

No. 772,855.

PATENTED OCT. 18, 1904.

H. D. WINTON.
PACKAGING MACHINE.

APPLICATION FILED JULY 26, 1904.

NO MODEL.

5 SHEETS—SHEET 1.

Fig. 1.

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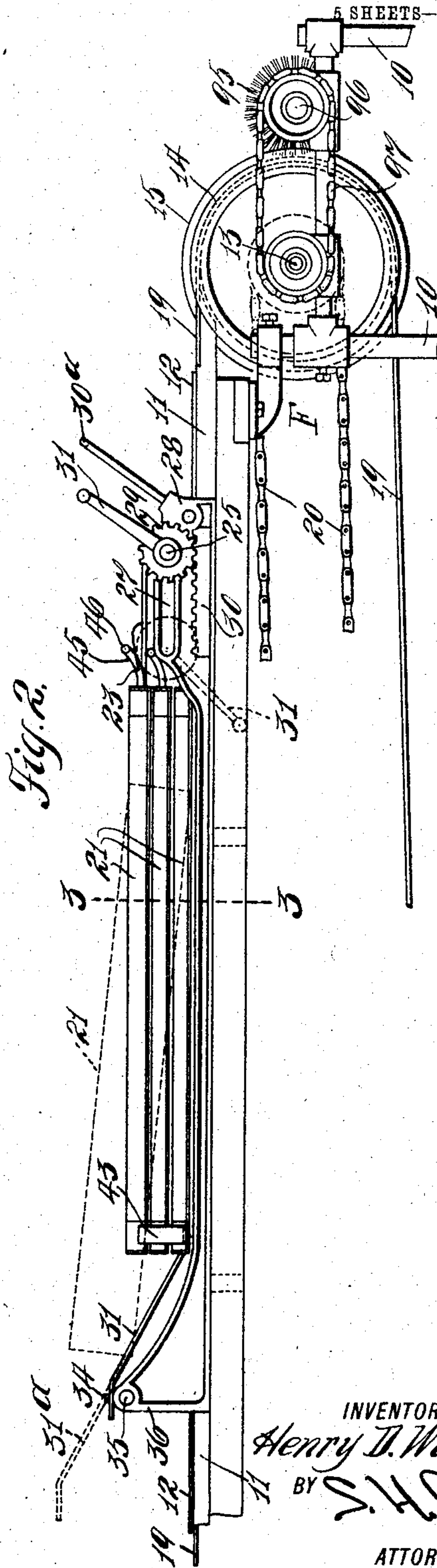
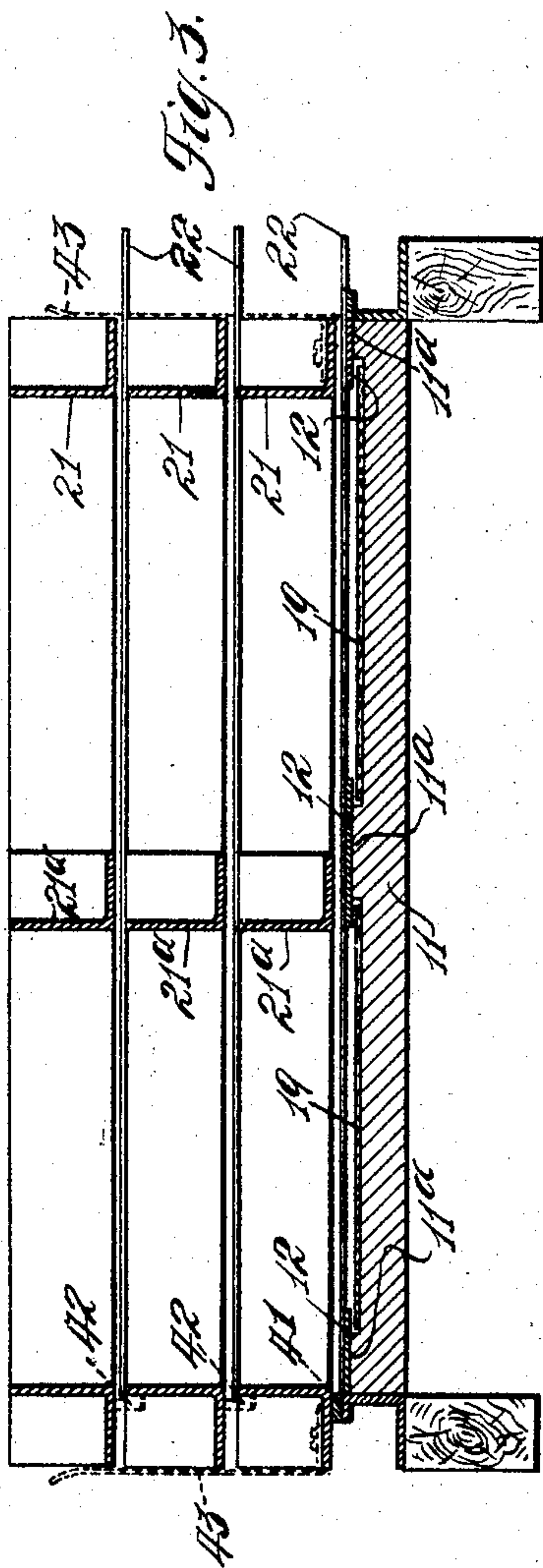
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5 SHEETS—SHEET 2.



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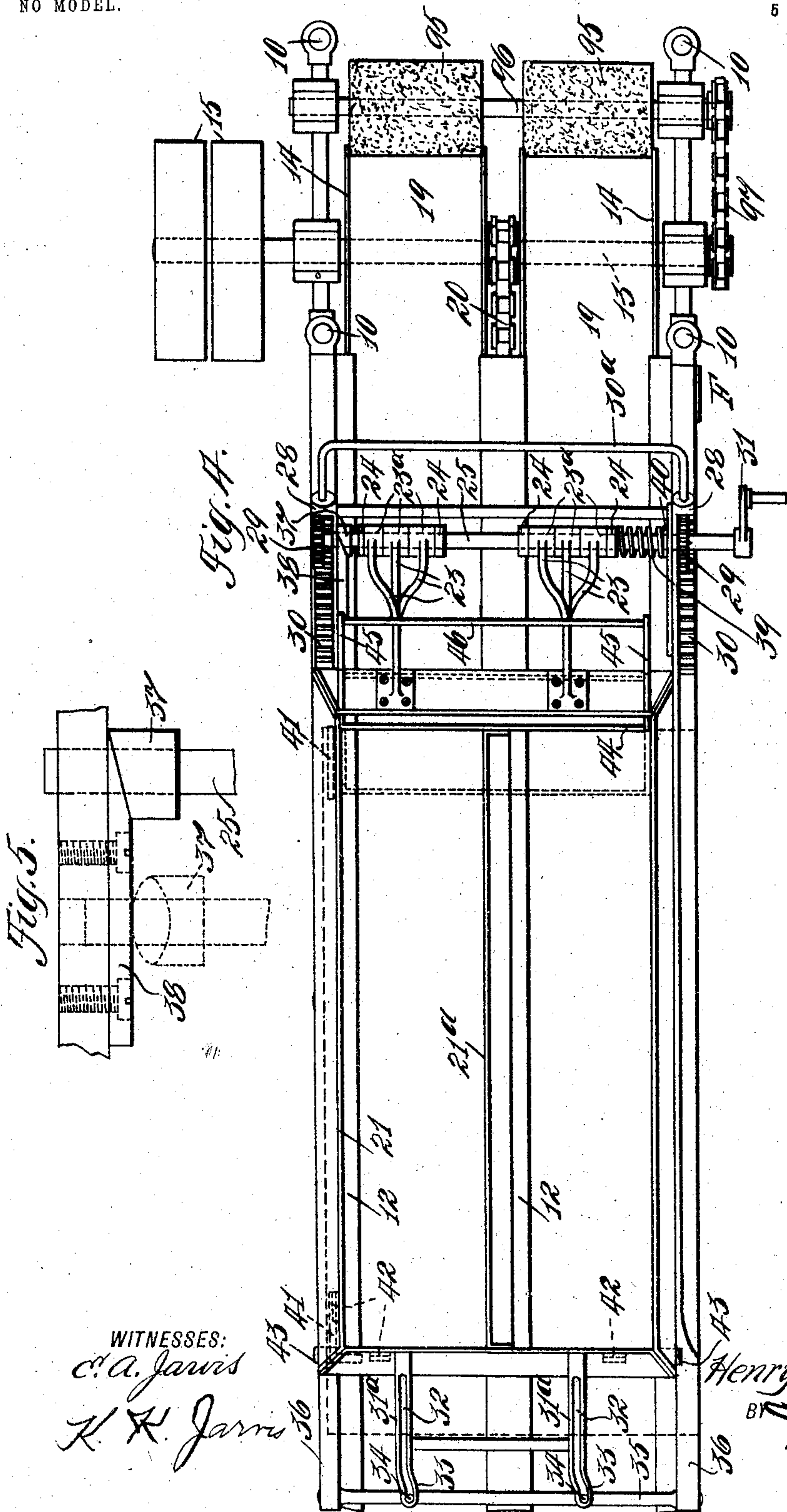
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5 SHEETS—SHEET 3.



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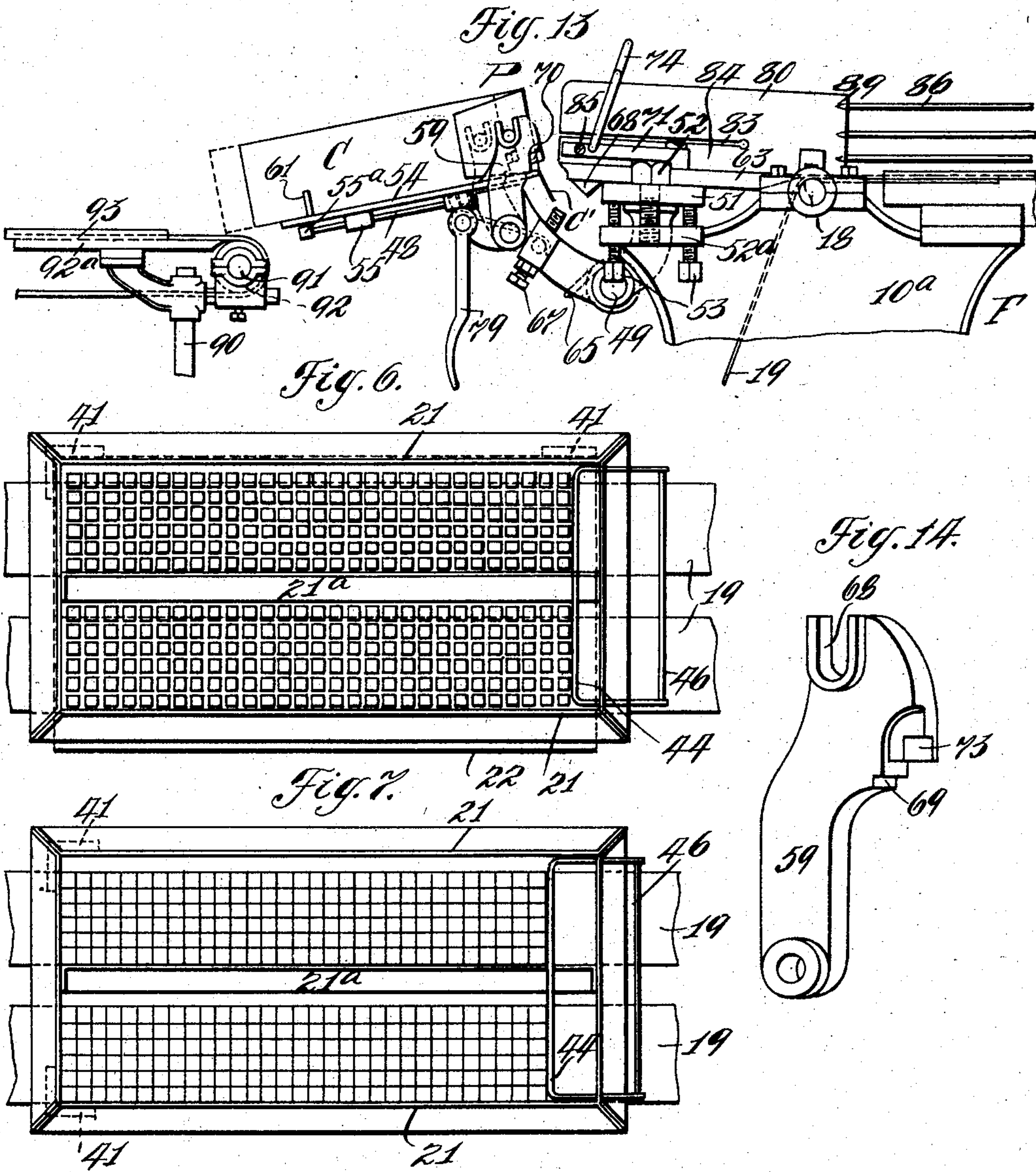
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5 SHEETS—SHEET 4.



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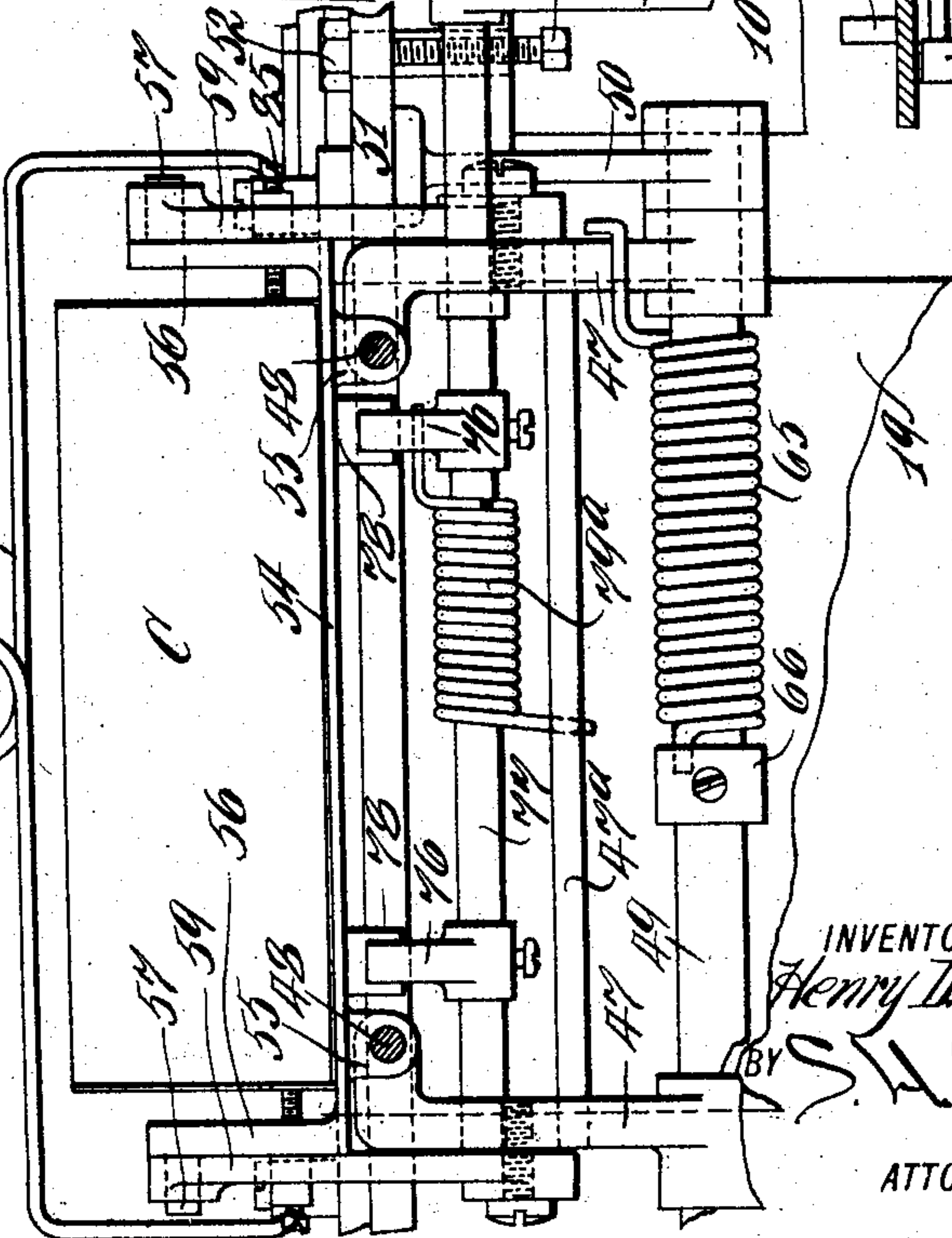
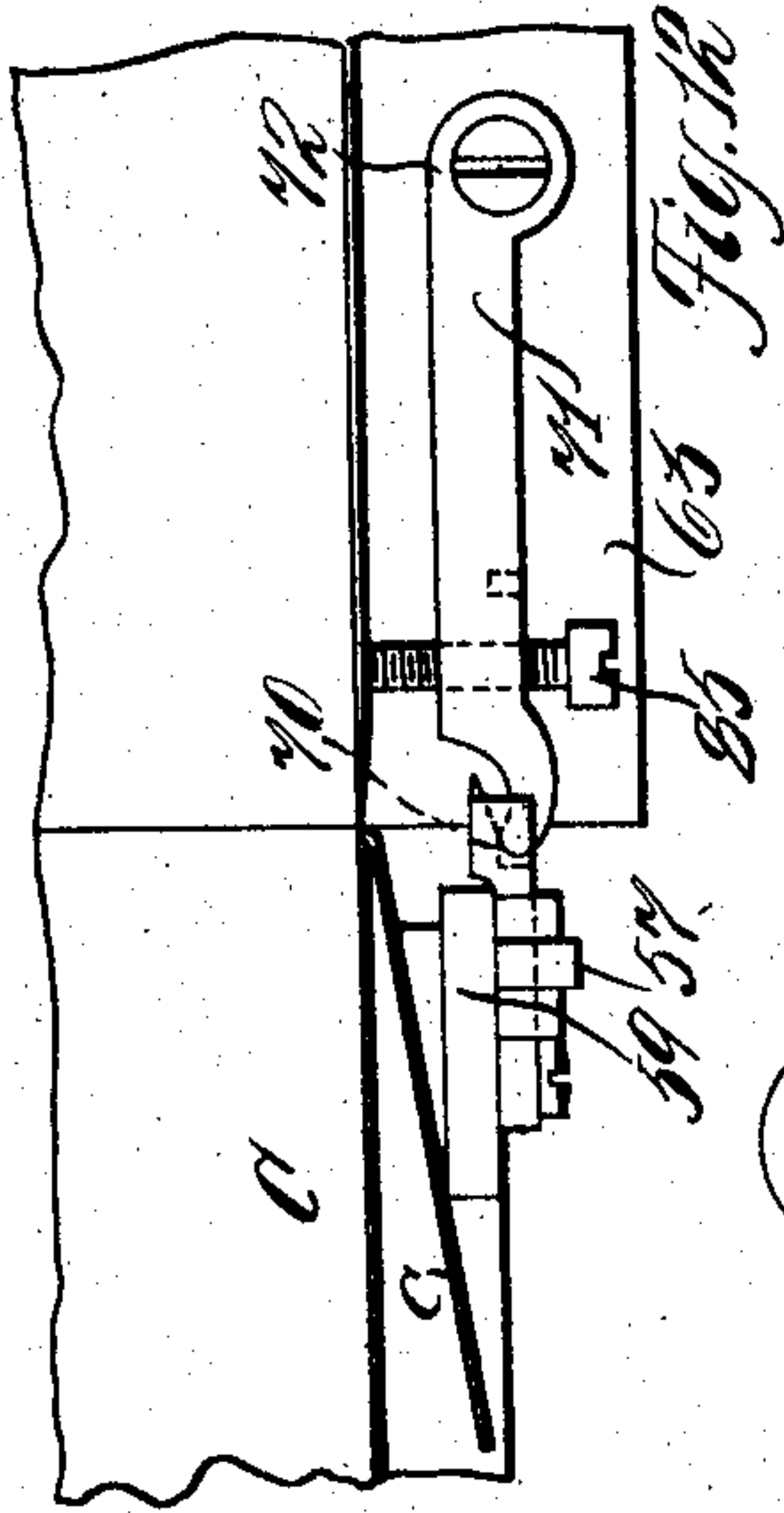
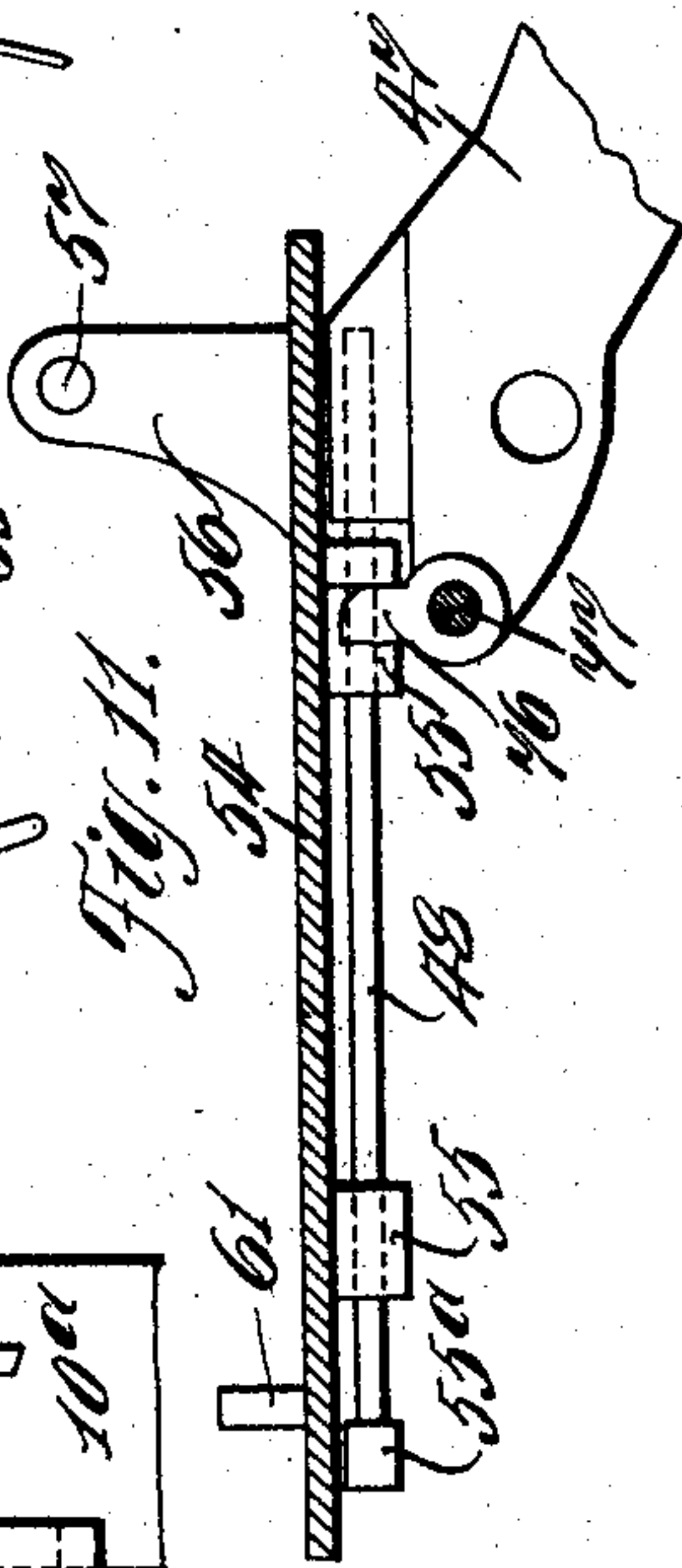
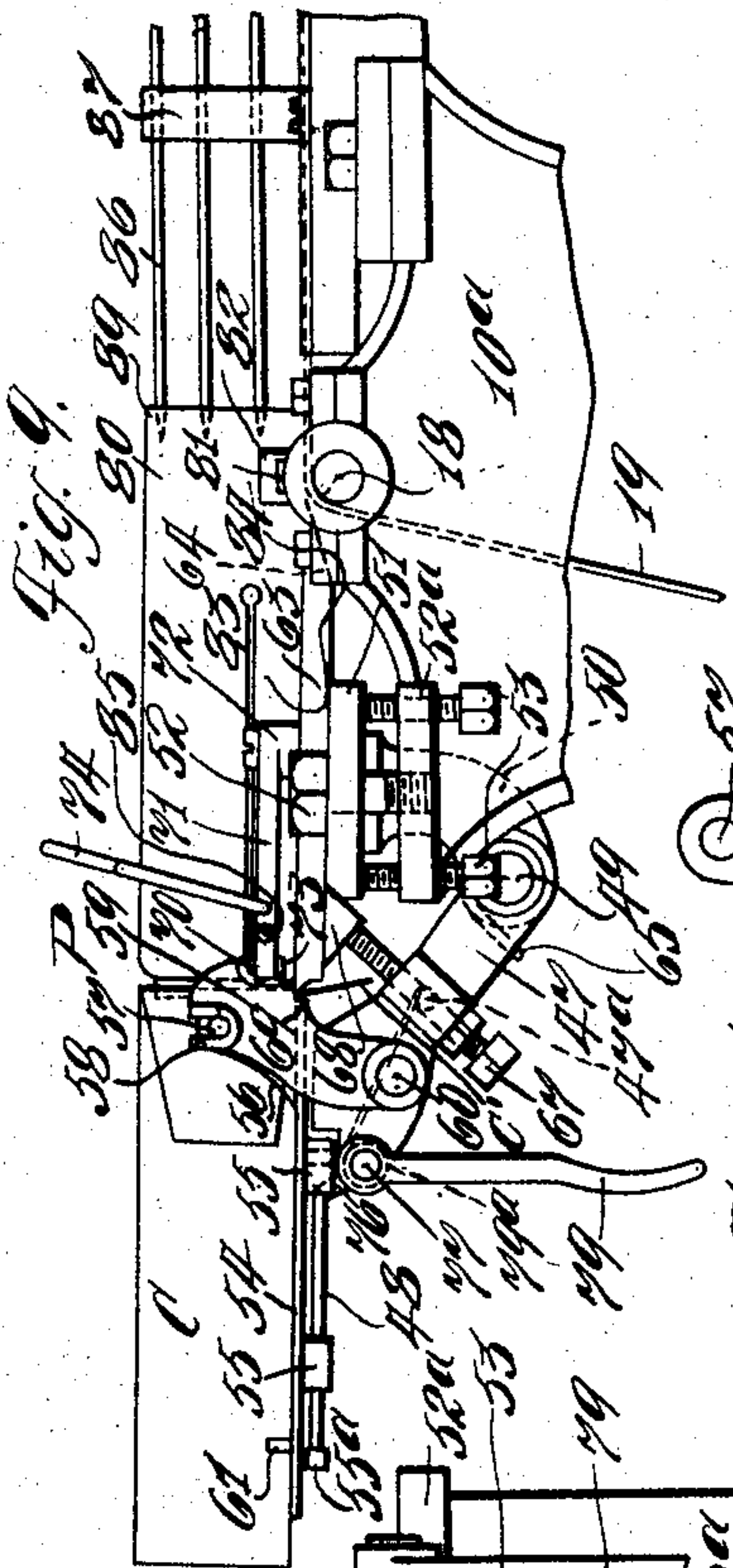
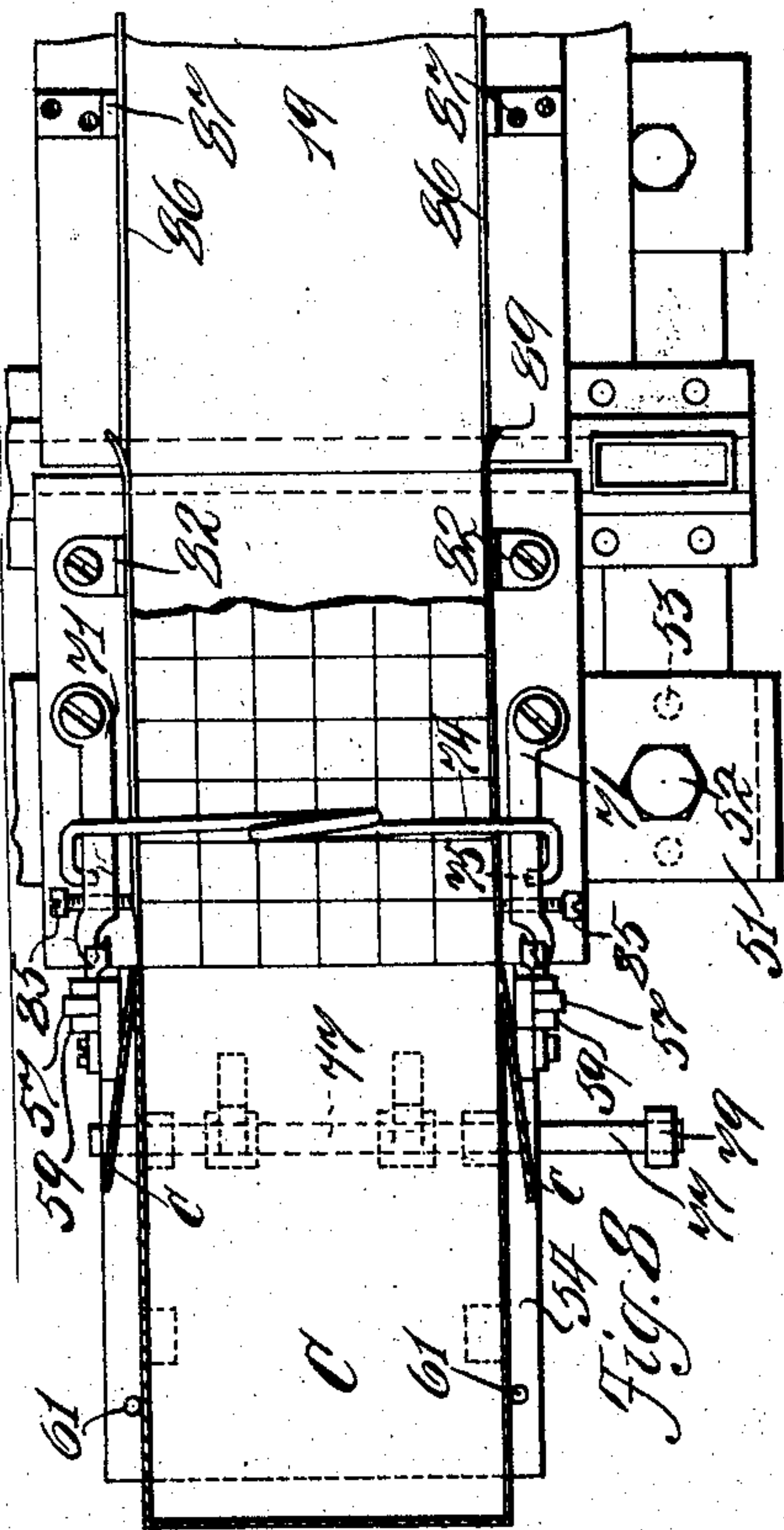
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NO MODEL.

5 SHEETS—SHEET 5.



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UNITED STATES PATENT OFFICE.

HENRY D. WINTON, OF WELLESLEY HILLS, MASSACHUSETTS.

PACKAGING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 772,855, dated October 18, 1904.

Application filed July 26, 1904. Serial No. 218,279. (No model.)

To all whom it may concern:

Be it known that I, HENRY D. WINTON, a citizen of the United States, residing at Wellesley Hills, in the county of Norfolk and State of Massachusetts, (whose post-office address is as above,) have invented certain new and useful Improvements in Packaging - Machines, of which the following is a specification.

My invention relates to machines for packaging various materials, it being particularly applicable to those which are compressed or formed in more or less regular masses, as is the case with cubed sugar or cereals. Its principal objects are to provide such a machine in which the operations of filling the packages with a definite quantity of material and delivering them may be readily and accurately carried on with a minimum number of attendants.

With these objects in view my invention consists in the various features and combinations hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a broken side elevation of one embodiment of my invention. Fig. 2 is an enlarged side elevation of the feed end thereof. Fig. 3 is a still further enlarged transverse section on the line 3 3 of Fig. 2. Fig. 4 is a top plan view of the same portion of the machine. Fig. 5 is a detail in top plan of the cooperating cam members on the frame-shaft and main frame. Figs. 6 and 7 are top plan views of the retaining-frames, showing the cubes of material therein in their spaced and their closed or assembled positions, respectively. Fig. 8 is a top plan view of half of the delivery end of the machine. Fig. 9 is a broken side elevation thereof. Fig. 10 is an enlarged end elevation looking from the left in Fig. 9. Fig. 11 is a central vertical longitudinal sectional detail through the package-carrier. Fig. 12 shows in enlarged plan the coaction between the package-holder and its locking means. Fig. 13 shows in side elevation the package-holder while delivering the filled package, and Fig. 14 is a perspective view of the locking-arm.

Similar characters indicate like parts throughout the several figures of the drawings.

F designates a main or supporting frame, which may consist of suitable standards 10 and 10^a, between which is a connecting-bed 11. The sides and center of this bed are shown as raised at 11^a to form channels, 55 which in the present instance are two in number, and over these channels at each side preferably extend cleats 12. At the feed end of the frame is journaled a shaft 13, carrying flanged rolls 14 14, having their upper peripheries lying in substantially the plane of the bed. Upon this shaft 13 are fast and loose driving-pulleys 15, to which power may be applied from any desired source. At the opposite end of the frame considerably below 65 the bed is journaled a shaft 16, having upon it rolls 17, and above this, with its upper periphery in alinement with the bed, is a small roll 18. Over these rolls operate endless belts 19, extending through and guided in the 70 channels beneath the cleats and serving as conveyers for the material. These belts travel continuously while the machine is in operation, the shaft 16 and its rolls 17 being preferably driven by a chain 20, extending over 75 sprocket-wheels upon the shafts 13 and 16 between the rolls.

At the rear of the machine is situated means for collecting and for temporarily retaining the material against movement with the conveyor-belts, this in the present instance being shown as in the form of movable frames 31. These frames are here illustrated as three in number, it being assumed that three tiers of the cubes of material will properly fill one 85 dimension of the package. They extend completely across the main frame to opposite sides of the belts and are of sufficient length to cover plates 22, which are usually of sheet metal and upon which the cubes are brought 90 from the drying-ovens. Between the end bars of each frame extends a center bar 21^a, which has its edge adjacent to the right-hand conveyer, or that shown at the upper side of Fig. 4, situated in substantially the same vertical plane as the edge of the center cleat 12. 95 Each frame has at its rear end a pair of arms 23 23, each having upon its outer extremity a hub 23^a, rotatable about a shaft 25 and retained against longitudinal movement there- 100

on by collars 24, fixed at each side of the contacting hubs. The shaft 25, which furnishes one element of a releasing device, is preferably guided by a slot 27, formed in a raised portion 28 at each side of the frame. It has fast upon its ends pinions 29, which mesh with racks 30, carried on the frame. At one end of the shaft is a crank 31, the rotation of which causes said shaft and the retaining-frames to move longitudinally of the main frame. To support the retaining-frames when they are swung away from the bed about the shaft 25, a cross-bar 30^a is shown as extending between the ends of the raised portion 28.

To properly liberate the material from the retaining influence of the frames, it is desirable that they should be simultaneously moved upwardly from the conveyers, at least their forward ends, longitudinally of the conveyers and during the inauguration of their movement laterally of the direction of travel thereof. To effect this, there are preferably provided guides consisting of arms 31^a, which extend upwardly from the lower frame at separated points and at an angle to the bed. In these arms are longitudinal slots 32, having extensions 33, which are laterally inclined to the main portions of the slots. Through these slots extend pins or projections 34, rising from a bar 35, carried by small standards 36 at each side of the bed. To impart a simultaneous lateral movement to the rear of the frames, there is fixed to the shaft 25 a cam member 37, having an inclined face contacting with a similar face at one end of a member 38, extending along the frame. The shaft 25 is longitudinally movable through its guiding-slots and is held in its normal position by a spring 39, here shown as a spiral compression-spring, contacting at one end with one of the collars 24 and at the other with a washer 40, operating against the frame. It will be seen that as the shaft 25 is rotated by its crank the frames will all be moved along the bed and that their forward ends by virtue of the upward and lateral inclination of the slotted portions will be raised and at the same time be first moved abruptly to one side. Simultaneously the cam member 37 will ride up the coacting cam-face, the compression of the spring about the shaft permitting this, thus producing a similar movement of the rear of the frames without raising them. After this initial movement the forward ends will continue to rise, moving in lines parallel to the movement of the conveyers, the cam member 37 sliding over a straight face upon the companion member 38.

To provide for the correct positioning of the plates, contact-pieces 41 are fixed to the main frame at one side thereof, they lying beneath the corners of the retaining-frames. The upper retaining-frames are spaced apart by similar contact-pieces 42 42, situated at one

end and side thereof. To the lower frame at each side of the forward end of the retaining-frames are secured leaf-springs 43, extending to the upper frame 21 and maintaining the alinement of all when they are turned down upon the main frame.

Each retaining-frame preferably carries means for moving forward or closing up the material within it, which is here shown as consisting of a bar 44, from each end of which arms 45 extend through openings in the rear bar of the frame. The outer extremes of these arms are connected by a bar or operating member 46, and when this is pressed inwardly the bar 44, bearing against the cubes of material lying upon the plates, forces them forward into contact with the front bar of the frame and with one another, so that they are in continuous contact longitudinally of each frame.

At the opposite end of each conveyer from the retaining-frames is a package-holder P, which consists of a pair of supporting-arms 47 47, preferably tied together by a connecting-rod 47^a and each of which has extending from it a guide-rod 48. These arms are rotatably mounted about a shaft 49, carried by brackets 50, depending from the under side of a bridge 51, connecting the standards 10^a. This bridge is preferably held in place upon the standards by a screw 52 passing loosely through an opening in each end and into a bracket 52^a, extending horizontally from each standard. It may be adjusted for inclination by pairs of contact-screws 53 53, threaded through the brackets and having their ends resting against the under side of the bridge.

Upon the guide-rods 48 of each package-holder slides a package-carrier, consisting of a plate 54, having pairs of perforated lugs 55 coöperating with the rods, the forward one of each pair moving into contact with an enlargement or stop member 55^a upon the rod, these serving to limit the outward movement of the carrier thereon. At each side of the inner end of the carrier-plate is an upward extension or post 56, having an outwardly-projecting pin 57, which rests in a recess 58 in the upper end of an arm 59, pivoted at 60 upon one of the supporting-arms. At each side of the carrier-plate in advance of the arms 59 is a finger 61.

Carried by the bridge 51 is a delivery-plate 63, which may be provided with an inclined rear edge 64, extending into close proximity with the associated material-conveyers. It may be adjusted to perfect this alinement by turning the screws 53 in one direction or the other. The package-holder swings toward and from this delivery-plate, it being normally held in coaction with it by a spring 65, which, as illustrated, is in the form of a spiral surrounding the shaft and having one end connected to a collar 66 fast thereon, while the opposite end bears against one of the arms 47,

exerting its tension to turn it upwardly about the shaft. The relation of each package-holder to the delivery-plate may be varied by screws 67, threaded through the supporting-arms and coacting with lugs or projections 68 from the delivery-plate.

The package-holder may be locked with the delivery-plate by the arms 59, which have latch-recesses 69, adapted to overhang and have frictional engagement with the edge of the delivery-plate and support the inner end of said holder. These arms 59 also have contact-surfaces 70, which are engaged by the rounded ends of levers 71, pivoted at 72 upon the delivery-plate. Inclined contact-surfaces 73 lead to surfaces 70 to force these levers outwardly in bringing the parts into coöperation. The levers are preferably held in engagement with the contact-surfaces by a spring common to both, which is illustrated as a bow-spring 74, having angular ends 75 resting in depressions in the levers. The engagement of the arms 59 and levers may be brought about by operating arms or projections 76, fixed to a shaft 77, journaled in the supporting-arms, these arms being movable against lugs 78, depending from the under side of the carrier-plate by a finger-piece 79, secured to the outer end of the shaft. Surrounding the shaft 77 is shown a spiral spring 79^a, having one end surrounding the connecting-rod 47^a, which joins the arms 47, and the opposite end resting against the inner side of one of the operating-arms 76. This spring exerts its tension to hold said arms 76 in their extreme outward position, at which they may contact with the lugs upon the carrier-plate after its travel to the ends of the guide-rods.

Extending into the path of the material at each side are means for temporarily resisting its movement under the influence of the conveyers. This restraining means may consist of flexible members 80, conveniently formed of sheet metal and adjustably fixed to the delivery-plate near one end by screws 81, extending through perforated lugs 82 into the plate. These resisting members or walls are shown as divided longitudinally at 83, the lower section 84 being substantially equal in width to the height of a unit cube to be packaged as it rests upon the delivery-plate. Against these lower sections rest the ends of adjustable screws 85, threaded through the levers 71, and which act to force the lower sections against the cubes by means of the spring 74, thereby resisting the movement of the cubes under the action of the conveyers.

Rearwardly of the restraining members upon the opposite sides of each conveyer lie guide-walls, which are shown as consisting of separated rods 86, carried by standards 87. These extend from within flaring ends 89 of the restraining members back to a distance depending upon the accumulation of the material upon the conveyer necessary to operate

the package-holder. They serve to prevent the displacement of the upper tiers of cubes upon those below them.

Beyond the delivery end of the machine are standards 90, in which is journaled a shaft 91, carrying a roll 92. Over this roll and another situated at a suitable distance therefrom and operating over a table 92^a extends a package-conveyer or belt 93. A continuous travel of this package-conveyer may be obtained by a chain 94, passing over sprocket-wheels upon the shafts 16 and 91.

The material-conveyers may be kept clean by brushes 95, mounted upon a shaft 96, journaled in the standards 10 and operated by a chain 97, surrounding sprocket-wheels on the brush-shaft and the shaft 13.

In using my improved packaging-machine, the retaining-frames 21 being all swung back against the cross-bar 30^a, one being so indicated in dotted lines in Fig. 1, a plate upon which are the cubes of material is brought from the drying-ovens or elsewhere and placed upon the bed with its edges against the contact-pieces, and the lower frame is turned down to surround the cubes. Upon each plate the cubes lie in two sets, one over each conveyer, and in each set every cube is separated from those adjacent to it by comparatively narrow equal spaces, as is shown in Fig. 6. This arrangement results from the press which produces the cubes and deposits them upon the plates. The cubes are now moved into continuous masses longitudinally by pressing the bar 46, carried by its frame, which crowds them against the front bar of the retaining-frame. Then by withdrawing the plate at the side opposite the contact-pieces the cubes are compacted against the edges of the side and middle bars of the frames. This operation disposes the material in the manner illustrated in Fig. 7 in two compact layers on the conveyer. This operation is repeated with a second and third plate by means of the succeeding frames, forming three tiers of cubes resting upon the conveyers and retained by the frames. The material is now ready for release from the retaining-frames, and to effect this the crank-handle 31 is turned quickly to the left by an attendant. This by the coaction between the pinions and racks and the slots, pins, and cam members in the manner previously described moves the frames forwardly and laterally or at an angle to the direction of travel of the conveyers, the parts assuming the positions indicated in dotted lines in Fig. 2. The retaining movement is such that before the material can be started in its travel by the conveyers it is completely freed from the contact of the frames and all possibility of displacement of the cubes avoided. The forward ends of the frames also rise, and the material carried by the conveyers starts toward the delivery end. The frames are then turned back on the sup-

porting-bar 30^a to receive another set of plates.
 At this time each package-holder is raised and
 locked in position; its carrier having been pro-
 vided with a carton C, closed at its outer end
 5 and placed between the fingers 61, with op-
 posite side flaps *c c* turned back and held in
 place by the posts 56, and a downwardly-
 turned flap *c'* engaged between the edge of
 the carrier-plate and the delivery-plate. The
 10 open throat of each carton is in alinement with
 a section of the delivery-plate beyond one of
 the conveyers. The piles of material pass be-
 tween the opposed guide-walls, and the forward
 cubes are forced over the delivery-plates into
 15 the cartons until they contact with the closed
 rear walls. Meanwhile fresh charges of ma-
 terial are supplied to the conveyers in the
 same manner and are moved through the ma-
 chine one by one until they strike the preced-
 20 ing charge held by the cartons, these latter
 being prevented from moving longitudinally
 upon the carriers by the engagement of the
 flap *c'*. The guide-walls prevent lateral dis-
 placement of the cubes upon one another as
 25 their movement ceases, while the conveyers
 move beneath them. This continues until the
 frictional force of the conveyers against the
 under sides of the aggregated material ex-
 ceeds the resistance of the latch-arms 59,
 30 which are locked upon the plate 63. They
 then unlatch, and the weight of the filled car-
 tons overcomes the action of the springs 65,
 when the carriers swing downward and the
 cartons slide forward, as shown in Fig. 13,
 35 until their ends come in contact with the con-
 veyer 93. This draws them from the carrier
 and delivers them to be sealed and packed.
 The package-carriers will be returned by the
 action of the springs 65 ready to be locked in
 40 place when the cartons have been replaced.
 At the same moment that each carrier un-
 latches from the delivery-plate the levers 71
 on each side of the restraining-plates are re-
 lieved by the disengagement of the arms 59,
 45 and their screws 85 are pressed against the
 lower sections 84 of the retaining-walls by
 the action of the spring 74. These contact
 with the cubes that remain on the delivery-
 plate, holding them from moving forward
 50 until the carton is replaced and the holder is
 again locked in position by means of the fin-
 ger-piece 79. This spreads the levers 71 apart
 as their rounded edges ride over the inclined
 surfaces 73 of the arms 59 and removes the
 55 pressure of the screws. Then the cubes will
 pass freely between the retaining-walls and
 enter the carton and the operation just de-
 scribed will be repeated. It will be seen that
 an attendant at the delivery end of the ma-
 60 chine simply replaces the cartons when they
 have been delivered to the package-conveyer
 and locks the holders in place. These car-
 tons will be released when enough material
 has reached the delivery end to give sufficient
 65 frictional contact with the conveyers to per-

form the work of filling and unlocking, and
 until such time the forward cubes will not ad-
 vance.

Having thus described my invention, I
 claim—

1. A packaging-machine comprising a con-
 veyer, a package-holder toward which mate-
 rial is moved by the conveyer, and means for
 temporarily restraining the movement of the
 material.

2. A packaging-machine comprising a con-
 tinuously-operating conveyer, a package-
 holder toward which material is moved by the
 conveyer, and means for temporarily restrain-
 ing the movement of the material.

3. A packaging-machine comprising a con-
 veyer, a package-holder toward which mate-
 rial is moved by the conveyer, and spring-ac-
 tuated means for temporarily restraining the
 movement of the material.

4. A packaging-machine comprising a con-
 veyer, a package-holder toward which mate-
 rial is moved by the conveyer, and restrain-
 ing members situated adjacent to the package-
 holder and extending into the path of the ma-
 terial.

5. A packaging-machine comprising a con-
 veyer, a package-holder toward which mate-
 rial is moved by the conveyer, restraining
 members situated adjacent to the package-
 holder and extending into the path of the ma-
 terial, and means for varying the relation of
 the members to the conveyer.

6. A packaging-machine comprising a con-
 veyer, a package-holder toward which mate-
 rial is moved by the conveyer, means for
 temporarily restraining the movement of the
 material, and a wall extending along each side
 of the conveyer rearwardly from the restrain-
 ing members.

7. A packaging-machine comprising a con-
 veyer, a package-holder toward which mate-
 rial is moved by the conveyer, and restrain-
 ing members having independently-movable
 sections situated adjacent to the package-
 holder and extending into the path of the ma-
 terial.

8. A packaging-machine comprising a con-
 veyer, a package-holder toward which mate-
 rial is moved by the conveyer, and restrain-
 ing members situated adjacent to the package-
 holder and being divided longitudinally of the
 conveyer.

9. A packaging-machine comprising a con-
 veyer, a package-holder toward which mate-
 rial is moved by the conveyer, and restrain-
 ing members situated adjacent to the package-
 holder and being divided longitudinally of
 the conveyer, the distance of the divisions
 above the plane of the conveyer being sub-
 stantially equal to the thickness of a unit to
 be packaged.

10. A packaging-machine comprising a con-
 veyer, and a package-holder toward which
 material is moved by the conveyer, said pack-

age-holder being movable under the influence of the weight of the material.

11. A packaging-machine comprising a conveyor, and a package-holder pivoted adjacent to the conveyor, said package-holder swinging under the influence of the weight of the material.

12. A packaging-machine comprising a conveyor, a package-holder toward which material is moved by the conveyor, and a lock for the package-holder operable by the pressure of the material.

13. A packaging-machine comprising a conveyor, a package-holder toward which material is moved by the conveyor, and a friction-lock for the package-holder.

14. A packaging-machine comprising a conveyor, and a package-holder toward which material is moved by the conveyor pivoted adjacent to said conveyor and movable toward and from the same.

15. A packaging-machine comprising a conveyor, a package-holder toward which material is moved by the conveyor, and spring-actuated members mounted with the conveyor and engaged by the package-holder.

16. A packaging-machine comprising a conveyor, a package-holder toward which material is moved by the conveyor and consisting of a swinging support and a carrier movable upon the support.

17. A packaging-machine comprising a conveyor, a package-holder toward which material is moved by the conveyor and consisting of a swinging support and a carrier mounted to slide upon the support.

18. The combination with a material-conveyor and a package-conveyor, of interposed means for holding and delivering the package.

19. The combination with a material-conveyor and a package-conveyor, of a package-holder movable from coaction with one conveyor to coaction with the other.

20. The combination with a material-conveyor and a package-conveyor, of a package-holder movable from coaction with one conveyor to coaction with the other, and means for normally maintaining the coaction between the package-holder and the material-conveyor.

21. The combination with a material-conveyor and a package-conveyor, of a package-holder movable between the conveyers, and a spring for normally maintaining the coaction of the package-holder with the material-conveyor.

22. The combination with a material-conveyor and a package-conveyor, of a package-holder movable between the conveyers, and a lock for temporarily retaining the package-holder in coaction with the material-conveyor.

23. A packaging-machine comprising a conveyor, a package-holder toward which material is moved by the conveyor, said package-holder being movable under the influence of

the weight of the material, and means for temporarily restraining the movement of the material.

24. A packaging-machine comprising a conveyor, a package-holder toward which material is moved by the conveyor, a lock for the package-holder operable by the pressure of the material, and restraining members situated adjacent to the package-holder and extending into the path of the material.

25. The combination with a material-conveyor and a package-conveyor, of interposed means for holding and delivering the package, and means for temporarily restraining the movement of material upon the first-named conveyor.

26. The combination with a material-conveyor and a package-conveyor, of interposed means for holding and delivering the package movable under the influence of the weight of the material.

27. The combination with a material-conveyor and a package-conveyor, of interposed means for holding and delivering the package movable under the influence of the weight of the material, and means for temporarily restraining the movement of the material upon the first-named conveyor.

28. In a packaging-machine, the combination with a traveling conveyor, of a frame movable adjacent to the conveyor, and means for guiding the frame at an angle to the direction of travel of the conveyor.

29. In a packaging-machine, the combination with a traveling conveyor, of a frame mounted above the conveyor, and means for moving the frame toward and from the conveyor.

30. In a packaging-machine, the combination with a traveling conveyor, of a frame mounted above the conveyor, and means for simultaneously moving the frame toward and from the conveyor and at an angle to the direction of travel thereof.

31. In a packaging-machine, the combination with a traveling conveyor, of a plurality of frames mounted above the conveyor, and means for simultaneously moving all the frames toward and from the conveyor and at an angle to the direction of travel thereof.

32. In a packaging-machine, the combination with a conveyor, of a plurality of frames situated adjacent to the conveyor and one above the other, and means for spacing the frames apart.

33. In a packaging-machine, the combination with a conveyor, of a frame movable adjacent to the conveyor, and means carried by the frame for moving material therein.

34. In a packaging-machine, the combination with a conveyor, of a frame movable adjacent to the conveyor, and a bar extending across the frame and being movable therein.

35. In a packaging-machine, the combination with a continuously-operating traveling

conveyer, of a package-holder to which it delivers, means for receiving portions of material and temporarily retaining them upon the conveyer against movement therewith, a releasing device for said material, and means adjacent to the package-holder for temporarily restraining the movement of material.

36. The combination with a conveyer and a package-holder, of oppositely-situated movable members extending from the conveyer adjacent to the holder, and a spring common to said members for forcing them toward one another.

37. The combination with a conveyer and a package-holder, of oppositely-situated flexible members extending from the conveyer adjacent to the holder, and a spring common to said members for forcing them toward one another.

38. The combination with a conveyer and a movable package-holder, of oppositely-situated movable members extending from the conveyer adjacent to the holder, and a lever coacting with each movable member and with the package-holder.

39. The combination with a conveyer and a movable package-holder, of oppositely-situated movable members extending from the conveyer adjacent to the holder, a lever coacting with each movable member and with the package-holder, and a spring connecting the levers.

40. The combination with a conveyer and a movable package-holder, of oppositely-situated movable members extending from the conveyer adjacent to the holder, and a lever situated at each side of the movable members and coacting with the holder and having an adjustable portion contacting with one of the movable members.

41. The combination with a conveyer and a movable package-holder, of oppositely-situated movable members extending from the conveyer adjacent to the holder, a lever situated at each side of the movable members and coacting with the holder and having an adjustable portion contacting with one of the movable members, and a spring connecting the levers.

42. The combination with a frame and a conveyer movable therein, of a package-holder comprising a support swinging upon the frame and having contact-surfaces, and a spring-actuated lever carried by the frame and coacting with said surfaces.

43. The combination with a frame and a conveyer movable therein, of a package-holder comprising a support swinging upon the frame, guides extending from the support, and a carrier movable upon the guides.

44. The combination with a frame and a conveyer movable therein, of a package-holder comprising a support swinging upon the frame, guides extending from the support, a carrier movable upon the guides, and arms

pivoted upon the support and having engagement with the carrier.

45. The combination with a frame and a conveyer movable therein, of a package-holder comprising a support swinging upon the frame, arms pivoted to the support, and a carrier movable upon the support and engaging the arms.

46. The combination with a frame and a conveyer movable therein, of a package-holder comprising a support swinging upon the frame, arms pivoted to the support, a carrier movable upon the support and engaging the arms, and levers carried by the frame for engagement with the arms.

47. The combination with a frame and a conveyer movable therein, of a package-holder comprising a support swinging upon the frame, arms pivoted to the support, a carrier movable upon the support and engaging the arms, levers carried by the frame for engagement with the arms, and means mounted upon the support for effecting the coöperation of the arms and levers.

48. The combination with a frame and a conveyer movable therein, of a package-holder comprising a support swinging upon the frame, arms pivoted to the support, a carrier movable upon the support and engaging the arms, levers carried by the frame for engagement with the arms, and a shaft journaled in the support and provided with an operating-arm movable into contact with a portion of the carrier.

49. In a packaging-machine, the combination with a conveyer, of a frame movable above the conveyer, and a guide for the frame having a laterally and upwardly inclined portion.

50. In a packaging-machine, the combination with a supporting-frame, of a conveyer operating therein, a shaft movable above the conveyer, a frame turning about the shaft, and coacting cam members carried by the shaft and by the supporting-frame.

51. In a packaging-machine, the combination with a supporting-frame, of a conveyer operating therein, a shaft movable above the conveyer, a frame turning about the shaft, coacting cam members carried by the shaft and by the supporting-frame, the cam member upon the shaft being movable therefrom, and a spring for forcing the last-named cam member into contact with that upon the supporting-frame.

52. In a packaging-machine, the combination with a supporting-frame provided with a rack, of a conveyer operating therein, a shaft movable above the conveyer, a frame turning about the shaft, and a pinion fixed to the shaft and meshing with the rack.

53. In a packaging-machine, the combination with a supporting-frame provided with a rack, of a conveyer operating therein, a shaft movable above the conveyer, a frame turning about the shaft, a pinion fixed to the

shaft and meshing with the rack, and a guide for the frame having a laterally and upwardly inclined portion.

54. In a packaging-machine, the combination with a conveyer, of a package-holder, and a delivery-plate interposed between the conveyer and the package-holder.

55. In a packaging-machine, the combination with a conveyer, of a package-holder, a delivery-plate interposed between the conveyer and the package-holder, and a latch for the package-holder engaging the delivery-plate.

56. In a packaging-machine, the combination with a conveyer, of a package-holder, and a delivery-plate interposed between the conveyer and the package-holder and having a reduced edge coacting with the conveyer.

57. In a packaging-machine, the combination with a conveyer, of a package-holder, a delivery-plate interposed between the conveyer and the package-holder, and means for adjusting the delivery-plate with relation to the conveyer.

58. In a packaging-machine; the combination with a conveyer, of a delivery-plate situated adjacent thereto, and a package-holder mounted with the delivery-plate.

59. In a packaging-machine, the combination with a conveyer, of a package-holder, a delivery-plate interposed between the conveyer and the package-holder, and restraining members carried by the delivery-plate at each side of the conveyer.

60. In a packaging-machine, the combination with a conveyer, of a delivery-plate situated adjacent thereto, restraining members carried by the delivery-plate at each side of the conveyer, and a package-holder mounted with the delivery-plate.

Signed at Boston, in the county of Suffolk and State of Massachusetts, this 20th day of July, 1904.

HENRY D. WINTON.

Witnesses:

FRANCIS C. HERSEY, Jr.,
WILLIAM T. KERSHAW.