

Aug. 20, 1935.

C. L. BOND

2,011,793

CARTON STUFFING MACHINE

Filed May 9, 1934

4 Sheets-Sheet 1

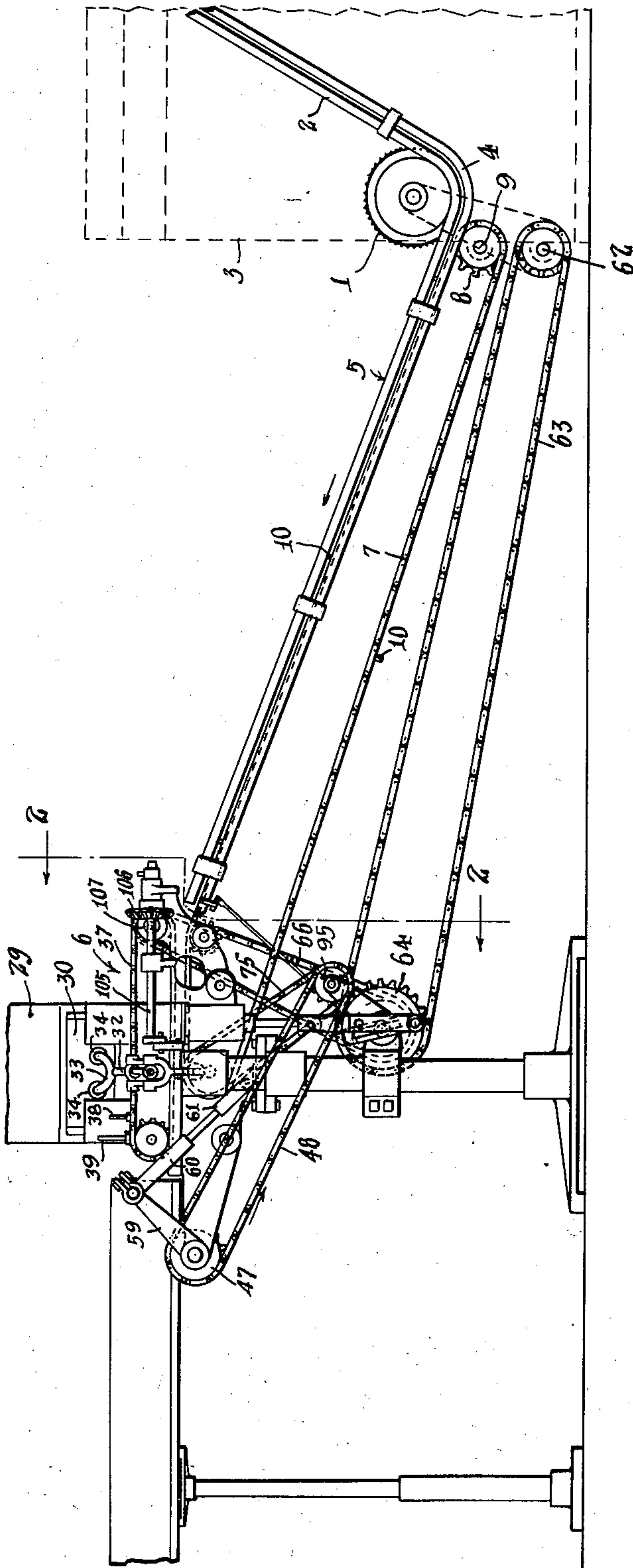


Fig. 1

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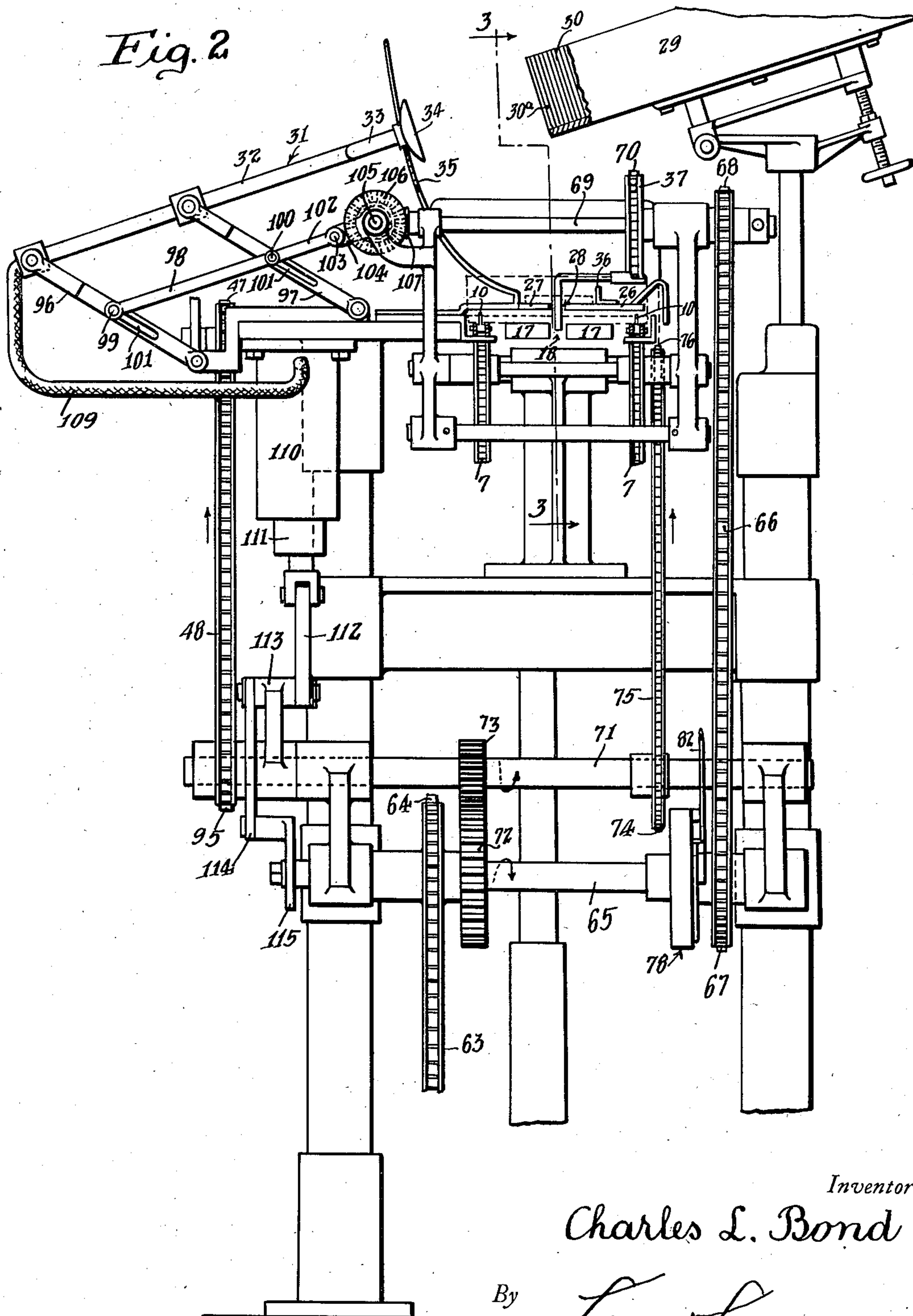
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4 Sheets-Sheet 2



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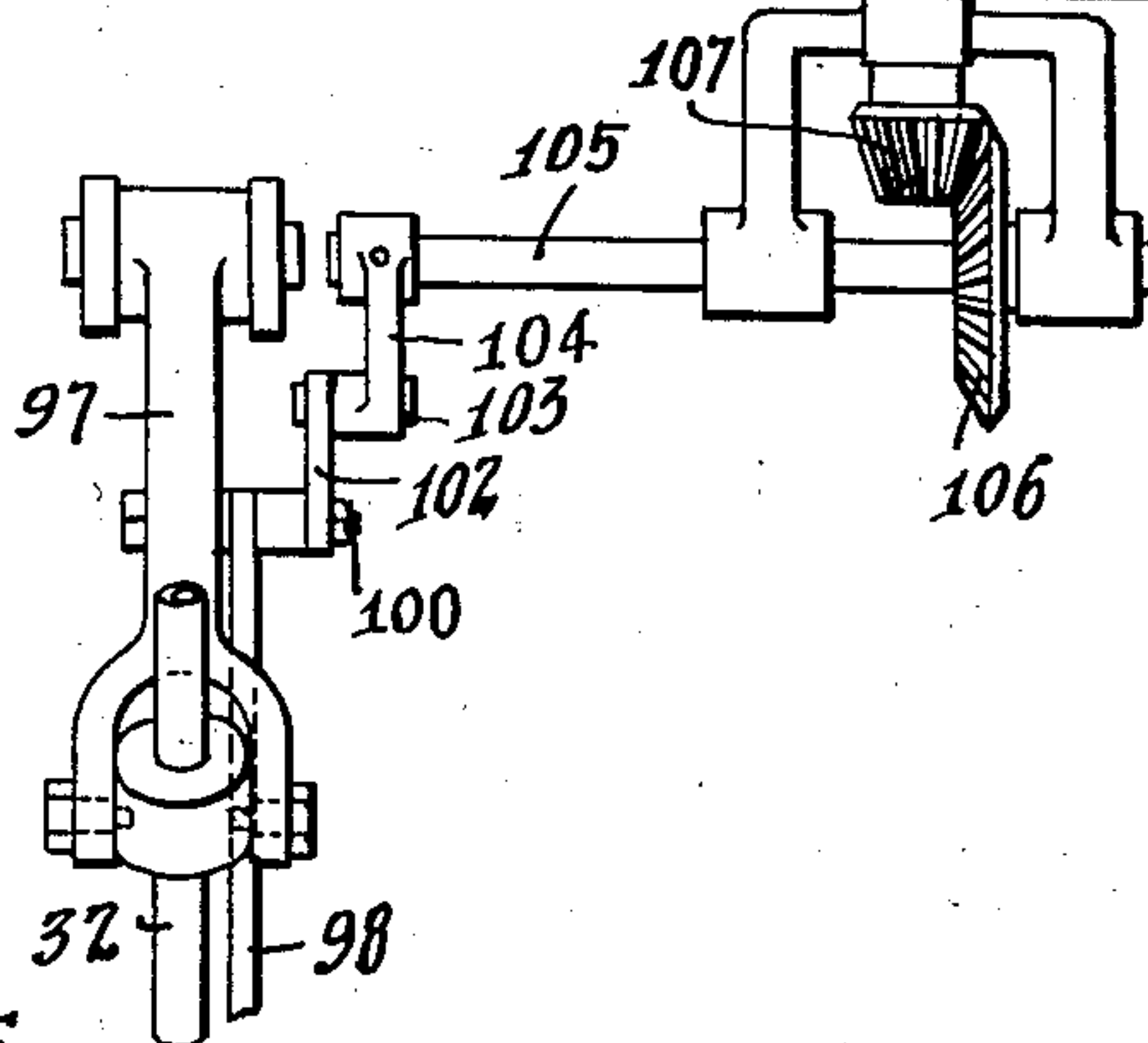
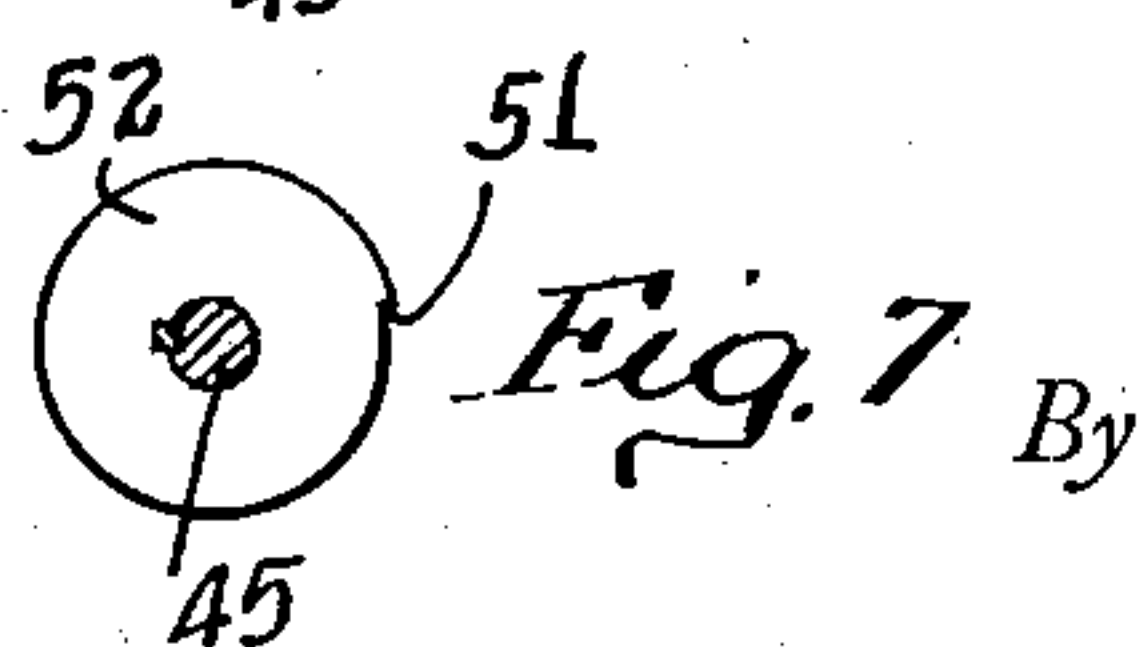
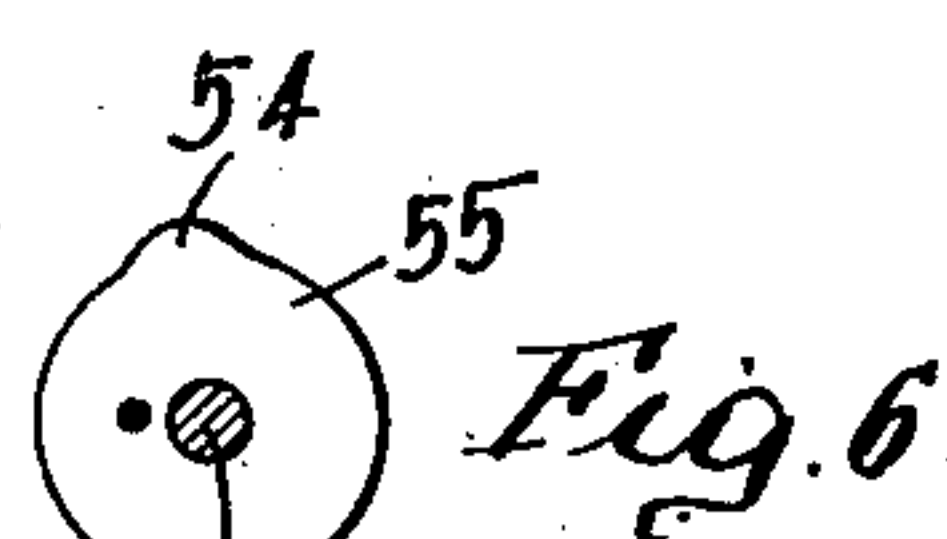
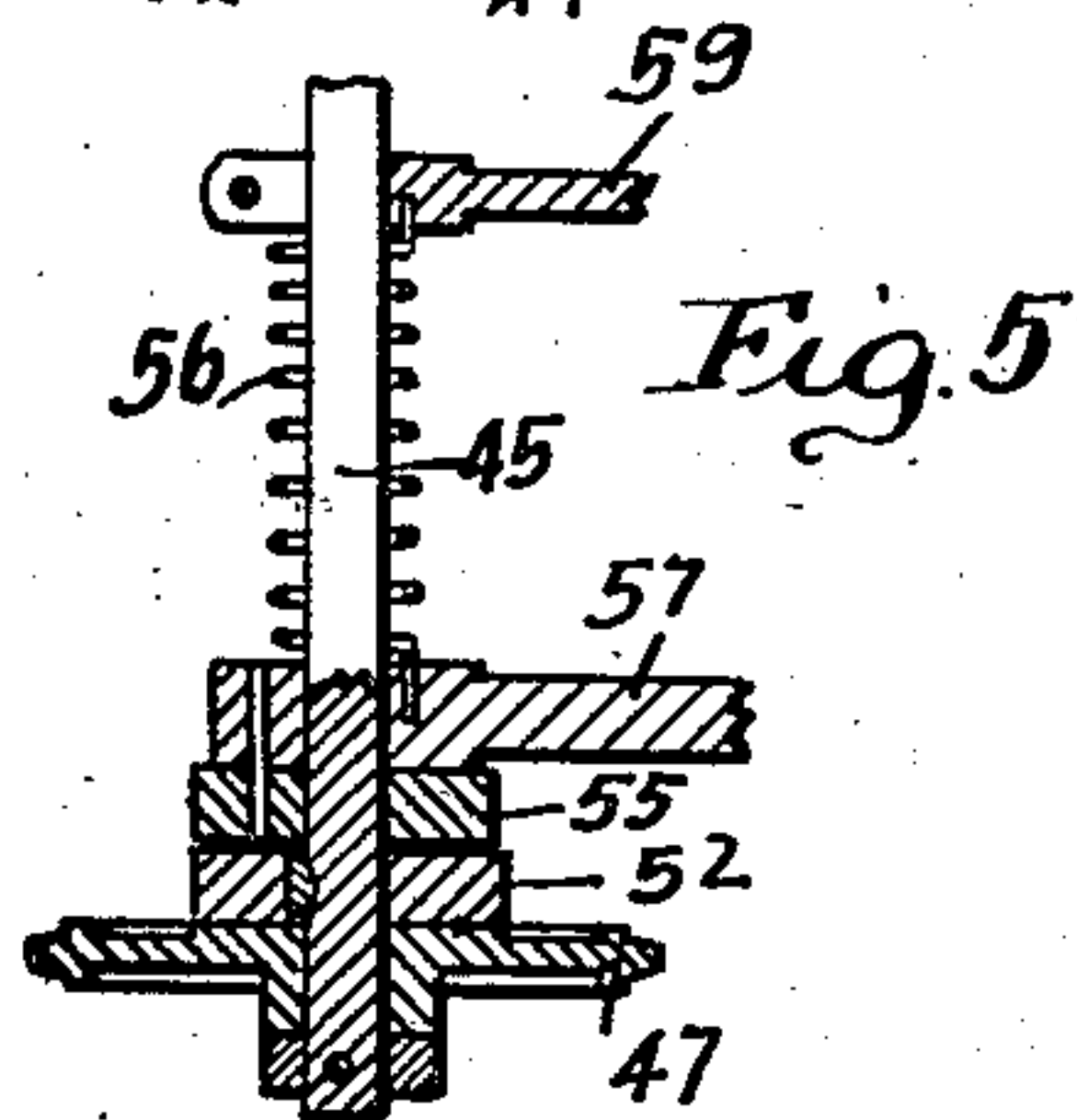
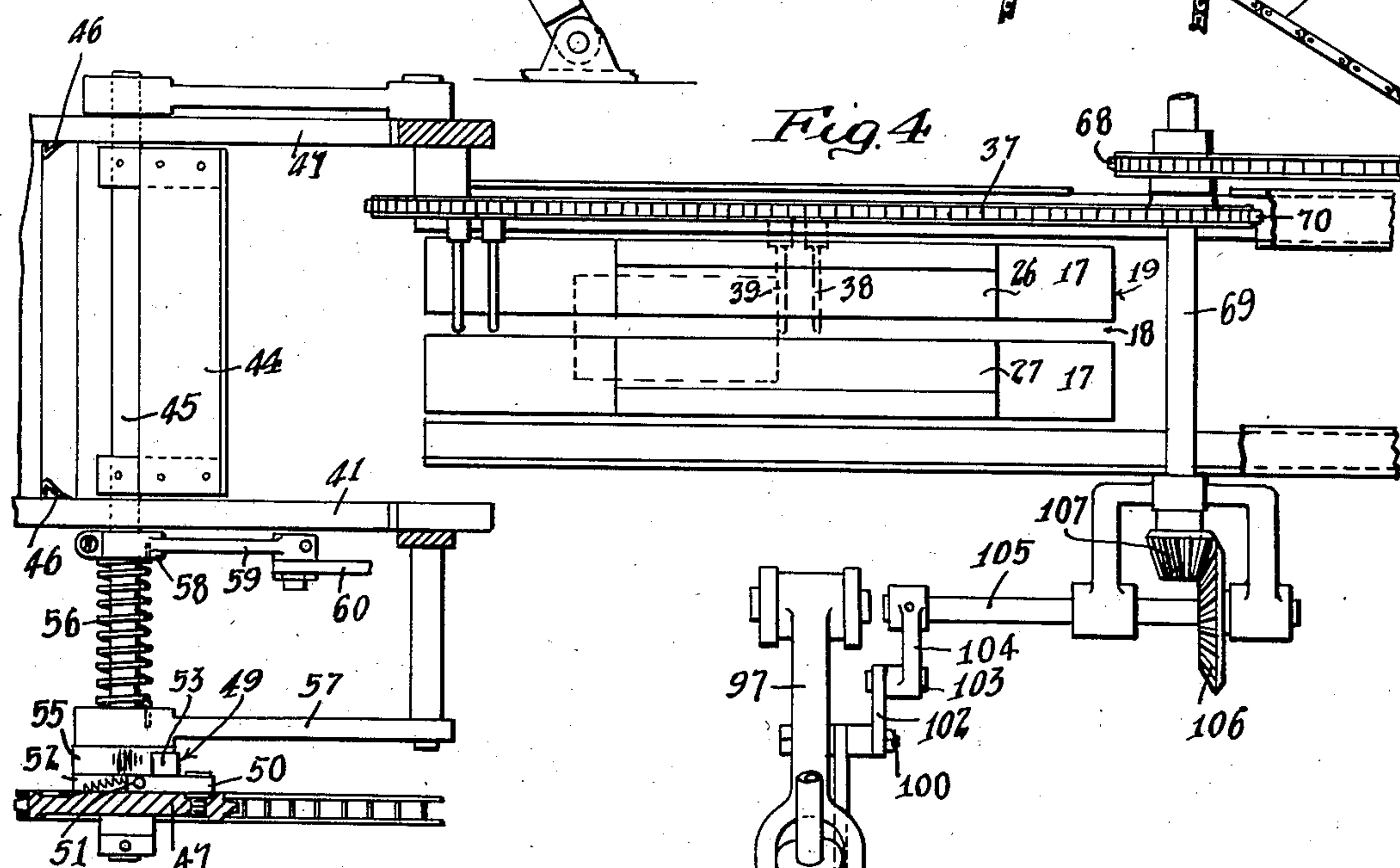
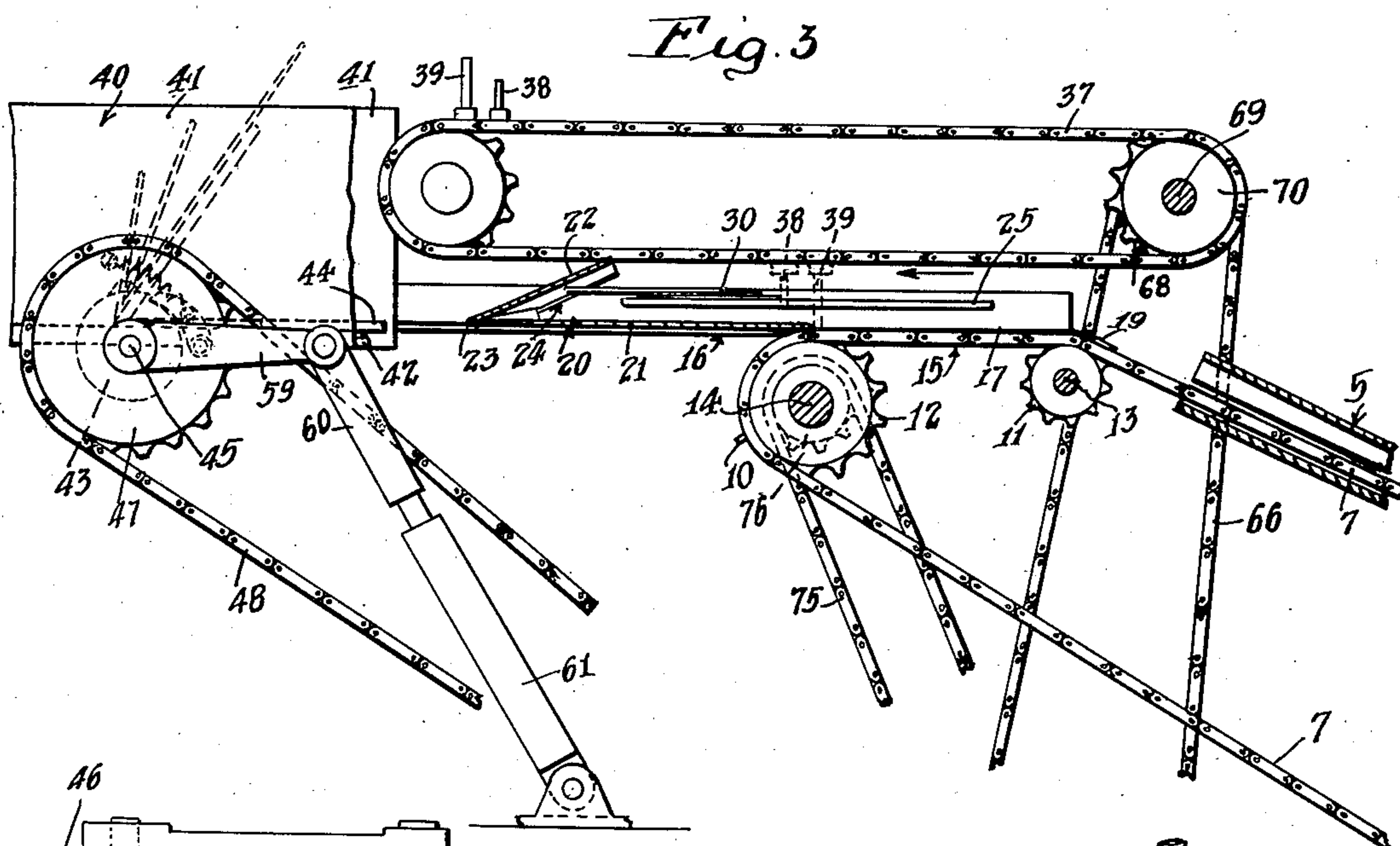
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CARTON STUFFING MACHINE

Filed May 9, 1934

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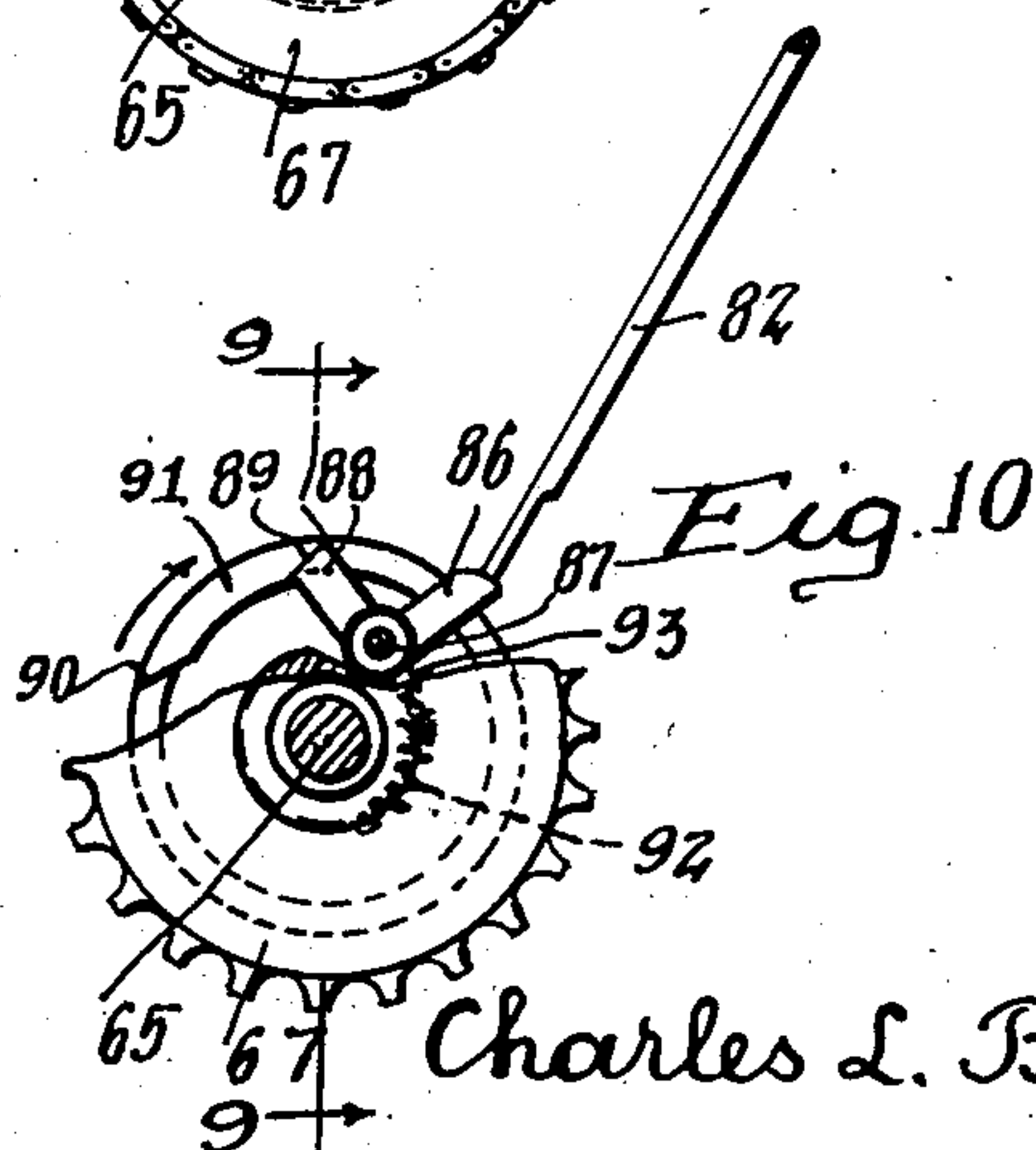
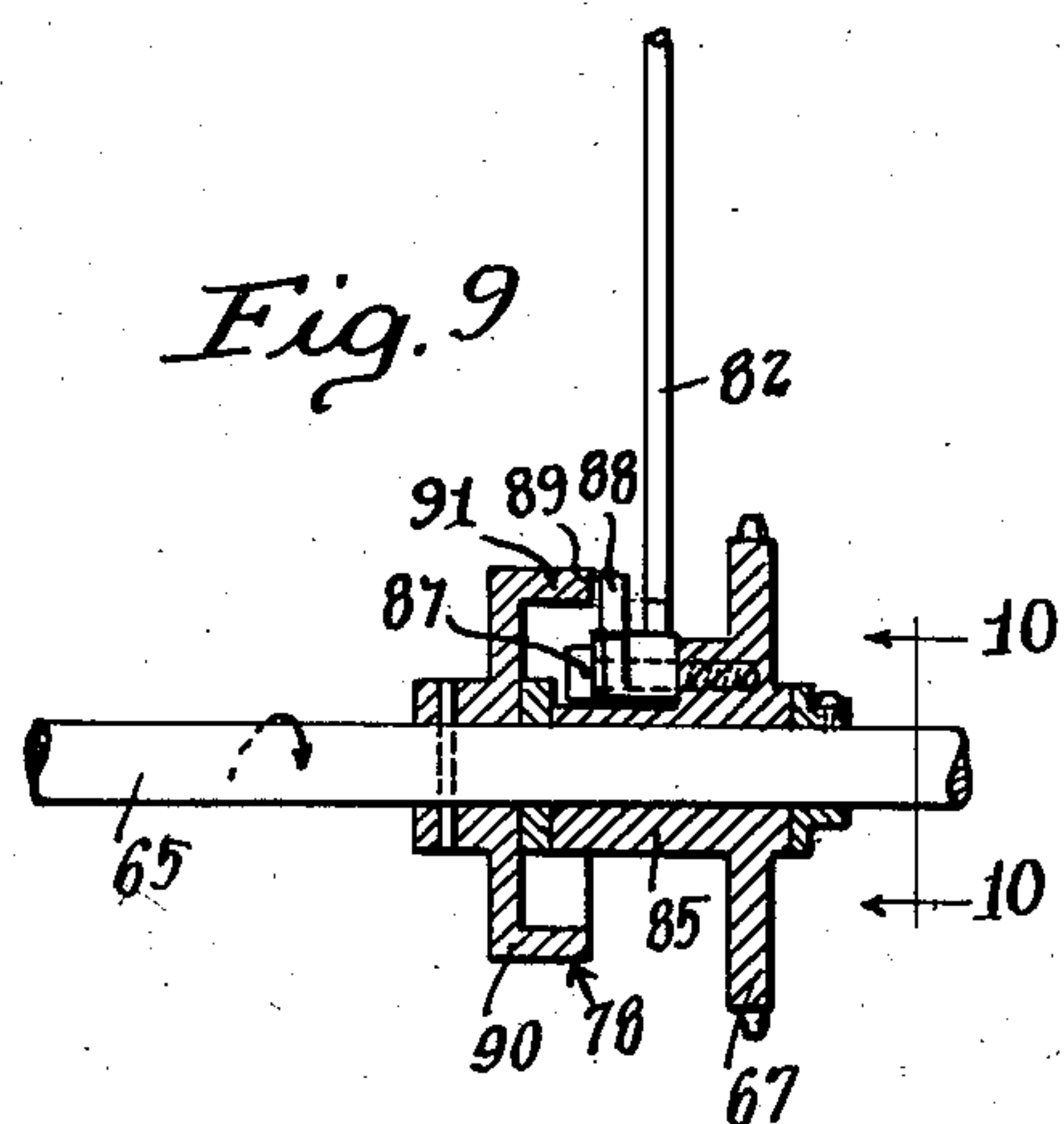
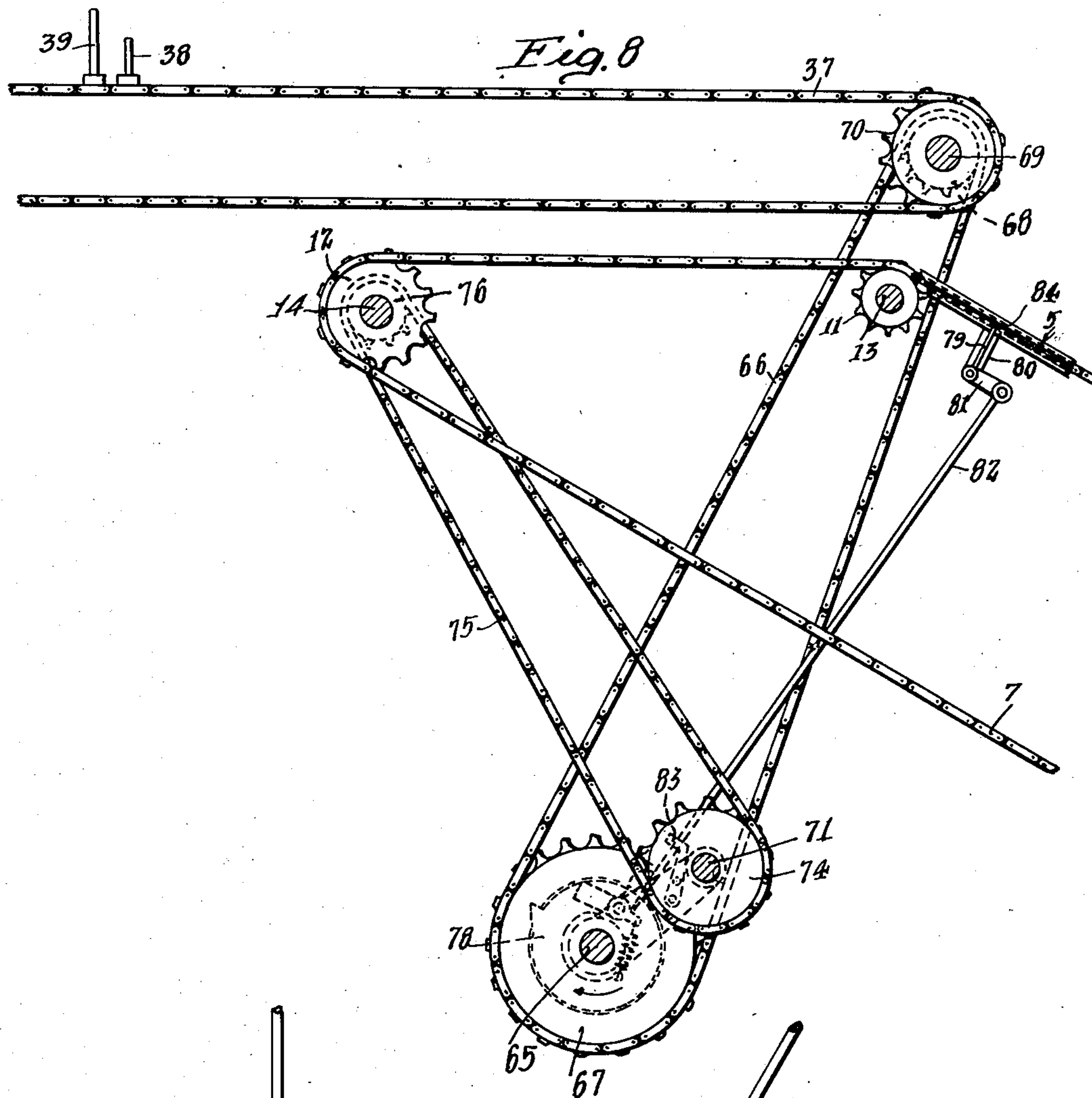
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4 Sheets-Sheet 4



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UNITED STATES PATENT OFFICE

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CARTON STUFFING MACHINE

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Application May 9, 1934, Serial No. 724,736

21 Claims. (Cl. 93—55)

This invention relates to a machine for placing collapsed fillers in collapsed or folded cartons. It is the practice to ship cartons with fillers stuffed into them to consumers, who open and set up the box formed by the carton and insert the set-up filler in the box. The placing of such fillers in cartons is a laborious process, when performed by hand, and the general object of this invention is to produce a machine capable of receiving cartons in a folded or knocked-down condition, and having means for placing the collapsed fillers in the cartons. These machines are generally known in the trade as stuffing machines.

The cartons which are received by this machine are in a knocked-down or folded condition and present two extensions or flaps which diverge from each other; that is to say, they form a dihedral angle or folded edge, which is disposed forwardly when the carton is fed forward to the stuffing machine. In this way the flap or free portion of the carton that projects away from the body of the carton will not interfere with the movements of the carton through the machine. One of the objects of this invention is to provide a machine for receiving a carton in this condition and having means for feeding the collapsed filler into position adjacent the carton, and then advancing the same into the angle between the diverging portions of the carton.

The stuffing machine described in the following specification is adapted to receive the cartons from a carton machine, and one of the objects of the invention is to provide a construction which will automatically start the operation of the stuffing machine whenever a carton is fed through to it from the stuffing machine.

A further object of the invention is to provide a machine for this purpose, the elements of which are particularly adapted to enable the different operations of the stuffing machine to be nicely timed.

A further object of the invention is to provide the stuffing machine with means for packing the stuffed cartons into a compact bundle, ready to be tied up for shipment.

Further objects of the invention will appear hereinafter.

The invention consists of the novel parts and combination of parts to be described hereinafter, all of which contribute to produce an efficient carton stuffing machine.

A preferred embodiment of the invention is described in the following specification, while the

broad scope of the invention is pointed out in the appended claims.

In the drawings:—

Figure 1 is a side elevation of a stuffing machine embodying my invention and indicating the feed device which is associated with the carton machine for delivering the folded cartons to the stuffing machine.

Figure 2 may be considered a vertical section taken about on the line 2—2 of Figure 1. This view is upon an enlarged scale and represents certain parts broken away.

Figure 3 is a longitudinal, vertical section through the stuffing table and taken about on the line 3—3 of Figure 2, omitting the magazine for the fillers that is shown in Figure 2. This view illustrates the carton and the filler adjacent to each other and ready to have the machine advance the filler into the carton. This view also illustrates the stacking device that receives the stuffed cartons and pushes them into a stack or pack. Many parts in this view are represented broken away.

Figure 4 is a plan of the parts illustrated in Figure 2, certain parts being shown in cross section, or broken away. This view also illustrates part of the pneumatic picker mechanism for feeding the collapsed fillers into place for stuffing them into the cartons.

Figure 5 is a horizontal section and further illustrating details of parts illustrated in plan in Figure 4. These parts constitute part of the mechanism for receiving a stuffed carton and pushing the same into a pack.

Figure 6 is a side elevation of a cam which is part of the mechanism illustrated in Figure 5.

Figure 7 is a side elevation of a clutch member which is part of the mechanism illustrated in Figure 5, and which cooperates with the cam illustrated in Figure 6.

Figure 8 is a view of a diagrammatic nature, and particularly illustrating the main shaft of the stuffing machine, together with the driving chains associated with it. This view also illustrates the automatic mechanism which I prefer to employ for starting up the stuffing machine when cartons come to it from the carton machine.

Figure 9 is a vertical section through the main shaft, taken on the line 9—9 of Figure 10, and particularly illustrating a one-revolution clutch which is illustrated in Figure 8.

Figure 10 is a vertical section taken on the line 10—10 of Figure 9, certain parts being broken away, and further illustrating details of the clutch illustrated in Figure 9.

Before proceeding to a detailed description of the machine in which this invention is embodied, it should be stated that in the present description the invention is applied to a machine which receives folded or "knocked down" cartons from a carton machine. These cartons are advanced one by one automatically into position in the stuffing machine, by means of a conveyor, and when a carton arrives at a certain point on the conveyor the stuffing machine is started up. In other words, a tripping mechanism is employed which is tripped by a carton advancing on the conveyor. The carton continues to advance and is finally left in a predetermined position on the stuffing table. While the carton is advancing from the point where it trips the starting device for the stuffing machine to the point where the carton is left in the stuffing machine, the feed device for the collapsed filler feeds a filler from the filler magazine into position to be stuffed into the carton, and the mechanism is also brought into action for stuffing the filler into the carton.

The carton has two extensions, one of which may be described as a body extension and the other as a cover extension, and these two extensions unite at a folded edge. In feeding the carton this folded edge is preferably disposed forwardly so that the cover extension does not interfere with the forward movement of the carton. When the carton is left on the stuffing table, this cover flap or cover extension projects upwardly at an angle and when the stuffing operation takes place the filler is shoved forwardly into the angle at this forward folded edge and the stuffed carton is immediately advanced off of the stuffing table. It is then moved forwardly into a receiver in which the cartons are stacked or packed, when they are ready to be tied up in bundles for shipment.

As pointed out above, the mechanism for starting up the stuffing machine is preferably a one-way clutch which moves the mechanism of the stuffing machine through a complete cycle, and then automatically stops it. As soon as another carton arrives at the tripping device the stuffing machine starts again. In this way, if for any reason the advance of cartons from the carton machine ceases, the stuffing machine will automatically shut down. This reduces wear and tear on the stuffing machine and also reduces the amount of power necessary to drive it.

Referring more particularly to the parts, and particularly to Figure 1, I indicates a rotary feed device which engages with cartons coming down a feed chute 2 from the carton machine 3, indicated in dotted lines. This feed device 1 carries the carton around corner 4 and delivers it into a guide-way 5 which is disposed in an inclined position in order to feed the carton up to the stuffing machine 6. The carton is advanced in the guide-way by means of two endless feed chains 7 which run over sprocket wheels 8 on a countershaft 9 near the lower end of the guide-way. These chains 7 carry dogs 10 which are equidistant from each other and which engage the rear edge of each carton to push it up the guide-way.

Referring now to Figure 3, the upper ends of the feed chains 7 pass around sprocket wheels 11 and 12 carried respectively on shafts 13 and 14. These sprocket wheels are mounted so as to form a horizontal run 15 for each feed chain, and these runs 15 are located substantially in the plane of the stuffing table 16. This stuffing table is of skeleton construction (see Figure 2) and

preferably is constructed of a lower shelf comprising two horizontal guide plates 17 disposed apart to form a slot 18 between them. The ends of these plates adjacent to the sprocket wheels 11 are formed with downwardly curved bends 19 so as to enable them to cooperate with the chains in guiding the cartons into place on the stuffing table.

In Figure 3 a carton 20 is indicated in the position in which it would be left by the feed chains 7. This carton is shown in section and it will be noted that it includes a horizontal body extension 21 and a cover extension 22 that diverges from the body extension 21 and forms a folded edge 23 therewith. In this way an acute angle 24 is formed by the extensions.

The stuffing table 16 includes an upper shelf 25 composed of two horizontal plates 26 and 27 (see Figure 2) and these plates are disposed apart so as to form a long slot 28 between them.

As soon as a carton is left in the position indicated in Figure 3, a collapsed filler is fed into place adjacent the carton, ready to be stuffed into the carton. In order to accomplish this I prefer to provide an inclined magazine 29 (see Figure 2) in which the collapsed fillers 30 are stacked. Opposite this magazine I provide a pneumatic picker device 31 which preferably includes a tube 32 with two branches 33 at its forward end carrying vacuum cups 34 of rubber or similar material. At a properly timed instant this feed device swings inwardly from the position indicated in Figure 2 so as to enable the vacuum cups to pick off the foremost filler 30^a from the magazine, and the vacuum tube 32 then swings back toward the position in which it is shown in Figure 2 until the vacuum is broken, whereupon the filler 30^a falls off the vacuum cups and falls upon a curved guide plate 35, down which the filler slides until it strikes against a stop 36 mounted on the plate 26. In Figure 2 one of these fillers is represented in dotted lines in engagement with the stop 36. In this way the carton and the filler are brought into position on their respective shelves.

In order to stuff the filler into the carton I prefer to employ means mounted for longitudinal movement over the stuffing table and at the proper time or instant this means operates to engage the filler, stuffing it into the carton, and then advancing the stuffed carton off of the stuffing table. For this purpose I prefer to employ an endless chain 37 (see Figure 3). This chain at a certain point is provided with two pushers or pins 38 and 39 which project outwardly from the chain. The pin 38 is intended to run in the slot 28 of the upper shelf of the stuffing table to engage the rear edge of the filler 30, while the other pin 39 projects down into the lower slot 18 of the stuffing table so as to engage the rear edge of the carton 20 to shove the same off of the stuffing table. The feed chain 37 is preferably located on one side of the stuffing table, as indicated in Figure 4, and these pins 38 and 39 are offset from the chain so as to bring their ends into the slots. These pins 38 and 39 are far enough apart to enable the pin 38 to stuff the filler well up into the angle 24 before the pin 39 commences to advance the carton.

In order to take the stuffed cartons from the stuffing table I provide a receiver 40 which is in the form of an open trough with side plates 41, and a bottom plate 42 which is substantially in line with the lower shelf of the stuffing table. The receiver 40 is provided with a stacking device 43 which preferably includes an oscillating plate

or flapper 44 that is mounted to rock on a horizontal shaft 45. This plate 44 is normally in a horizontal position so that it virtually operates as an extension of the lower shelf of the stuffing table. While in this horizontal position the feed chain 37 pushes the stuffed carton over onto the flapper plate 44, whereupon the flapper plate automatically swings upwardly into a substantially vertical plane. In doing this it carries the stuffed carton past two resilient pawls or holders 46 mounted in the side walls 41 (see Figure 4). As the carton comes into position it pushes forward the stack of stuffed cartons already in the receiver.

In order to enable the oscillating member, or flapper plate 44 to have this timed movement, I provide the flapper shaft 45 with a sprocket wheel 47 (see Figures 3 and 4) which is continuously driven when the stuffing machine is running, by sprocket chain 48, and I provide suitable means, such as an automatic releasing clutch 49, which enables the shaft 45 to be rotated through about 90° and then released and returned by a spring to its horizontal position. In order to accomplish this the sprocket wheel 47 runs loose on the shaft 45. It carries a spring-pressed pawl 50, the tip of which may engage a shoulder 51 on a collar 52 which is rigid on the shaft 45. At each revolution of the sprocket wheel this pawl picks up the shoulder 51 and rotates the shaft 45 until a roller 53 on the side of the pawl engages a toe 54 of a fixed cam 55. As soon as this happens the pawl is thrown out. As soon as the pawl is thrown out or disengaged from the shoulder 51 a coil spring 56 on the shaft 45 swings the flapper back to its horizontal position. One end of this spring is fixed in a frame member 57 and the other end is fixed in a split hub 58 which is rigidly secured to the shaft 45, and this hub 58 is formed on an arm 59 that is connected by a link 60 to a dashpot 61. It is preferable to employ this dashpot 61 to dampen the return movement of the flapper.

The drive for the machine will now be described, together with the automatic tripping mechanism for starting up the stuffing machine when a carton is being fed to it.

Referring particularly to Figures 1 and 8, a continuously driven shaft 62 is provided which actuates a main drive chain 63 for the stuffing machine. This main drive chain passes around sprocket wheel 64 on the main shaft 65 of the machine. From this main shaft 65 the endless chain 37 is driven through a suitable drive chain 66 which passes over a sprocket wheel 67 on the main shaft and a small sprocket 68 which is mounted on an upper countershaft 69. This shaft 69 carries the driving sprocket wheel 70 for the feed chains 37. The drive for the main conveyor chains is effected from a countershaft 71 driven by gear wheels 72 and 73 from the main driving shaft 65. The countershaft 71 carries a sprocket wheel 74 which drives a chain 75 that runs up to a sprocket wheel 76 on an elevated horizontal shaft 14 which carries the sprocket wheels 12 already described in connection with Figure 3.

In order to trip the stuffing machine into operation, I prefer to employ a one-way clutch 78 on the main shaft 65 and I control this clutch by means of a trip pin or dog 79 mounted on a bracket 80 attached to the guide-way 5. This tripping pin 79 is a rigid arm of a bell-crank lever 81 which carries a sliding stem 82 guided to slide freely through a guide 83 (see Figure 8). The end of this stem 82 is normally in a depressed

position which holds it in the path of the movable part of the one-way clutch 78. When a carton at the point 84 on the guide-way 5 strikes the pin 79, it swings it to the left and pulls the stem 82 upwardly, thereby releasing the clutch and permitting the clutch to make one revolution. Before the clutch has completed this one revolution the pin 82 will drop back by gravity and be in position to throw the clutch out when it has completed its one revolution. Any suitable one-way clutch mechanism can be employed for this purpose. In the present instance I prefer to mount the sprocket wheel 67 loose on the shaft 65. The hub 85 of this sprocket wheel carries a driving pawl 86 mounted to swing on a pivot pin 87. This pawl has a rigid tail 88 at right angles to it, the end of which can come into the path of a driving face 89 which is formed as a notch in a driving clutch member 90 that is rigidly attached to the shaft 65. This driving face 89 is the edge of a notch in a flange 91 formed on the driving clutch member 90. A coil spring 92 is attached to a short arm 93 on the pawl 86 and tends to hold the pawl in the position indicated in Figure 10. The direction of rotation for the shaft 65 is clockwise, as indicated by the arrow in Figure 10. As long as the lower end of the stem 82 is located in the path of the driving pawl 86 it will hold the pawl in a position to hold the tail 88 in an inwardly disposed position within the radius of the inner face of the flange 91. Hence the sprocket wheel 64 will rotate without driving the shaft 65. However, as soon as the stem 82 is withdrawn, the spring 92 will pull the pawl 86 up into the position indicated in Figure 10. This will bring the end of the tail 88 out to the location of the driving face 89 of the driving clutch 90, and the pawl will then pick up this clutch member and rotate it through one revolution. As soon as the pawl 86 strikes the stem 82 it will swing the tail 88 inwardly and stop the drive from the shaft 65.

The sprocket chain 48 that drives the flapper plate 44 is driven by passing over the wheel 95 on the end of the countershaft 71.

Referring again to the pneumatic picker device 31, the pneumatic tube 32 is mounted for parallel movement on two parallel arms 96 and 97 which are connected by a link 98, the ends of which are mounted for adjustment on pins 99 and 100 that may be secured at any point in slots 101 formed in the arms 96 and 97. To the pin 100 a driving link 102 is attached, said link being attached on a crank pin 103 carried on a crank 104 (see Figure 2). This crank 104 is rigidly secured to a horizontal shaft 105 that is driven through the medium of a bevel gear 106 rigid on it and meshing with a driving bevel pinion 107 carried on a horizontal shaft 69 that carries the sprocket wheel 70, already referred to, which drives the pusher means, or feed chains 37. At each revolution of the crank 104 the link 102 is reciprocated so as to impart the forward and return swinging movement to the suction tube 32.

The rear end of the suction tube 32 is attached by a pneumatic hose 109 to a vacuum cylinder 110 (see Figure 2), the plunger 111 for which is actuated through the medium of the link 112 and loose rocker 113 on the shaft 71. This loose rocker 113 is rocked through the medium of a link 114, the lower end of which is attached to an adjustable crank disc 115 secured on the end of the main shaft 65. The crank disc 115 is positioned on the shaft 65 so that when the vacuum cups 34 arrive in their return movement at about

the point indicated in Figure 2, the plunger 111 will have arrived at a point in its upward travel which will reduce the vacuum in the tube substantially to zero. When the cups 34 in their forward movement have arrived almost in contact with the foremost filler 33, the vacuum will be at its height so that as soon as the cups 34 strike the foremost filler in the magazine they will pick it off and carry it back toward the guide plate 35.

The use of a feed device in the form of the endless chain 37 for stuffing the carton and for pushing it off the stuffing table is most advantageous because the pins 38 and 39 can readily be located at a point on the chain which will properly time them in their cooperation with the filler on the upper shelf 25 of the stuffing table.

It is understood that the embodiment of the invention described herein is only one of the many embodiments this invention may take, and I do not wish to be limited in the practice of the invention, nor in the claims, to the particular embodiment set forth.

What I claim is:—

1. In a machine for stuffing a folded carton having a transverse folded edge and diverging extensions forming an angle between the same, the combination of means for advancing the carton with the folded edge disposed forwardly, means for advancing a collapsed filler into the folded carton in the same direction that the carton advances and into the said angle between the extensions of the carton, and means for stacking the stuffed cartons thereafter.

2. In a machine for stuffing folded cartons with collapsed fillers, the combination of means for advancing the carton to a predetermined point, means for holding the collapsed filler above the carton, and means for advancing the filler in the same direction as the carton advances to shove the filler into the carton and advance the carton from said predetermined point.

3. In a machine for stuffing folded cartons with collapsed fillers, the combination of a frame, a stuffing table supported on the frame, means for advancing the carton onto the stuffing table, means for moving the filler into a position adjacent the carton, and means for moving the filler in the same direction as the carton advances to push the filler into the carton and for advancing the stuffed carton off of the stuffing table.

4. In a machine for stuffing folded cartons with collapsed fillers, the combination of a frame, an endless conveyor having a run extending along the table, said conveyor having pushers for advancing the cartons resting on the table, feeding mechanism for feeding a filler into the carton, and automatic means for starting up the filler feeding mechanism, with means for controlling the same by a carton advancing along the said conveyor.

5. In a machine for stuffing folded cartons with collapsed fillers, the combination of a frame, a stuffing table, an endless conveyor for advancing the cartons onto the table, filler feeding mechanism for feeding collapsed fillers into the carton, a clutch for driving the same, and means for controlling the clutch by a carton advancing on the endless conveyor.

6. In a machine for stuffing folded cartons, the combination of a frame, a substantially horizontal stuffing table mounted on the frame, means for advancing the carton onto the stuffing table, a magazine for the collapsed fillers located above the stuffing table, means for dropping a collapsed filler from the magazine into position above the

carton lying on the stuffing table, and means operating thereafter for advancing the collapsed filler in the same direction that the cartons advance to push the collapsed filler into the carton and for pushing the stuffed carton off of the stuffing table.

7. In a machine for stuffing folded cartons, the combination of a frame, a substantially horizontal stuffing table mounted on the frame, means for advancing the carton onto the stuffing table, a magazine for the collapsed fillers located above the stuffing table, a reciprocating picker for picking the foremost filler from the magazine and dropping the same into position above the carton lying on the stuffing table, and means operating thereafter for advancing the collapsed filler in the same direction that the cartons advance to push the collapsed filler into the carton and for pushing the stuffed carton off of the stuffing table.

8. In a machine for stuffing folded cartons, the combination of a frame, a substantially horizontal stuffing table mounted on the frame, means for advancing the carton onto the stuffing table, a magazine for the collapsed fillers located above the stuffing table, a pneumatic picker movably mounted on the frame, and means for actuating the same to pick off the foremost filler in the magazine, and drop the filler into position above the carton lying on the stuffing table, and means operating thereafter for advancing the collapsed filler in the same direction that the cartons advance to push the collapsed filler into the carton and for pushing the stuffed carton off of the stuffing table.

9. In a machine for stuffing folded cartons, the combination of a frame, a substantially horizontal stuffing table mounted on the frame, means for advancing the carton onto the stuffing table, means for placing a collapsed filler into position above the carton, an endless chain extending longitudinally over the table and having a pusher for the filler and a pusher for the carton, means for actuating the said endless chain to push the filler into the carton and to push the carton thereafter off of the stuffing table.

10. In a machine for stuffing a folded carton having a transverse folded edge and diverging extensions forming an angle between the same, the combination of a stuffing table, means for advancing the carton onto the stuffing table with the folded edge disposed forwardly, means for placing a collapsed filler into position above the carton, an endless chain extending longitudinally with the table, and means carried by the chain for stuffing the filler into the carton and for advancing the stuffed carton off of the stuffing table.

11. In a machine for stuffing a folded carton having a transverse folded edge and diverging extensions forming an angle between the same, the combination of a stuffing table, means for advancing the carton onto the stuffing table with the folded edge disposed forwardly, means for dropping a collapsed filler into position above the carton, an endless chain mounted above the stuffing table having a dog for stuffing the filler into the carton and having a dog for engaging the stuffed carton to advance the same off of the stuffing table, and means for actuating the said chain.

12. In a machine for stuffing folded cartons with collapsed fillers, the combination of a stuffing table, an endless conveyor having a run extending along a portion of said table, pusher pins on the conveyor for advancing the cartons and leaving the same one by one on the table, mech-

anism for stuffing a collapsed filler into the carton, and automatic means for actuating the same by a carton being advanced by the conveyor.

13. In a machine for stuffing folded cartons with collapsed fillers, the combination of a stuffing table, an endless conveyor having a run extending along a portion of said table, pusher pins on the conveyor for advancing the cartons and leaving the same one by one on the table, mechanism for stuffing a collapsed filler into the carton, mechanism including a one-revolution clutch for driving the last-named mechanism, and means for controlling the said clutch by the carton being advanced by the conveyor.

14. In a machine for stuffing folded cartons with collapsed fillers, the combination of a stuffing table, an endless conveyor having a run extending along a portion of said table, pusher pins on the conveyor for advancing each carton and leaving it on the table, an endless chain extending longitudinally over the stuffing table, a sprocket wheel for driving said chain, a shaft rotating with the sprocket wheel, filler feeding means actuated by said shaft for dropping a collapsed filler into position above the carton lying on the stuffing table, and dogs on the endless chains for pushing the filler into the carton and for pushing the carton off of the stuffing table.

15. In a machine for stuffing folded cartons with collapsed fillers, the combination of a stuffing table, an endless conveyor having a run extending along a portion of said table, pusher pins on the conveyor for advancing each carton and leaving it on the table, an endless chain extending longitudinally over the stuffing table, a sprocket wheel for driving said chain, a shaft rotating with the sprocket wheel, filler feeding means actuated by said shaft for dropping a collapsed filler into position above the carton lying on the stuffing table, dogs on the endless chain for pushing the filler into the carton and for pushing the carton off of the stuffing table, an endless chain for driving said shaft, a driving shaft for said last-named endless chain and having a one-revolution clutch associated therewith, and means for controlling the one-revolution clutch by a carton being advanced by the conveyor.

16. In a machine for stuffing folded cartons with collapsed fillers, the combination of a stuffing table, an endless conveyor having a run extending along a portion of said table, pusher pins on the conveyor for advancing each carton and leaving it on the table, an endless chain extending longitudinally over the stuffing table, a sprocket wheel for driving said chain, a shaft rotating with the sprocket wheel, filler feeding means actuated by said shaft for dropping a collapsed filler into position above the carton lying on the stuffing table, dogs on the endless chain for pushing the filler into the carton and for pushing the carton off of the stuffing table, an endless chain for driving said shaft, a driving shaft for said last-named endless chain and having a one-revolution clutch associated therewith,

and means for driving the filler feeding means through said driving shaft.

17. In a machine for stuffing cartons with fillers, the combination of a stuffing table having a lower shelf and an upper shelf, means for advancing the carton onto one of the shelves, means for placing the filler on the other shelf, said shelves having longitudinal slots through the same, means mounted for movement over the stuffing table, said last-named means having means for engaging the filler and the carton, operating to push the filler into the carton and push the stuffed carton off of the stuffing table.

18. In a machine for stuffing cartons with fillers, the combination of a stuffing table having a lower shelf and an upper shelf, said shelves having alining slots therein, means for advancing the carton onto the lower shelf, means for placing the filler on the upper shelf above the carton, means mounted for movement longitudinally over the stuffing table and having parts for engaging the filler and the carton for pushing the filler into the carton and pushing the stuffed carton off of the stuffing table.

19. In a machine for stuffing cartons with fillers, the combination of a stuffing table having a lower shelf and an upper shelf, said shelves having alining longitudinal slots therein, means for advancing the carton onto the lower shelf and leaving the same at rest beyond the upper shelf, means for placing the filler on the upper shelf, and means mounted over the stuffing table movable longitudinally of the same and having parts for engaging the filler and the carton to push the filler into the carton and to push the stuffed carton off of the stuffing table.

20. In a machine for stuffing cartons with a filler, the combination of a stuffing table having a lower shelf and an upper shelf with alining longitudinal slots therein, a conveyor having a pair of chains with runs extending partially along the lower shelf for advancing each carton to a position of rest beyond the upper shelf, means for placing a filler on the upper shelf above the carton, and pushing means mounted to move longitudinally over the stuffing table and having means running in said slots for respectively engaging the filler and the carton to push the filler into the carton and to push the stuffed carton off of the stuffing table.

21. In a machine for stuffing cartons with fillers, the combination of a stuffing table, a receiver for receiving the stuffed cartons from the stuffing table, having a bottom plate substantially in line with the stuffing table, an oscillating member mounted so as to assume a position substantially in line with the stuffing table to receive the stuffed carton, pusher-means for pushing the stuffed carton off of the stuffing table and onto the said oscillating member, and means for swinging the oscillating member upwardly in timed relation to the pushing means to force the stuffed cartons into and along the receiver.

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