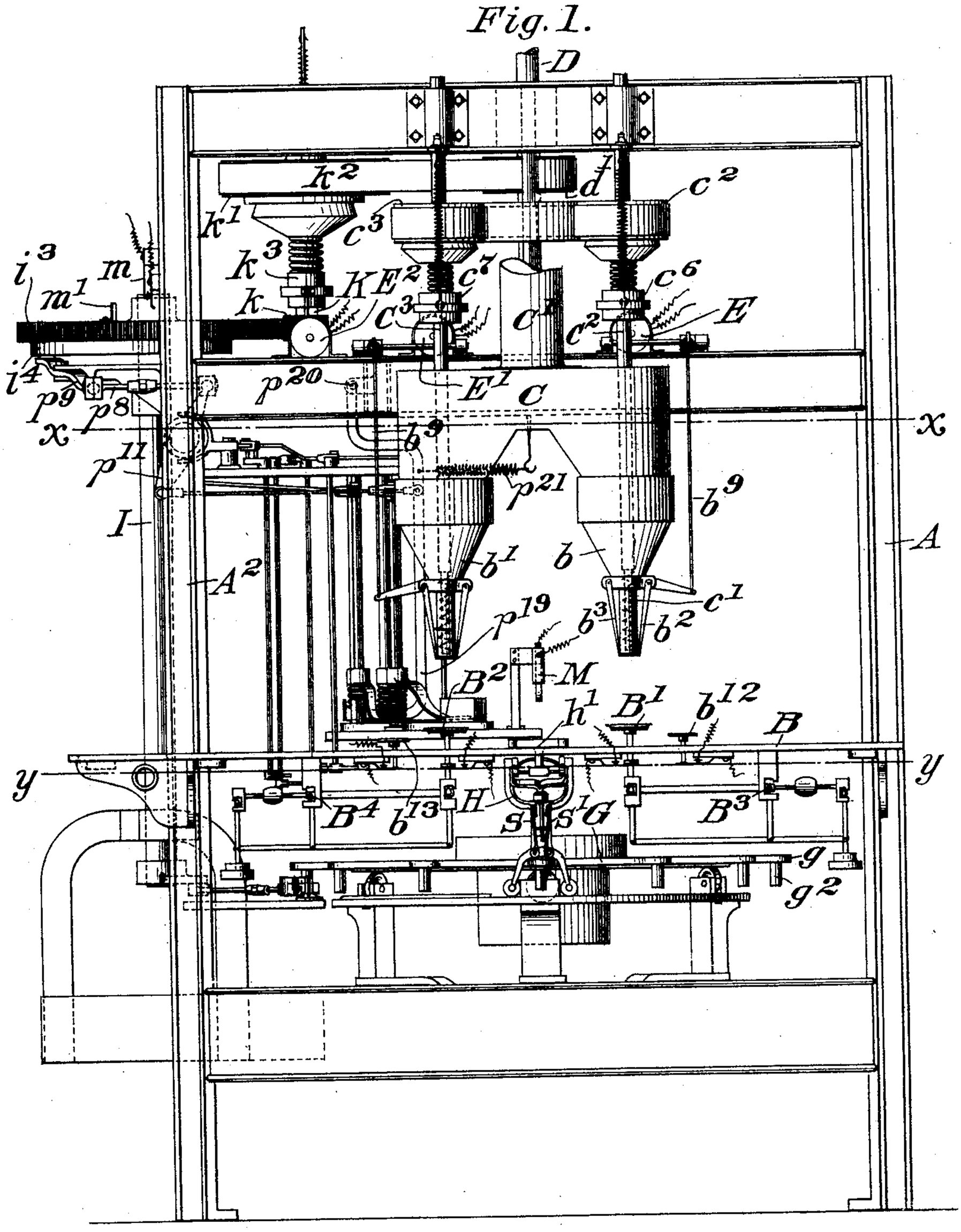
(No Model.) 6 Sheets—Sheet 1.

A. STEARNS.

MACHINE FOR FILLING, WEIGHING, AND ASSORTING PACKAGES.

No. 603,413. Patented May 3, 1898.

Fig. 1.



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by attorneys:
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Fig. 2.

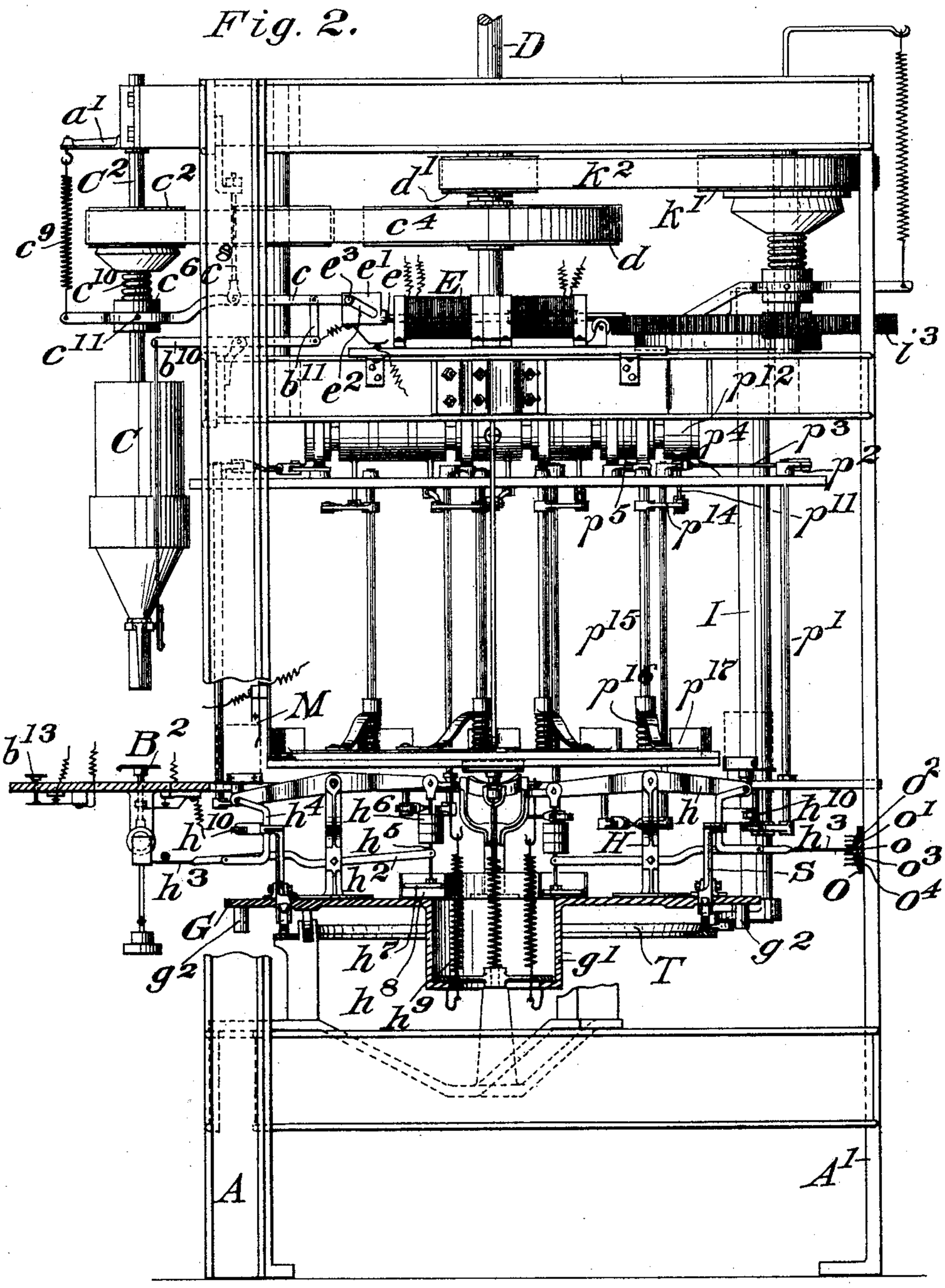

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Fig. 14.

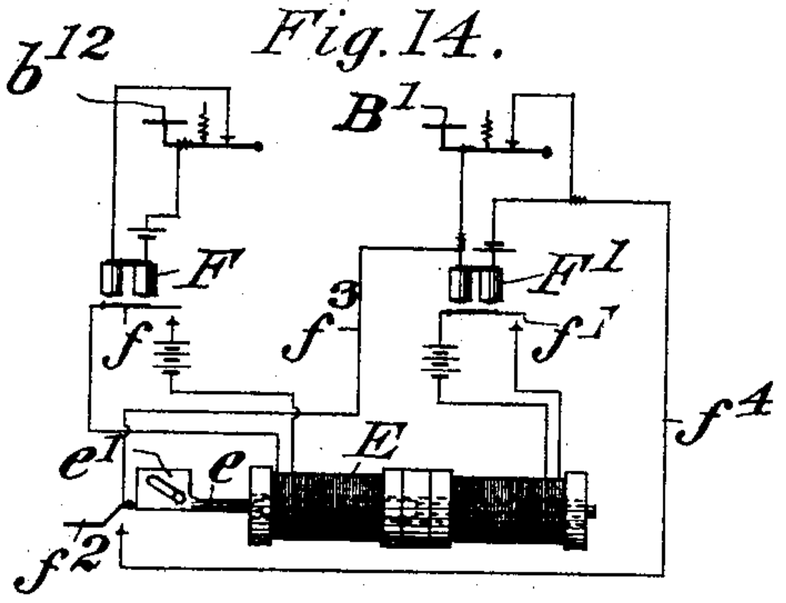

Fig. 15.

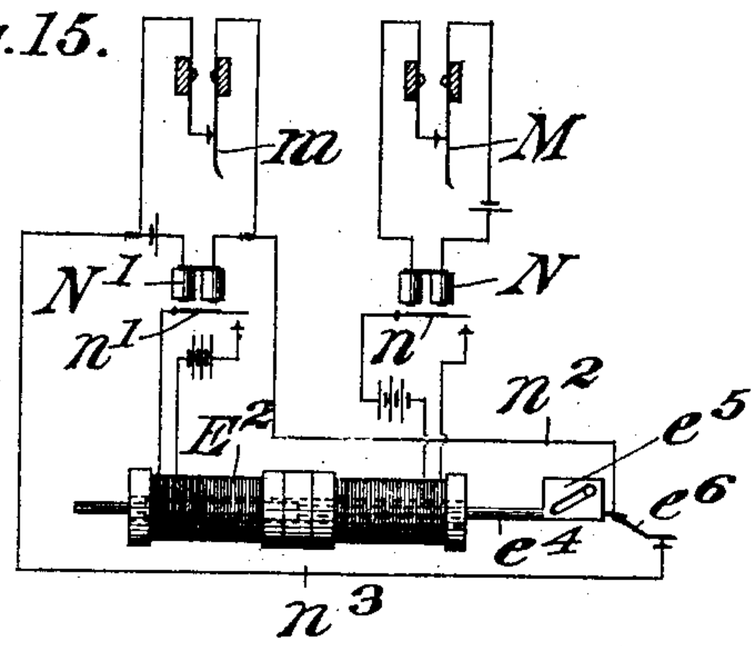

Fig. 3

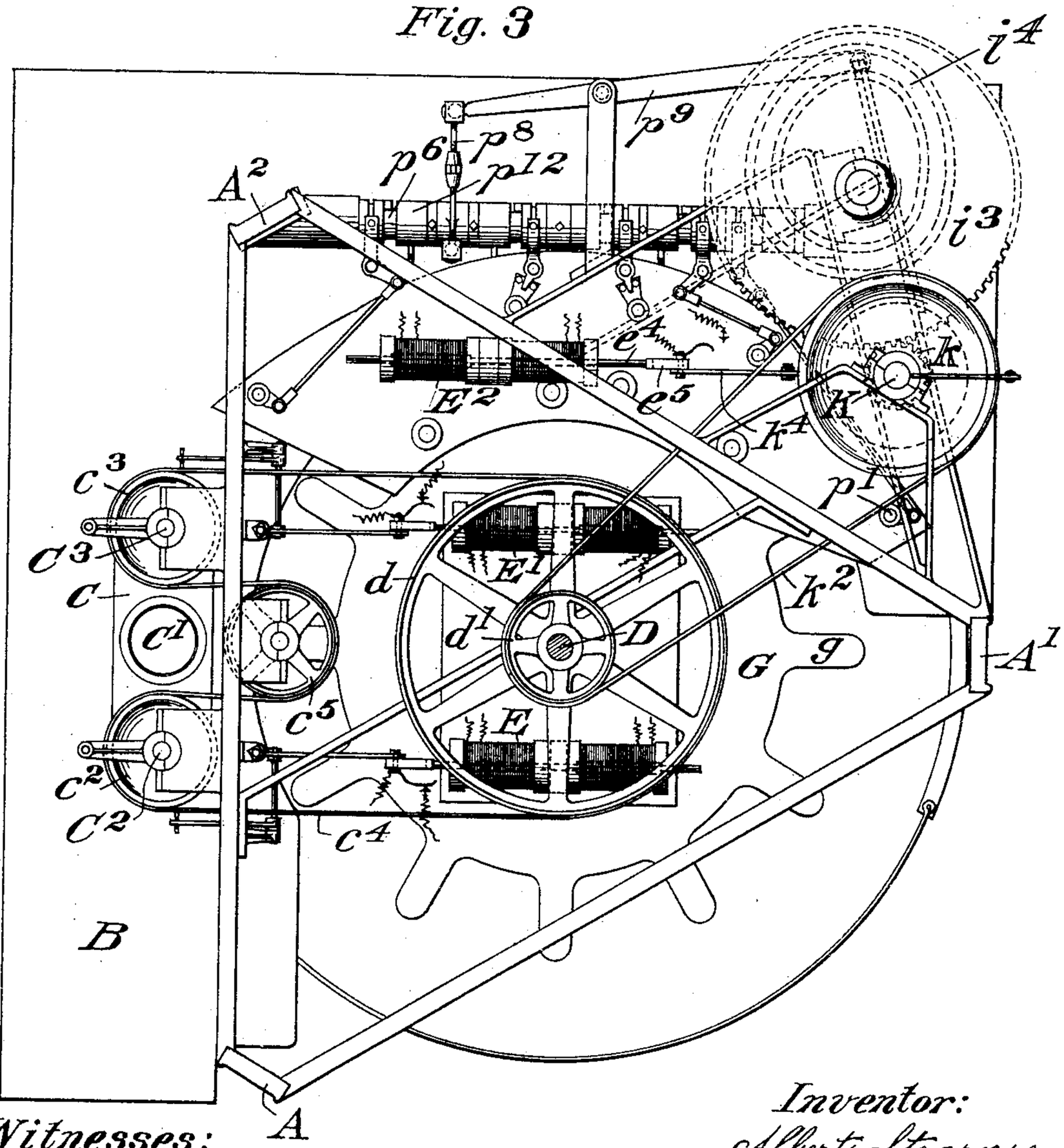

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Fig. 4.

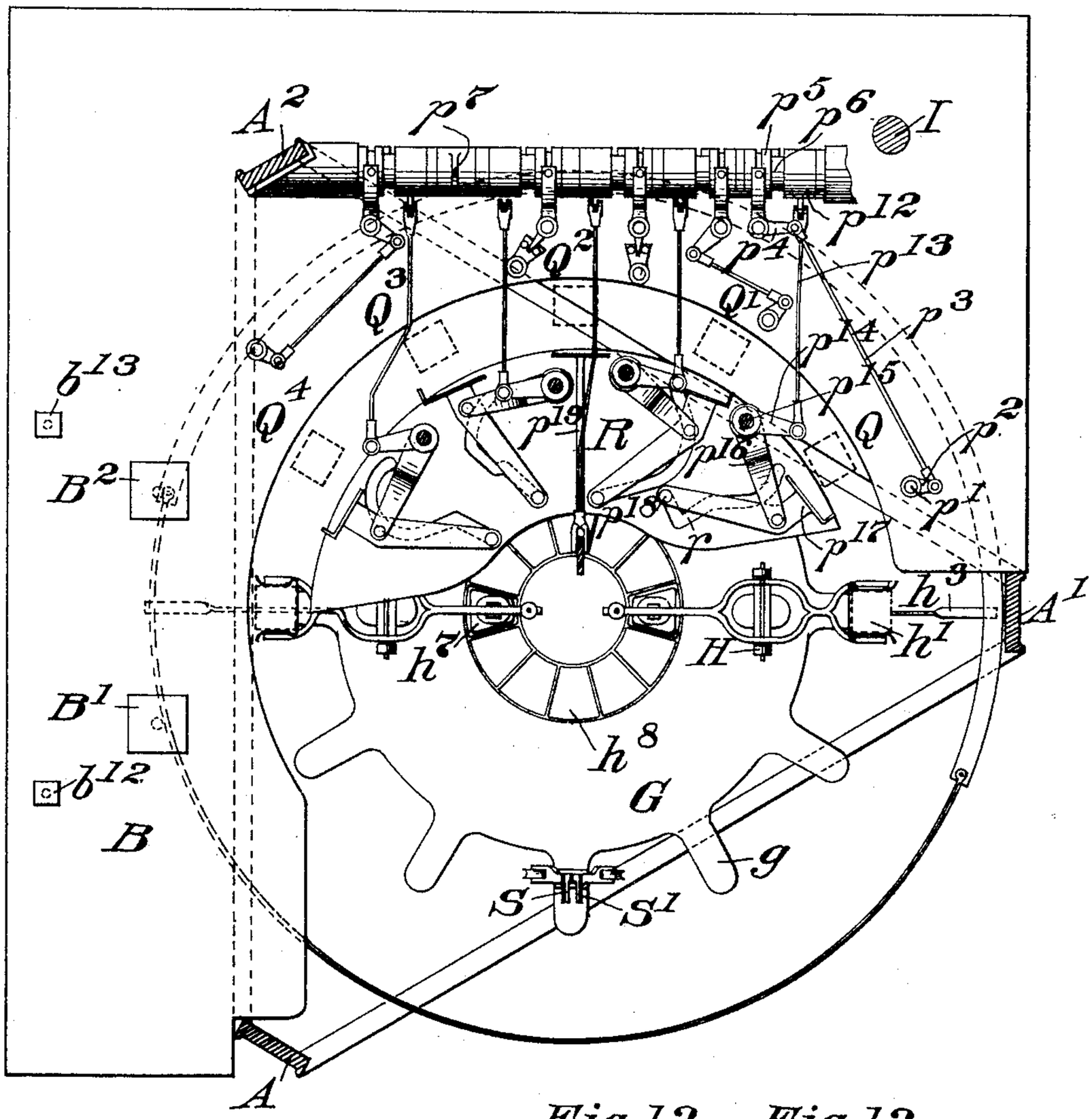

Fig. 12. *Fig. 13.*

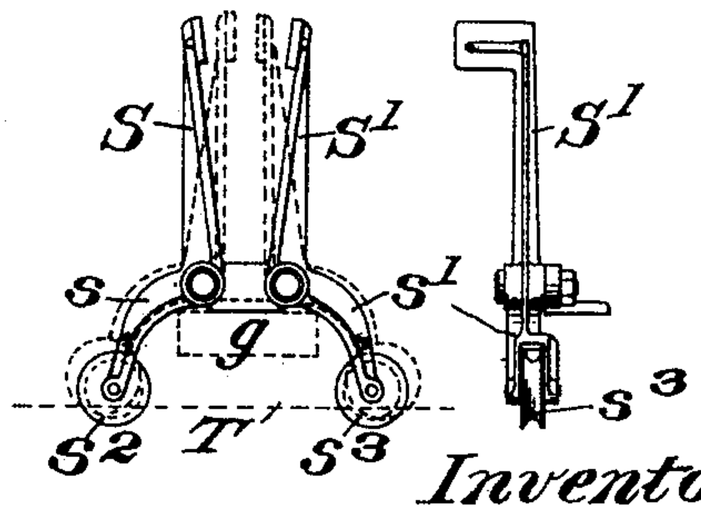

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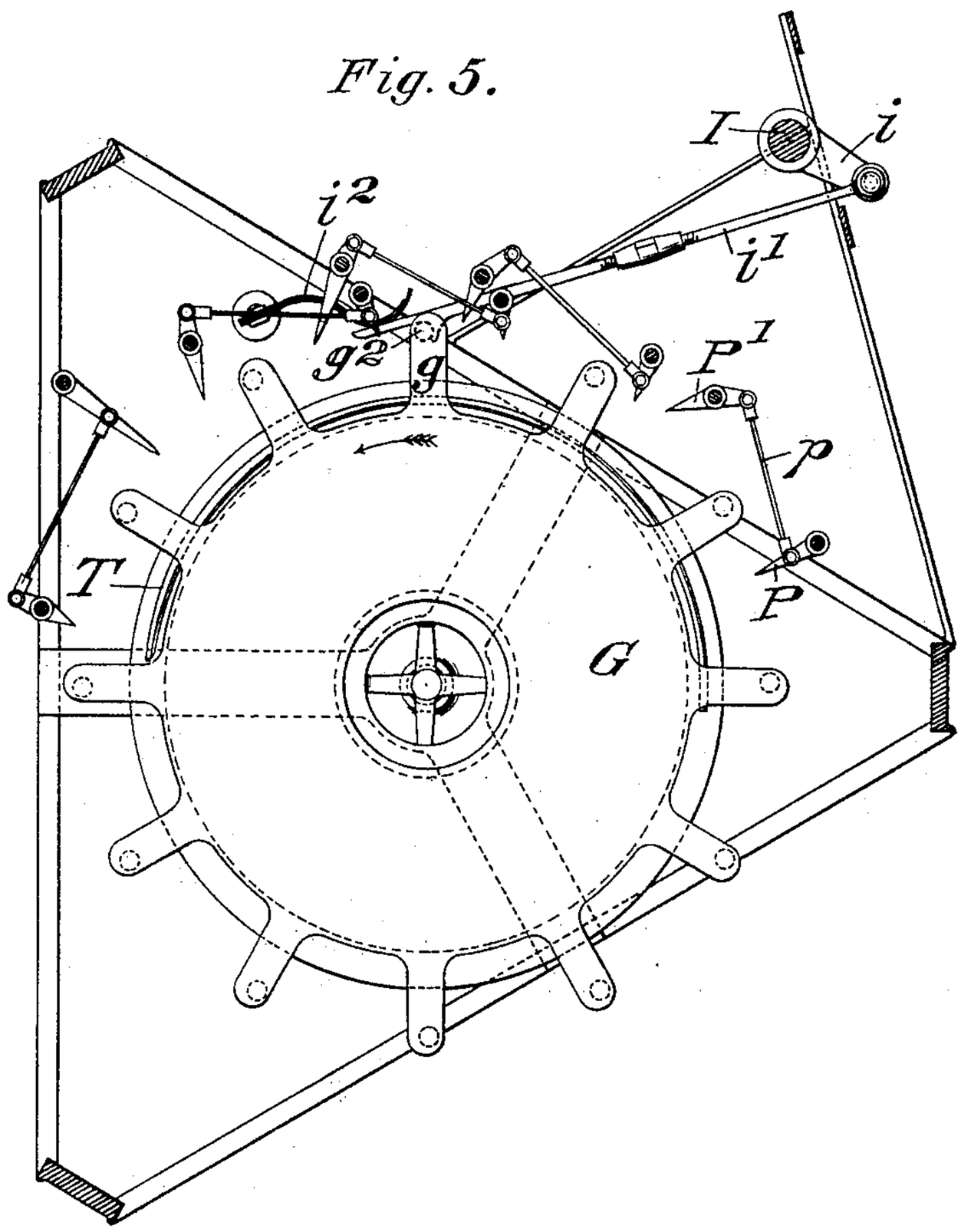
Fig. 5.



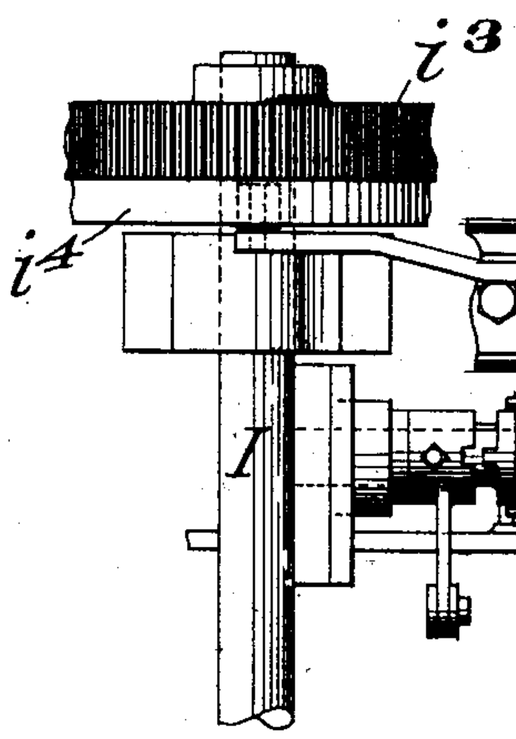


Fig. 6.

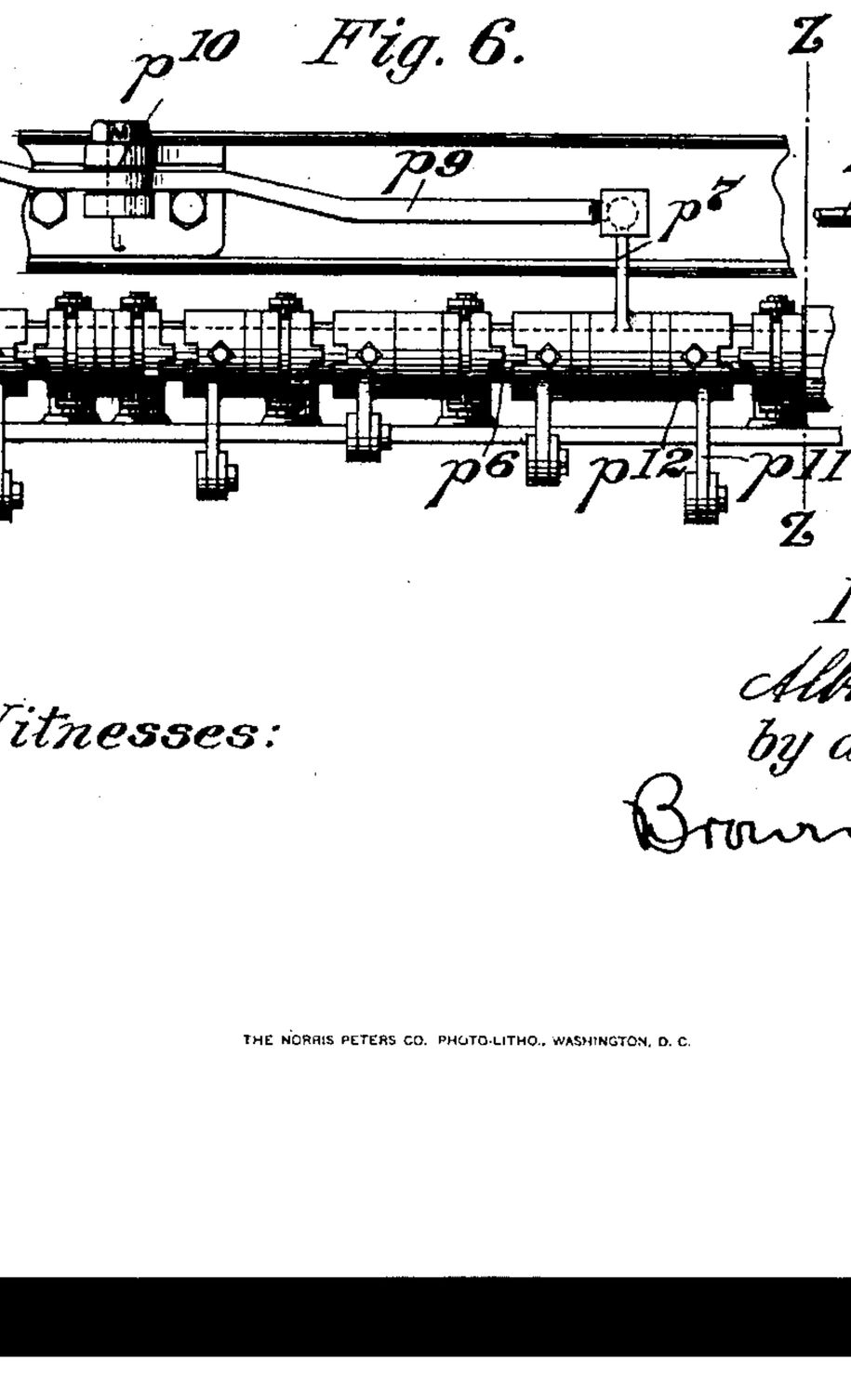


Fig. 7.

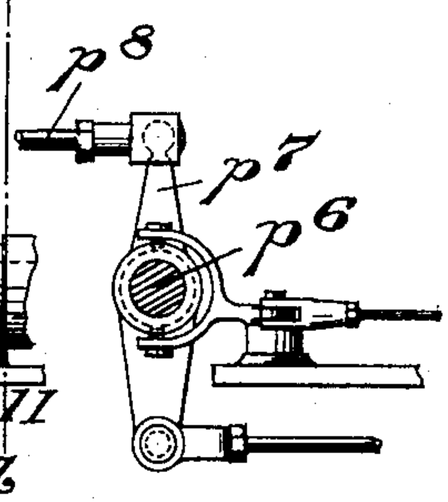


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Fig. 8.

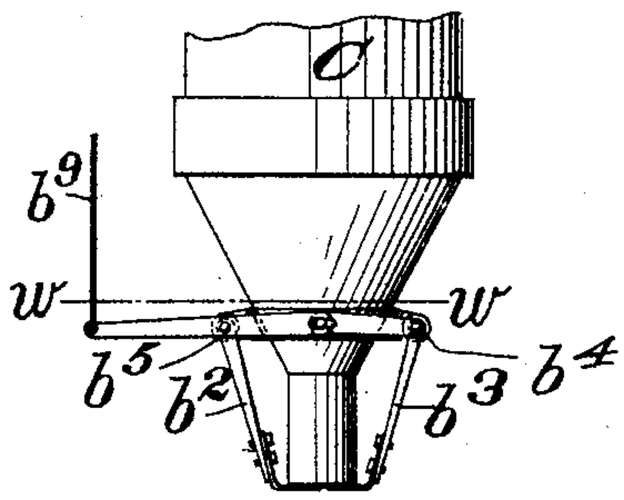


Fig. 9.

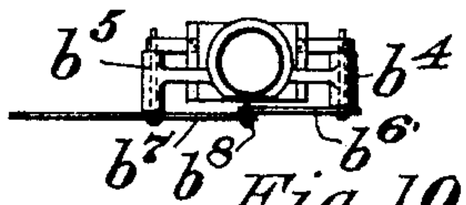


Fig. 10.

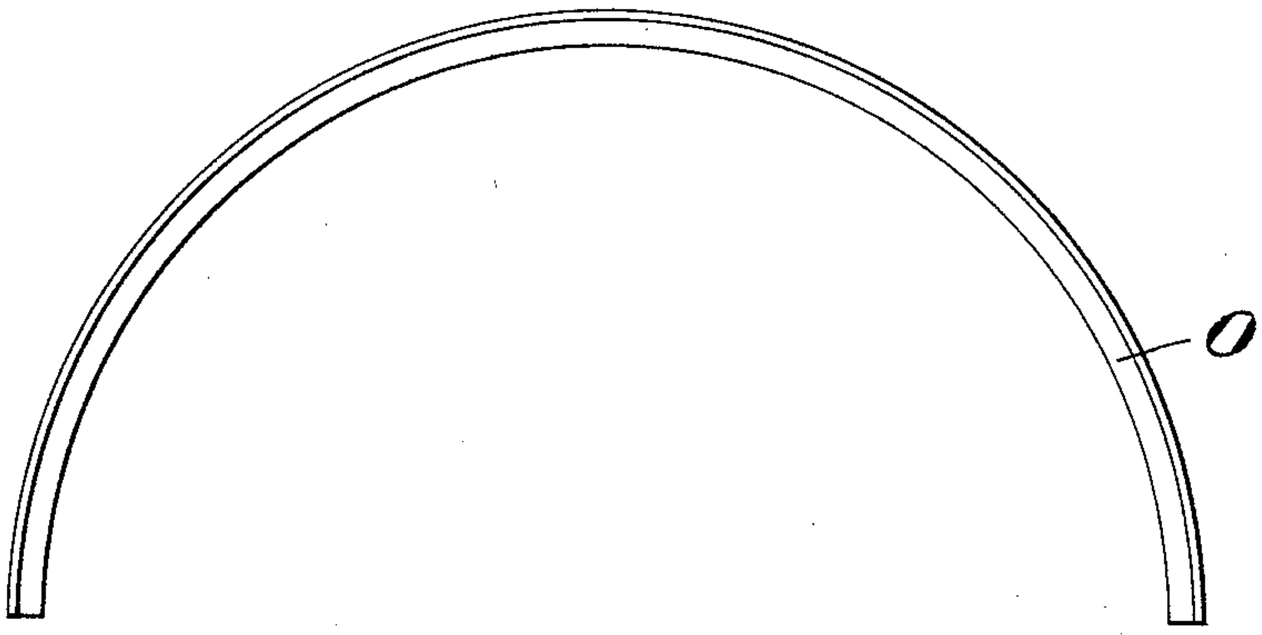
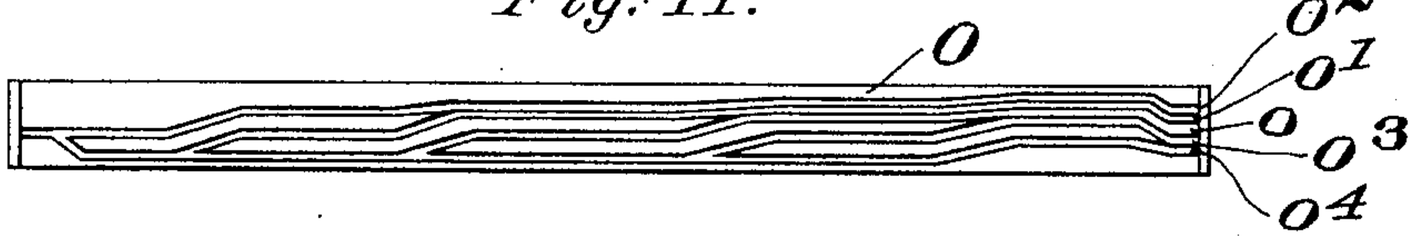


Fig. 11.



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by attorneys:
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THE NORRIS PETERS CO.; PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ALBERT STEARNS, OF TRENTON, MICHIGAN.

MACHINE FOR FILLING, WEIGHING, AND ASSORTING PACKAGES.

SPECIFICATION forming part of Letters Patent No. 603,413, dated May 3, 1898.

Application filed November 1, 1895. Serial No. 567,663. (No model.)

To all whom it may concern:

Be it known that I, ALBERT STEARNS, of Trenton, in the county of Wayne and State of Michigan, have invented a new and useful Improvement in Machines for Filling, Weighing, and Assorting Packages, of which the following is a specification.

My invention relates to an improvement in machines for filling, weighing, and assorting packages in which provision is made for automatically directing packages of correct weight or under or over weight onto different landings in order that the weights of those which are under or over weight may be corrected with great facility.

It has been found in practice that when the flow from the fillers into the packages is rapid a uniform weight cannot be relied upon in all the packages.

My present invention is directed to the assorting of the packages into a greater or lesser number of grades of weight—in the present example of my invention five grades, one within the permissible limits of correct weight, two below weight, and two over weight. I find it further feasible to make the grades such that the two which represent the lower and greater amount of overweight shall present errors corresponding with the two which are a lesser and greater amount under weight, so that in making the correction it will only require the taking of a predetermined amount from one of the overweights and putting it into the corresponding package of underweight.

The mechanism for accomplishing these ends consists, broadly speaking, in a rotary table or platform provided with a series of scales for receiving packages from the filling mechanism, the said table or platform having imparted to it a step-by-step movement and discharging mechanisms for the several grades under the control of the operating device subject to the scales carried by the platform or table to select that discharging mechanism at the grade-landing which corresponds to the weight of the package carried by the scale.

In the accompanying drawings, Figure 1 is a view of the machine in front elevation. Fig. 2 is a view, partly in side elevation and partly in section, from front to rear. Fig. 3 is a top plan view, the scales being removed from the table or platform. Fig. 4 is a horizontal section on the plane of line $x\,x$ of Fig. 1, the feeding mechanism being omitted. Fig. 5 is a horizontal section on line $y\,y$ of Fig. 1, the scales being removed. Fig. 6 is an enlarged view in detail, showing the clutch mechanism in elevation. Fig. 7 is a transverse section through line $z\,z$ of Fig. 6, looking toward the left. Fig. 8 is an enlarged view in detail, in rear elevation, of the discharge end of one of the feed-hoppers. Fig. 9 is a horizontal section through line $w\,w$ of Fig. 8, the tapering portion of the hopper being omitted. Fig. 10 is a top plan view of the grooved curved guide. Fig. 11 is a face view of the same. Fig. 12 is an enlarged view in detail of the temporary scale-brace. Fig. 13 is a view of the same in edge elevation. Fig. 14 is a diagrammatical view of the circuits for operating the solenoid which throws the feeding mechanism into and out of operation, and Fig. 15 is a diagrammatical view of the solenoid and circuits which control the discharging mechanisms for the several grades of packages.

The supporting-frame may be of any well-known or approved form adapted to the mounting of the several operating parts. In the present instance it consists of three uprights A A′ A^2, connected by girders a at suitable intervals.

At the front of the machine there is a table B, above which project the platforms or pans B′ B^2 of two scales fulcrumed at B^3 and B^4, respectively, in suitable hangers depending from the table B. Over the platforms or pans B′ B^2, on which the packages to be filled are intended to rest, there are located feed-hoppers b and b', (one over each,) the discharge ends of which are provided with a pair of swinging gates b^2 b^3, which swing away from and toward each other to open and close the discharge end of the feed-hopper. The particular structure of the gates is represented in Figs. 8 and 9, where they are shown pivoted in bearings b^4 b^5 at the opposite sides of the discharge-nozzle of the feed-hopper and operated by arms b^6 b^7, having a slot-and-pin connection at b^8, one of the arms, in the present instance b^7, being extended from the pivotal bearing b^5 and connected by a rod b^9 with a lever b^{10}, (see Fig. 2,) pivoted to the sup-

porting-frame and connected by a link b^{11} with the clutch-operating lever c for starting and stopping the screw-feed, as will be hereinafter more particularly referred to. The feed-hoppers b b' are supplied from a common reservoir C, connected by a conduit c' with a suitable source of supply. (Not shown.) The feed is effected by rotary spindles C^2 C^3, one for each hopper, each of which extends down into the discharge end of the hopper and is there provided with a screw c' in a manner quite similar to what is shown and described in Letters Patent No. 219,322, granted to me on September 2, 1875.

The spindles C^2 C^3 are each provided with a loose pulley mounted thereon, the pulley on the spindle C^2 being denoted by c^2 and that on the spindle C^3 being denoted by c^3. The pulleys c^2 and c^3 are continuously driven by a pulley d, fixed on the drive-shaft D by means of a belt c^4, which passes from the pulley d partially around the pulley c^2, and thence rearwardly around a tension-pulley c^5, (see Fig. 3,) thence back and partially around the loose pulley c^3, and thence back to the drive-pulley d, the tension-pulley c^5 being introduced for the purpose of giving the belt a more extended bearing contact with the loose pulleys c^2 c^3, while at the same time driving them constantly in the same direction. The drive-shaft D may be actuated from a suitable source of power. (Not shown.)

The spindles C^2 and C^3 are brought into and thrown out of action by means of clutches c^6 c^7, mounted on the spindles in sliding adjustment, but caused to rotate therewith by means of an ordinary feather-and-groove connection. The clutch-operating lever c, hereinbefore referred to, is fulcrumed in a suitable hanger c^8, fixed to the supporting-frame, and after embracing the clutch c^6 is extended toward the front and connected by a spring c^9 with a bracket a', projecting from the front of the supporting-frame. The spring c^9 tends to draw the clutch-operating lever, and hence the clutch, toward the loose pulley c^2, while a spring c^{10}, interposed between the clutch and the pulley, tends to throw the clutch away from the loose pulley. The connection of the clutch-operating lever c with the clutch c^6 is made by pins c^{11}, which extend from the opposite branches of the lever c into an annular groove in the periphery of the clutch, as is common.

The clutch c^7 is provided with an operating-lever fulcrumed and spring-actuated in a manner quite similar to that hereinabove described with respect to the lever c, which actuates the clutch c^6.

The clutch-operating lever c is controlled by the core e of the solenoid E, as follows: The core e of the solenoid has attached thereto a plate e', in which there is an oblique slot e^2, into which a laterally-projecting pin e^3 on the lever enters, so that when the core e is moved toward the front the lever c will be vibrated in a direction to lift the clutch c^6 into contact with the loose pulley c^2, and hence operate the spindle C^2, while the movement of the core e of the solenoid in the opposite direction will rock the lever c in a direction to release the clutch c^6 from the loose pulley c^2, and hence stop the rotary movement of the feed-spindle C^2. The connection of the gate-operating lever with the lever c by the link b^{11} is such that when the clutch-operating lever c is moved in a direction to operate the feed-spindle the gates b^2 b^3 will be opened, while the movement of the lever c in the opposite direction will close said gates. The clutch-operating lever for the spindle c^3, which feeds the material from the hopper b', is controlled by a solenoid E′ in a manner quite similar to that hereinabove described with reference to the solenoid E.

The solenoids E and E′ are energized at pleasure to move the core in the direction to start the feed by means of circuit-breakers in the form of keys, (represented in Fig. 1 by b^{12} b^{13},) the former for the solenoid E and the latter for the solenoid E′. The circuits for the control of the solenoids E and E′ are quite similar, and one of them is shown diagrammatically in Fig. 14, where the key b^{12} is arranged to break the circuit through the electromagnet F, thereby permitting the armature f of said magnet to fall into position to close circuit through the section of the solenoid E, which causes the core e to advance and throw the clutch c^6 into contact with the loose pulley c^2 to start the feed, while the opposite section of the solenoid E, which when energized draws the core e back and stops the feed, is represented as under the control of an electromagnet F′, the armature f' of which when released from the magnet closes circuit through that section of the solenoid, the circuit through the electromagnet F′ being broken by the depression of the platform or pan B′ of the scale when the package thereon has received a sufficient weight of the material to cause the said platform and its load to overbalance the weight.

The return of the core e of the solenoid E automatically breaks the circuit through that section of the solenoid which caused its return by completing a circuit through the electromagnet F′ independently of the return of the scale-pan B′. The circuit-closer carried by the plate e' for this purpose is denoted by f^2 and the wires by f^3 f^4.

The packages after receiving their charges from the feed-hoppers are placed upon the pans or platforms of a series of scales carried by a horizontal rotary table, which brings the pans of the scales into convenient position in proximity to the filling-table B. The rotary scale-carrying table is denoted by G and is shown as provided with radial arms g—in the present instance twelve—corresponding to the number of scales H carried by the table. The scales H are preferably made with an upper balance-bar h, carrying the platform or pan h', and a lower bar h^2, carrying a

guide-finger h^3 and connected with the balance-bar h by a link h^4 at one end and by a rod h^5 at the opposite or inner end, which rod also carries the weight h^6 and a plate or piston h^7 at its lower end for working in a dash-pot h^8. The inner end of the balance-bar h has connected thereto one end of a light spring h^9, the opposite end of the spring being connected with the hub g' of the table G. My preferred arrangement is that shown in the drawings, where the hub g' of the table G is made open at the top to receive the springs h^9 from the several scales and the dash-pots h^8 are arranged in a circular series around the upper open end of the hub.

The scales on the table G are preferably arranged at equal distances apart and the table is given a step-by-step movement corresponding to the distance between two successive scales. The table is operated by the rotary movement of an upright shaft I, (see Fig. 5,) which carries a crank-arm i, having a long-shanked pawl i' pivoted to its free end, the pawl i' being arranged to engage one of a series of pins g^2, depending from the arms g of the table G, and advance the table during one half of the rotary movement of the shaft I, the pawl being withdrawn ready for action during the other half movement of the shaft. The pawl i' is held in engagement with the pin g^2 by a spring i^2, fixed to the supporting-frame. The shaft I is driven by means of a gear-wheel i^3, fixed thereon in engagement with a pinion k on a shaft K, which latter is actuated by a pulley k', loosely mounted on the shaft and connected by a belt k^2 with a pulley d' on the main drive-shaft D. The shaft K is locked to and released from the continuously-driven loose pulley k' by a clutch k^3, operated by the core of a solenoid under the control of the operator at the front of the machine to lock the shaft K to the pulley k' and under the control of the gear-wheel i^3 as it completes a revolution to release the shaft K from the pulley k', and hence stop the movement of the scale-carrying table operated by it. The solenoid for this purpose is denoted by E^2, (see Fig. 3,) its core by e^4, the slotted plate carried by the core by e^5, (see Figs. 3 and 15,) and the clutch-operating lever engaged with the slotted plate by k^4.

The circuit-breaker for the solenoid E^2 under the control of the operator is denoted by M and is located where it can be conveniently manipulated at the moment of placing a package onto one of the pans or platforms of the scales H, and the circuit-breaker for moving the core of the solenoid in the opposite direction is denoted by m and in position to be engaged by a pin m' on the wheel k^3. (See Fig. 1.) The electric circuits for energizing the solenoid E^2 are shown diagrammatically in Fig. 15, where the circuit-breaker M includes an electromagnet N, the armature n of which, when the electromagnet is deënergized, closes the circuit through that section of the solenoid E^2 which operates the core in a direction to clutch the shaft K to the pulley k' and start the scale-carrying table, while the circuit under the control of the circuit-breaker m includes an electromagnet N', the armature n' of which, where the magnet is disengaged, closes circuit through that portion of the solenoid which releases the shaft K from the pulley k' and stops the scale-carrying table. The return of the core e^4 also completes the circuit through the electromagnet N' independently of the circuit-breaker m by means of a contact-piece e^6, carried by the slotted plate e^5 and forming when the core reaches the limit of its inward stroke, as shown in Fig. 15, a connection between the wires n^2 and n^3, leading to the poles of the electromagnet N'. This promptly energizes the magnet, closes the armature n', and breaks the circuit through the core-retaining section of the solenoid.

As the packages are placed upon the scales H, carried by the rotary table, the guide-fingers h^3 of the scales are caused to assume different levels, according as the packages are within the limits of "correct weight," "over weight," or "under weight." For my present purposes I have provided for two grades of underweight and two grades of overweight in addition to the correct weight. Thus, for example, if a package be within one scruple of the correct weight it may be considered correct. If it be between one scruple and two scruples under weight it may be classified as the "first-grade underweight," and if it be between two and three scruples under weight it may be classified in the "second-grade underweight." In the same manner if it be between one and two scruples over weight it may be classified in the "first-grade overweight," and if it be between two and three scruples over weight it may be classified in the "second-grade overweight."

The guide-finger on the scale at the level corresponding to one of the above grades, after it has traveled with the table a half-revolution, more or less, and thereby become substantially at rest, is received within one of five grooves (represented by o o' o^2 o^3 o^4) on or in the face of a curved plate O, which extends half-way around the margin of the table, more or less, and in position to retain the end of the guide-finger within the groove which it entered until the said finger has passed the several landings corresponding to the several grades of weight of the packages. These grooves o to o^4, inclusive, are so continued in or bent from a horizontal course as to bring an operating-roller h^{10}, carried by the link h^1 of the scale, into engagement with some one of five sets of discharge-operating levers, according to the grade to which the package belongs. For example, the set of levers P P', (see Fig. 5,) connected by a link p, are located at such a height as to engage the roller h^{10}, carried by the scale, when the guide-finger h^3 of that scale enters the lowermost groove o^4—

that is, when the package has a weight which will carry it to the grade which I have seen fit to conveniently call "second-grade overweight"—and a package of that grade will be discharged by the discharging mechanism onto a landing designated at Q. (See Fig. 4.) As the sets of levers for operating the discharge mechanism of the packages and the discharge mechanisms themselves are quite similar at the different landings, with the exception of the landing for the reception of the packages of correct weight, a complete description will be given of one only of these discharge mechanisms, it being understood that the description will apply with equal force to those located at the landings Q', Q^3, and Q^4. The operating-lever P, with its free end located in the path of the operating-roller h^{10} of the scale, as hereinbefore referred to, is connected with an upright rock-shaft p', which carries a crank-arm p^2, connected by a rod p^3 with one arm of a bell-crank lever p^4 for operating the clutch p^5 on a rock-shaft p^6, actuated by an arm p^7 thereon, connected by a rod or link p^8 with a vibrating operating-lever p^9, pivoted to the supporting-frame at p^{10} and engaged with a cam i^4 on the shaft I, so as to vibrate the lever p^9 back and forth for each revolution of the wheel i^3 and hence rock the shaft p^6 back and forth once for each revolution of said wheel. The shaft p^6 has also an arm p^{11}, mounted loosely on the shaft by means of a sleeve p^{12} and connected by a rod p^{13} with an arm p^{14} on an upright spring-actuated rock-shaft p^{15}. The shaft p^{15} also has an operating-arm p^{16} fixed thereon and pivotally connected at its outer end with the shank of a push-plate p^{17} for engaging the package and sliding it from the scale pan or platform onto the landing Q whenever the shaft p^{15} is rocked. The direction which the push-plate p^{17} assumes relatively to the package in its outward movement under the impulse of the arm p^{16} is determined by means of a cam-groove r in a fixed horizontal plate R, with which pins p^{18} on the shanks of the push-plates engage. When, therefore, the lever P has rocked the upright shaft p' by the engagement of the roller h^{10} of the scale, the said shaft will throw the clutch p^5 into engagement with the sleeve p^{12}, which carries the arm for operating the spring-actuated upright shaft p^{15}, and the rocking movement of the shaft p^6 will thereby be imparted to the upright shaft p^{15} and the push-plate p^{17} will be caused to engage the package and slide it from the scale-pan onto the landing Q. As the table G advances the next step the roller h^{10} on the scale will engage the lever P' and rock it in a direction to reverse the motion of the lever P and thereby release the clutch p^5 from the sleeve-section p^{12}, thereby permitting the spring-actuated upright shaft p^{15} to return under the action of its spring tension to its normal position (shown in Fig. 4) and thereby withdraw the push-plate p^{17} into position to be again operated. The operating-roller h^{10} of the scale, which has been directed by its guide-finger h^3 into the proper groove to engage the set of levers P P', will be prevented by the same guide-finger h^3 from coming into contact with any other set of levers than that set P P'. In the same manner a package of such weight as to carry its guide-finger to a level corresponding to the groove o^3 would bring its operating-roller h^{10} in position to operate the set of discharge-operating levers at the landing Q', while the "correct-weight package," the "first-grade-underweight package," and the "second-grade-underweight package" would depress the guide-fingers of their scales to a level corresponding, respectively, to the grooves o o' o^2 and would, in a similar manner to that hereinabove described, operate the set of levers to effect a discharge of the package at either the landing Q^2 for the correct package, at Q^3 for the first-grade underweight, or at Q^4 for the second-grade underweight.

As distinguished from the discharging mechanisms at the landings Q Q' Q^3 Q^4, the mechanism at the landing Q^2, where the correct-weight packages are discharged, does not require the spring-actuated vertical rock-shaft p^{15}, as the motion of the push-plate is in this instance directly toward and away from the vertical plane of the rock-shaft p^6. In this instance the shank p^{19} of the push-plate is extended upwardly and pivoted to a fixed support, as at p^{20}, (see Fig. 1,) while the connecting-rod which connects the sleeve on the shaft p^6 directly with the shank and which corresponds to the connecting-rod p^{13}, hereinbefore referred to, serves to swing the shank and its push-plate forward by a direct pull, a spring p^{21} being employed to return the push-plate when the clutch is released from the operating-sleeve on the shaft P^6.

For the purpose of holding the end of the scale which carries the discharge-operating roller h^{10} steadily and stiffly in position against lateral movement after the guide-finger h^3 enters one of the guide-grooves I provide a pair of brace-tongs, one pair for each scale, the jaws of which are denoted by S S', (see Figs. 12 and 13,) pivotally secured to the radial arms g of the table G, so as to swing toward and away from each other. The jaws S S' are provided with operating-arms s s', extending upon opposite sides of their pivots from the jaws S S' and provided with rollers s^2 s^3, which are adapted to ride onto a curved raised track T (see Fig. 5) as the guide-finger enters its groove. The effect of the engagement of the rollers s^2 s^3 with the raised track T is to close the jaws S S' in proximity to the opposite sides of the link h^4 at the outer end of the scales, preferably in the neighborhood of the attachment of the operating-roller h^{10}, so that the latter is held firmly to its work when it engages the discharge-operating mechanism. It is desirable that the jaws S S' should approach the opposite sides of the link h^4 as closely as may be, while at

the same time permitting the said link to shift its position vertically as the guide-finger follows the direction of the different portions of the groove.

The operation as a whole in connection with the operation of the several parts hereinabove described may be briefly stated as follows: The operator at the front of the machine places a package on the scale-pan under one of the screw-feed spouts, presses the button for that feed, and then is at liberty while the feed is taking place to repeat the same operation beneath the other screw-feed. As soon as the correct or proximately correct amount has been deposited in the package the screw-feed has been stopped in the manner fully hereinabove described, and the package is now taken and placed on the pan of one of the scales carried by the rotary table. When so placed, the table is started by breaking the circuit at M, which causes the rotation of the gear-wheel i^3 and advances the table one step, the further advancement of the table being automatically cut off by the gear-wheel i^3 at the circuit-breaker m. This same movement of the gear-wheel i^3 also rocks the shaft p^6 back and forth, and thereby operates such discharge mechanism or mechanisms as have been thrown into operative position by the action of the rollers h^{10}, carried by the scales. If the package be second-grade underweight, its scale will not operate a discharge mechanism at any of the landings until it reaches the landing Q^4; but its operating-roller h^{10} will have been directed by the groove o^2 past the several sets of discharge-operating levers for the four landings which it has passed.

It being known that packages discharged at the landings Q^3 and Q^4 are respectively as much under weight as packages discharged at the landings Q' and Q are over weight, the correction may be easily accomplished by an attendant by simply taking a known amount corresponding to the error from the package Q' and placing it in the package Q^3 or from the package Q and placing it in the package Q^4.

What I claim is—

1. A plurality of discharging mechanisms, a movable support for packages and means under the control of the packages for operating the discharging mechanisms, the particular discharging mechanism to be operated being determined by the weight of the package, substantially as set forth.

2. A plurality of discharging mechanisms, a movable support for conducting packages to the discharging mechanisms and means under the control of the packages which enable each package to select the discharging mechanism which is to operate upon it, substantially as set forth.

3. A plurality of discharging mechanisms, a rotary support, scales carried by the support and adapted to receive packages and convey them to the discharging mechanisms, devices carried by the scales for operating the discharging mechanisms, and means for guiding the discharge-operating device to different discharging mechanisms, according to the weight of the package on the scale, substantially as set forth.

4. A plurality of discharging mechanisms, means located in different planes for setting the different discharging mechanisms in operation, package-supports constructed to assume different levels according to the weight of the package and provided with devices for setting the discharging mechanisms in operation and means for conveying the said package-supports into position where they will engage one or another of said discharge-operating devices according to the planes which they assume under the weights of the packages, substantially as set forth.

5. A plurality of discharging devices, landings for the reception of the articles which they discharge, a rotary package-support for conveying packages opposite said landings, scales carried by said rotary support and adapted to receive the packages to be discharged, guide-fingers carried by the scales, a series of guides with which the guide-fingers engage, means for operating the discharging mechanisms located at different heights and devices carried by the scales for operating the discharge mechanisms, the said guides in conjunction with the guide-fingers serving to direct the said discharge-operating devices of a particular scale to that discharge mechanism only where the package carried by that scale is intended to be landed, substantially as set forth.

6. A plurality of discharging mechanisms, landings for the reception of packages to be discharged, a movable support for conveying the packages to positions opposite the landings, scales mounted on said support for receiving the packages, devices carried by the scales for operating some one of the discharging mechanisms according to the weight of the package, dash-pots, and pistons or plungers connected with the scales in position to enter the dash-pots to bring the scales to a rest at the level determined by the weight of the package, substantially as set forth.

7. A plurality of discharging mechanisms, a rock-shaft for operating said mechanisms, clutches for locking the said mechanisms in and releasing them from operative connections with the shaft, devices located in different planes for throwing the clutches into and out of position to lock the discharging mechanisms to the shaft, means for conveying the packages in position to be discharged and means under the control of the package for engaging some one of the clutch-operating devices according to the weight of the package, substantially as set forth.

8. The combination with the rotary table, the package-carrying scales mounted thereon and means for discharging the packages, of braces carried by the rotary table and means for throwing the braces into position to steady

the scales during a portion of the revolution of the table, substantially as set forth.

9. The combination with the package-discharging mechanisms and the rotary table for conveying the packages to the discharging mechanisms, of the scales carried by the table and forming supports for the packages, devices carried by the scales for operating the discharging mechanisms, weights for partially counterbalancing the scales, springs for completing the counterbalance of the scales, and dash-pots for steadying the scales in the positions which they assume, substantially as set forth.

10. In combination, a package-filling hopper, a scale forming a support for the package, a solenoid for starting the feed, said solenoid being under control of the scale which supports the package for stopping the feed-discharging mechanisms, means for conveying the package with its load to the discharge mechanisms and means under the control of the package for operating some one of the discharging mechanisms according to the weight of the package, substantially as set forth.

11. Several discharging mechanisms, a rotary table for conveying packages to the discharging mechanisms, means for imparting to the table a step-by-step movement, a solenoid for starting the table-operating mechanism and an electric circuit under the control of the table-operating mechanism for energizing the solenoid to stop the movement of the table, substantially as set forth.

12. In combination, several discharging mechanisms, one for discharging packages of correct weight and others for discharging packages of underweight and overweight, those for discharging packages of underweight and overweight being located upon the opposite sides of the mechanism for discharging packages of correct weight, a rotary table for conveying the packages to be discharged to the discharging mechanisms, scales carried by the said table for receiving the said packages and means under the control of the scales for selecting that discharging mechanism corresponding to the weight of the package carried by the scale, substantially as set forth.

ALBERT STEARNS.

Witnesses:
GEO. L. JONES,
CLARKE R. ALVORD.