

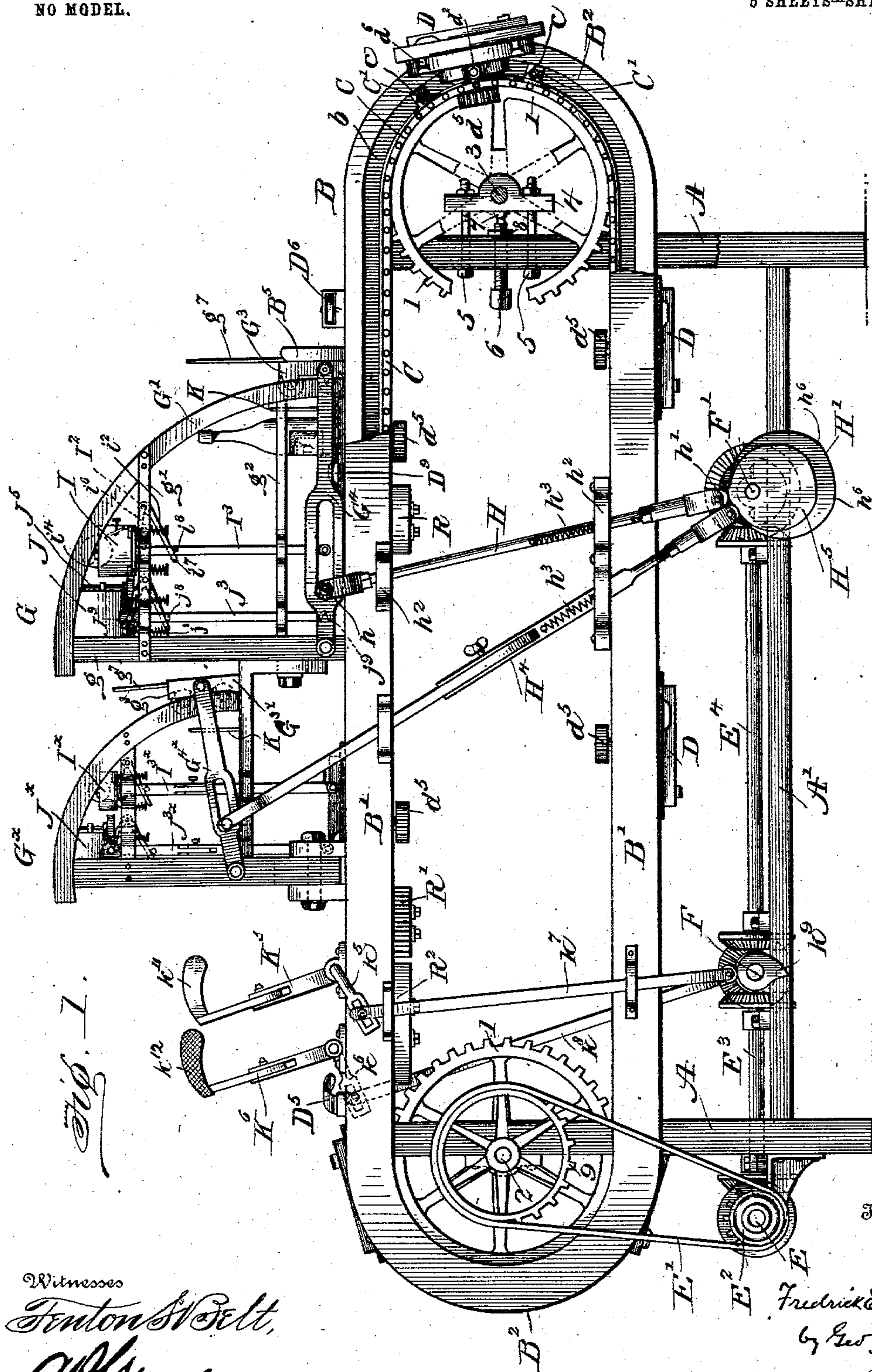
No. 730,424.

PATENTED JUNE 9, 1903.

F. E. WENZEL.  
LABELING MACHINE.  
APPLICATION FILED SEPT. 6, 1902.

NO MODEL.

5 SHEETS—SHEET 1.



Witnesses  
Fenton S. Belt,  
Attest

Inventor  
F. E. Wenzel  
by Geo. H. Chapman  
Attorney.



No. 730,424.

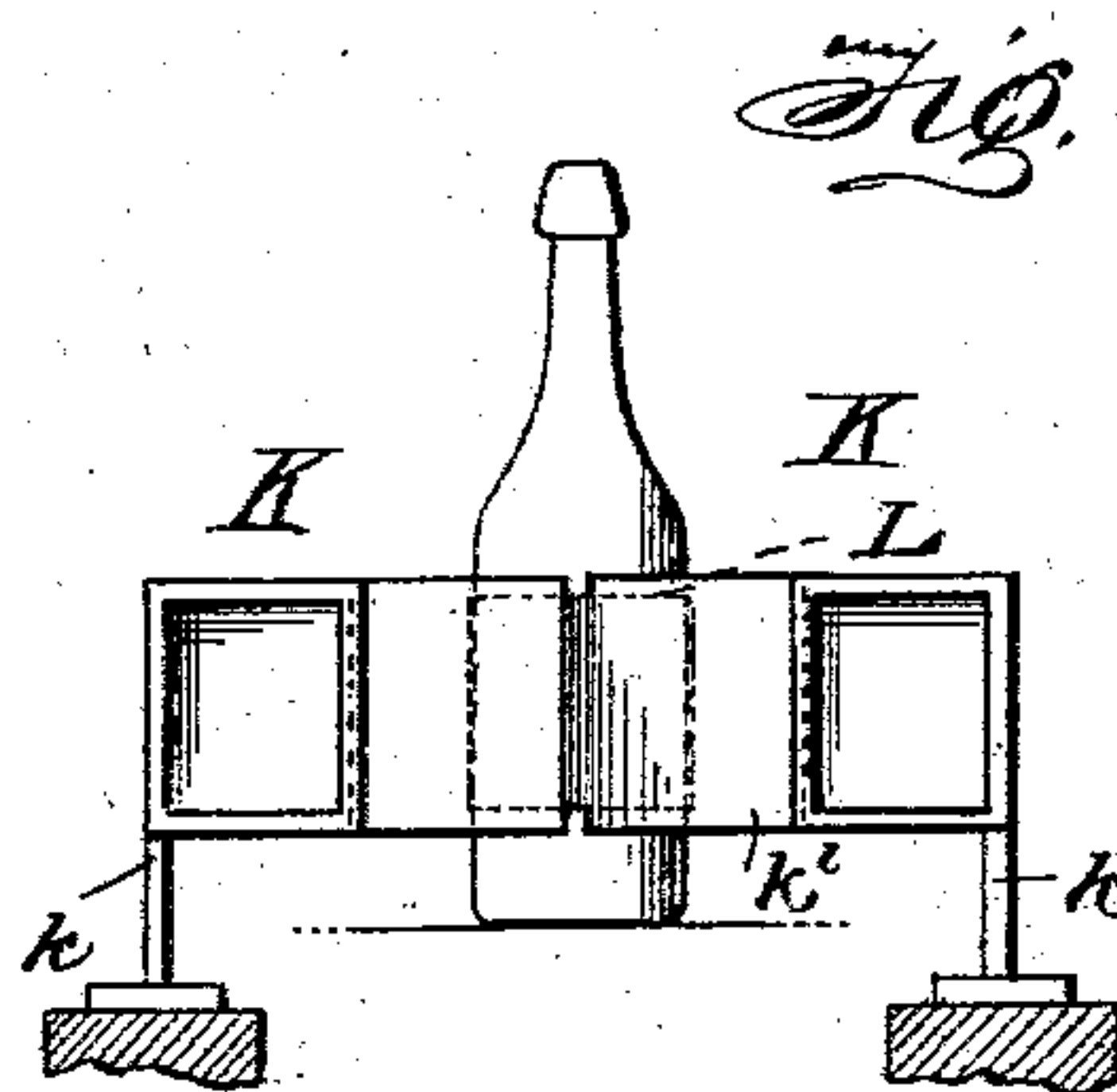
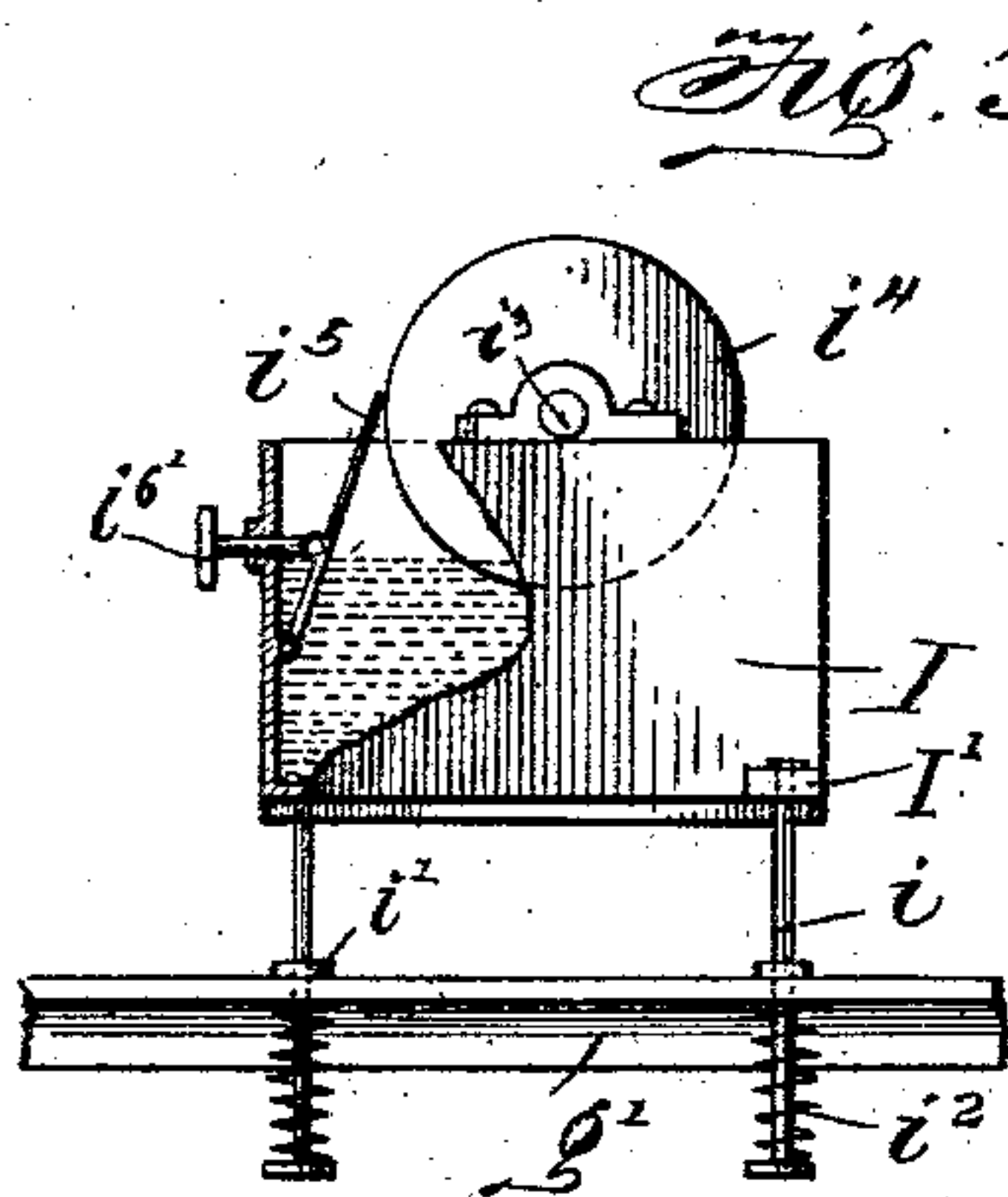
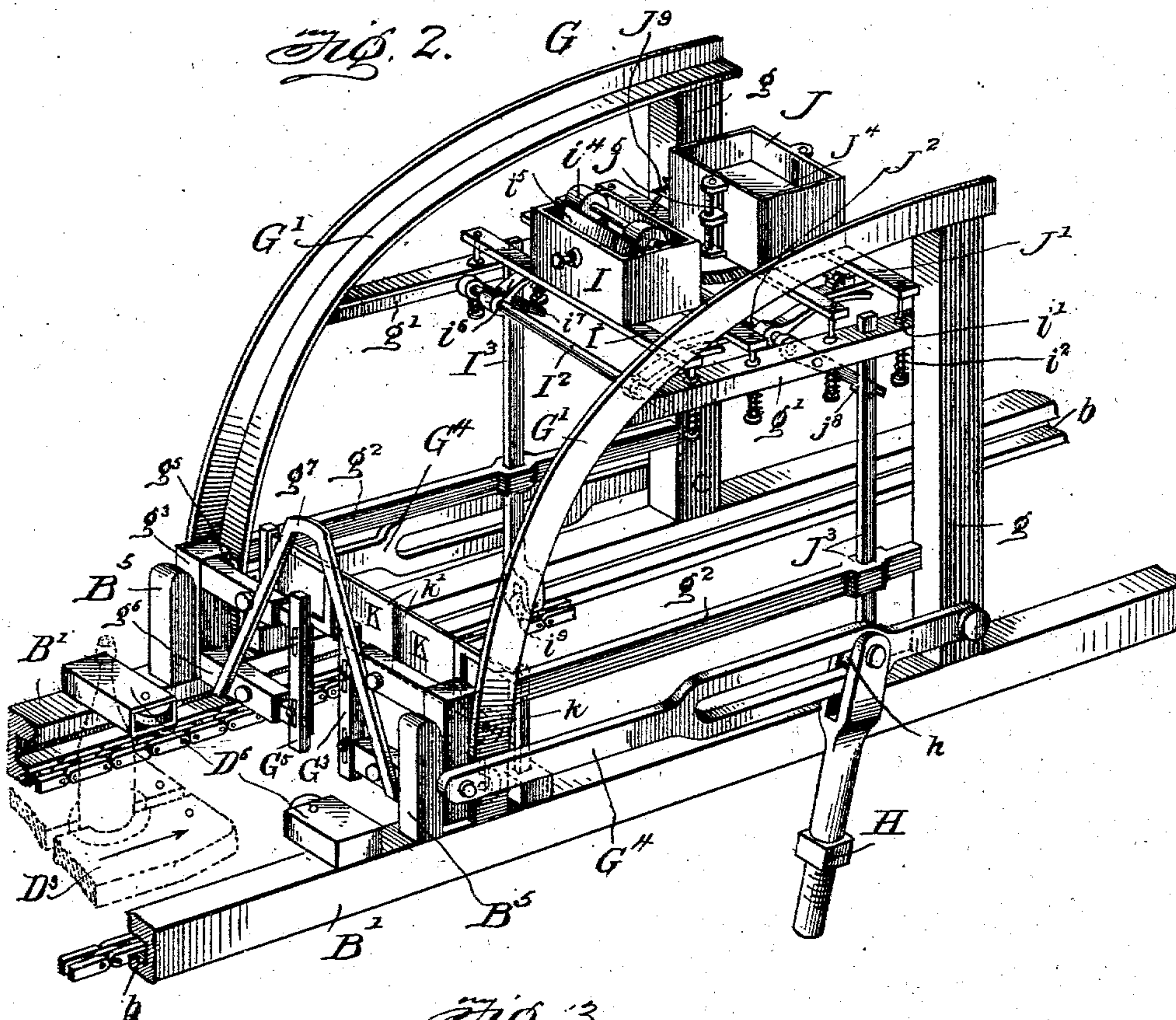
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5 SHEETS—SHEET 2.



Witnesses  
Gordon Stolt,  
Attorney

Inventor  
Fredrick E. Wenzel  
by Geo. H. Evans

Attorney

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5 SHEETS—SHEET 3.

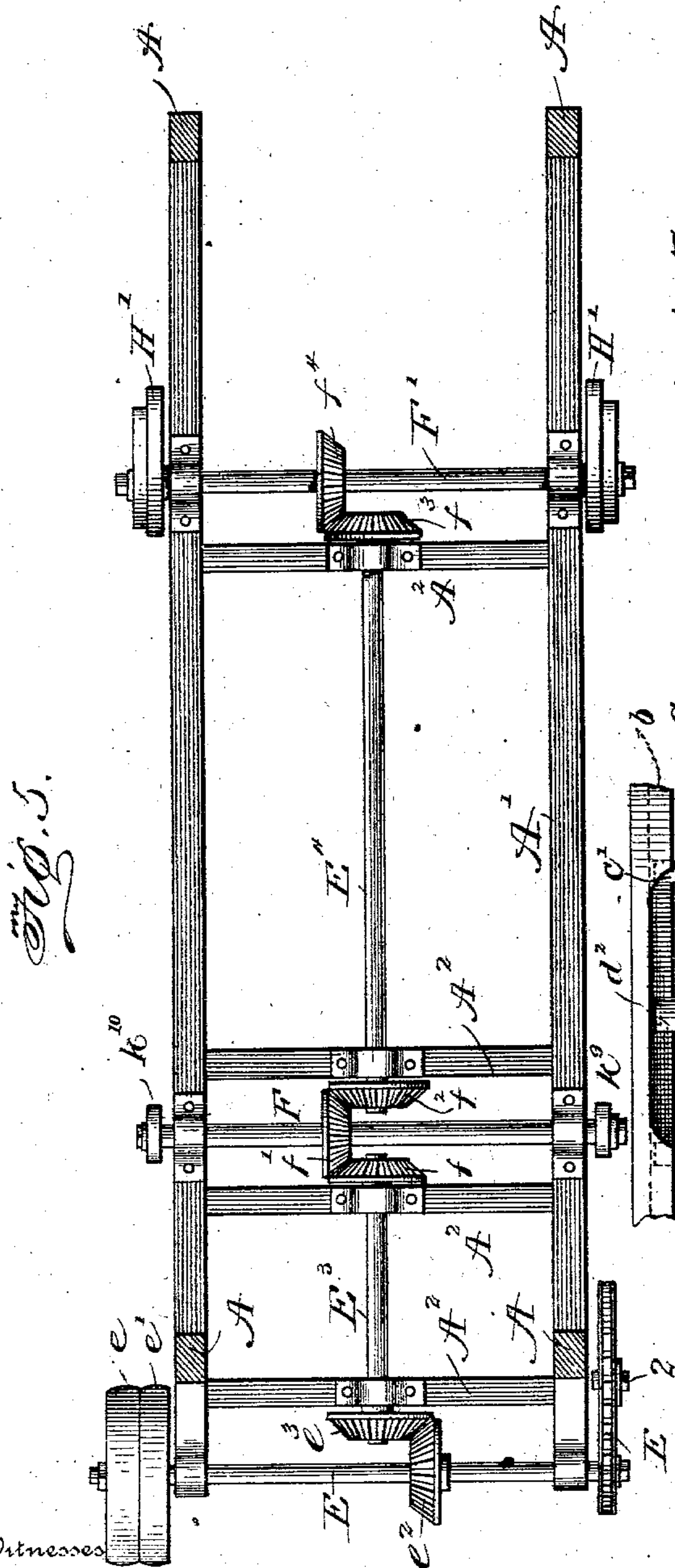


Fig. 5.

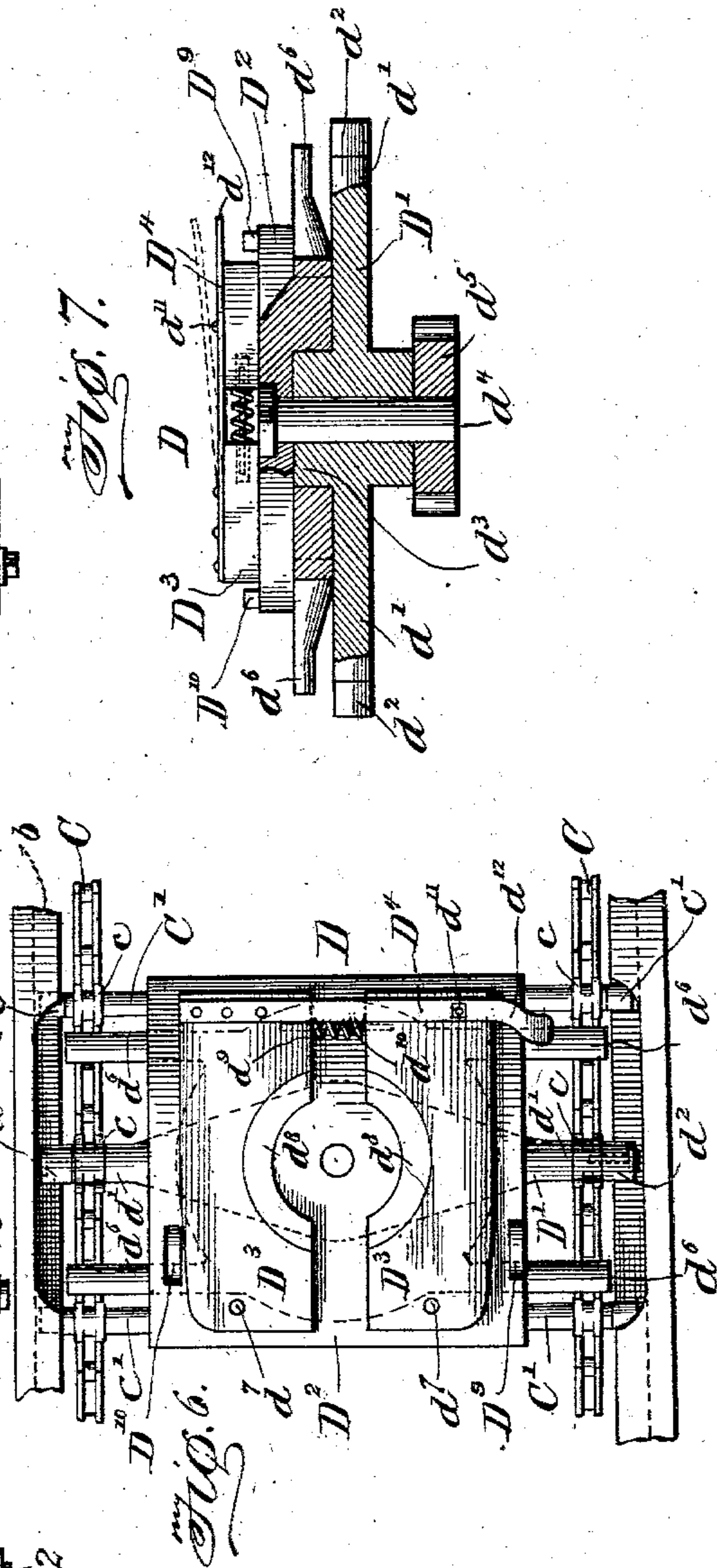


Fig. 7.

Fig. 6.

Witnesses  
Genton & Bell,  
Attorneys

Inventor  
Fredrick E. Wenzel  
by Geo. H. Evans

Attorney



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5 SHEETS—SHEET 4.

NO MODEL.

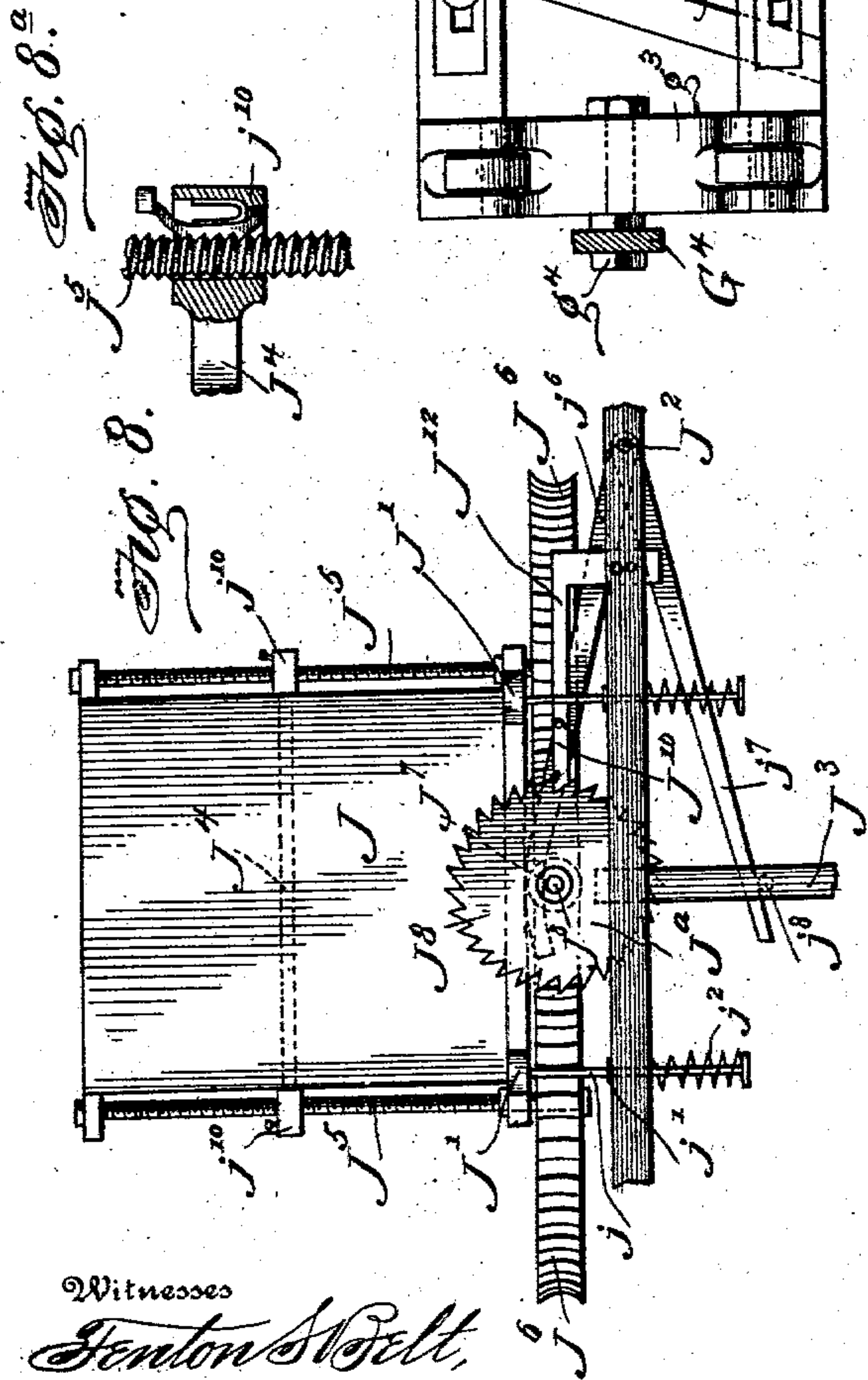
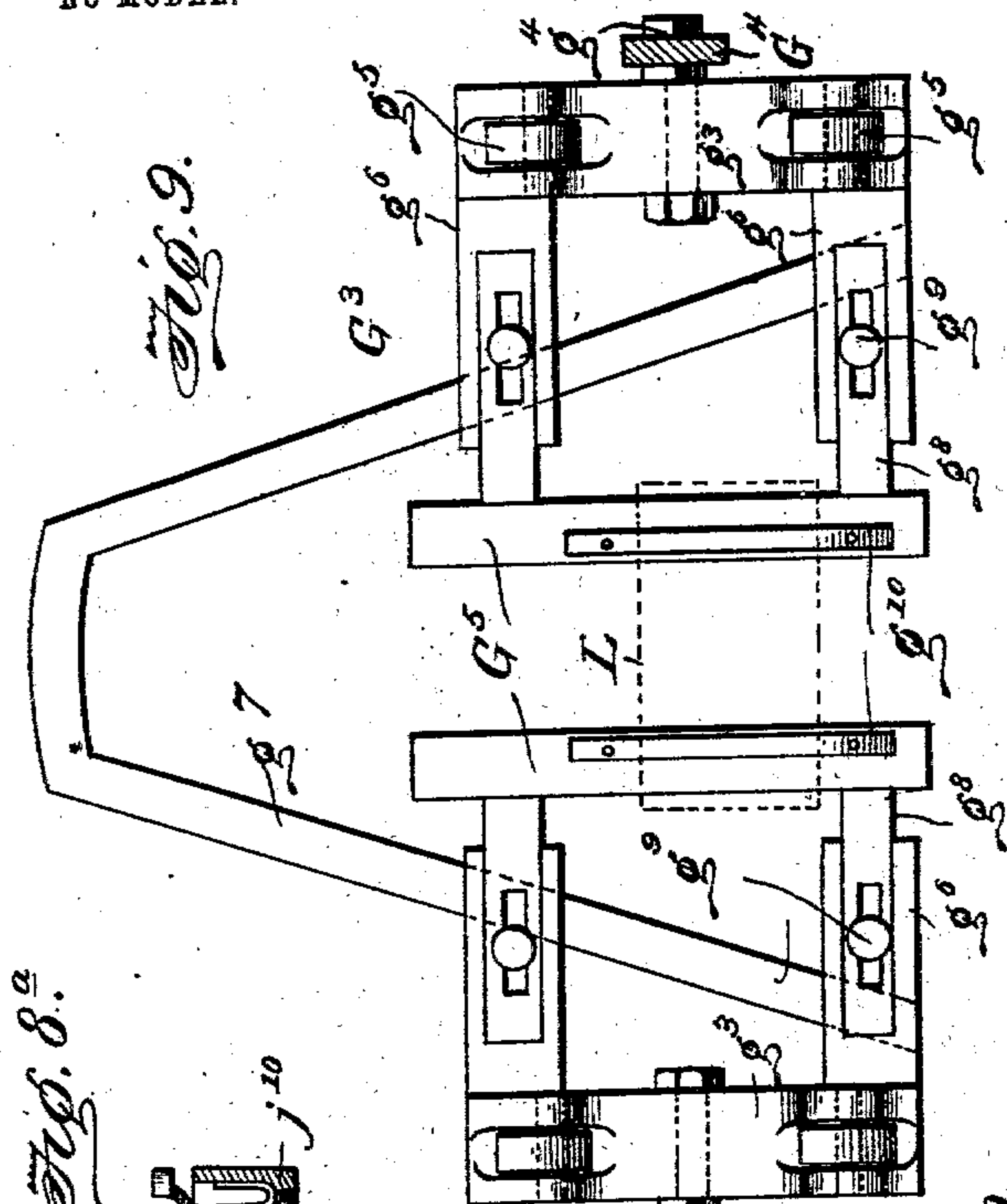
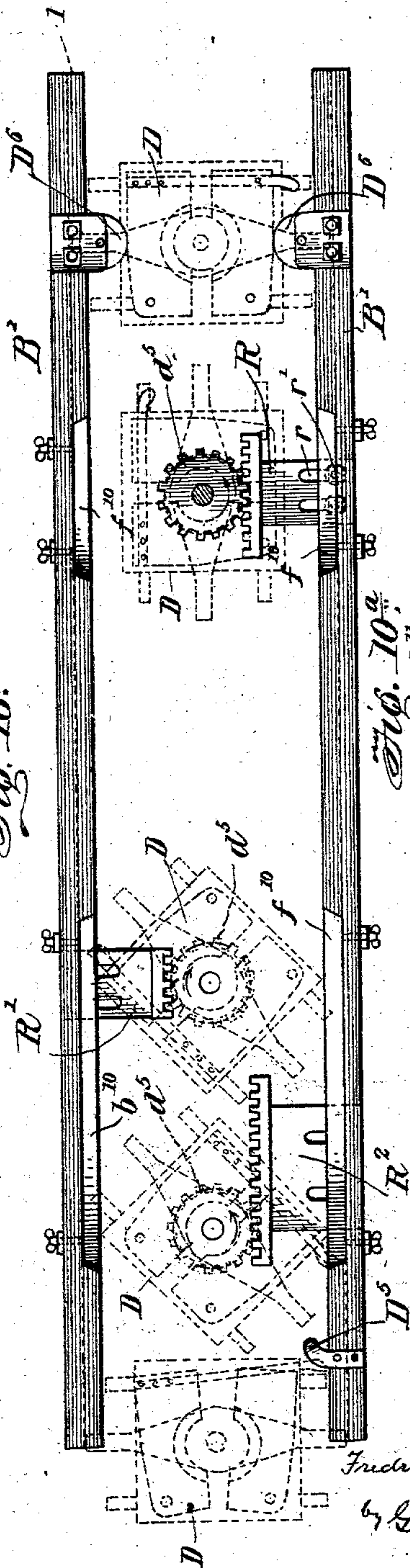


Fig. 10.



Inventor

Fredrick E. Wenzel

by George E. Wenzel

Attorney

Witnesses  
Fenton S. Bell,  
A. H. Wenzel



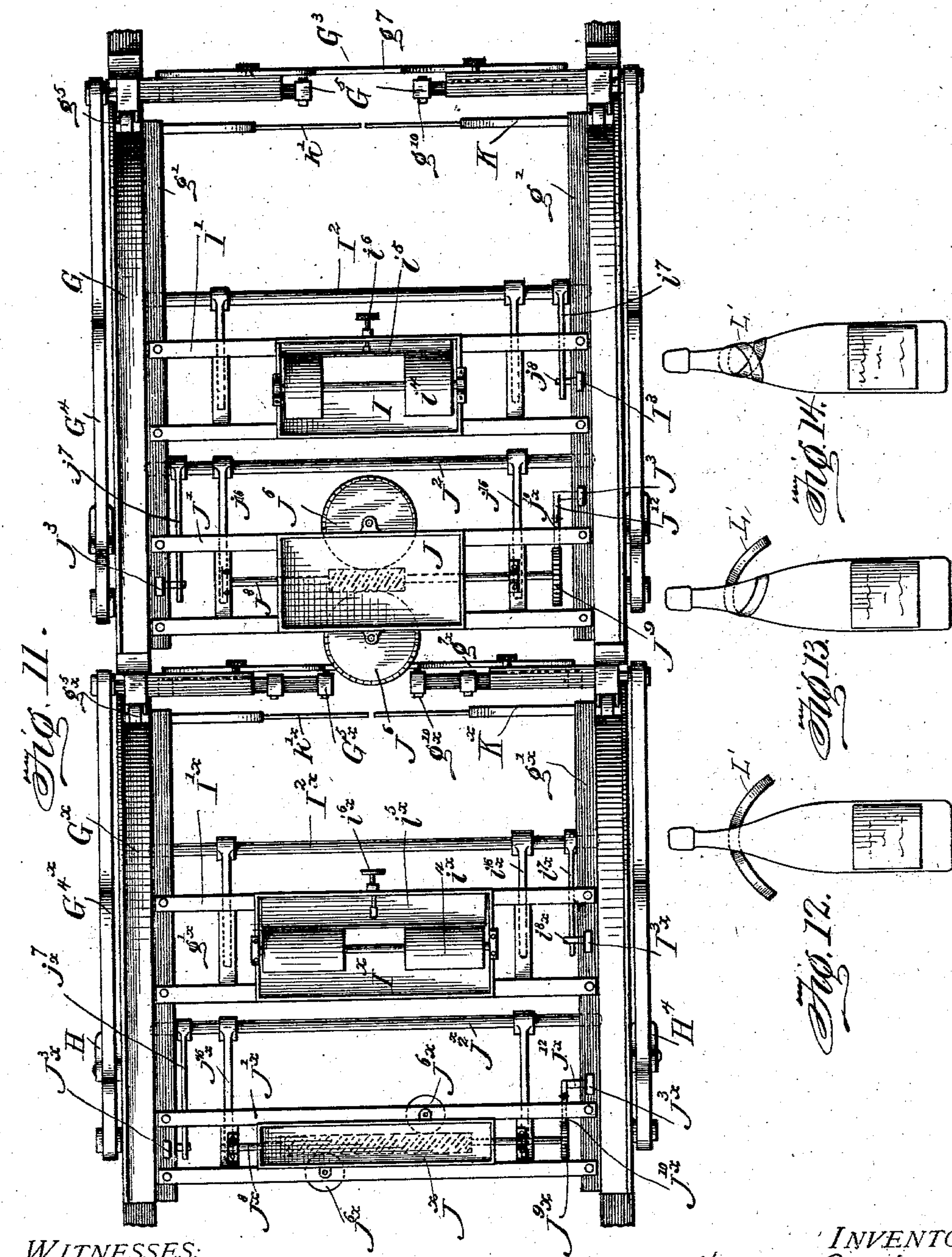
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NO MODEL.

6 SHEETS—SHEET 6.



WITNESSES:

Genoa Belt,

Albany

 $BY$ 

INVENTOR  
Frederick E. Wenzel  
Geo H Evans

*Attorney*



# UNITED STATES PATENT OFFICE.

FREDRICK E. WENZEL, OF LA CROSSE, WISCONSIN.

## LABELING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 730,424, dated June 9, 1903.

Application filed September 6, 1902. Serial No. 122,335. (No model.)

*To all whom it may concern:*

Be it known that I, FREDRICK E. WENZEL, a citizen of the United States, residing at La Crosse, county of La Crosse, and State of Wisconsin, have invented certain new and useful Improvements in Labeling-Machines, of which the following is a specification.

My invention relates to that class of machines in which bottles are labeled as they are carried on an endless carrier through the machine.

The objects of the invention are to provide a labeling-machine which will apply the body and neck labels to the bottles in an expeditious and efficient manner; also, to provide such a machine with means for applying either the long or the short neck-labels, to provide a simple and efficient label-carrying mechanism, to provide a bottle-holder with means for automatically opening and closing it as it is moved through the machine by its carrier, and also to provide means for rotating the bottle-carrier at stated intervals to bring it into proper position for the label-applying devices; also, to provide a simple and effective label-feeding mechanism coacting with the label-carrier and paste-supplying mechanism. These and other objects I accomplish by the construction shown in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved labeling-machine. Fig. 2 is an enlarged perspective of one set of body-label-applying mechanism. Fig. 3 is a detail view of one paste receptacle and roller. Fig. 4 is a detail rear elevation of the wipers for the body-labels and a bottle about to pass between them. Fig. 5 is a plan view of the operating gearing and shafting. Fig. 6 is an enlarged plan of one of the bottle-holders with a portion of the endless carrier and frame. Fig. 7 is an enlarged sectional front elevation of one of the bottle-holders. Fig. 8 is an enlarged elevation of one of the label-holders and the actuating mechanism. Fig. 8<sup>a</sup> is a detail of one of the nuts and screws for actuating the label-followers. Fig. 9 is an enlarged rear elevation of one of the label-carriers. Fig. 10 is a plan of the machine with the label and paste mechanisms removed and showing the progress of a bottle through a machine. Fig. 10<sup>a</sup> is a detail view of a por-

tion of one track-rail. Fig. 11 is an enlarged plan view of the label and paste mechanisms. Fig. 12 shows a bottle with the body-labels applied and the neck-label partially applied. Fig. 13 shows the bottle and the neck-label at another stage. Fig. 14 shows the bottle with both labels applied.

The frame of the machine comprises four uprights A, longitudinal side bars A', and cross-bars A<sup>2</sup>.

B B are the endless tracks secured to the pairs of uprights A, and these tracks each comprise upper and lower members B' B', connected at their opposite ends by the curved end sections B<sup>2</sup>. The inner sides of these tracks are provided with endless grooves b, in which travel the ends of the slats or cross-pieces C' C'. The purpose of these slats is to keep the bottle from tilting backward or forward, and they are secured at intervals to the endless chains C C by means of suitable clips or fastenings c c. The ends of these slats are provided, preferably, with rollers c' c' to run in the track-grooves b. (See Fig. 6.) These carrier-chains pass around sprocket-wheels 1 1, mounted on shafts 2 3, journaled in bearings on the ends of the frame and constitute the endless carrier for the bottle-holders to be presently described. The bearing 4 of shaft 3 is mounted on two guide bolts or rods 5 5 and is adjustable thereon by means of the set-screw 6, having a ball-and-socket connection 7 at its outer end with the middle of bearing 4, so that by turning said set-screw the bearing may be moved to regulate the tension of the endless chains C C, and when properly adjusted the screw 6 will be locked by a nut 8. (See Fig. 1.)

Power is applied to the sprocket-wheel 9 on shaft 2 from the main shaft E by means of a sprocket-chain E' and a sprocket-wheel E<sup>2</sup>. The main shaft E is provided with fast and loose pulleys e e'.

In the lower part of the frame are two aligned line-shafts E<sup>3</sup> E<sup>4</sup>, geared together and to a counter-shaft F by bevel-gears f f' f<sup>2</sup>, and the shaft E<sup>3</sup> is geared to the main shaft by bevel-gears e<sup>2</sup> e<sup>3</sup>, while the shaft E<sup>4</sup> is geared to a second counter-shaft F' by bevel-gears f<sup>3</sup> f<sup>4</sup>. (See Fig. 5.)

The endless carrier C C is provided between every pair of slats C' C' with a bottle-



holder D, so that there is an endless series of bottle-holders traveling through the machine between the tracks.

Each bottle-holder D comprises a centrally-apertured cross-bar or bed-piece D', provided at each end with an arm d', secured to the chains C C by means of clips c and beyond which clips said arms are provided with rollers d<sup>2</sup>, which travel in the track-grooves b. On a central cross-bar d<sup>3</sup> on the upper side of the cross-bar d' is the rotary clamp-carrier D<sup>2</sup>, to which is secured the upper end of a shaft d<sup>4</sup>, extended down through the central aperture in cross-bar D' and having a gear-wheel d<sup>5</sup> on the low end.

The clamp-carrier D<sup>2</sup> is provided at its ends with pairs of arms d<sup>6</sup>, which rest loosely on top of the chains C C to prevent the clamp-carrier from rotating when bottle-carrier is not in channeled-out places in frame, and these arms d<sup>6</sup> do not enter the track-grooves b, as will be seen in Fig. 6.

On top of the clamp-carrier D<sup>2</sup> are the bottle-clamping jaws D<sup>3</sup>, which are pivoted at their rear ends, as shown at d<sup>7</sup>, to move toward and from each other and clamp the base of a bottle between them. For this purpose the adjacent faces of the clamping-jaws are recessed, and these recesses are provided with bushings d<sup>8</sup> of some yielding material, such as rubber, and when so clamped the bottle rests upon the clamp-carrier D<sup>2</sup>.

The free ends of the jaws D<sup>3</sup> are forced apart by means of an expansion-spring d<sup>9</sup>, mounted on a pin d<sup>10</sup>, and the jaws are held closed against the action of said spring by means of a spring-catch D<sup>4</sup>, secured to one jaw and having an aperture engaging a pin or catch d<sup>11</sup> on the other jaw. (See Figs. 6 and 7.) The free end d<sup>12</sup> of this catch projects beyond the outer side of the jaw into the path of a releasing lug or arm D<sup>5</sup> at the rear of the machine, so as to lift the catch out of engagement with the pin d<sup>11</sup> and permit the jaws to spring apart and release the bottle. These jaws D<sup>3</sup> are also automatically closed upon a bottle by means of the rollers D<sup>6</sup> D<sup>6</sup>, secured to opposite sides of the forward ends of the tracks, as shown in Figs. 1, 10, and engaging the rear outer rounded corners of the jaws as they pass and forcing them into closed position around the bottle.

G indicates the label mechanism for the body-label, and comprises two curved tracks G' G', formed of angle-iron and mounted on top of the tracks B B, the tracks extending upwardly and rearwardly from points just in rear of the jaw-closing rollers D<sup>6</sup>, and these tracks G' G' are supported at their upper rear ends by the standards g, and braced thereto by cross-pieces g' g<sup>2</sup>.

G<sup>3</sup> is the label-carrier, pivoted between the outer ends of two vertically-swinging slotted levers G<sup>4</sup> G<sup>4</sup>, pivoted at their rear ends to the lower ends of the standards g g.

The label-carrier G<sup>3</sup> is formed of two end pieces g<sup>3</sup> g<sup>3</sup>, to which the levers G<sup>4</sup> are pivoted,

and in these end pieces at opposite sides of their pivots g<sup>4</sup> are mounted the rollers or wheels g<sup>5</sup> g<sup>5</sup>, which travel along the tracks G' 70 as the levers G<sup>4</sup> are swung up and down. Extending inwardly from the end pieces g<sup>3</sup> g<sup>3</sup> are pairs of arms g<sup>6</sup>, and these arms are connected by an arched brace g<sup>7</sup>. (See Figs. 2 and 9.)

G<sup>5</sup> indicates the label-carrying plates, adjustable toward and from each other for bottles of varying diameters by means of parallel slotted arms g<sup>8</sup> and screws g<sup>9</sup>. On the rear faces of these plates or bars G<sup>5</sup> are the vertical ribs g<sup>10</sup> for a purpose to be presently described. When the label-carrier G<sup>3</sup> is in its lowest position, it will be held perpendicular (see Fig. 2) by means of two guide posts or lugs B<sup>5</sup>, projecting up from the rails B', in which position it will hold the label across the space between its plates G<sup>5</sup> for the bottle to engage as it is carried rearwardly.

The levers G<sup>4</sup> are rocked by means of rods H H, provided at their forked upper ends with rollers h, which enter the lever-slots, while similar rollers h' on the lower ends of the rods engage cams H' on the ends of counter-shaft F'. The rods H are guided vertically in the bearings h<sup>2</sup> and are held down on the cams by means of the spiral springs h<sup>3</sup>.

I is the vertically-movable paste-box, having supporting-bars I', provided with pairs of depending guide-arms i, mounted in the upper braces or cross-pieces g' and provided thereabove with supporting-collars i' and below the braces with spiral springs i<sup>2</sup> to return the box to its normal position. Within the paste-box is mounted a shaft i<sup>3</sup>, having a pair of distributing-rollers i<sup>4</sup> and a scraper i<sup>5</sup>, provided with an adjusting-screw i<sup>6</sup>, whereby the amount of paste carried up by the rollers may be regulated.

I<sup>2</sup> is a rock-shaft, provided with upwardly-extending curved arms i<sup>6</sup>, projecting under the paste-box and having a downwardly-projecting operating-arm i<sup>7</sup>, engaged by a pin or lug i<sup>8</sup> on a vertically-sliding rod I<sup>3</sup>, mounted in bearings in the braces g' g<sup>2</sup> at one side of the frame and provided at its lower end with a roller i<sup>9</sup> in the path of a cam-lug D<sup>9</sup> on the left side of the bottle-holder D. This cam-lug D<sup>9</sup> raises the rod I<sup>3</sup>, which in turn rocks shaft I<sup>2</sup> to raise its arms i<sup>6</sup> and elevate the paste-box so that its rollers will be in the path of the paste-ribs g<sup>10</sup> of the label-carrier G<sup>3</sup> when the same is raised by the rods H.

J is the body-label holder in rear of the paste-box and mounted in the same way to move vertically. The label-holder is provided with supporting-bars J', depending guide-arms j, having supporting-collars j', and spiral springs j<sup>2</sup>, and the label-holder is raised by a rock-shaft J<sup>2</sup>, having curved arms j<sup>6</sup>, engaging the lower side of label-holder, and arms j<sup>7</sup>, engaged by a pin or lug j<sup>8</sup> on the upper part of a vertically-sliding rod J<sup>3</sup>, which rod has a roller j<sup>9</sup> on its lower end in the path of a cam-lug D<sup>10</sup> on the right side of the bottle-



carrier D, the rod  $J^3$  being in rear of the other rod  $I^3$ . By this construction the label-holder J will be raised after the paste-box to bring its top label up against the paste-carrying ribs  $g^{10}$   $g^{10}$ , the paste-box I having been lowered to its normal position in the meantime by reason of lug  $D^9$  passing from under its rod  $I^3$ , and the label-holder J will be lowered in like manner. The label-carrier D will now be brought down behind the guide-lugs  $B^5$ , in which position the label will be held vertically edgewise across the path of the bottle.

K K are flexible label-wipers immediately in rear of the label-holder and against which the bottle carries the label L, which is wiped around it by said wipers. (See Figs. 2 and 4.) These wipers comprise standards or frames  $k$   $k$  at opposite sides of the machine and provided with inwardly-projecting sheets of yielding material  $k'$   $k'$ .

Holders D are so spaced and above mechanisms are so timed that a label will be brought down into position for every bottle, and the cam  $H'$  is so formed that its flattened point of greatest diameter will engage and hold rod H up and so hold the label-carrier  $G^3$  over the label-box J while said box is being raised to bring a label up to the paste-carrying ribs  $g^{10}$ .

The labels are moved upwardly in the holder J by means of a follower  $J^4$ , extending through slots in the box and provided on its outer ends with ratchet-nuts  $j^{10}$  of any suitable construction and through which pass the vertical screws  $J^5$ , swiveled at their upper and lower ends to the label-holder. These screws  $J^5$  and nuts  $j^{10}$  raise the follower  $J^4$  and the labels resting thereon, and when it is desired to lower the follower it is simply necessary to push it down, as the ratchet-nuts allow of such movement, as is well understood. The screw-shafts  $J^5$  are provided at their lower ends with worm-wheels  $J^6$   $J^6$ , between which extends a worm  $J^7$  on a shaft  $J^8$ , provided at one end with a ratchet-wheel  $J^9$ . (See Figs. 8 & 8<sup>a</sup>.) This label-actuating mechanism is all carried by the label-holder and moves up and down with it, and the ratchet-wheel  $J^9$  is turned the distance of one tooth or far enough to keep one label exposed at the top of the holder J by means of a pawl  $J^{10}$ , pivoted to an arm or bracket  $J^{12}$ , so as to swing up when the ratchet-wheel moves up with the holder, but to remain rigid when the ratchet-wheel moves down and so turn it, as above described.

It will be seen that by the above-described mechanism a bottle may be placed on the holder D at the front of the machine and that the jaws will be closed on the bottle by the rollers  $D^6$  and that the bottle will then pass between the members  $G^5$  of the label-holder and carry the body-label back against the wipers K, which will wipe the label around the bottle and cause its ends which are supplied with paste by the ribs I to adhere to the bottle. As the bottle-holder D moves rearwardly the lugs  $D^9$   $D^{10}$  will raise the paste-

box I and label-holder J and the cam  $H'$  will raise the label-carrier and return it with a label in time for the next bottle. When the labeled bottle reaches the rear end of the machine, it will be released by means of the releasing-arm  $D^5$ , which lifts the catch  $D^4$  out of engagement with the pin  $d^{11}$ , whereupon the spring  $d^9$  will throw the jaws  $D^3$  open and release the bottle.

$G^x$  is a second label-applying mechanism constructed like that just described and located in rear thereof and in a higher plane, so as to apply neck-labels to the bottles after their body-labels have been applied.

The neck-labeling mechanism  $G^x$  being the same as the body-labeling mechanism will only be briefly described, as follows:  $G^{3x}$  is the label-carrier;  $G^{4x}$ , the operating-levers therefor;  $H^4$ , the rods for rocking said levers, and  $H^5$  the cam for reciprocating said rods. These rods  $H^4$   $H^4$  will be made adjustable in any suitable manner, so as to properly regulate the throw of levers  $G^4$   $G^4$ .  $I^x$  designates the paste-box;  $I^{3x}$ , its actuating-rod.  $J^x$  is the label-holder, and  $J^{3x}$  its actuating-rod.

After a bottle has been supplied with a body-label it will be carried along to the neck-labeler, where a neck-label will be applied. If the neck-label is a short one, it will be applied to the bottle without rotating the latter; but where long neck-labels are used, as shown at L', Figs. 12 to 14, the bottle must be rotated, as will now be described, and the label-carrier will have four paste-carrying ribs  $g^{10x}$ , and the paste-rollers  $r^{4x}$  will be proportionately lengthened, so that the long labels will be gummed in four places instead of in two places. (See Fig. 11.) Of course the label-holder will be correspondingly lengthened, as is also shown in Fig. 11.

In order that the bottle may be rotated after it passes the body-label wipers K and before it reaches the neck-label holder, I provide a rack R in the path of the gear-wheels  $d$  and secured adjustably to one of the upper rails  $B'$  by means of slots  $r$  and screws or bolts  $r'$ . The upper sides of the rails are cut away, as shown at  $b^{10}$ , so that when the gear engages the rack R and rotates the bottle-holder space will be formed to allow the ends  $d^6$  to clear the rails.

The rack R and gear  $d^5$  are so proportioned that the bottle-holder will be given a half-turn, thereby to make the back of the bottle-neck face the neck-label holder and cause it to engage the label, as in Fig. 12, and then carry it against the second set of wipers K K. After this the gear  $d^5$  engages rack  $R'$ , which gives it a quarter-turn, and so turns the bottle at the first oscillating wiper  $K^5$ , which wipes one end of the label around the neck, as shown in Fig. 13, after which a longer rack  $R^2$  rotates the gear  $d^5$  in an opposite direction to rotate the bottle at the second oscillating wiper  $K^6$ , which wipes the other end of the label around the neck, as shown in Fig. 21. This last rack  $R^2$  is of a length to turn the bottle-



holder far enough to restore it to its original position, and thereby bring its bottle-clamps in position for release of their catch  $D^4$  by the arm  $D^5$ . All three of these racks  $R R' R^2$  are provided with the slots and set-screws, and when they are moved back out of the way of gear  $d^5$  the open spaces  $b^{10}$  at every rack will be filled by the filling-strips  $b^{11}$ . (See Fig. 10<sup>a</sup>.)

The oscillating wipers  $K^5 K^6$  are mounted at opposite sides of the machine on the top rails and are provided with slotted operating-arms  $k^5 k^6$ , engaged by rollers on the upper ends of the sliding rods  $k^7 k^8$ , engaging at their lower ends with oppositely-arranged cams  $k^9 k^{10}$  on the ends of the shaft  $F$ . These cams rock the wipers in succession as the bottle is brought into position relative thereto in order to bring the curved brushes  $k^{11} k^{12}$  down to the bottle-neck in position for wiping the label ends therearound.

The operation is as follows: The shaft  $E$  is set in motion, whereupon the various parts begin their movements, as above described. The operator at the front end of the machine places a bottle in the holder  $D$  just before it reaches the rollers  $D^6$ , whereupon the rollers will close the clamping-jaws upon the bottle, which will now pass on to the front or body-label carrier, which will hold a label in its path, said label-carrier having made its upward movement to and return movement from its paste-box and label-holder through the action of the rods  $H$  and cams  $H'$  and the paste-box and label-holder having been elevated into the path of the label-carrier by their rods  $I^3 J^3$  and the cams  $D^9 D^{10}$  on one of the preceding bottle-holders and then dropped back after the said cams  $D^9 D^{10}$  have passed from under the rods. The holder containing the bottle now passes through the label-carrier and carries the label with it through the front pair of flexible wipers, which wrap it or bend it around the bottle and cause its pasted or gummed ends to become attached to the bottle. The holder, with the bottle, now reaches the first rack  $R$ , which gives the holder a half-turn to the left and causes the bottle to face in the opposite direction, and in this position the bottle-neck will be brought against the neck-label held in the neck-label carrier, which has gone through the same operation as the body-label carrier. The bottle-holder proceeds, and the rear set of flexible wipers  $K$  will bend the long neck-label into  $U$  shape from rear to front on the bottle-neck, after which the bottle-holder reaches the rack  $R'$ , which gives it a quarter-turn to the right, and at the same time the curved brush  $k^{11}$  has been brought into position and one end of the label wiped into place on the neck. After passing the rack  $R'$  the bottle-holder comes opposite to the third rack  $R^2$ , which gives it a three-quarter turn to the left, and the rear wiping-brush  $k^{12}$  comes simultaneously into action and wipes the other end of the neck-label in place. The bottle-holder is now restored to its original position and pro-

ceeds rearwardly with the bottle, which is released, as before stated, by the releasing-arm  $D^5$  lifting the catch  $D^4$  of the bottle-clamp.

Where short neck-labels are to be applied, the racks  $R R' R^2$  are moved out of the path of the bottle-holder gear  $d^5$  and a short-label holder and paste-box like those for the body-label will be employed. Where no neck-labels are to be applied, the mechanism  $G^x$  will be thrown out of action, as by raising the several operating-rods out of the path of their cams.

I do not restrict myself to the exact mechanisms illustrated, as they may be considerably varied within the scope of my invention, nor do I restrict the use of the machine to bottle-labeling, as it is obvious that articles other than bottles may be labeled thereby or with very slight changes in the present mechanism.

What I claim is—

1. The combination with an endless horizontally-traveling carrier, provided with a plurality of bottle-holders to engage the bottoms of the bottles, a paste mechanism over the said endless carrier, and a label-holder in rear of said paste mechanism, of a forked or divided label-carrier, pivoted levers to the free ends of which the label-carrier is pivoted and means for causing the label-carrier to travel horizontally over the paste and label mechanisms and on its return with a label, present it vertically endwise across the path of the bottles.

2. The combination with an endless horizontally-traveling carrier provided with a plurality of bottle-holders to engage the bottoms of the bottles, a vertically-movable paste mechanism over the said endless carrier, and a vertically-movable label-holder in rear of said paste mechanism, of a forked or divided label-carrier, pivoted levers to the free ends of which said label-carrier is pivoted, means for causing the label-carrier to travel horizontally over the paste mechanism and label-holder and on its return with a label, present it vertically edgewise across the path of the bottles, and mechanism for operating the paste and label-holding mechanism.

3. The combination with a plurality of traveling bottle-holders each provided with jaws for clamping the bottom of a bottle, a catch for locking the jaws together around a bottle, and means for automatically closing the said jaws and means for automatically releasing said catch, of a label-carrier, and paste and label mechanism therefor, substantially as set forth.

4. The combination with a plurality of traveling bottle-holders, of a labeling mechanism comprising a label-carrier, mechanism for operating the carrier toward and from the path of the bottle-holders, a vertically-movable paste mechanism, means for raising the same into the path of the label-carrier to apply paste to it, a vertically-movable label-supply in rear of the paste mechanism, means for raising the



label-supply to the overlying paste-supplied surface of the label-carrier, means for returning the label and paste supply devices to their normal position prior to the return movement of the label-carrier, and means for wiping or wrapping the label upon the bottle as it is carried through the label-carrier.

5. The combination with a plurality of traveling bottle-holders, of a labeling mechanism comprising a label-carrier, means for moving the label-carrier toward and from the path of the bottle-holders, a paste mechanism and label-supply, means for moving the same into and out of the path of the label-carrier, a feed mechanism for the label-supply, means for actuating said feed from the movement of said label-supply, and means for affixing the label upon the bottle as the latter is carried through the label-carrier, substantially as described.

6. The combination with a plurality of horizontally-traveling bottle-holders, of front and rear label-carriers mounted over the said bottle-holders in different horizontal planes and movable toward and from the paths in which the bodies and necks of the bottles travel, means for actuating said label-carriers in harmony, a paste and label supply over the bottle-holders for each label-carrier and co-acting therewith to first supply the paste and then the labels, and means for wiping or smoothing the labels on the bottles when the bottles pass through the carriers, substantially as described.

7. The combination with a plurality of traveling bottle-holders, of levers each swinging in a vertical plane, at opposite sides of the path of the bottle-holders, mechanism for actuating the said levers, a label-carrier pivoted to the free end of said levers and having spaced paste-receiving surfaces to engage a label and hold it across the path of the bottles, curved tracks on which the label-carrier runs, guides at the lower ends of the tracks to hold the label-holder and label vertically edgewise and vertically-movable paste and label supply mechanisms at the upper ends of the tracks to supply paste and labels in succession to the label-carrier, substantially as described.

8. The combination with a plurality of traveling bottle-holders, of levers each swinging in a vertical plane and pivoted at opposite sides of the path of said holders, a label-carrier in two spaced sections at the outer ends of said levers; each section having on its rear face a paste-receiving surface, upwardly and rearwardly curved tracks for the label-carrier and means for operating the levers, a label and a paste supply mechanism at the upper ends of the tracks over which the label-carrier travels, substantially as described.

9. The combination with a plurality of horizontally-traveling bottle-holders, of levers swinging in a vertical plane pivoted at oppo-

site sides of the path of said holders, a label-holder at the free ends of said levers and formed in two spaced adjustable sections between which the bottles are adapted to pass, upwardly and rearwardly curved tracks for the label-carrier and a label-supply mechanism at the upper end of the tracks, substantially as described.

10. In a labeling-machine, a label-carrier comprising a yoke, a carrier-section at each end of the yoke having rollers and provided with parallel plates or members adjustable toward and from each other and a track for said rollers, substantially as described.

11. A labeling-machine comprising an endless series of bottle-holders, a driving mechanism therefor, a label mechanism mounted above the path of the holders, and comprising curved tracks, a label-carrier traveling thereon toward and from the bottle-holders, pivoted levers to the outer ends of which said label-carrier is connected, operating-rods connected at their upper ends to said levers, a shaft having cams engaging the lower ends of said rods and vertically-movable paste and label boxes at the upper ends of the curved track and provided with operating-rods actuated from the bottle-holders to raise the paste and label devices into the path of the label-carrier, substantially as described.

12. In a labeling-machine the combination with the traveling bottle-holders, of the upwardly and rearwardly movable label-carrier, and means for moving it toward and from the bottle-holders, of paste and label boxes or holders, in the upper rearward path of the label-carrier, rock-shafts having arms engaging the paste and label boxes to raise them, and vertically-reciprocating rods in operative connection with the said rock-shafts and actuated successively from said bottle-holders, substantially as described.

13. In a labeling-machine, the combination with the traveling bottle-holders having cam-lugs on opposite sides, of a label-carrier, means for moving it toward and from the bottle-holders, paste and label holders in the upper rearward path of the label-carrier, rock-shafts having arms engaging said paste and label boxes to raise them, springs for retracting said boxes, and rods operatively connected at their upper ends with said rock-shafts and extending at their lower ends into the paths of said cam-lugs, substantially as described.

14. The combination with the rotary traveling bottle-holders, of body and neck labeling mechanisms one in advance of the other and adapted to bring the labels in the path of the body and neck of the bottle, means for imparting rotary motion to the bottle-holders between the two labeling mechanisms, to present the rear of the bottle-neck to the middle of the neck-label, neck-label wipers to engage the ends of the neck-labels and means adjacent to each of the said wipers to rotate



the bottle-holder in opposite directions and restore it finally, to the same normal position, substantially as described.

15. The combination with rotary traveling  
5 bottle-holders each having an operating-shaft provided with a gear, of the body and neck labeling mechanisms one in advance of the other to supply the body and neck labels in the paths of the bodies and necks of the bot-  
10 tles, wipers in rear of the neck-labeling mechanisms having curved brushes at their upper ends to engage the ends of the neck-labels, and three alternately-arranged racks located in the paths of the gears on the shafts of said  
15 bottle-holders to rotate the same for the purposes set forth.

16. The combination with the traveling  
bottle-holders each having an operating-shaft provided with a gear, of the body and neck  
20 labeling mechanisms one in advance of the other to supply the body and neck labels in the paths of the bodies and necks of the bottles, rocking wipers at opposite sides of the machine in rear of the neck-labeling mech-  
25 anism and having curved brushes at their upper ends to successively engage the ends of the neck-label, means for actuating the said rocking wipers, in harmony with the travel of the bottle-holders, racks in the path  
30 of the bottle-holder gears for rotating the bottle-holders in the manner described in advance of the neck-labeler, and at each rocking wiper; the said racks being adapted to be moved out of the path of said gears, substan-  
35 tially as set forth.

17. In a labeling-machine, a bottle-carrying mechanism comprising, the endless tracks, endless chains having pairs of slats with their ends in said tracks, bottle-holders provided  
40 with base members secured to the chains between every pair of slats and having their ends projecting into said tracks, a clamp-carrier secured to each base-piece and having projections resting freely on the chains and  
45 terminating exterior to the tracks, and clamps mounted on the upper sides of the clamp-carriers to grasp the base of the bottle.

18. In a labeling-machine, a bottle-carrying mechanism comprising the endless tracks  
50 having cut-away portions on its upper side, sprocket-wheels, endless chains on the wheels and provided with pairs of slats extended at their ends into said tracks, and bottle-holders comprising base-pieces secured to the chains  
55 between the pairs of slats with their ends entering said track, clamp-carriers mounted on the base-pieces with their ends overlying the chains exterior to the tracks, pivoted clamps on said clamp-holders, and a locking device  
60 to hold the clamp closed upon the base of a bottle, a shaft secured to the clamp-carrier and extended down through the said base-

piece and there provided with a gear, and racks for actuating said gear, substantially as described. 65

19. In a labeling-machine, a bottle-carrier provided on its upper side with clamps to grasp the base of a bottle and hold it vertically, springs to separate the clamps and a spring-catch to hold the clamps in their closed  
70 position, substantially as described.

20. A labeling-machine, comprising the endless tracks, the sprocket-wheels, the endless chains, the bottle-holders carried thereby and having automatically-operated clamps to  
75 grasp and release the bottles, a drive-shaft geared to one of the sprocket-wheels, two counter-shafts geared to the drive-shaft and provided with cams at their ends, front and rear labeling mechanisms each having a paste  
80 and label supply and a label-carrier, pivoted levers to which said label-carriers are pivoted and adapted to carry gummed labels down into the path of the bottles, rods extended down from said pivoted levers to the cams on  
85 one of said counter-shafts, flexible wipers in rear of the lowest position of the label-carriers, and rocking wipers in rear of the rear labeling mechanism and provided with oper-  
90 ating-rods engaging the cams on the rear counter-shaft, substantially as described.

21. In a labeling-machine, the combination with the vertically-movable label-box open at its top and provided with a follower, of screw-  
95 shafts engaging the ends of the follower, worm-gears on the lower end of the screw-shafts, a worm-shaft provided with a worm meshing with said worm-gears, a ratchet-wheel on said shaft and a pawl mounted in-  
100 dependent of the label-box and engaging the ratchet-wheel to rotate it when the label-box moves down and yield when the box moves up, substantially as described.

22. In a labeling-machine, the combination with the vertically-movable label-box open at  
105 its top and provided with a follower having ratchet-nuts at its ends, of screw-shafts swiveled to the label-box and passing through said nuts to raise the follower and allow it to be pushed down, worm-gears on the lower  
110 ends of the screw-shafts, a worm-shaft having its worm meshing with said worm-wheels and provided with a ratchet-wheel, and a pawl engaging said ratchet and pivoted to a stationary support beyond the label-box to yield  
115 as the box moves up and actuate the ratchet as the box moves down, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

FREDRICK E. WENZEL.

Witnesses:

GEO. H. GORDON,

MARION G. ANDERSON.