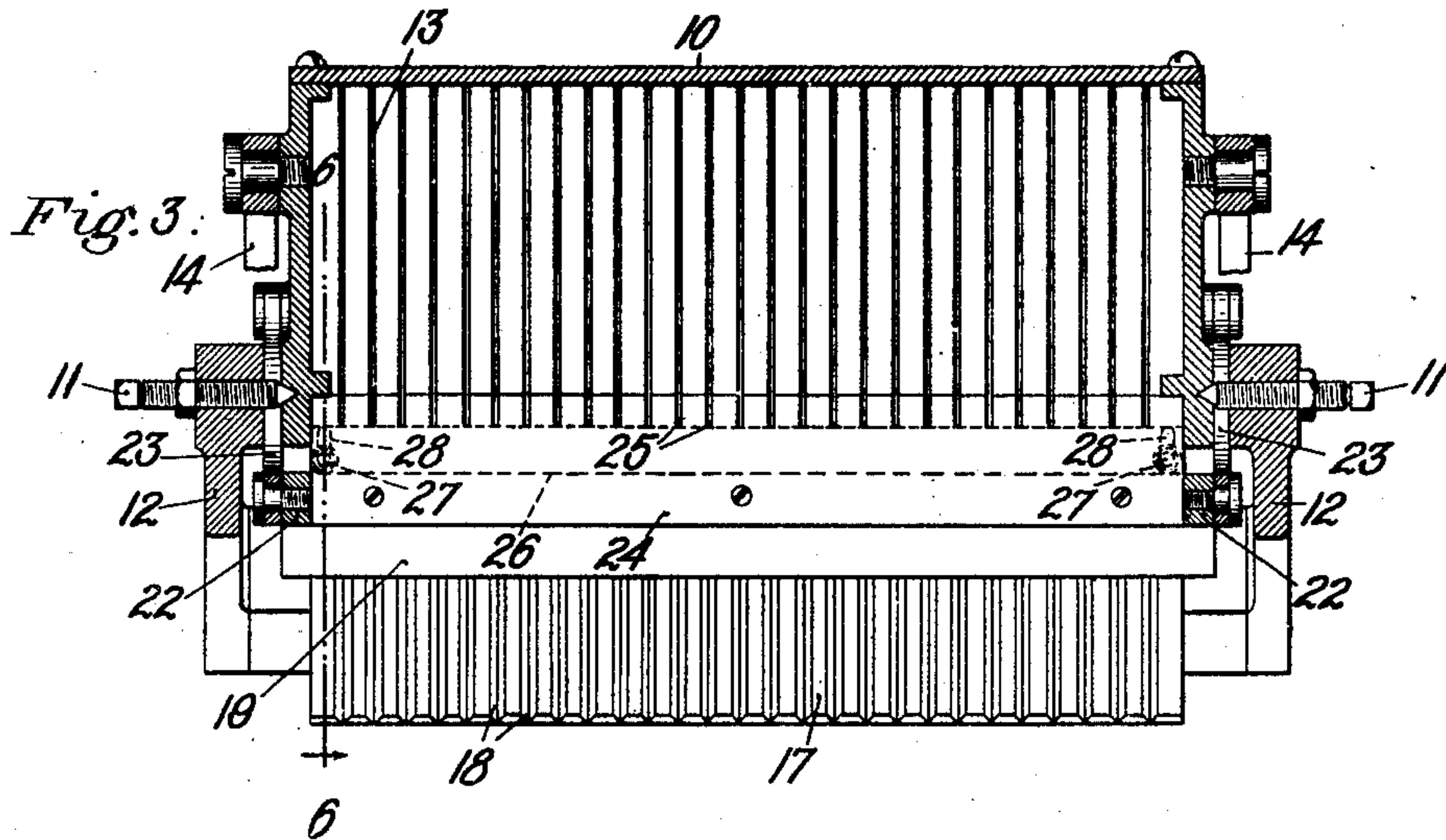
Inventor:
Bradford B. Waterman
by his attorney,
Charles S. Gooding.

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UNITED STATES PATENT OFFICE.

BRADFORD B. WATERMAN, OF EAST BRIDGEWATER, MASSACHUSETTS, ASSIGNOR TO THE AMERICAN SHOE FINDING COMPANY, A CORPORATION OF MAINE.

TACK-FEEDING DEVICE.

No. 924,707.

Specification of Letters Patent.

Patented June 15, 1909.

Application filed June 15, 1908. Serial No. 438,533.

To all whom it may concern:

Be it known that I, BRADFORD B. WATERMAN, a citizen of the United States, residing at East Bridgewater, in the county of Plymouth and State of Massachusetts, have invented new and useful Improvements in Tack-Feeding Devices, of which the following is a specification.

This invention relates to improvements in devices for feeding tacks or the like, and the object is to provide a device which shall be capable of feeding tacks or the like from a mass contained in a hopper and transferring them to a raceway, and the object is further to provide a device of the class described which shall be capable of delivering to each one of a plurality of raceways one tack or a predetermined number of tacks.

The invention consists in the combination and arrangement of parts set forth in the following specification and particularly pointed out in the appended claims.

Referring to the drawings: Figure 1 is a vertical sectional elevation of a feeding device embodying my invention, the tack hopper being shown in its raised position. Fig. 2 is a sectional elevation similar to Fig. 1 showing the tack hopper in its lowered position. Fig. 3 is a section at a reduced scale taken on line 3—3 of Fig. 1. Fig. 4 is a section taken on line 4—4 of Fig. 1, looking toward the left and partly broken away to save space in the drawings. Fig. 5 is a sectional elevation taken on line 5—5 of Fig. 1, looking toward the left. Fig. 6 is a detail sectional elevation taken on line 6—6 of Fig. 3, looking toward the right and partly broken away to save space.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, 10 is a hopper pivotally mounted on two pivotal screws 11, 11 having screw-threaded engagement with suitable brackets or supports 12, 12, the bottom of said hopper being provided with a plurality of passages or slots 13 extending transversely of the pivotal axis of said hopper. The hopper 10 is adapted to be rocked on its pivot from the position shown in Fig. 1 to the position shown in Fig. 2 by means of two links 14, 14 pivotally connected at their upper ends to said hopper and at their lower ends to rocker arms 15, only one of which is illustrated in the drawings in Fig. 1, said rocker arm being fast to a rock shaft 16 journaled in

suitable bearings. A raceway plate 17 is provided with a plurality of grooves 18 preferably V-shaped in cross section, said grooves constituting raceways located in alignment with the passages 13, respectively, of the hopper 10. Mounted on the plate 17 is a slide 19 extending transversely of the grooves 18 and maintained in proper relation with said plate by means of two caps 20, 20 secured to said slide by means of screws 21, 21.

The slide 19 is provided with two ears 22, 22 to which are pivotally connected two links 23, 23, respectively, said links being also pivotally connected to the hopper 10. As the hopper 10 is rocked on its pivots the same is adapted to act through the links 23 to impart a reciprocatory movement to the slide 19 longitudinally of the grooves 18. Fast to the slide 19 is a plate 24 provided with a plurality of slots 25 leading from the upper edge thereof, said slots being located in alignment with the grooves 18 and passages 13. Interposed between the plate 24 and the plate 17 is a bar 26 extending transversely of the grooves 18 and slots 25, said bar being adjustably secured to the plate 17 by means of two screws 27, 27 passing through slots 28, 28, respectively, and having screw-threaded engagement with said bar. By loosening the screws 27 the bar 26 may be moved longitudinally of the slots 25 so that each of said slots will be adapted to receive from its respective groove 13 one tack or two tacks or three tacks as may be desired. When the bar is set in the position shown in the drawings, each of the slots 25 is adapted to receive three tacks therein. The right hand wall 29 of the hopper 10, as seen in Figs. 1, 2 and 6, is separated from the bottom of said hopper by a slight space sufficient to allow the heads of the tacks to pass between the lower edge thereof and the upper face of said bottom.

The general operation of the feeding device hereinbefore specifically described is as follows: Assuming the parts to be in their initial position as shown in Fig. 2, it will be seen that of the mass of tacks contained in the hopper 10 a number are located in the passages 13. When the hopper 10 is rocked from the position shown in Fig. 2 to the position shown in Fig. 1, the plate 24 slides upwardly from the position shown in Fig. 2 so that the slots 25 register with the passages 13 and tacks pass from said passages into

said slots as seen in Fig. 1. When the hopper 10 is rocked downwardly on its pivot from the position shown in Fig. 1 to the position shown in Fig. 2, the plate 24 is simultaneously moved downwardly toward the right with the result that the tacks which are located in the slots 25 are forced therefrom by the bar 26 and drop point foremost into the grooves 18. The mass of tacks in the hopper 10 finds its way back again to the lowermost part of said hopper, as shown in Fig. 2. As before stated the bar 26 may be set in such a position that each of the slides 25 will at each rocking movement of the hopper 10 receive only one tack and deliver the same to its respective groove 18.

Having thus described my invention, what I claim and desire by Letters Patent to secure is:

1. In a device for feeding tacks or the like, a raceway provided with an inclined groove, a movable member provided with a passage located above and in alinement in one direction with said groove, and a movable carrier adapted to deposit a tack or the like into said passage, said movable member being adapted to subsequently deposit said tack into said groove.

2. In a device for feeding tacks or the like, a raceway provided with an inclined groove, a movable member provided with a passage located above and in alinement in one direction with said groove, and a movable carrier provided with a passage adapted to guide a tack into said passage, said movable member being adapted to subsequently deposit said tack into said groove.

3. In a device for feeding tacks or the like, a raceway provided with an inclined groove, a movable member provided with a passage located above and in alinement in one direction with said groove, and a pivoted hopper adapted to deposit a tack into said passage, said movable member being adapted to subsequently deposit said tack into said groove.

4. In a mechanism for feeding tacks or the like, a raceway provided with an inclined groove, a movable member provided with a passage located above and in alinement in one direction with said groove, and a pivoted hopper provided with a passage adapted to guide a tack into said passage, said movable member being adapted to subsequently deposit said tack into said groove.

5. In a device for feeding tacks or the like, a raceway provided with an inclined passage, a member movable longitudinally of said inclined passage and provided with a passage located above and in alinement in one direction with said inclined passage, and a movable carrier adapted to deposit a tack or the like into said passage of said movable member, said movable member being adapted to subsequently deposit said tack into said inclined passage.

6. In a device for feeding tacks or the like, a raceway provided with an inclined passage, a member movable longitudinally of said inclined passage and provided with a passage located above and in alinement in one direction with said inclined passage, and a movable carrier provided with a passage adapted to guide a tack into said passage of said movable member, said movable member being adapted to subsequently deposit said tack into said inclined passage.

7. In a device for feeding tacks or the like, a raceway provided with an inclined passage, a member movable longitudinally of said inclined passage and provided with a passage located above and in alinement in one direction with said inclined passage, a pivoted carrier adapted to deposit a tack or the like into said passage of said movable member, and means connecting said carrier to said movable member, whereby when said carrier is rocked on its pivot, said movable member is adapted to deposit said tack into said inclined passage.

8. In a device for feeding tacks or the like, a raceway provided with an inclined passage, a member movable longitudinally of said inclined passage and provided with a passage located above and in alinement in one direction with said inclined passage, a pivoted carrier provided with a passage adapted to guide a tack or the like into said passage of said movable member, and means connecting said carrier to said movable member, whereby when said carrier is rocked on its pivot, said movable member deposits said tack into said inclined passage.

9. In a mechanism for feeding tacks or the like, a raceway provided with an inclined groove, a member provided with a slot having one open end and located above and in alinement in one direction with said groove, a movable carrier adapted to deposit a tack or the like into said slot, and a second member which a portion of said tack is adapted to engage, said members being relatively movable and adapted to cooperate to move said tack out of the open end of said slot and allow said tack to pass into said groove.

10. In a mechanism for feeding tacks or the like, a raceway provided with an inclined groove, a member provided with a slot having one open end and located above and in alinement in one direction with said groove, a pivoted carrier provided with a passage adapted to guide a tack or the like into said slot, and a member which a portion of said tack is adapted to engage, said members being relatively movable and adapted to cooperate to move said tack out of said slot and allow the same to pass into said groove.

11. In a device for feeding tacks or the like, a raceway provided with an inclined groove, a member provided with a slot having one open end and located above and in

alinement in one direction with said groove, a movable carrier adapted to deposit a tack or the like into said slot, and a second member which the shank of said tack is adapted to engage, said second member being interposed between said first member and said raceway, said members being relatively movable and adapted to cooperate to move said tack from said slot and allow the same to pass into said groove.

12. In a device for feeding tacks or the like, a raceway provided with an inclined groove, a member provided with a slot having one open end and located above and in alinement in one direction with said groove, a pivoted carrier provided with a passage adapted to guide a tack or the like into said slot, and a second member which a portion of said tack is adapted to engage, said members being relatively movable and adapted to cooperate to move said tack out of said slot and allow the same to pass into said groove.

13. In a device for feeding tacks or the like, a raceway provided with an inclined passage, a member provided with a slot having one open end and located above and in alinement in one direction with said passage, a pivoted carrier provided with a passage adapted to guide a tack or the like into said slot, a member which a portion of said tack is adapted to engage, said second-named member being movable longitudinally of said first-named passage, means connecting one of said members to said carrier, whereby when said carrier is rocked on its pivot, said member to which said carrier is connected is moved longitudinally of said first-named passage and said tack is moved out of said slot and allowed to pass into said first-named passage.

14. In a device for feeding tacks or the like, a raceway provided with an inclined groove, a member provided with a slot having one open end and located above and in alinement in one direction with said groove, a pivoted carrier provided with a passage adapted to guide a tack or the like into said slot, and a second member which the shank of said tack is adapted to engage, said second member being located between said first member and said raceway, one of said members being movable relatively to the other of said members and adapted to cooperate with said other member to move said tack out of said slot and allow the same to pass into said groove.

15. In a device for feeding tacks or the like, a raceway provided with a plurality of inclined grooves, a member provided with a plurality of slots each having open ends and located above and in alinement in one direction with said grooves, respectively, a pivoted carrier provided with a plurality of passages adapted to guide tacks into the open ends of said slots, respectively, and a second member which a portion of each of said tacks is adapted to engage, said second member extending transversely of said slots, one of said members being movable longitudinally of said slots and adapted to cooperate with the other of said members to move said tacks out of the open ends of said slots and allow said tacks to pass into said grooves, respectively.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

BRADFORD B. WATERMAN.

Witnesses:

NINETTA M. WATERS,
HELEN M. MOFFAT.