

No. 630,964.

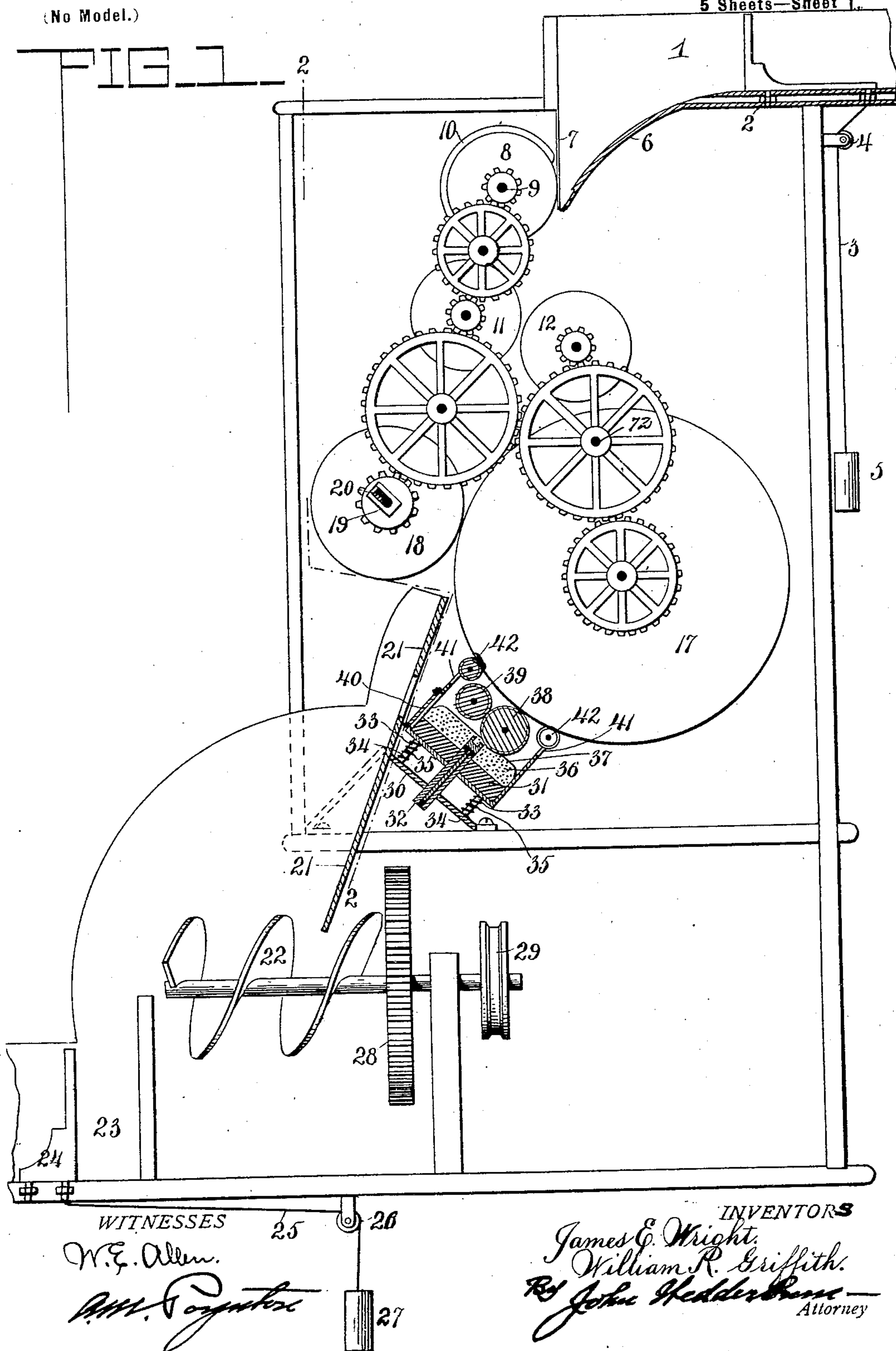
Patented Aug. 15, 1899.

J. E. WRIGHT & W. R. GRIFFITH.
POSTMARKING AND STAMP CANCELING MACHINE.

(Application filed Feb. 26, 1897.)

(No Model.)

5 Sheets—Sheet 1.



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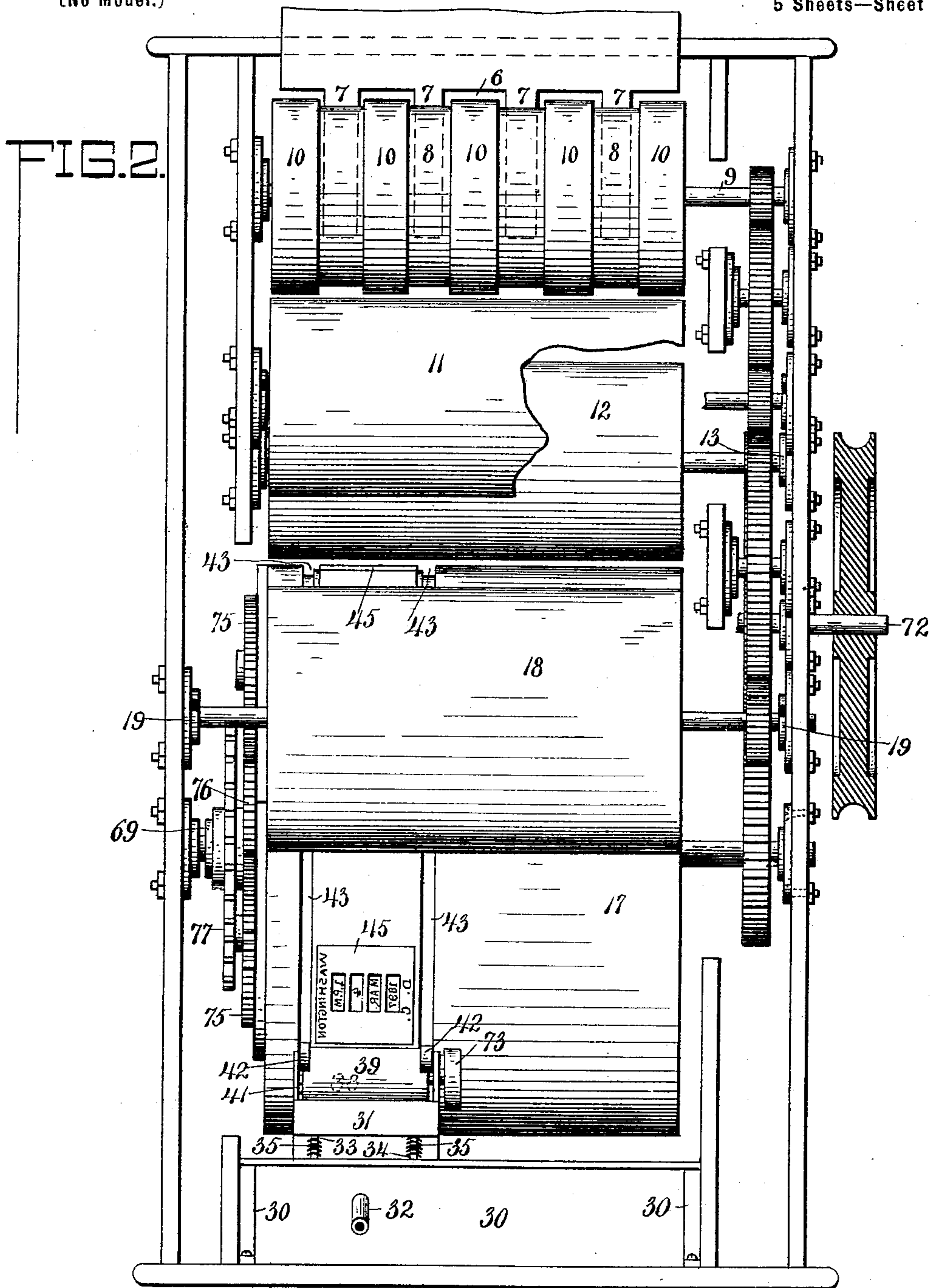
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5 Sheets—Sheet 2.



WITNESSES

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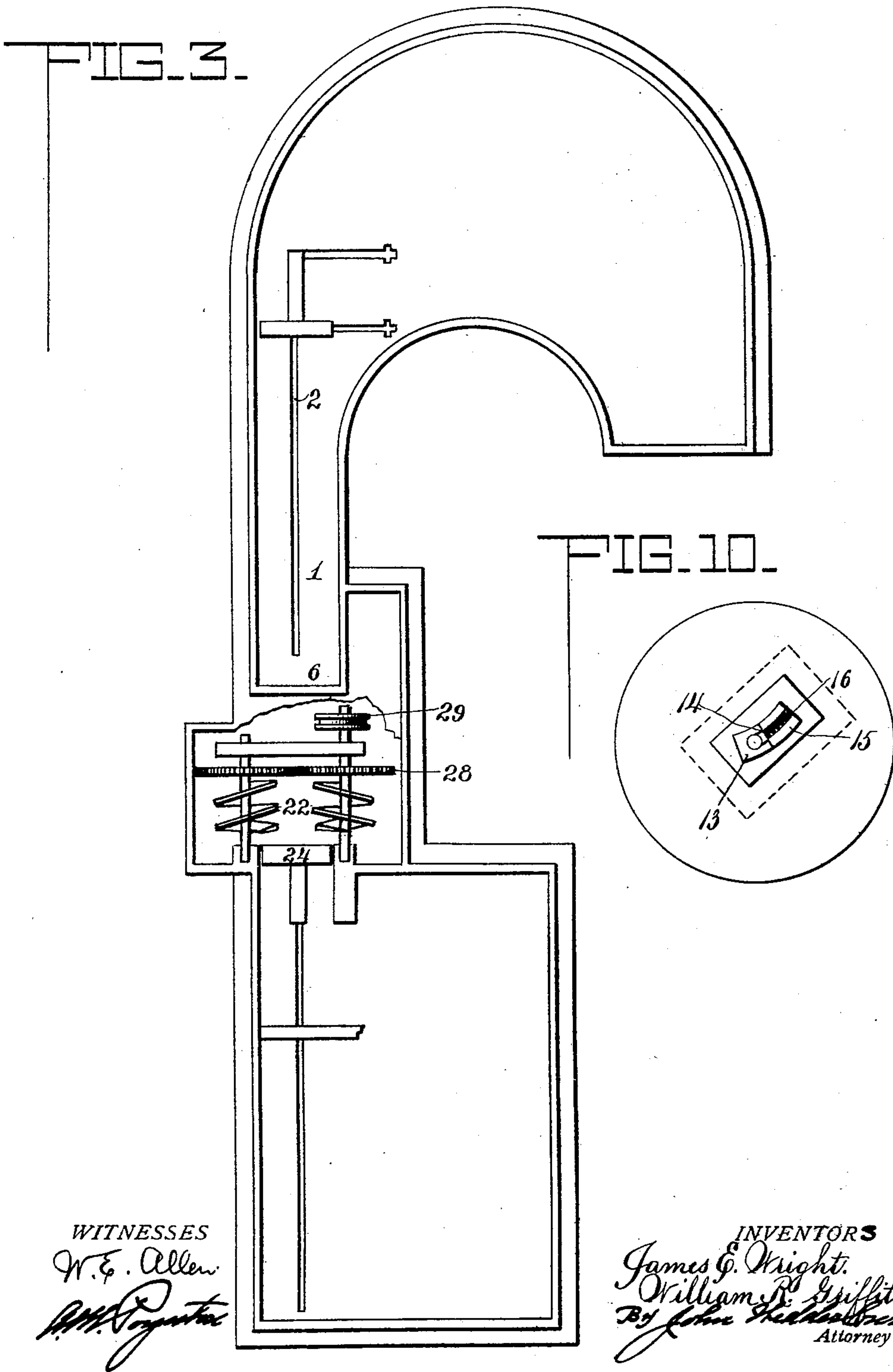
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5 Sheets—Sheet 5.

FIG. 8.

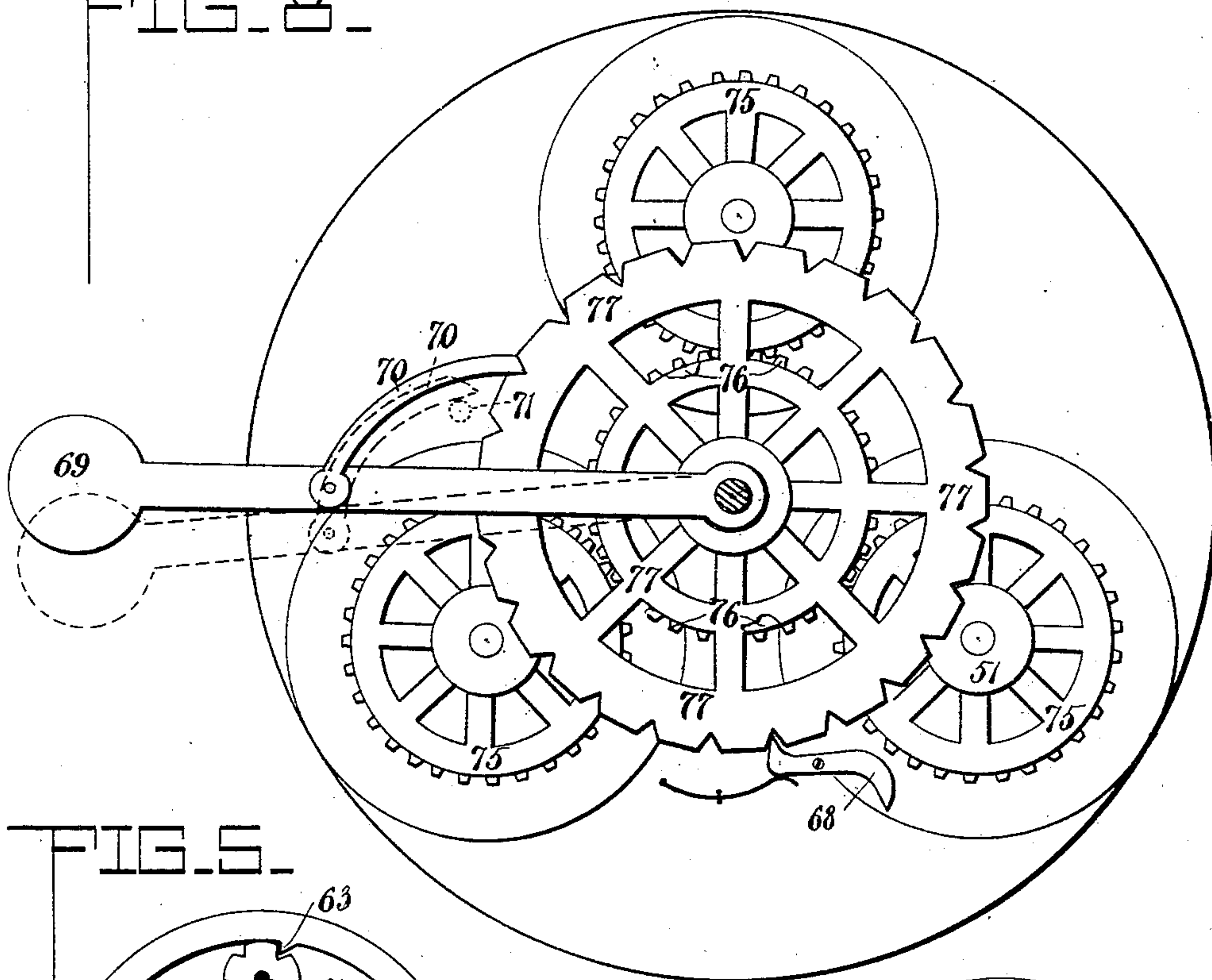


FIG. 5.

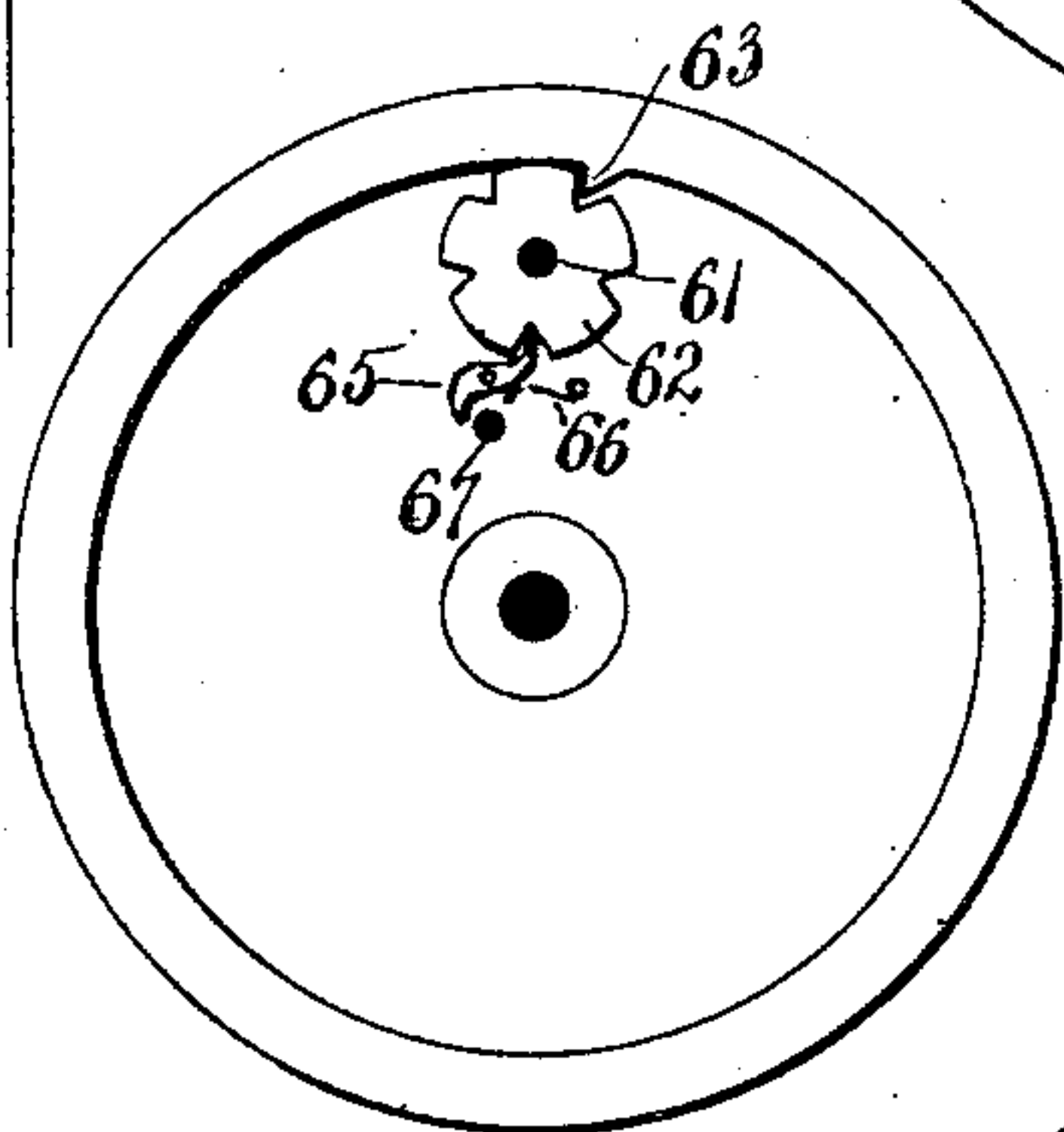


FIG. 6.

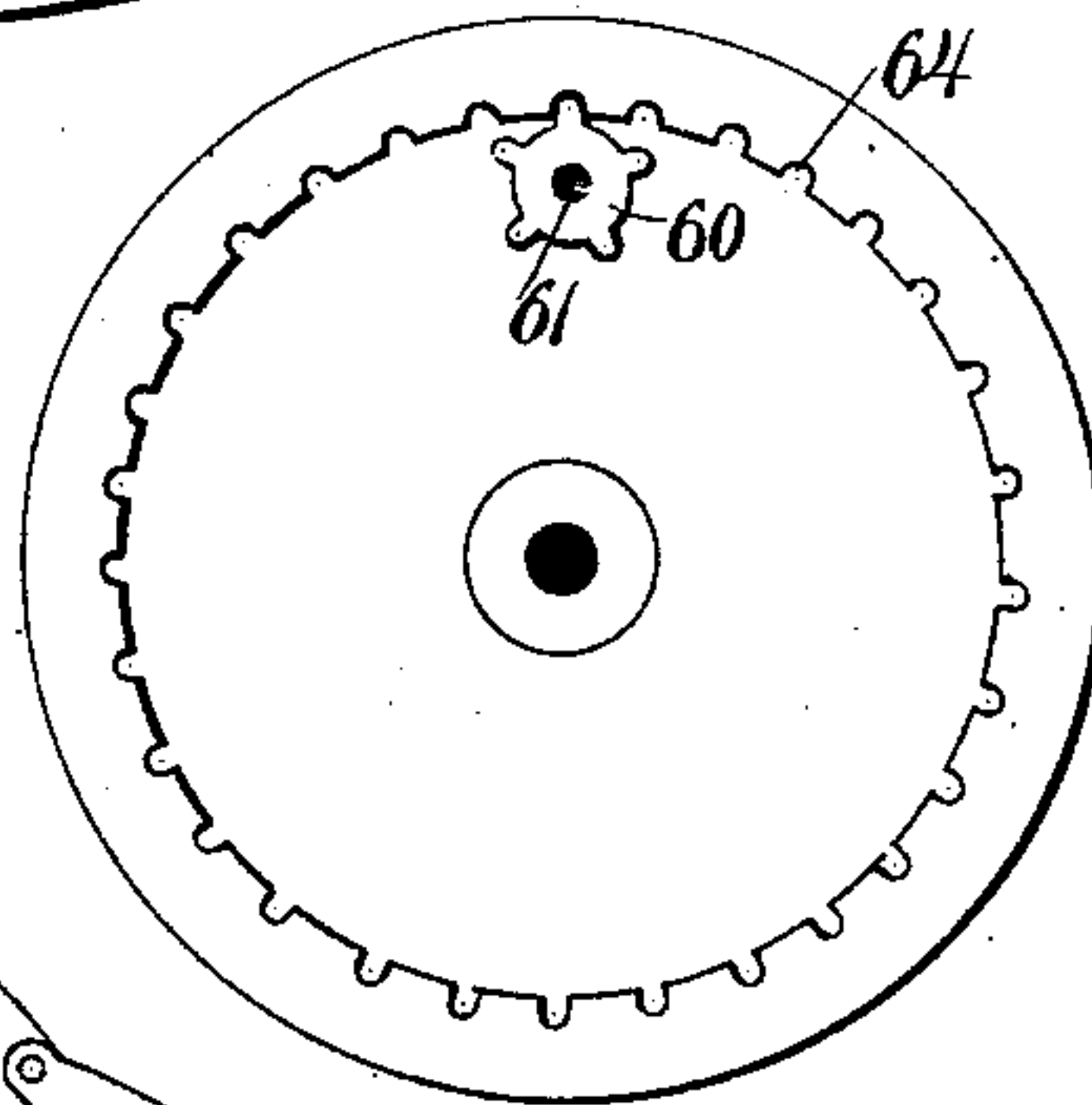
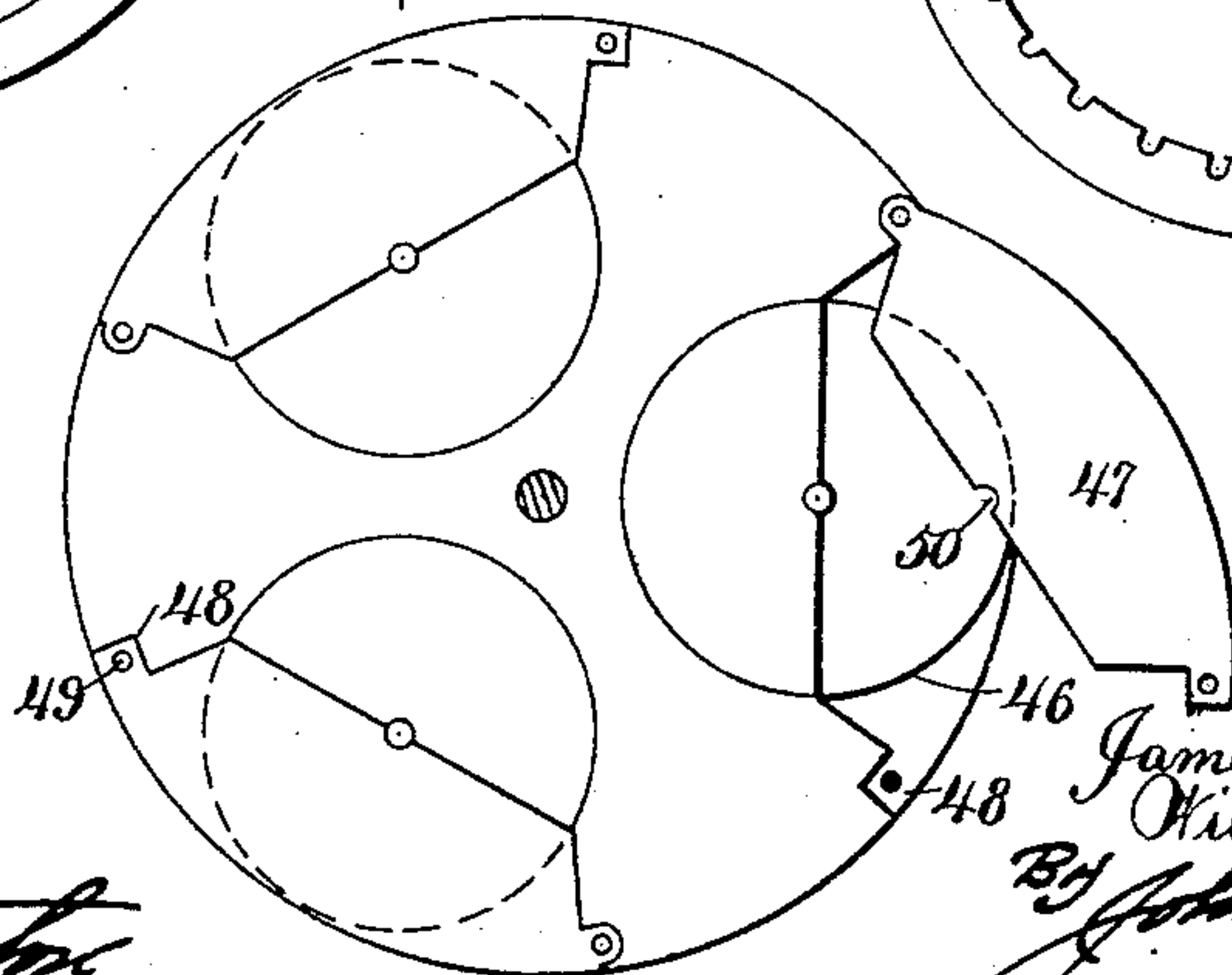


FIG. 7.

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UNITED STATES PATENT OFFICE.

JAMES E. WRIGHT AND WILLIAM R. GRIFFITH, OF PORTLAND, OREGON.

POSTMARKING AND STAMP-CANCELING MACHINE.

SPECIFICATION forming part of Letters Patent No. 630,964, dated August 15, 1899.

Application filed February 26, 1897. Serial No. 625,134. (No model.)

To all whom it may concern:

Be it known that we, JAMES E. WRIGHT and WILLIAM R. GRIFFITH, citizens of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful Improvements in Stamp-Canceling and Postmarking Machines; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in stamp-canceling and postmarking machines, the object of the same being to provide a machine of this character in which the letters will be automatically separated and conveyed to a cylinder carrying the canceling and dating stamps, through which they are delivered to an inclined chute terminating between Archimedean screws which push them upon the delivery-tray.

The invention embodies not only the general construction and efficient operation of the machine as a whole, but also certain details of construction including devices for inking the canceling and dating stamps, means for feeding the letters to the type-cylinder and for stacking the letters after they have been canceled and postmarked, and also mechanism for changing the postmarking-stamp, the latter comprising automatically-operated devices.

With the above ends in view our invention consists in a postal machine comprising a type-cylinder, a chute located above the same and terminating in a pocket, a roller having flexible strips extending partially around its circumference, a plate for holding the letters until engaged by said flexible strips of the feeding-roller, together with rollers for feeding the letters into contact with the type-cylinder.

The invention further consists in an inking device for the type-cylinder, consisting of a spring-pressed pad, a roller in contact with the pad and with the type-cylinder, a second roller impinging against the first-mentioned roller, and guide-rollers for the pad operating in grooves in the circumference of the type-cylinder.

The invention further consists in devices

for automatically changing the dates of the dating-stamp by the operation of the hour-disk, including mechanism for operating several dating-stamps simultaneously.

The invention further consists in the particular construction and combination of the several mechanisms taken together or separately, all as will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of a machine constructed in accordance with our invention, the near side of the inclosing case being removed. Fig. 2 is a vertical sectional view on the line 2 2 of Fig. 1. Fig. 3 is a plan view of the machine with the top of the inclosing case broken away. Fig. 4 is a sectional view through the dating mechanism carried by the type-cylinder. Fig. 5 is a side view of one of the type-disks. Fig. 6 is a detail view looking at the opposite side of the type-disk. Fig. 7 is an end view of the type-cylinder, showing the manner of placing the dating mechanism therein. Fig. 8 is an end view of the type-cylinder, showing the mechanism for turning the hour-disks of the several postmarking or dating mechanisms simultaneously. Fig. 9 is a detail view of the type-cylinder. Fig. 10 is a detail view showing the spring-bearing of the rollers.

The mechanism of our improved postal machine is inclosed within a casing, at the upper end of which is a feeding-chute and at the lower end a delivery-tray.

The numeral 1 designates the feeding chute or tray, having a wide or extended portion upon which the mail-matter to be marked is deposited. Upon this tray or table the letters are assorted or "faced," after which they are moved into the chute of the machine. This chute is provided in its base with a longitudinal dovetailed recess or groove receiving corresponding projections at the lower end of a slide or follower 2, adapted to push the letters into the machine. This follower or slide is automatically moved toward the machine by means of a cord or flexible connection 3, passing rearward from said slide or follower to and over the guide-pulley 4 and at its end attached to a weight 5. The inner end of the feeding chute or tray 1 is provided with a pocket formed by a spring-plate 6 in

connection with depending spring-fingers 7, attached to the end piece of said chute. Beyond this pocket is located a roller 8, the shaft 9 of which is journaled in suitable bearings supported by the inclosing case. This roller is provided on its periphery with a series of flexible strips 10, which extend only partially around the circumference of said roller. These strips move between the spring-fingers 7 when the roller is rotated and project in front of said fingers to engage a letter which has been moved into the pocket. The strips are preferably made of hard rubber, although felt or any other suitable material to cause proper frictional engagement with the letter may be substituted.

Below the roller 8 are located two feeding-rollers 11 and 12, which are normally held in contact with each other by the shaft of one of the rollers being journaled in bearings having a movement in their supports, said bearings 13 having an extension 14, while the support has a corresponding projection 15 to receive a helical spring 16, interposed between these parts. By providing one of these rollers with a spring movement toward the other rollers letters of different thicknesses will be properly fed between said rollers to the printing or type cylinder.

17 designates the type or printing cylinder, which is located below the feeding-rollers 11 and 12 and is provided on its periphery with a series of postmarking and canceling stamps, the cylinder and roller 8 being geared to each other in such manner that upon each complete rotation of said cylinder the roller 8 will have rotated as many times as there are postmarking-stamps around the circumference of the said cylinder. This arrangement is provided so that the letters will be properly fed to the cylinder as it is rotated. To one side of the type or printing cylinder 17 is positioned a presser-roller 18, adapted to contact with the periphery of the cylinder, said presser-roller being located so that the letters which pass between the feed-rollers 11 and 12 will be adjusted between said presser-roller and the type-cylinder. The roller 18 is spring-pressed in contact with the type or printing cylinder 17 by having the bearings 19 of its shaft movable in housings provided with interposed springs 20. The object of providing the spring-pressed roller at this point is to permit letters of different thicknesses to pass between said roller and the type or printing cylinder.

Below the presser-roller 18 is located an inclined chute 21, which receives the letters as they are delivered from the printing-cylinder and conveys the same to Archimedean screws 22, located at the lower end of said chute. These screws push the letters into a tray 23, located at the bottom of the machine, said tray having a slide or follower 24, against which the letters are stacked. The said follower is provided with dovetailed depending portions which slide in corresponding grooves

in the tray, and one of the projections is extended and has attached thereto a flexible connection or cord 25, extending to and over a pulley 26, the end being attached to a weight 27. This weight draws upon the follower, moving it in the direction of the screws in order that the letters may be stacked and kept together. The shafts of the Archimedean screws are suitably journaled in bearings or standards projecting from the base of the machine, and the shafts have intermeshing gearings 28 28 mounted thereon, and one of the shafts is extended to receive a pulley 29, from which a driving-belt passes. By this arrangement said screws are turned toward each other and rotated at the same rate of speed.

30 designates a bracket which is rigidly secured to the base-plate of the machine and supports the inking device for the printing-cylinder. This inking device is permitted to have a movement to and from the printing-cylinder, and therefore the block 31, forming a part thereof, is guided in the standard 32, projecting from the base-plate. The block 31 is provided with projections 33, similar projections 34 projecting from the bracket 30, and between these projections are interposed helical springs 35, which press the inking device in contact with the printing-cylinder. The block 31 carries an absorbent packing 36, over which is placed a silk covering 37, the absorbent packing being intended to act as a reservoir for the ink. A suitably-journaled inking-roller 38 is carried by the block, so that it will contact with the pad and with the type or stamps on the printing-cylinder. This roller 38 may be made of metal with a felt covering, forming a pad, over which may be placed a covering of silk. Also supported by the block 31 is a presser-roller 39, which bears against the inking-roller 38 and removes any surplus ink before the surface comes in contact with the printing-cylinder. The casing which incloses the pad is provided with a hinged door 40, through which the pad may be removed for the purpose of supplying the same with ink. From this casing project spring members 41, carrying guide-rollers 42 at their upper ends which travel in grooves 43, extending around the circumference of the printing-cylinder 17 on either side of the canceling and postmarking stamps. These guide-rollers provide for properly guiding the inking-roller with respect to the type of the printing-cylinder.

The printing-roller 17 is of considerable width, and it will be noted that the canceling and postmarking stamps are adjoining one end of the same or in such position as to cancel the stamp provided it is in the proper corner of the envelop or properly faced before being delivered to the feeding-roller 8. It will also be noticed that the part of the printing-cylinder between the grooves therein is slightly lower than the other part of the cylinder in order that the type or stamps may

project, and thus receive the ink without inking the intervening parts of the cylinder.

The canceling-stamp 44 consists of the usual parallel bars, which are secured to the periphery of the printing-cylinder in any suitable manner.

The postmarking-stamp may be constructed or made up in the usual manner and inserted in the wheel within the plate 45, having the name of the post-office formed therein; but in order to provide for automatically setting the date of the postmarking stamp or device we provide suitable mechanism for this purpose and also construct the printing-cylinder to receive the same. The end of the printing-cylinder adjoining the grooves therein is recessed at its outer edge in three or more places to provide chambers 46, which are partly closed at one end by a plate of the cylinder and wholly closed by a swinging lid 47, hinged at one end to the cylinder and provided at its other end with offsets 48, having an aperture through which a bolt 49 passes for securely holding said lid in place. At the inner edge of the lid 47 is a recess 50, which, with a corresponding recess in the head of the cylinder, forms the bearing for a sleeve 51, said sleeve also having a bearing on a stud-shaft 52, loosely passing therethrough and secured at its other end to the cylinder. Upon this shaft are mounted disks carrying the postmarking characters. At the inner end of the sleeve 51 is secured or formed integral therewith a wheel 53, provided with a rim upon which is formed type characters representing each hour of the day, twenty-four marks in all. Adjoining this wheel and splined to the said stud-shaft 52 is a disk 54, beyond which is loosely mounted a second type-carrying wheel 55, the periphery or rim of which is provided with numerals representing the days of the month or thirty-one marks in all. A third type-carrying wheel 56 is loosely mounted on the shaft, with an interposed stationary disk 57, and upon this wheel are formed characters or letters designating the months of the year, the said months being repeated around the wheel to correspond with the number of marks on the first type-carrying wheel. The fourth type-carrying wheel 58 is loosely mounted on the shaft beyond the wheel 56, and a stationary disk 59 is interposed between said wheels. The periphery of the wheel 58 is marked with numerals representing the present and future years of the calendar or twenty-four in all, thus corresponding in number of characters to those of the wheels 53 and 56. The several type-carrying wheels are geared to each other so that the turning of the first wheel will turn the others in succession. For this purpose one edge of each type-carrying wheel, except the wheel 53, is provided with a series of teeth 64, corresponding in number with the marks on the periphery of the wheel. For instance, the wheel 55 has thirty-one teeth, the wheel 56 twenty-four teeth, and the wheel 58

also twenty-four teeth. With these teeth engages a pinion 60, mounted on a shaft 61, extending through or bearing in the interposed stationary disk, the other end of each shaft carrying a star-wheel 62, the points of which are engaged by projections 63 on the sides of the type-carrying wheels opposite the teeth 64. It will be understood, of course, that it is not necessary to provide the first type-carrying wheel 53 with teeth corresponding to the marks thereon; but the inner side of said wheel is provided with the projection 63 to engage the adjoining star-wheel 62, and it will be also understood that the projections hereinafter mentioned are located at the end of the series of marks, with the exception of the type-wheel carrying the marks designating the months of the year, and as the marks on this wheel are repeated the said wheel is provided with two projections, so as to operate the adjoining wheel 58 twice at each revolution of the said wheel 56. In order to hold the wheels after being turned, we provide each disk with a pawl 65, having a projection which enters the space between the teeth of the star-wheel, being brought into such engagement by a flat spring 66. This pawl is provided with a tail, which extends in the path of a pin 67, projecting from the inner side of the type-wheel, this projection being located in such position relative to the projection 63 that the pinion will be released when said projection is in engagement with the star-wheel. By the construction and arrangement just described each revolution of the hour-wheel 53 will turn the wheel 55 representing the day of the month one tooth or a distance equal to the next mark thereon, and each revolution of this wheel 55 will turn the next wheel 56 one tooth to bring the marks designating the next month in proper position, a half-rotation of this latter wheel turning the next wheel or that carrying the years. It will be understood, of course, that in the event of the month having but thirty days the registering mechanism is manipulated to turn the hour-wheel a complete rotation to skip the thirty-first mark on the wheel carrying the months.

The end of the cylinder in the present instance is provided with three sets of dating or type-carrying wheels, and in order to operate the three sets in unison we have extended the hub of each hour-wheel to form the sleeve 51, which projects beyond the end of the printing-cylinder, where it is provided with a gear-wheel 75, and upon the shaft of this printing-cylinder is loosely mounted a gear-wheel 76, in mesh with all three gear-wheels 75, hereinbefore mentioned. To the gear-wheel 76 is rigidly secured a wheel or disk 77, having notches in its periphery, and with said notches engages a spring-actuated pawl 68, carried by the printing-cylinder, so that the disk and the several gear-wheels connected thereto will revolve with said cylinder without turning with respect thereto. Upon the

shaft of the printing-wheel is also mounted a lever 69, having a gravity-pawl 70 pivoted thereto and adapted to be thrown in engagement with the notched disk 77 to move the same, the said pawl being released from the notched disk when the lever is in its normal position, a lug 71, projecting from the inclosing case, being provided for this purpose. Of course the lever 69 is not operated until the mechanism is stopped; but when it is moved to turn the notched disk 77 one tooth such movement will be communicated to the hour-disk 53 through the intervention of the gear-wheels 76 and 75. The operating end of the lever 69 extends through a slot in the forward end of the inclosing case, so that it can be operated without requiring access to the mechanical parts of the machine.

From the foregoing description, in connection with the accompanying drawings, the construction and operation of our invention will be readily apparent, and the main driving-shaft 72 may be driven from any suitable power, the motion of said shaft being communicated to the different feed-rollers, printing-cylinder, and other revoluble parts of the mechanism. The inking-roller of the inking device is driven by a roller 73 in contact with the printing-cylinder beyond the inner groove therein, said roller being on the shaft of the inking-roller. It will be understood that the operation of our improved postal machine is substantially automatic throughout, the attendant only being required to assort and face the letters and place them in front of the follower or slide in the delivery-chute. After a sufficient quantity of letters have been placed in the chute and brought in contact with the spring-fingers 7 at the end thereof the machine is started, and the roller 8 will take the first letter when the rubber strip thereon contacts therewith and, pushing said letter down between the fingers and lip 6, deposits it between the feed-rollers 11 and 12, from which it is delivered to the printing-cylinder between the presser-roller 18, and as it passes therethrough the stamp is canceled and the letter postmarked before it goes out to the screws which stack the letters against the slide at the bottom of the machine.

Instead of having the delivery-chute 1 on a horizontal plane it may be placed at a slight inclination toward the feed-roller 8 in order to assist the movement of the said letters toward the said roller.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a postal machine, the combination with the chute and means for feeding letters along the same, a pocket formed at the inner end of the chute, a plate having a series of depending spring-fingers above the pocket and a roller having a corresponding series of strips extending partially around the circumference of the same, said strips passing between the spring-fingers; together with feed-

rollers, and a printing-cylinder, substantially as shown, and for the purpose set forth.

2. In a postal machine, the combination with the chute and means for feeding the letters along the same, of a pocket at the end of the chute comprising a spring-lip, a plate located above the pocket and provided with a series of depending spring-fingers, a roller located adjoining the plate, and a series of rubber or flexible strips separated from each other and extending partially around the circumference of said roller and adapted to pass between the fingers as the roller is rotated; together with feed-rollers and a printing-cylinder, substantially as shown, and for the purpose set forth.

3. In a postal machine, the combination with the chute and means for feeding the letters along the same, a plate at the end of the chute having a series of depending spring-fingers, a roller provided with a corresponding series of strips separated from each other and extending partially around the same and adapted to pass between the strips, feeding-rollers located below the aforesaid roller, one of said rollers being spring-pressed toward the other; together with a printing-cylinder carrying canceling and postmarking stamps adjoining one end, and a spring-pressed roller bearing against the printing-cylinder, substantially as shown, and for the purpose set forth.

4. In a postal machine, the combination with the chute having means for pushing the letters along the same, a spring-plate at the end of the chute and forming a part thereof, a plate having a series of depending spring-fingers, a roller adjoining the plate and provided with a corresponding series of strips extending partially around the same and adapted to pass between the fingers when said roller is rotated, feed-rollers carrying the letters to the printing-cylinder; together with a chute receiving the letters from the cylinder, Archimedean screws located at opposite sides of the lower end of the chute, and a plunger against which the letters are stacked by said screws, substantially as shown, and for the purpose set forth.

5. In a postal machine, the combination with the printing-cylinder and feeding-rollers delivering the letters thereto, of an inking device an inking-roller interposed between the feed-roller and the printing-cylinder, a presser-roller bearing against the inking-roller, and a guide-roller at the end of the shaft of the inking-roller, substantially as shown, and for the purpose set forth.

6. In a postal machine, the combination with the printing-cylinder, rollers for feeding the letters to the same, said printing-cylinder having type and circumferential grooves at either side of the same, of an inking device for the cylinder consisting of a pad spring-pressed, guides for holding said pad against lateral movement, an inking-roller interposed between the pad and printing-cylinder, a sec-

ond roller located on the shaft of the inking-roller in contact with the printing-cylinder, guide-rollers carried by the inking device and engaging the circumferential grooves of the printing-roller.

7. In a postal machine, the combination with the printing-cylinder having type on its circumference, of an inking device presenting a box or casing spring-pressed toward the printing-cylinder, an inking-pad contained in said box or inclosing case, a roller located between the pad and printing-cylinder, said roller having an extended shaft with a roller in engagement with the printing-cylinder, a spring-pressed roller bearing against the inking-roller, and members projecting from the box or casing and carrying rollers which bear in circumferential grooves in the printing-cylinder, substantially as shown, and for the purpose set forth.

8. In a postal machine, the combination with the printing-cylinder having type thereon, of a bracket presenting an inclined member with projecting studs, a casing provided with corresponding studs and in engagement with suitable guides, springs interposed between the casing and bracket to engage the studs, an inking-pad located within the casing, an inking-roller journaled in bearings carried by the casing and in contact with a pad and printing-cylinder; together with a spring-pressed roller bearing against the inking-roller, substantially as shown, and for the purpose set forth.

9. In a postal machine, the combination with the printing-cylinder having openings in one end which extend through the periphery of said cylinder, shafts located in said openings and a series of type-wheels mounted on each shaft to project beyond the periphery; together with gearing connecting said wheels so that the rotation of one will operate the others consecutively and mechanism for turning the first wheel of the different series in unison, substantially as shown, and for the purpose set forth.

10. In a postal machine, the combination with the type-cylinder having a chamber or chambers in one end extending through the circumference, a sectional lid covering the ends of said chambers, the adjoining edges of said sections having openings forming a bearing, the outer section of the lid being secured in place by a screw passing through the same, a shaft located in the chamber or chambers, a series of type-wheels mounted on said shaft, a gearing connecting said type-wheels so that the rotation of one will operate the others consecutively, substantially as shown, and for the purpose set forth.

11. In a postal machine, the combination with the printing-cylinder having two or more openings in one end, shafts mounted in said openings to bear at their ends in the cylinder, a set of type-wheels mounted on each shaft and connected by a gearing so that the operation of the outer wheel will operate the

others consecutively, gearings rigidly connected to the outer wheels of said postmarking device, a notched wheel geared to said gear-wheel and loosely mounted on the shaft of the printing-cylinder, and a normally-operated lever having a pawl in engagement with the toothed disk, substantially as shown, and for the purpose set forth.

12. In a postal machine, the combination with the printing-cylinder having two or more openings in one end, shafts mounted in said openings to bear at their ends in the cylinder, a set of type-wheels mounted on each shaft and connected by gearing so that the operation of the outer wheel will operate the others consecutively, gear-wheels rigidly connected to the outer wheels of said postmarking device; together with a notched disk loosely mounted on the shaft of the printing-cylinder and geared to the aforesaid gear-wheel, a pawl connected to the cylinder and spring-actuated to engage the notched disk, a lever loosely mounted on the shaft of the printing-cylinder and having a gravity-pawl adapted to be thrown in engagement with the notched disk, and a projection for supporting the gravity-pawl out of engagement with the notched wheel, substantially as shown, and for the purpose set forth.

13. In a postal machine, the combination with the printing-cylinder of a shaft fixed therein, a series of type-wheels mounted to rotate freely on said shaft, each type-wheel having a circumferential series of marks and gear-teeth corresponding therewith, disks or arms rigidly attached to the shaft and interposed between the type-wheels, shafts bearing in said disks and carrying a pinion which meshes with the gear-teeth of the type-wheel, a star-wheel on the other end of each shaft operated by a projection on the adjoining type-wheel, a pawl or dog for locking the type-wheels and a projection tripping the dog simultaneously with the operation of said shaft, substantially as shown, and for the purpose set forth.

14. In a postal machine, the combination with the printing-cylinder, of a shaft fixed therein, a series of type-wheels mounted to rotate freely on said shaft, each type-wheel having a circumferential series of marks and gear-teeth corresponding therewith, a projection or projections on the opposite side of the type-wheels, disks or arms projecting from the shaft and interposed between the type-wheels; together with shafts journaled in the disks or arms and provided at one end with a pinion in mesh with the teeth of the type-wheels, a star-wheel on the other end of the shafts and located in the path of the said projections of the type-wheels, a pawl or dog in engagement with the star-wheel and means for releasing the said dog when the star-wheel is operated, substantially as shown, and for the purpose set forth.

15. In a postal machine, the combination with the printing-cylinder, of a shaft fixed therein, a series of type-wheels mounted to ro-

tate freely on said shaft, each type-wheel having a circumferential series of marks and gear-teeth corresponding therewith, disks or arms fixed to the shaft and interposed between the
5 type-wheels, shafts journaled in said disks or arms, each shaft having a pinion at one end in mesh with the gear-teeth and a star-wheel at its other end engaged by a projection or projections on the adjoining type-wheels; together
10 with spring-pawls in engagement with the star-wheels, and a projection on the type-

wheels to trip the pawls when the star-wheels are engaged, substantially as shown, and for the purpose set forth.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

JAMES E. WRIGHT.

WILLIAM R. GRIFFITH.

Witnesses:

JAMES E. BRUCE,

WALLACE J. BRUCE.