

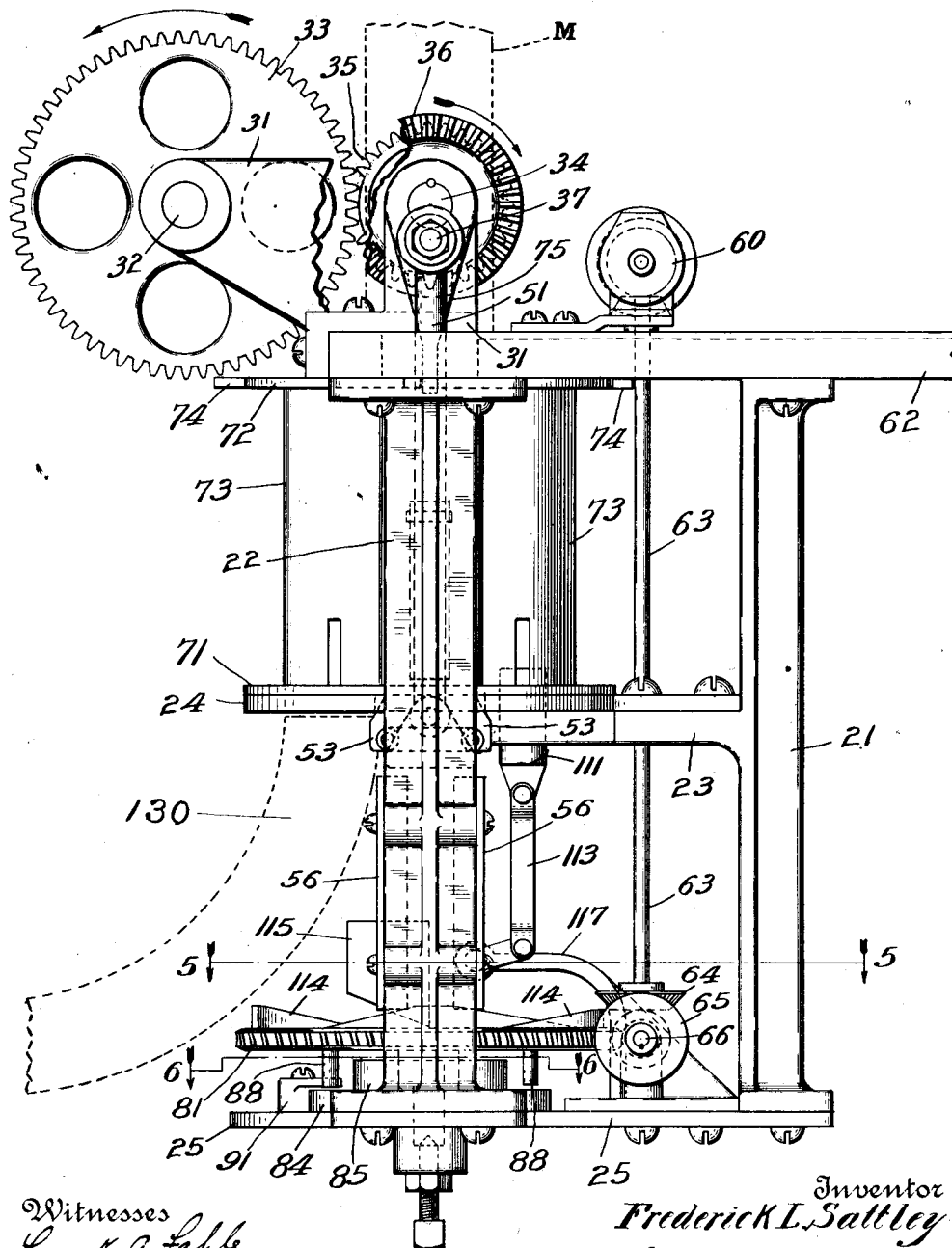
F. L. SATTLEY.
 COIN PACKAGING MACHINE.
 APPLICATION FILED OCT. 21, 1907.

1,047,304.

Patented Dec. 17, 1912.

6 SHEETS—SHEET 1.

Fig. 1.



Witnesses
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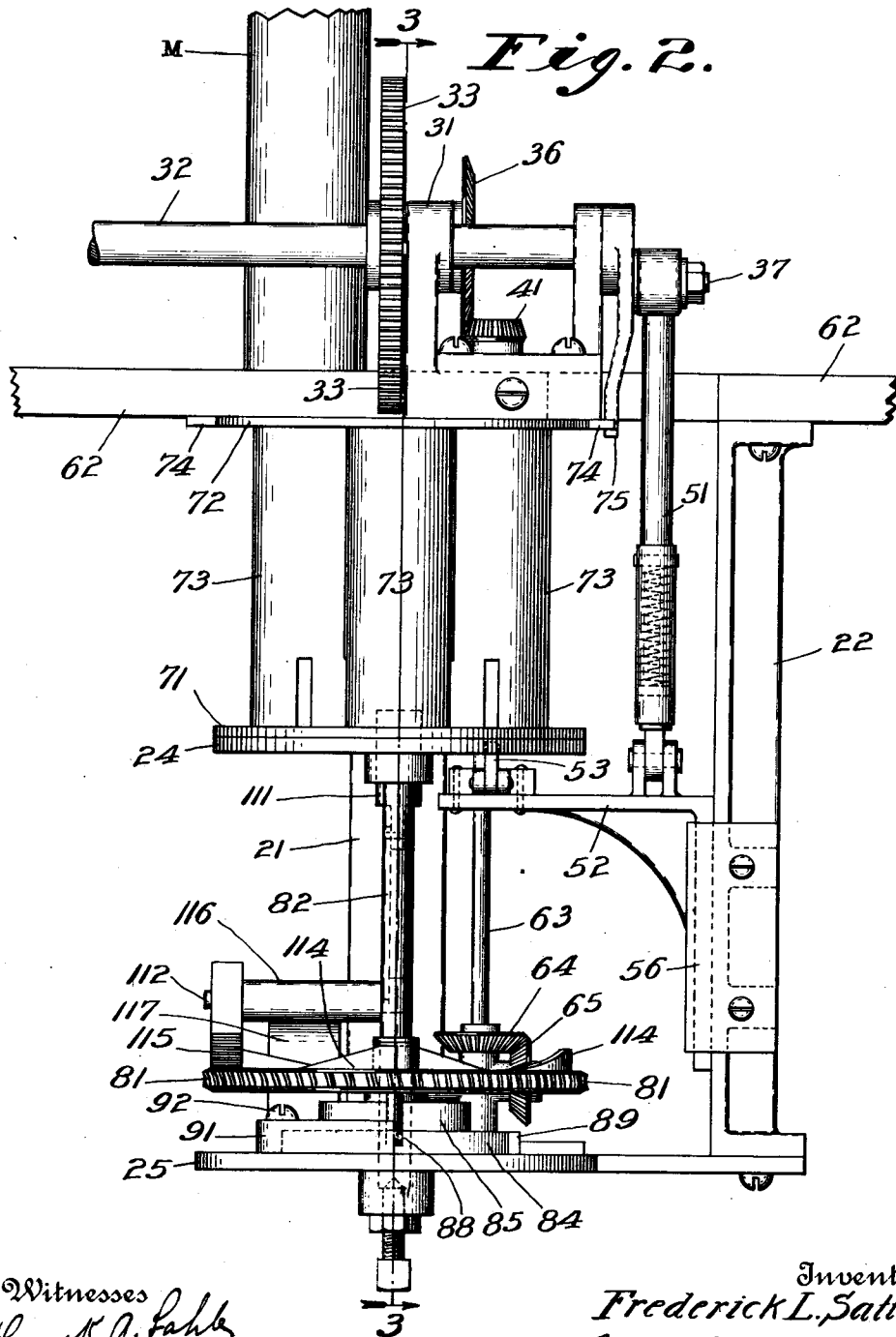
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6 SHEETS—SHEET 2.



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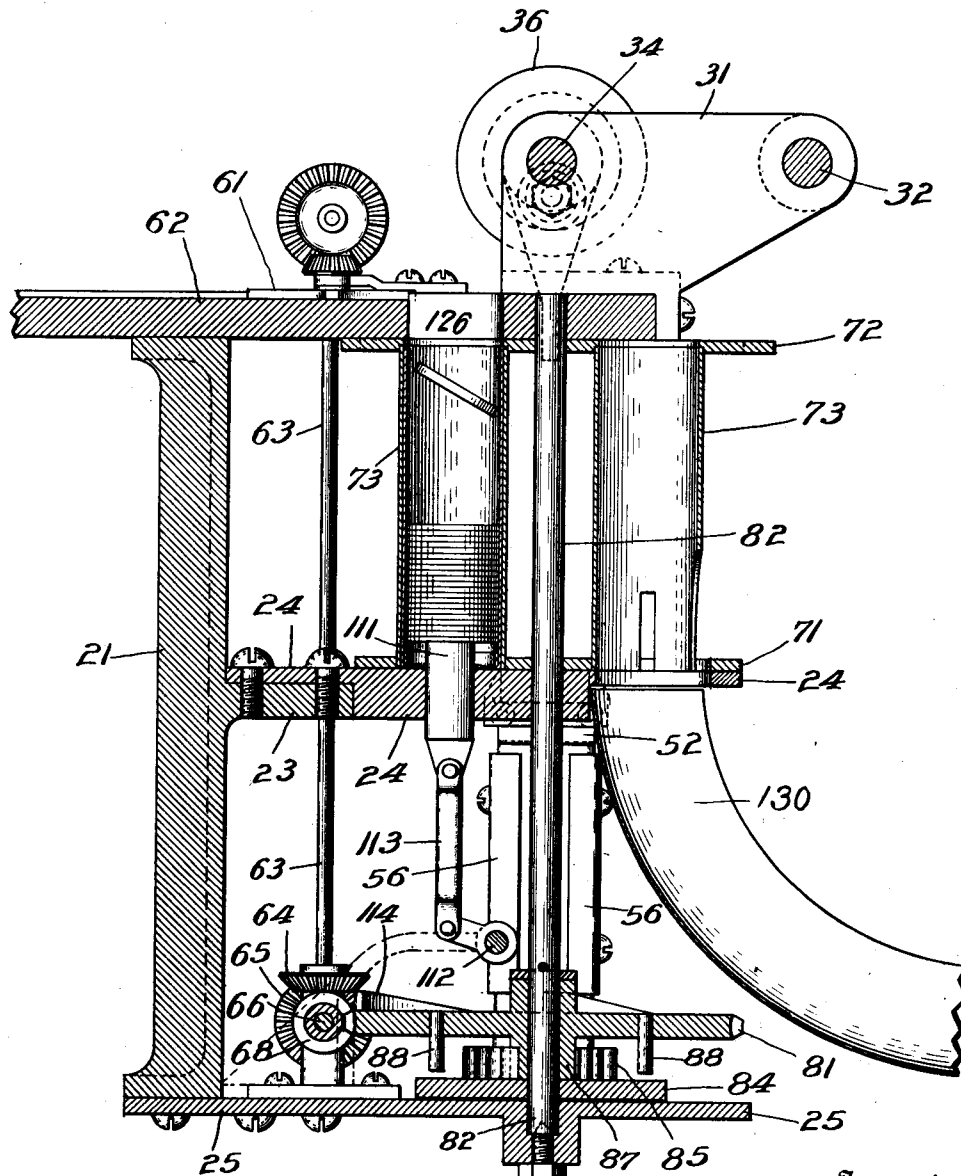
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6 SHEETS—SHEET 3.

Fig. 3.



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Fig. 4.

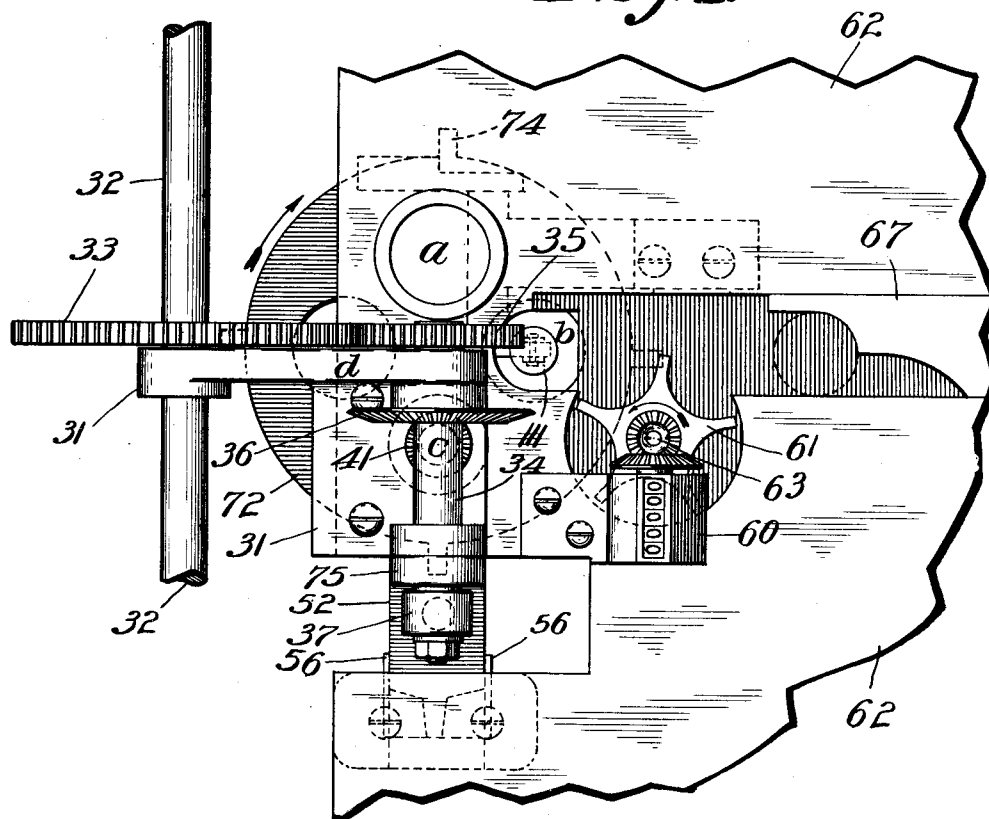
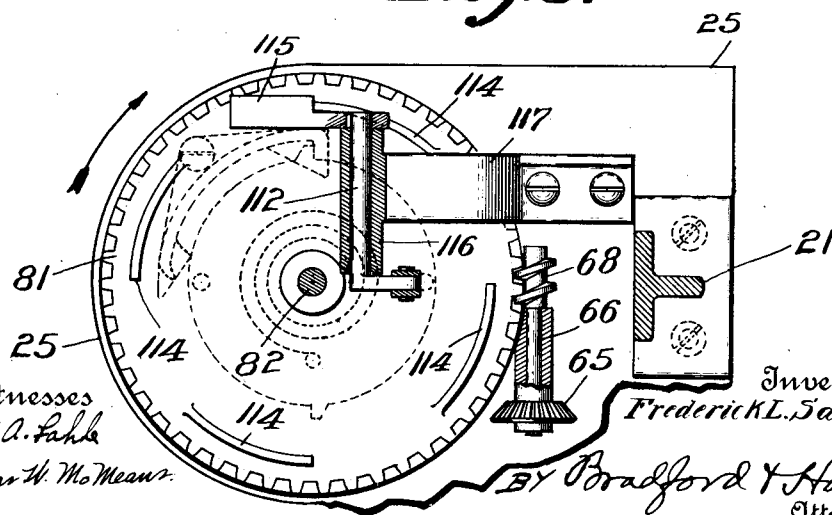


Fig. 5.



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Fig. 6.

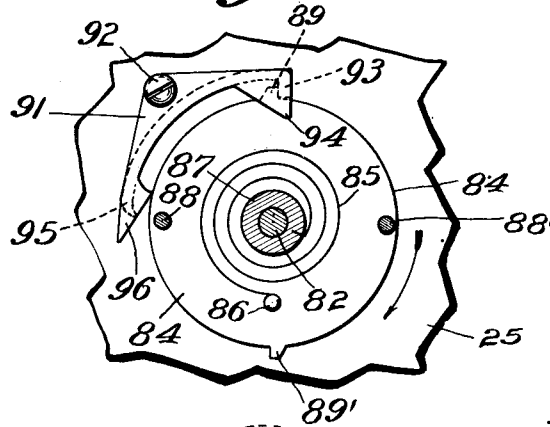


Fig. 8.

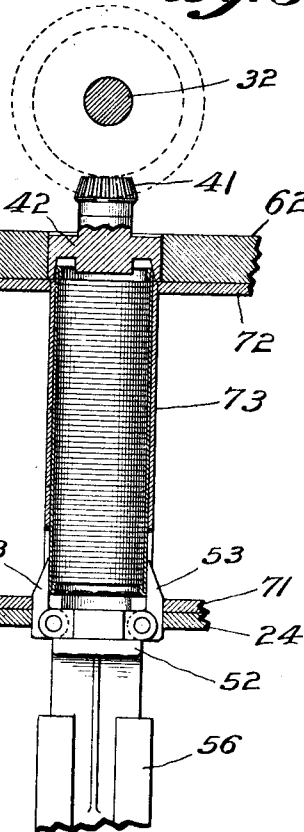


Fig. 7.

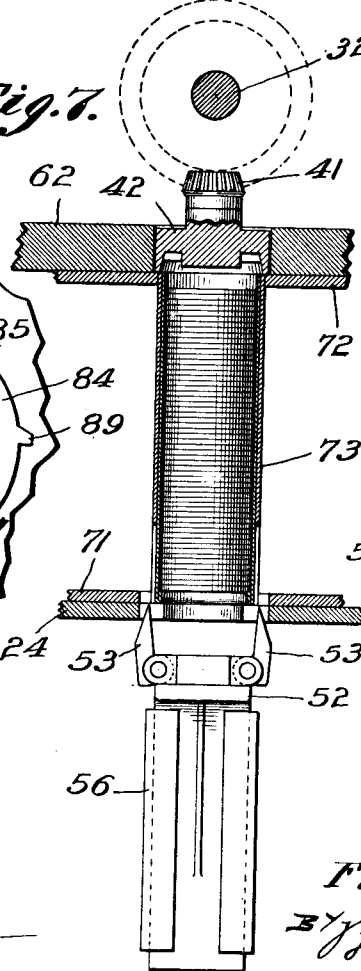
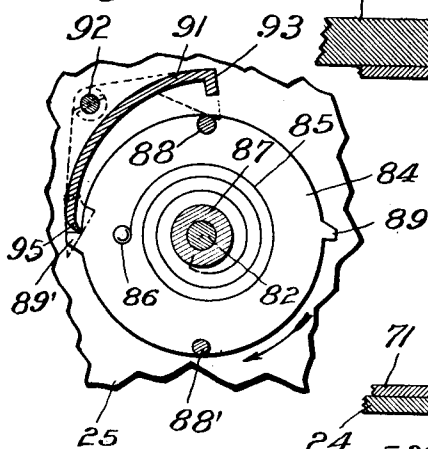


Fig. 6a



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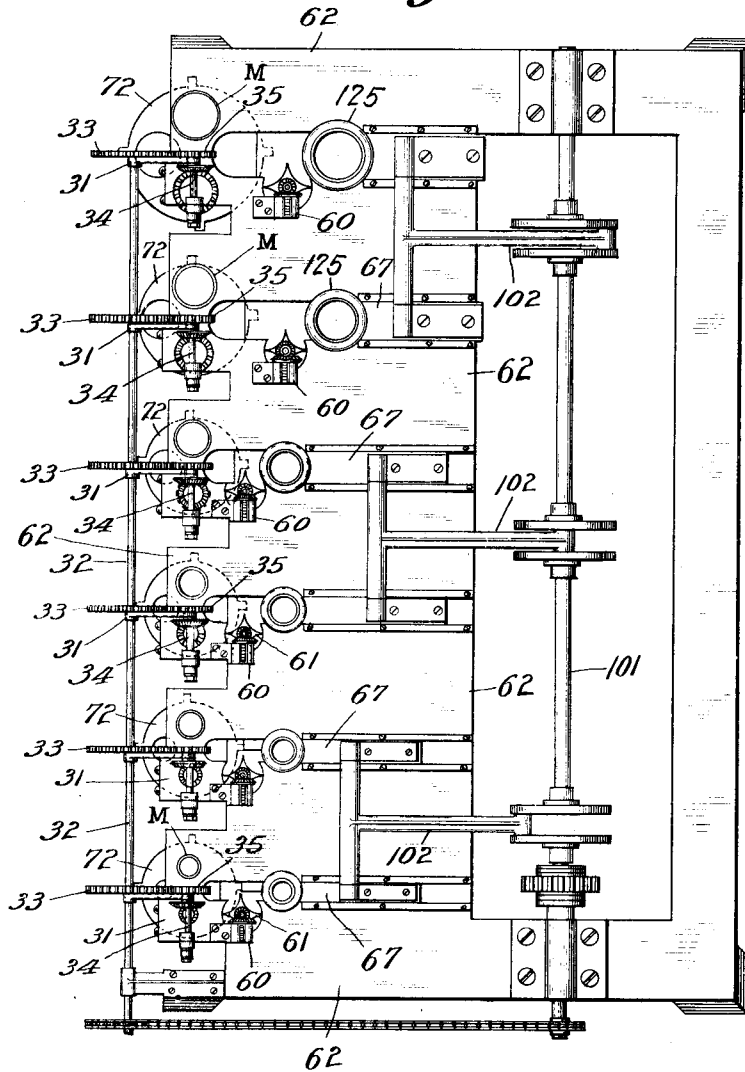
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6 SHEETS—SHEET 6.

Fig. 9.



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UNITED STATES PATENT OFFICE.

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COIN-PACKAGING MACHINE.

1,047,304.

Specification of Letters Patent.

Patented Dec. 17, 1912.

Application filed October 21, 1907. Serial No. 398,438.

To all whom it may concern:

Be it known that I, FREDERICK L. SATTLEY, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Coin-Packaging Machines, of which the following is a specification.

In those financial institutions and mercantile establishments where large quantities of coin are handled, it is necessary to put the coins into packages for convenience in handling. To do this by hand involves much labor; and there is also of course always the liability of mistake. Weighing cannot always be depended upon, because there is often sufficient abrasion of the coins to materially vary the weight, so that sometimes the variation will be sufficient to require an increased number to make up the weight. Graduated measuring devices are likewise not fully reliable for the same reason. To overcome these objections various mechanisms for counting the coins have been produced. In connection with the counting mechanism it is of course necessary to have packaging means in order to properly dispose of the coins as counted. Such packaging means, so far as I am aware, have heretofore been of such character as to require the cessation of the counting from time to time, as each package was filled or completed, for the purpose of removing the completed package and introducing a new receptacle for the coins to be included in the succeeding package. This makes necessary considerable labor, and such cessation of operation also consumes a certain amount of time, reducing the capacity of the machine.

A leading object of my invention, therefore, is to provide, in connection with appropriate counting mechanism, a coin-packaging means automatically operated or set in motion by said counting mechanism, by means of which the counting, packaging and disposal of the coins and the discharge of the completed packages may be made continuous.

My invention also includes means for closing the packages as they reach the predetermined size, means for discharging the completed packages from the machine, and means for automatically introducing into the machine empty shells or coin-containers

ready to receive the flow of coins from the counter.

Said invention further consists in various novel mechanisms, and in the construction and arrangement of various parts, all of which will be hereinafter more particularly described and thereafter defined in the claims.

Referring to the accompanying drawings, which are made a part hereof and on which similar reference characters indicate similar parts, Figure 1 is a side elevation of a coin packaging machine embodying my present invention; Fig. 2 a rear elevation thereof; Fig. 3 a vertical sectional view thereof as seen when looking in the direction indicated by the arrows from the dotted line 3 3 in Fig. 2; Fig. 4 a top or plan view of one machine or unit (the invention contemplating the use of these devices in series); Fig. 5 a detail horizontal sectional plan view as seen when looking downwardly from the dotted line 5 5 in Fig. 1; Fig. 6 a similar view looking downwardly from the dotted line 6 6 in Fig. 1; Fig. 6^a a view similar to Fig. 6 but with the parts in different positions and with the escapement shown in section; Fig. 7 a sectional view through a coin package just at the time when the counting has been completed but before the package has been closed, together with the adjacent parts of the machine; Fig. 8, a view similar to Fig. 7 after the package has been closed, and Fig. 9 a top or plan view showing a coin-counting machine adapted to count six different denominations of coins, each counting unit being arranged to deliver into one of my improved packaging devices, and the whole thus becoming a unitary machine capable of counting and packaging all the several denominations of coin provided for.

I may here remark that the counting mechanism in itself is substantially the same as that shown and described in my pending application, Serial No. 314,251, filed April 28, 1906, and that my present invention is for the purpose of completing the work of handling coins and putting them in convenient condition for use which is begun by the machine of the invention shown and described in said application. The table may be understood to be common to both mechanisms which go to make up the com-

plete apparatus. Depending from this table 62 are suitable standards or frame parts 21 and 22. Upon the part 21 is a bracket 23 to which is rigidly attached a circular platform 24, and to the lower ends of the two members 21 and 22 I secure a second platform 25, by means of which the lower mechanism of my apparatus is supported. Mounted on the table 62 is a bracket 31 having bearings in which are mounted the driving shaft 32, bearing the spur gear-wheel 33 and the main shaft 34 bearing the mutilated spur gear-wheel 35, the bevel gear-wheel 36, and the crank 37.

The bevel gear wheel 36 engages with a bevel pinion 41 which drives the container-closing head 42, as will be presently described. The crank or wrist 37 drives the pitman 51, which, in turn, operates the reciprocating head 52 carrying gripping jaws 53 which serve to grip and hold the packages, and carry the same up into operative contact with the package-closing head 42, and to withdraw them therefrom. They are forced into the gripping position as they ascend by the adjacent surfaces of the platform 24, through a hole in which they are arranged to pass. Their lower and upper positions are shown respectively in Figs. 7 and 8. The reciprocating head 52 is mounted in slides 56 carried on the frame member 22, as is best shown in Figs. 2 and 7. As shown by means of dotted lines in Fig. 2, an elastic element is introduced into the pitman 51, in order that it may yield somewhat at the end of its stroke (if necessary), and thus insure the efficient contact of the jaws with the coin-containers, and the forcing of the same closely up into the package-closing head 42 in every instance. Head 42 is provided on its under surface with an annular recess or socket the outer wall of which tapers inwardly and upwardly and the bottom of which is provided with radial ribs, the arrangement being such that, as the head 42 is rotated, the upper end of the wall of the container will be crimped inward and downward by the rubbing action of the head.

Mounted on the platform 24 and resting between said platform and the table 62 is a rotary structure for carrying the packages at the various steps during the packaging operation. This structure has two plates or heads 71 and 72 between which are secured four open-ended cylinders 73 which are adapted to receive and hold the coin-containers during the operation of the machine. Each of these cylinders performs a different work in each of its four different positions. In position *a* (see especially Fig. 4) it receives the empty coin-containers, one by one, from a suitable magazine (as *M*); in position *b* it receives the coins one by one from the counting mechanism; in position *c*

the filled coin-containers are closed or headed as by means of the head 42; and when in position *d* the coin packages (in complete form) are discharged therefrom through the discharge chute 130. This structure is given one-fourth of a revolution as the filling of each coin-container to the predetermined number is completed. It may here be remarked that the said structure 71—72—73 is so proportioned and the operating mechanism so constructed as to give said structure just one-fourth of a revolution at each operation, thus bringing each of the open-ended cylinders 73 into exact registry with the corresponding opening in the table 62, one of which openings 126 is at the end of the path along which the coins are propelled by the counting mechanism, and the others of which are positioned respectively to receive the empty coin containers from the magazine *M*; to close the filled coin containers; and to discharge the completed packages, as before indicated.

125 are tubular magazines, each adapted to hold a stack of superimposed coins of a given denomination, and across the bottom of each magazine the plunger 67 reciprocates to feed out one coin at a time from the bottom of the stack and move it to the opening 126 through which it falls into a coin-package held in registration therewith on the package carrier.

The movements of the parts which have been described are dependent upon and governed by the counting mechanism. Each coin, as it reaches the vicinity of the opening in the table 62 above the open coin-container situated at the end of its path of movement (said coin being moved by the plunger 67 as in the machine of my application Serial No. 314,251 above referred to) comes in contact with a star-wheel 61 mounted on a shaft 63. This shaft is designed to connect, through suitable gears, with a register of any desired type (as 60) as before. Said shaft also extends to near the bottom of my packaging attachment; and, through bevel gears 64 and 65, revolves a shaft 66 which is shown as engaging, by means of a worm 68, with a worm-wheel 81, which is loosely mounted on a suitable shaft 82. Said shaft 82 is mounted in suitable bearings in the table 62 and the lower plate or platform 25, and also passes through the platform 24. Said shaft 82 is the shaft of the structure 71—72—73 which is secured thereon at the point between the table 62 and platform 24, and there is also secured thereon (adjacent to the worm wheel 81) a disk 84—so that said shaft, said structure and said disk revolve together. Between the disk 84 and the worm wheel 81 is placed a spring 85, one end of which (as best shown in Figs 6 and 6*, and the dotted

lines in Fig. 5) is secured to a pin 86 or other suitable attachment on the disk 84, while the other end is secured by means of the hub 87, or otherwise, to the worm wheel 81. The worm wheel 81 has two projecting pins 88, and the disk 84 has two projecting lugs 89. For the purpose of convenience in describing the operation at various positions, I have marked these pins and projections in Figs. 6 and 6^a as 88 and 88', and 89 and 89' severally, although structurally they are indistinguishable.

Positioned alongside the disk 84 and extending into the path of the pins and lugs 88 and 89 is an escapement 91 carried by pivot-shaft 92 on the plate 25. The form of this escapement is best shown in Figs. 6 and 6^a; and the operation is as follows: When the machine is in use the worm wheel 81 is in continuous rotation, being actuated from the counting mechanism, as already described. In the position shown in Fig. 6 the detent 93 of the escapement 91 is in engagement with the lug 89 on the disk 84; and said disk, the shaft 82, and the structure 71—72—73 carried by said shaft, are thus held from further revolution so long as said engagement continues. When, however, the pin 88 on the worm wheel 81 comes in contact with the inclined surface of cam 94 of escapement 91, the detent 93 will be thrown out of engagement with projection 89, and the accumulated force of the spring 85 will serve to suddenly propel said disk, shaft and structure in a rotary direction. The swinging of escapement 91 has, however, thrown detent 93 into the path of projection 89' and as detent 93 is positioned a distance of one-fourth a revolution of disk 84 from detent 93, and as projection 89' is diametrically opposite projection 89, the result is that said disk, shaft and structure revolve suddenly just one-fourth of a revolution, to the position shown by Fig. 6^a, and then stop. The rotation of the worm wheel 81 continues until pin 88' thereon comes in contact with the inclined surface of cam 96 on escapement 91, which will throw detent 93 out of engagement with projection 89', and at the same time throw detent 93 back into the path of projection 89'. This operation is therefore continually repeated—the worm wheel traveling slowly but continuously, and the shaft 82 and parts carried thereby revolving suddenly under the action of the spring force periodically—each movement thereof being one-fourth of a revolution—the result being to bring the mouths of the cylinders 73 into registry with the cooperating structures and devices at exactly the right times, and these times being governed with unerring accuracy by the count; or, in other words, by the number of coins which pass the star wheel 61.

As shown in Fig. 9, there are a consider-

able number of these counting and packaging mechanism embodied in a single structure. This is so that the coins which are to be assorted and counted may have for each denomination a separate counting and packaging mechanism wherein the coin-containers shall be of proper size for such denomination, and thus permit the operation to proceed continuously in the handling of a large quantity of miscellaneous or mixed coins. The counters are all driven from a single shaft 101 by appropriate pitmen 102. Alongside the packaging machine, as already stated, is a continuously rotating shaft 32 mounted in brackets 31; and alongside said shaft 32, and partially mounted in the same bracket structures, are the short shafts 34 bearing the mutilated gears 35. Manifestly, so long as the portion of said mutilated gear which has no teeth is presented to the spur-gear-wheel 33 on shaft 32, the shaft 34 will remain idle. As already stated, there is on said shaft 34 an arm 75; and the top plate 72 of the rotary structure has projecting fingers 74 which extend into the path of said arm. As already described, this rotary structure moves suddenly by fourths-of-revolutions under the impulse of the spring 85. One of the fingers 74 will at each movement come in contact with the rear side of the arms 75, and give it and the shaft 34 a sufficient movement to throw the teeth of the mutilated gear 35 into engagement with the spur gear-wheel 33, whereupon the shaft 34 and parts carried thereby will be given the remainder of a complete revolution, bringing the arm 75 back to its original position. Another one of the fingers 74 has by this time been moved up to this point, and the arrangement and proportions are such that the arms 75 will exactly come in contact therewith when the untoothed portion of mutilated gear 35 is presented to gear wheel 33. The movement of shaft 34 and parts carried thereby then stops, and said parts remain idle until the next operation of the device, as above described.

To insure that the first coins shall lie flat in the bottom of the coin-container, and not be wedged by being caught in falling edgewise upon the intumed lower edge, it is necessary that there should be a central support. I have shown such a support most plainly in Fig. 3, where the plunger 111 is operated from rock-shaft 112 through link 113, and said rock-shaft is in turn operated by cams 114 on the top of worm-wheel 81 through arm 115 extending out from said rock-shaft into the path of said cams. Said rock-shaft rests in a bearing 116 on arm 117 extending up from the plate 25. The cams are equal in number to the cylinders 73 (*i. e.* four), and the parts are so proportioned that the plunger 111 is raised to the

desired point at the beginning of the filling of the coin-container, and will descend and escape therefrom just before the structure carrying the coin-containers is revolved by the force of the spring 85.

Having thus fully described my said invention, what I claim as new and desire to secure by Letters Patent, is:—

1. The combination, in a coin packaging apparatus, of means for delivering the coins thereto one by one, a rotary device interposed in the path of the coins and given a step-by-step movement by the coins as they pass, a shaft driven by said device, a rotating structure carrying the coin-containers into which the coins are delivered, a shaft to said device, a wheel loosely mounted on said shaft and driven steadily from the shaft of the device in the path of the coins, a connection between said wheel and the shaft carrying the structure for the coin-containers embodying a spring, an escapement, and means for periodically operating said escapement, whereby said shaft and said structure are driven by sudden periodical movements from the said wheel having a steady movement.

2. The combination, in a coin packaging apparatus, of a shaft driven by the coins as they are fed to the apparatus, a second shaft carrying a structure for holding the coin-containers, a shaft to said structure, a wheel loosely mounted on said shaft, a driving connection between said wheel and said first-named shaft, a spring connecting said wheel and said last-named shaft, detents also carried by said last named shaft, an escapement mounted adjacent thereto, and projections on said wheel for operating said escapement at certain predetermined points in the revolution of said wheel, whereby at said points said escapement is released and said last named shaft and the parts carried thereby enabled to move suddenly forward a predetermined portion of a revolution under the impulse of said spring.

3. The combination, in a coin packaging apparatus, of a rotating structure carrying the coin-containers, means for delivering a predetermined number of coins into the coin-containers carried by said structure successively, means controlled by the passage of the last coin of a series for suddenly moving said structure as each coin-container is filled, means for closing the coin-containers when filled, and means set in motion by the structure carrying said coin-containers for performing the closing operation.

4. The combination, in a coin-packaging apparatus, of a structure carrying coin-containers, means for moving said structure as the coin-containers are respectively filled, a heading device for heading in the coin-containers as they reach a predetermined point, a shaft driven by a mutilated gear for

revolving said heading device, an arm carried by the same shaft as said mutilated gear, and projections on the structure carrying the coin-containers extending into the path of said arm, whereby said arm is slightly moved and the mutilated gear thrown into operative connection with its driver at each movement of said structure.

5. The combination, in a coin packaging machine, of a structure carrying the coin-containers, a reciprocating device adapted to extend up into the lower ends of said coin-containers respectively as they reach the position to be filled, and means for actuating said reciprocating device, whereby it is projected into said position at the beginning of the filling operation, and withdrawn from said position when the filling is sufficiently completed and before the next movement of the structure carrying the coin-containers.

6. The combination in a coin packaging machine of a carrier adapted to carry coin-containers, a reciprocating device adapted to support and hold the coins during the time the container is being filled, means for actuating said device to withdraw the same from the filled coin-container and means for advancing said carrier upon the withdrawal of the reciprocating device.

7. A coin packaging machine comprising means for filling a previously-formed coin-container with a predetermined number of coins, means for delivering the first coin of the next predetermined number into a succeeding previously-formed container, means controlled by coin movement for securing the coins in their containers, and means for delivering the completed package from the machine.

8. A coin-handling machine comprising a coin-delivery channel having a single discharge outlet, a delivering mechanism for successively delivering previously formed coin containers to said single discharge outlet, coin-controlled mechanism associated with the coin channel and controlling the coin-container delivery-mechanism for shifting a filled container from, and an empty container to, the said single delivery outlet of the coin channel, and means controlled by coin movement for successively operating upon the filled containers to retain the coins therein.

9. A coin-handling machine comprising a coin-delivery channel having a single discharge outlet, a delivering mechanism for successively delivering previously formed coin containers to said single discharge outlet, coin-controlled mechanism associated with the coin channel and controlling the coin-container delivery-mechanism for shifting a filled container from, and an empty container to, the said single delivery outlet of the coin channel, means controlled by coin

movement for successively operating upon the filled containers to retain the coins therein and means for discharging the completed packages successively from the machine.

10. A coin-packaging machine comprising coin-delivering means for filling a container with a predetermined number of coins, means for delivering the succeeding coins of a predetermined number into a succeeding container without interrupting the motion of the first-mentioned coin-delivering means, and means controlled by the coin movement for closing the container to retain the coins.

11. A coin-packaging machine comprising means for filling a previously-formed container with a predetermined number of coins through a single channel, coin-controlled means for delivering the succeeding coins of a predetermined number into a succeeding previously-formed container through the same channel, means for securing the coins in their containers.

12. A coin-packaging machine comprising means for delivering a predetermined number of coins into a previously-formed container, coin-controlled means for securing the coins in their containers, and means for delivering the completed package of coins from the device.

13. A coin-packaging machine comprising means for delivering a predetermined number of coins into a previously-formed container, coin-controlled means associated with the device for securing the coins in the container, and means for delivering the completed package of coins from the device.

14. A coin-packaging machine comprising a magazine arranged to receive a quantity of previously-formed open-ended coin-containers, means for producing a stream of coins, means for successively delivering coin-containers from said magazine to receiving position to be filled with a predetermined number of coins, means for delivering a predetermined number of coins to each container, and for controlling the feed movement of the coin-containers to cause the first coin of a predetermined immediately succeeding number to fall into a succeeding coin-container and coin-controlled means for closing said containers to retain the coins.

15. A coin-packaging machine comprising a magazine arranged to receive a quantity of previously formed open-ended coin-containers, means for producing a stream of coins, means for successively delivering the containers from said magazine to receiving position to be filled with a predetermined number of coins, means for delivering a predetermined number of coins to each container, means for controlling the feed movement of the coin-containers to cause the first coin of the immediately succeeding predetermined number to fall into a succeeding coin-container without interrupting the flow

of the coins into the container and coin-controlled means for closing said containers to retain the coins.

16. A coin-packaging machine comprising a magazine arranged to receive a quantity of previously-formed open-ended coin-containers, means for producing a stream of coins, means for successively delivering the containers from said magazine to receiving position to be filled with a predetermined number of coins, means for delivering a predetermined number of coins to each container, means for controlling the feed movement of the coin-containers to cause the first coins of the immediately-succeeding predetermined number to fall into a succeeding container without causing a stoppage of the coin-delivering means and coin-controlled means for closing said containers to retain the coins.

17. A coin-packaging machine comprising a magazine arranged to receive a quantity of previously-formed open-ended coin-containers, means for producing a stream of coins, means for successively delivering the containers from said magazine to receiving position to be filled with a predetermined number of coins, means for delivering a predetermined number of coins to each container, means for controlling the movement of the coin-container to cause the first coin of the immediately succeeding predetermined number to fall into a succeeding container without interrupting the flow of the coins or causing a stoppage of the coin-delivering means and coin-controlled means for closing said containers to retain the coins.

18. A coin-packaging machine comprising, a magazine arranged to receive a quantity of open-ended coin-containers, means for successively delivering the containers to be filled with a predetermined number of coins, means for controlling the coin-container feed to cause the first coin of the succeeding predetermined number to fall into a succeeding container, coin-controlled means for securing the coins in the container, and means for delivering the package from the machine.

19. A coin-packaging machine comprising a magazine arranged to receive a quantity of open-ended coin-containers, means for successively delivering the containers to be filled with a predetermined number of coins, means for filling the container through a single channel, means for controlling the coin-container feed to cause the first coin of a succeeding predetermined number to fall into a container through the same channel, coin-controlled means for closing the container after it has been filled and thus completing the package, and means for delivering the completed package from the machine.

20. In a coin packaging machine, means for filling a previously-formed coin-container with a predetermined number of coins, coin-controlled means for closing the
 5 end of each coin-container, and means for delivering the completed package from the machine.

21. In a coin packaging machine, the combination of means for holding a previously
 10 formed container, means for delivering into said container a predetermined number of coins, and coin-controlled means for operating upon the said container to retain the coins therein.

22. In a coin packaging machine, the combination of means for holding a previously
 15 formed tubular container, means for delivering into said container a predetermined number of coins, and coin-controlled means
 20 for operating upon the said container to retain the coins.

23. In a coin packaging machine, the combination of means for holding a previously
 25 formed open-ended container, means for delivering into said container a predetermined number of coins, and coin-controlled means for operating upon the open end of said container to retain the coins therein.

24. In a coin packaging machine, the combination of means for holding a previously
 30 formed open-ended tubular container, means for delivering into said container a predetermined number of coins, and coin-controlled means for operating upon the open
 35 end of said container to retain the coins therein.

25. In a coin handling machine, the combination of means for holding a previously
 40 formed tubular container having an open receiving end, means for delivering a predetermined number of coins into said container, and coin-controlled means for crimping inwardly the wall of said container at its open end over the contained coins.

26. In a coin packaging machine, the combination with means for holding an open-ended tubular coin container, means for filling the container through an open end and
 50 coin-controlled means for operating upon the open receiving end of said container for retaining coins therein.

27. In a coin packaging machine, the combination of means for holding an open-ended tubular coin container, means for filling the
 55 container through an open end, and coin-controlled means for engaging the open receiving end of said container and turning the wall thereof inwardly.

28. The combination, in a coin-packaging
 60 apparatus, of means for ejecting coins one by one from a suitable magazine, means arranged in the path of the coins and adapted to be moved thereby in a step-by-step movement, a structure supporting previously
 65 formed coin-containers adapted to receive

predetermined numbers of coins, mechanism connecting the device in the path of the coin with said structure, whereby said structure is automatically periodically moved as the predetermined quantity of coins in each
 70 coin container is reached and whereby continuous operation of the apparatus is secured, and coin-controlled means for closing the containers upon their coins.

29. A coin-packaging machine comprising
 75 a single delivering channel through which coins of given denominations may be driven to and through the outlet of such channel, means for driving such coins through said
 80 passage, means for supporting a single series of previously formed coin-containers in conjunction with the outlet of such passage, means controlled by the passage of a predetermined coin through such channel for bringing the outlet of such channel and a
 85 succeeding coin-container into coöperative relation, and coin-controlled means for closing the containers upon their coins.

30. A coin-packaging machine comprising
 90 a single delivering channel through which coins of given denominations may be driven to and through the outlet of such channel, means for driving such coins through said passage, means for supporting a single series of previously formed coin-containers in
 95 conjunction with the outlet of such passage, means controlled by the passage of the first coin of the predetermined number through such channel for bringing the outlet of such channel and a succeeding coin-container into
 100 coöperative relation, and coin-controlled means for closing the containers upon their coins.

31. A coin packaging machine comprising
 105 a magazine for previously-formed containers, and coin-controlled means for removing coin-containers successively from such magazine, carrying them to receiving position, and discharging them from the machine.

32. A coin packaging machine comprising
 110 a magazine for previously-formed coin-containers, and coin-controlled means for extracting such containers in succession from the magazine, carrying the same to receiving position, filling such containers successively with a predetermined number of
 115 coins, and discharging the filled containers.

33. A coin packaging machine comprising
 120 a magazine for previously-formed coin-containers, and coin-controlled means for extracting such containers in succession from the magazine, carrying the same to receiving position, filling such containers successively with a predetermined number of coins,
 125 closing the containers, and discharging the filled containers.

34. In a coin-packaging machine the combination of a coin tube in which the coins
 130 are stacked, a device for feeding the lower-

most coin from the stack constantly and at regular intervals, a movable coin-container carrier, means for holding the carrier, with a container in position to receive the coins from the feed device, and means actuated upon the feeding in of a predetermined number of coins, for moving the container-carrier in the interval between the feeds of the coin-feed, to remove the filled container and bring an empty container into receiving position.

35. In a coin-packaging machine the combination of a coin tube in which the coins are stacked, a device for feeding the lowermost coins from the stack constantly and at regular intervals, a movable coin-container-carrier adapted to hold a multiple of containers with one container in receiving relation to the coin-feed, means for intermittently operating the coin-container-carrier in the interval between coin-feeds, such actuating device being controlled by the coin-feed mechanism.

36. A coin packaging machine comprising, a coin-container holder having a plurality of compartments, one arranged in position to receive a coin container, another arranged to hold a container in position to receive a predetermined number of coins, another arranged in such position that the container may be closed to retain the coins in said container, and another arranged in such position that the completed package may be delivered from the holder, means for moving the holder successively to bring its various compartments into successive positions, means for delivering coins into the coin containers successively, means for closing the filled containers to retain coins therein, and means for delivering the package from the holder.

37. A coin packaging machine comprising, a coin-container holder having a plurality of compartments one arranged in position to receive a coin container, another arranged to hold a container in position to receive a predetermined number of coins, another arranged in such position that the container may be closed to retain the coins in said container, and another arranged in such position that the completed package may be delivered from the holder, and means for moving the holder successively to bring its various compartments into successive positions.

38. In a coin packaging machine, the combination, of a structure formed to carry open-bottomed coin containers, a plunger associated with said structure, and means for projecting said plunger through the open bottom of such coin container to properly seat the first coin delivered thereinto, and for withdrawing the said plunger therefrom before the container is filled.

39. A coin packaging machine comprising, means for filling a container with a pre-

terminated number of coins, a closing mechanism adapted to operate upon the container, means for moving the container with its coins to the closing means, other means arranged to support and positively hold said container at the closing position, against movement with the closing means, and means for bringing the container and the closing means into container-closing relation to retain the coins in said container.

40. In a coin-packaging machine, the combination of a carrier for a multiple of coin-containers, means for moving the carrier intermittently to bring a coin-container to the filling position and thence to the closing position, means at the filling position for filling the container with a definite number of coins, means for controlling the movement of the carrier by the coin-feed mechanism and means at the closing position of the carrier for closing the container.

41. A coin handling machine comprising means for packaging coins, means for supplying a previously-formed container to the packaging means, means for directing said container to position to be filled with coins while an immediately-succeeding container is being supplied, means for shifting the filled container to a closing means while the immediately succeeding container is being supplied to be filled, closing means for closing a filled container and means for shifting the closed container into position to be delivered to a packaging mechanism while the immediately succeeding container is being shifted to the closing means.

42. In a coin handling machine, a packaging apparatus comprising a plate having a plurality of apertures, a coin-container magazine arranged to deliver coin-containers to one of said apertures, a coin-feed apparatus adapted to deliver coins through another of said apertures, a packaging-head having pockets adapted to receive coin-containers, and means for moving the head so that it will successively register with the magazine and the coin-delivery aperture, substantially as described.

43. In a coin-handling machine a packaging apparatus comprising a plate having a plurality of apertures, a magazine arranged to deliver previously-formed coin-containers through one of said apertures, a coin-feed apparatus adapted to feed coins through another of said apertures, a packaging-head moving below said apertures and having pockets adapted to receive previously-formed containers, a closing means for said containers, means for moving said packaging head to hold each pocket successively in registration with the magazine, the coin-delivery aperture and the closing means, and means for releasing the closed package from the packaging means.

44. A coin-handling machine comprising

a plate having an aperture through which coins of a single denomination may be delivered, means for delivering the coins successively therethrough, a packaging head arranged beneath said plate provided with a plurality of pockets for receiving coin-containers, an apertured base-plate arranged beneath the packaging head and adapted to retain coin-containers within the pockets of said head, except in one position, and means for rotating said head step-by-step to bring the pockets into successive register with the coin aperture and with an aperture through the base-plate.

45. In a coin counting device, the combination of a series of members lying in substantially the same horizontal plane, a series of coin carriers on said members, a series of coin receptacles of varying sizes, a plate below said receptacles having openings therein corresponding in size to the sizes of the receptacles, one opening for each receptacle, a series of fingers interposed between said plate and receptacles, one finger for each receptacle, and means operatively connected for imparting a relative movement to the fingers and members.

46. In a coin counting machine, the com-

bination of a coin receptacle, means for ejecting the coins from the receptacle, a fixed plate below the receptacle, having its end extending beyond said receptacle, mechanism operatively connected for actuating the ejecting means to force the coins beyond the edge of the plate, receivers for the ejected coins, said receivers comprising tubes initially closed at their lower ends and initially open at their upper ends, means for moving the tubes after a predetermined number of coins have been placed therein to carry one tube out of alinement with the end of the plate, and to carry another tube into alinement with the end of the plate, said tubes lying directly below said plate, whereby the coins forced beyond said plate are discharged directly into said tubes, and means for closing the open end of the tube.

In witness whereof I have hereunto set my hand and seal at Indianapolis, Indiana, this tenth day of October, A. D. one thousand nine hundred and seven.

FREDERICK L. SATTLEY. [L. s.]

Witnesses:

ARTHUR M. HOOD,
THOMAS W. McMEANS.