

No. 621,714.

Patented Mar. 21, 1899.

H. ROSE.

WRAPPING MACHINE.

(Application filed Dec. 21, 1897.)

(No Model.)

16 Sheets—Sheet 1.

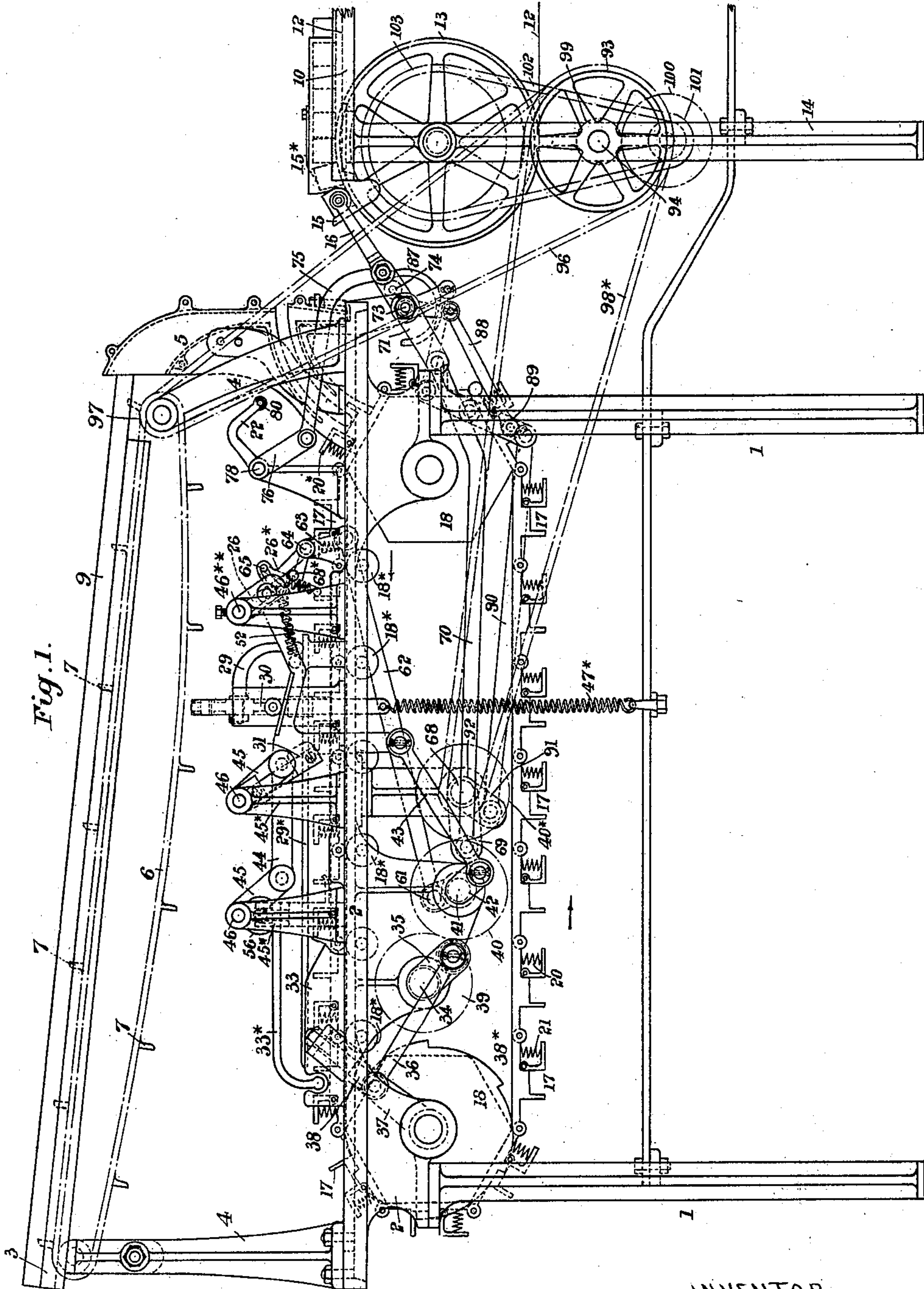


Fig. 1.

WITNESSES:

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*S. C. Connor*

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*Howson and Howson*  
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**No. 621,714.**

**Patented Mar. 21, 1899.**

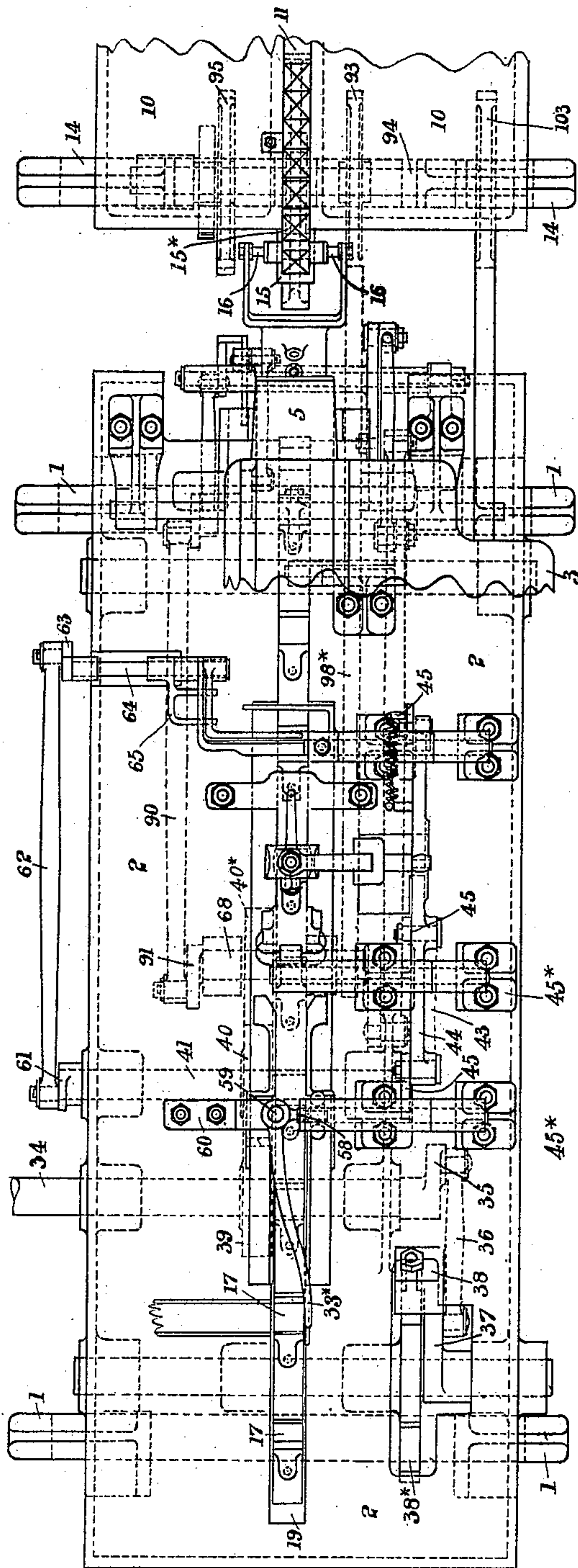
**H. ROSE.**

## WRAPPING MACHINE.

(Application filed Dec. 21, 1897.)

(No Model.)

**16 Sheets—Sheet 2.**



WITNESSES:

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No. 621,714.

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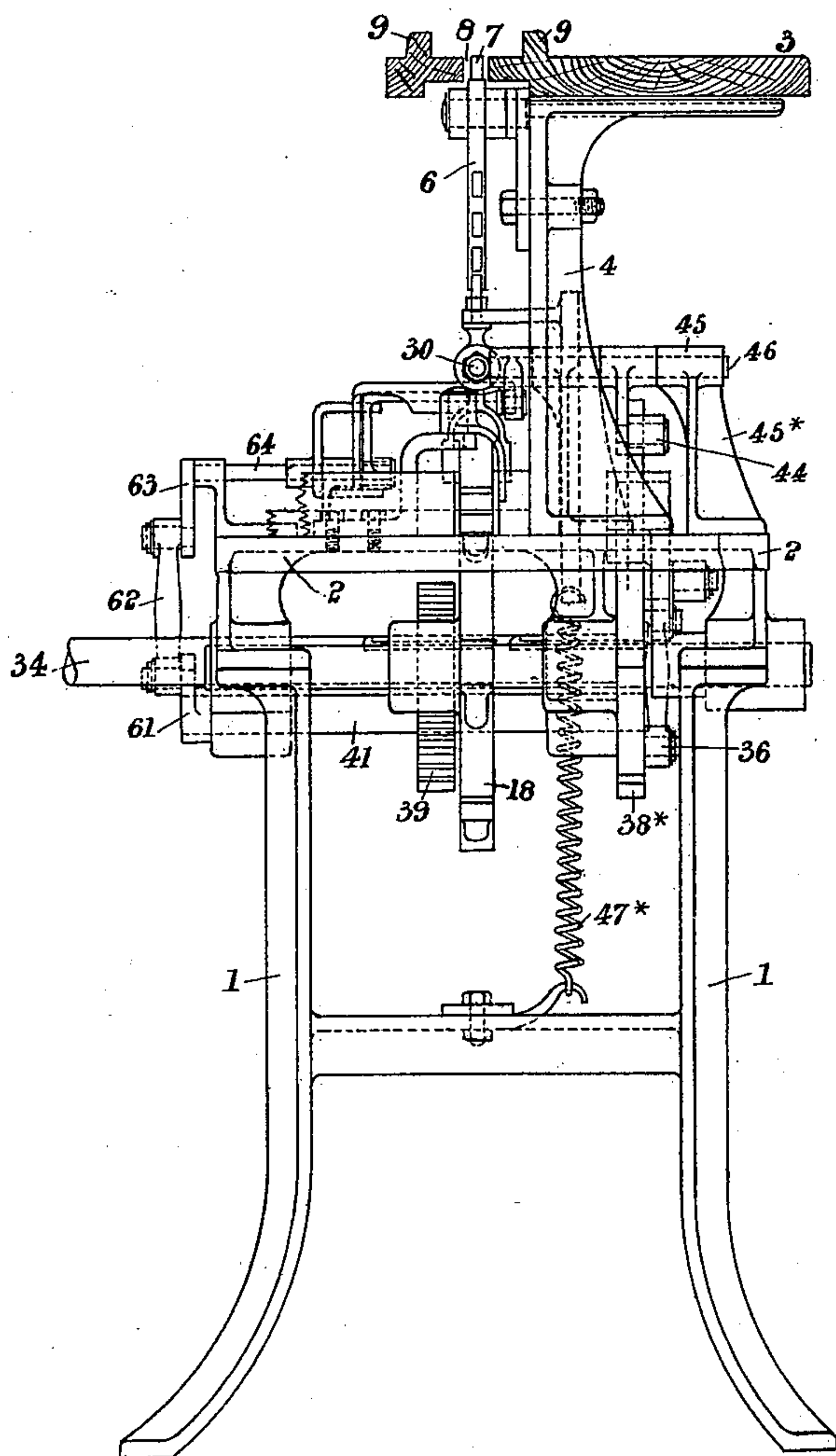
WRAPPING MACHINE.

(Application filed Dec. 21, 1897.)

(No Model.)

18 Sheets—Sheet 3.

Fig. 3.



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No. 621,714.

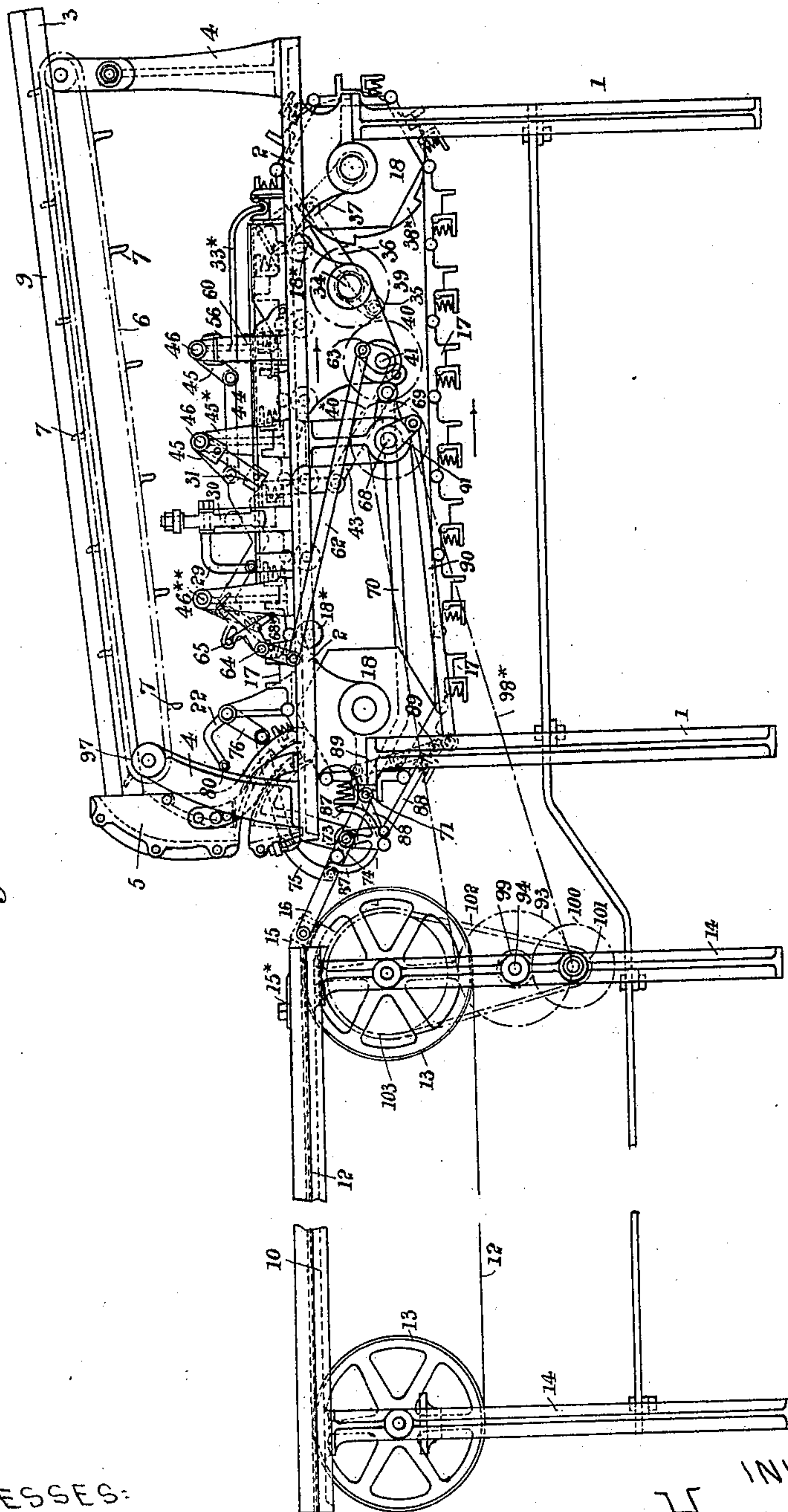
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H. ROSE.  
WRAPPING MACHINE.  
(Application filed Dec. 21, 1897.)

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(No Model.)

Fig. 4.



WITNESSES:

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H. ROSE.  
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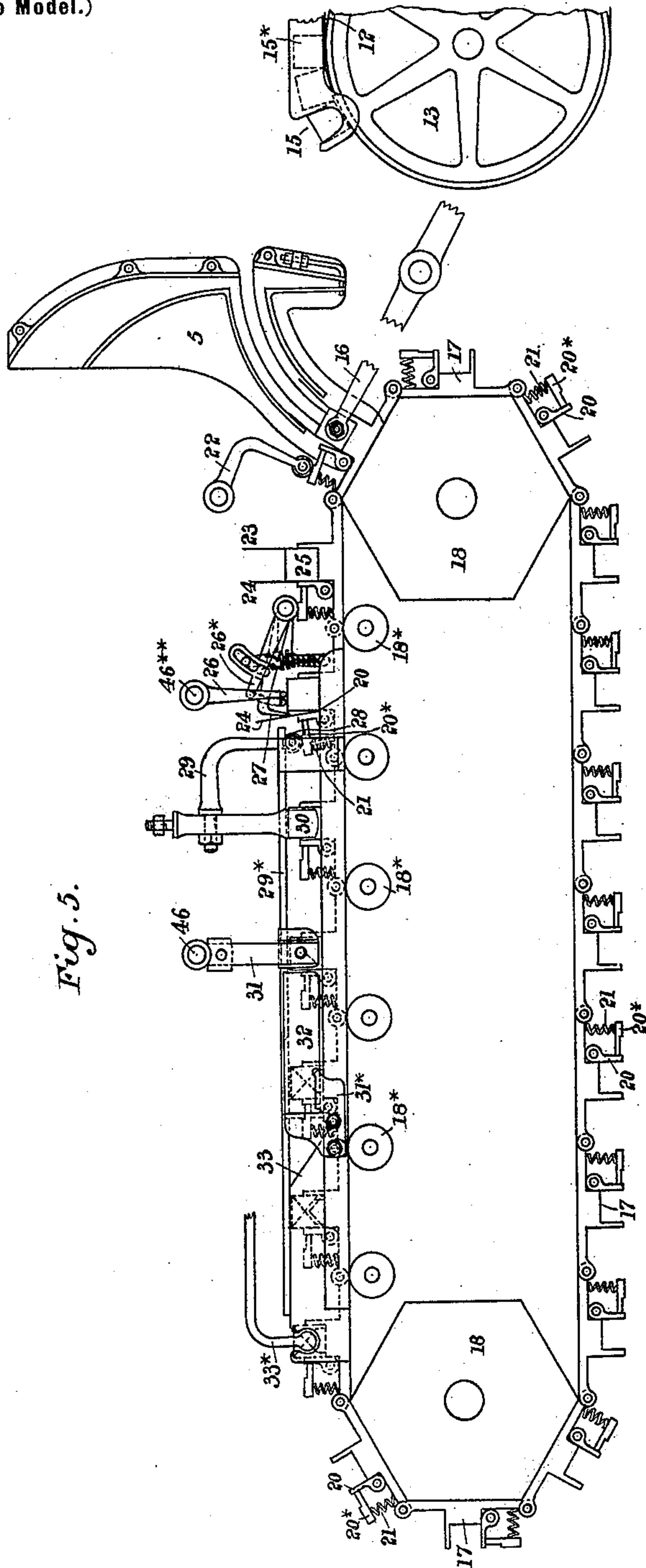


Fig. 5.

WITNESSES:

*A. W. Wright*  
*S. C. Connor*

16 Sheets—Sheet 5.

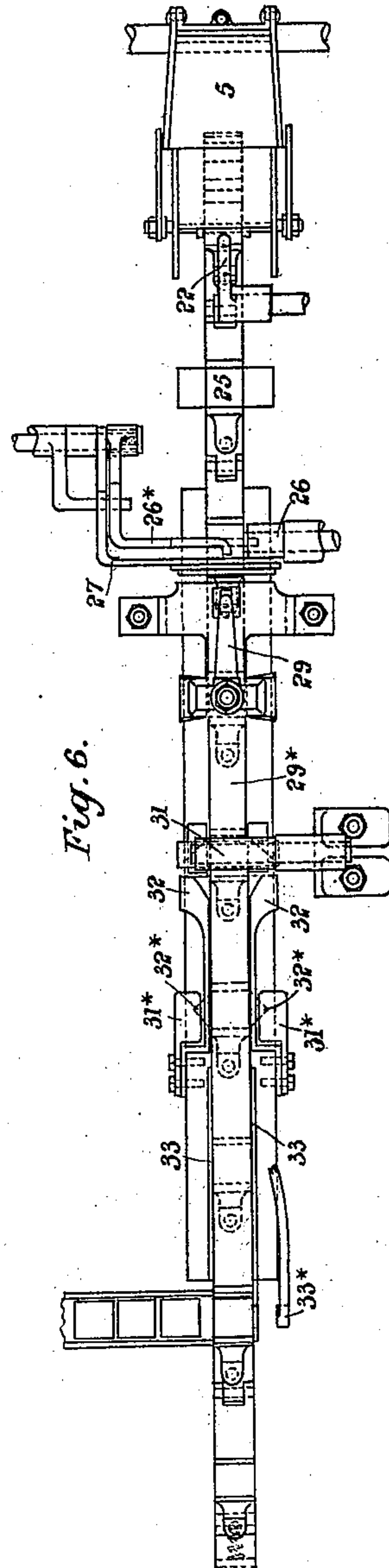
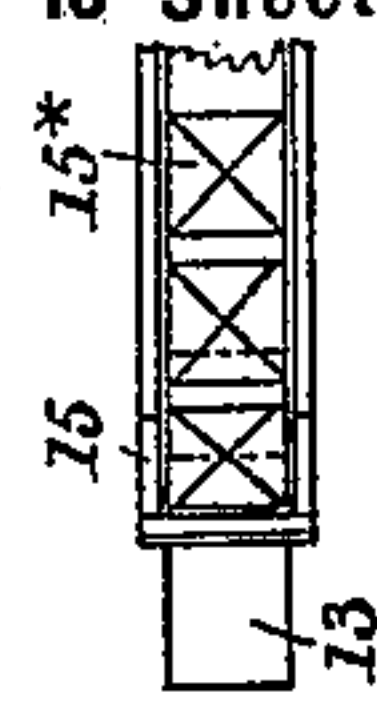


Fig. 6.

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No. 621,714.

Patented Mar. 21, 1899.

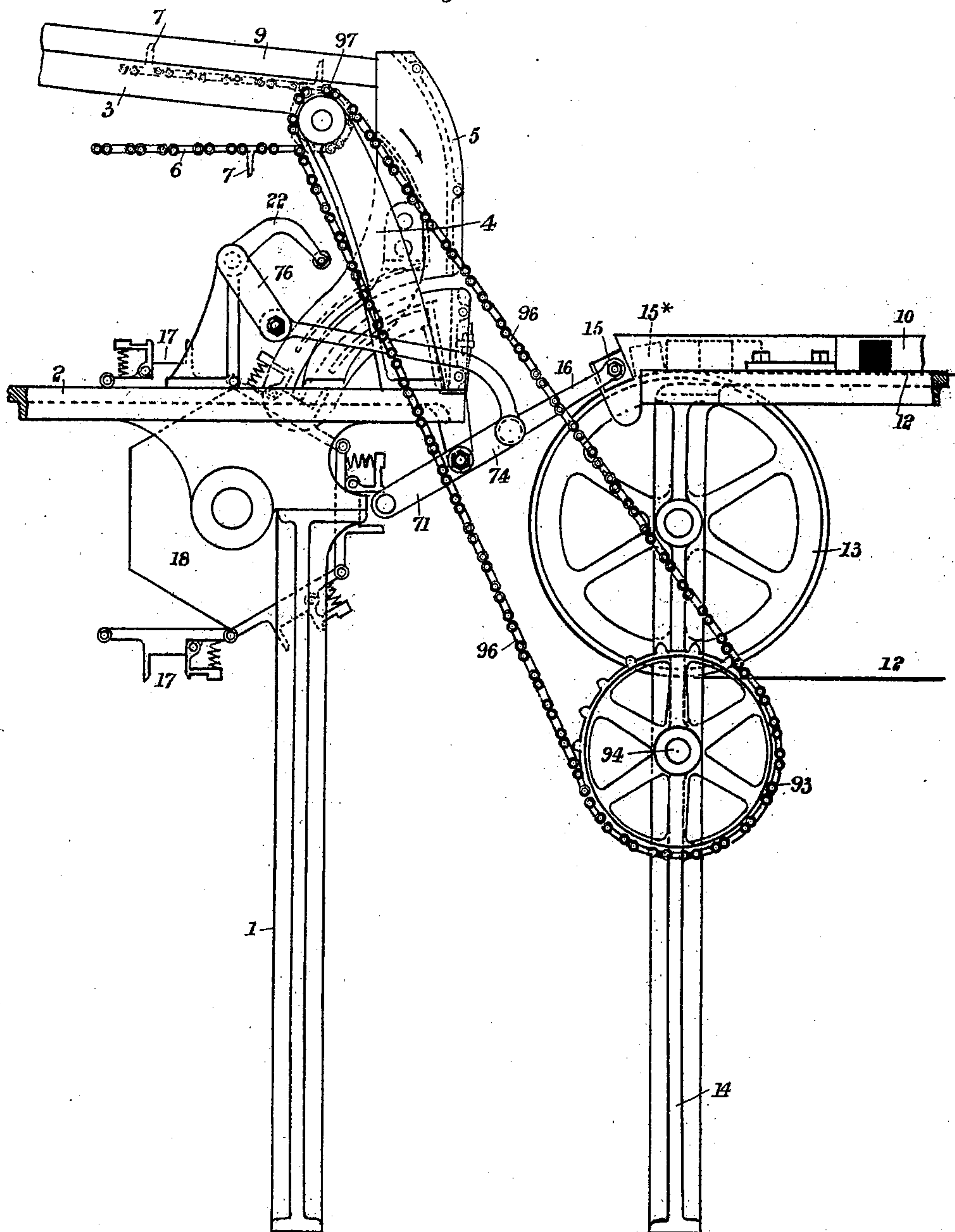
H. ROSE.  
WRAPPING MACHINE.

(Application filed Dec. 21, 1897.)

(No Model.)

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Fig. 7.



WITNESSES:

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No. 621,714.

Patented Mar. 21, 1899.

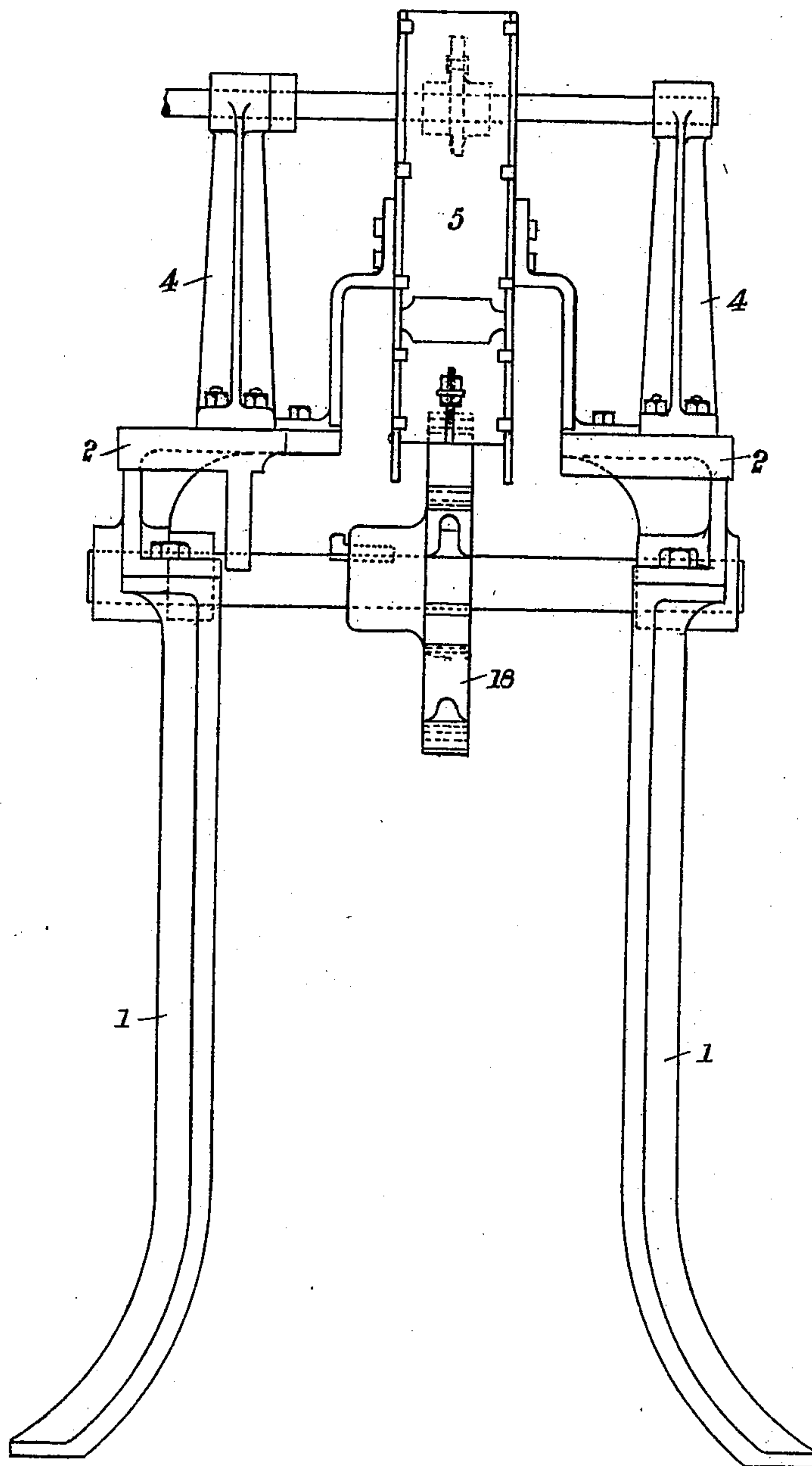
H. ROSE.  
WRAPPING MACHINE.

(Application filed Dec. 21, 1897.)

(No Model.)

16 Sheets—Sheet 7.

*Fig. 8.*



WITNESSES:

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No. 621,714.

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H. ROSE.

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(Application filed Dec. 21, 1897.)

(No Model.)

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Fig. 9.

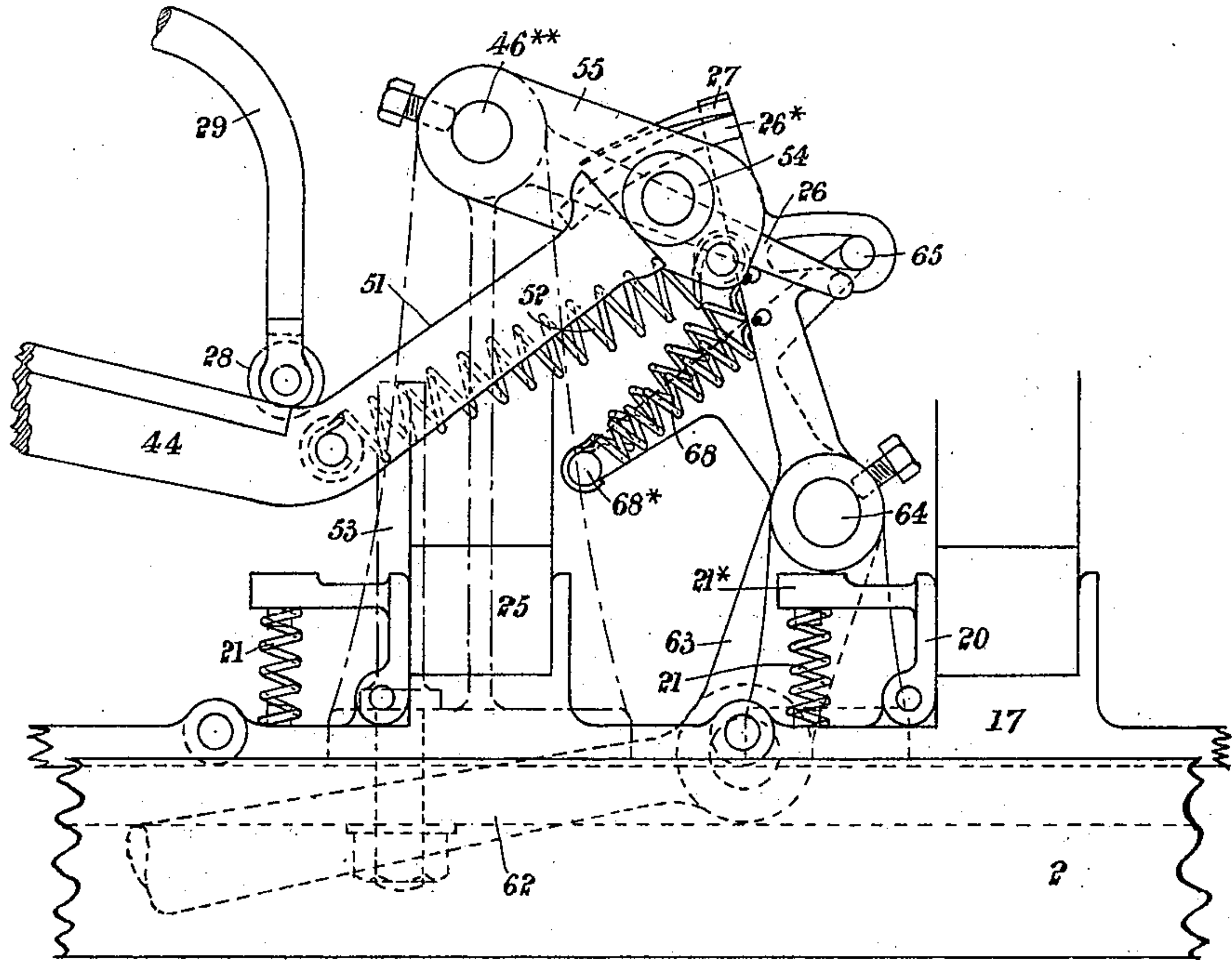
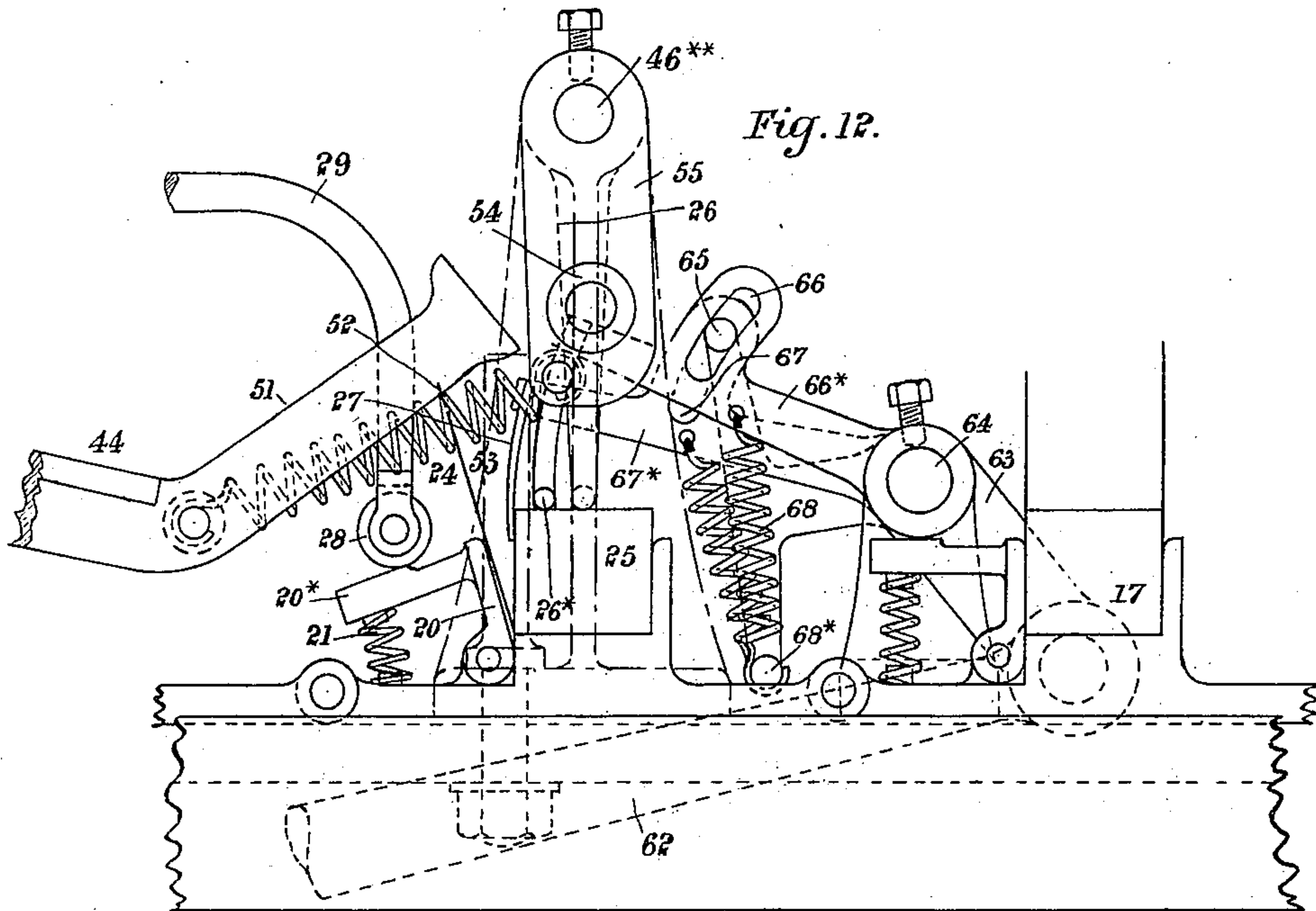


Fig. 12.



WITNESSES:

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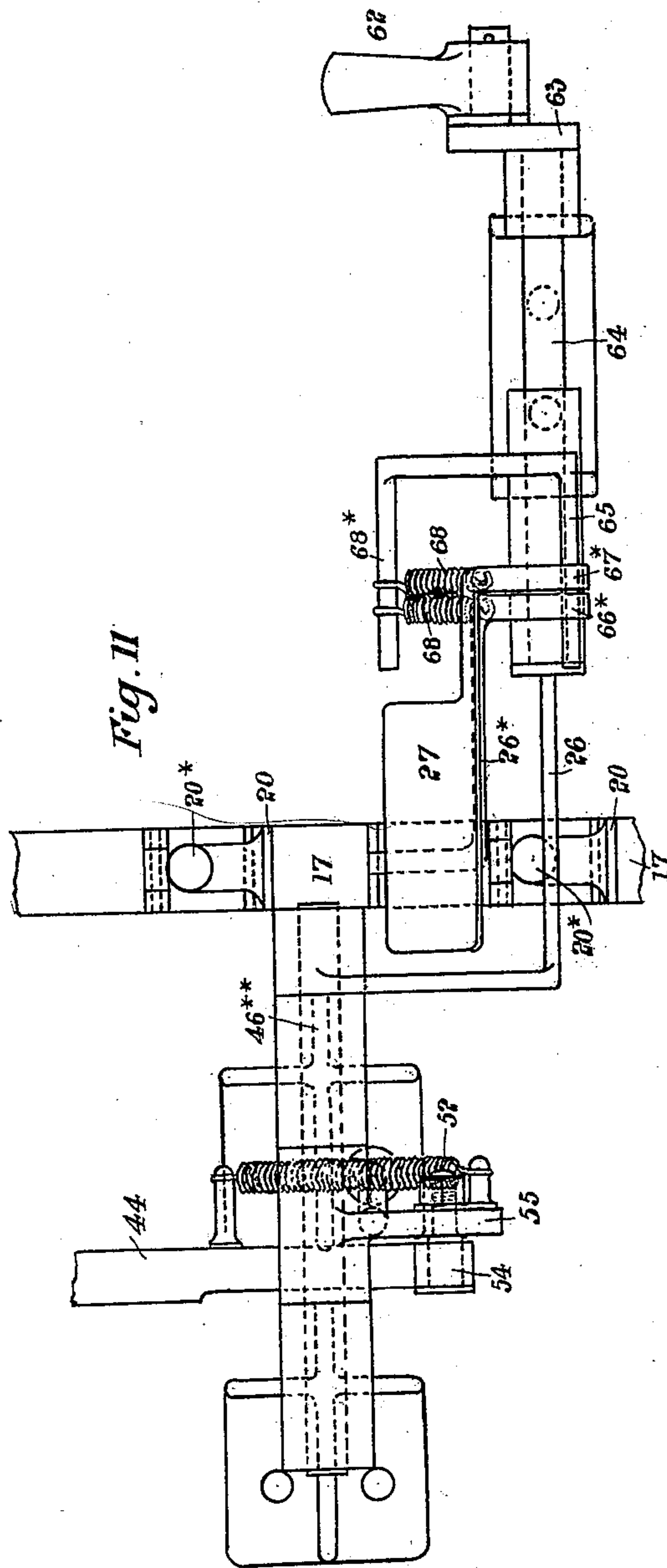
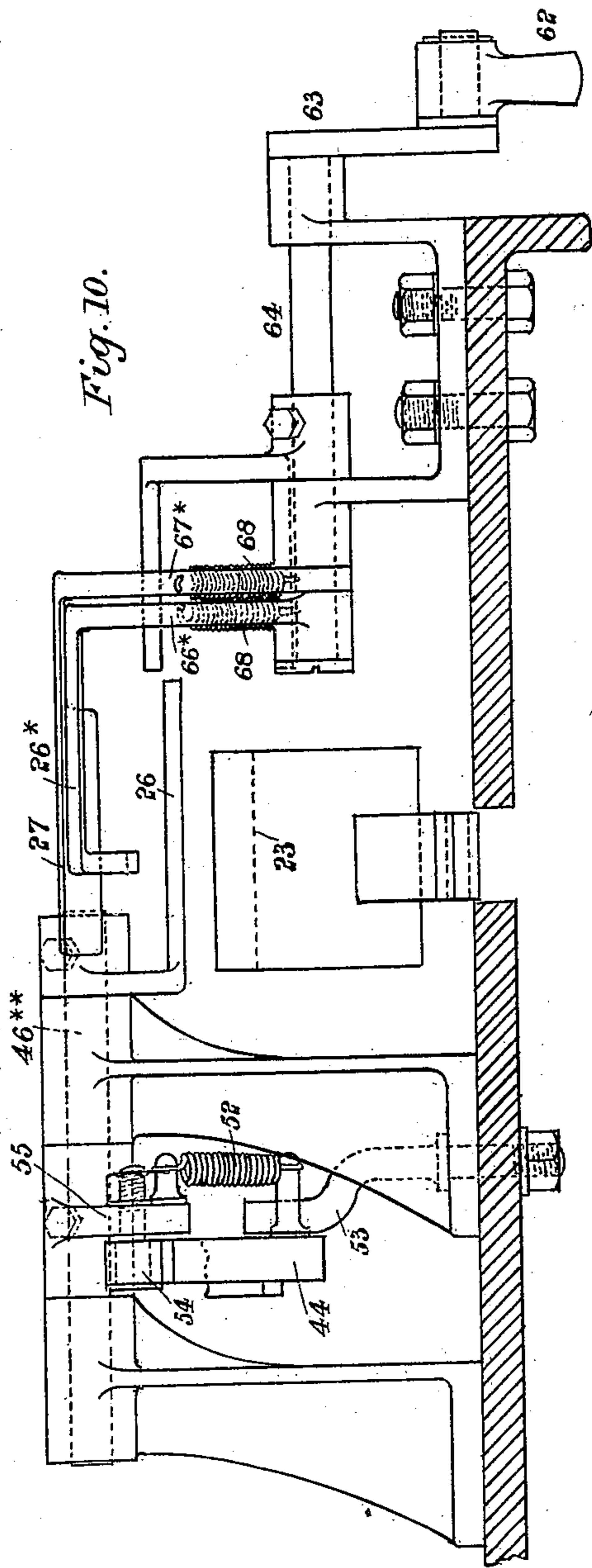
Patented Mar. 21, 1899.

H. ROSE.  
WRAPPING MACHINE.

(Application filed Dec. 21, 1897.)

(No Model.)

16 Sheets—Sheet 9.



WITNESSES:

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No. 621,714.

Patented Mar. 21, 1899.

H. ROSE.  
WRAPPING MACHINE.

(Application filed Dec. 21, 1897.)

(No Model.)

16 Sheets—Sheet 10.

Fig. 13.

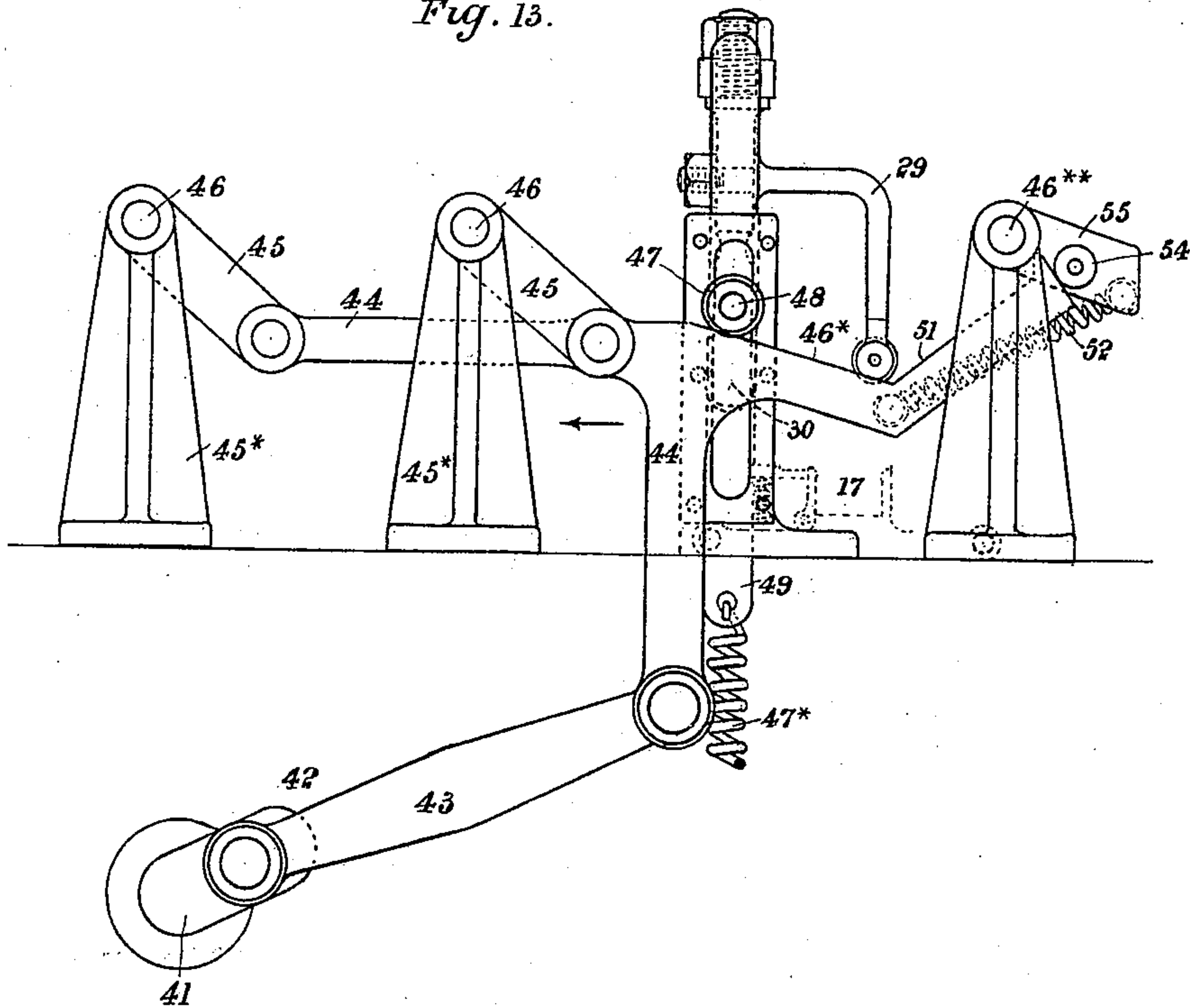
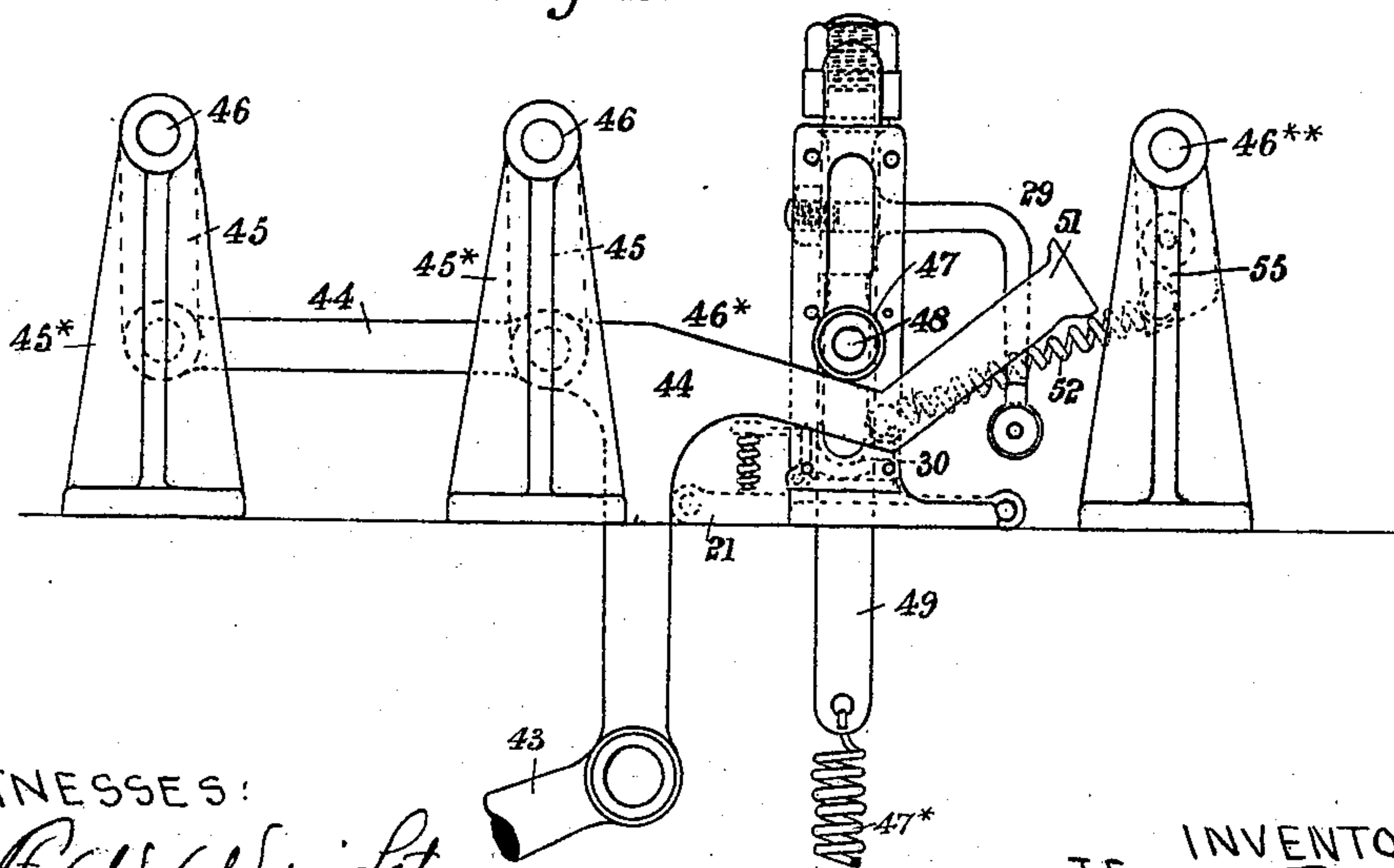


Fig. 21.



WITNESSES:

*P. W. Wright.*  
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No. 621,714.

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H. ROSE.  
WRAPPING MACHINE.

(Application filed Dec. 21, 1897.)

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16 Sheets—Sheet II.

Fig. 14.

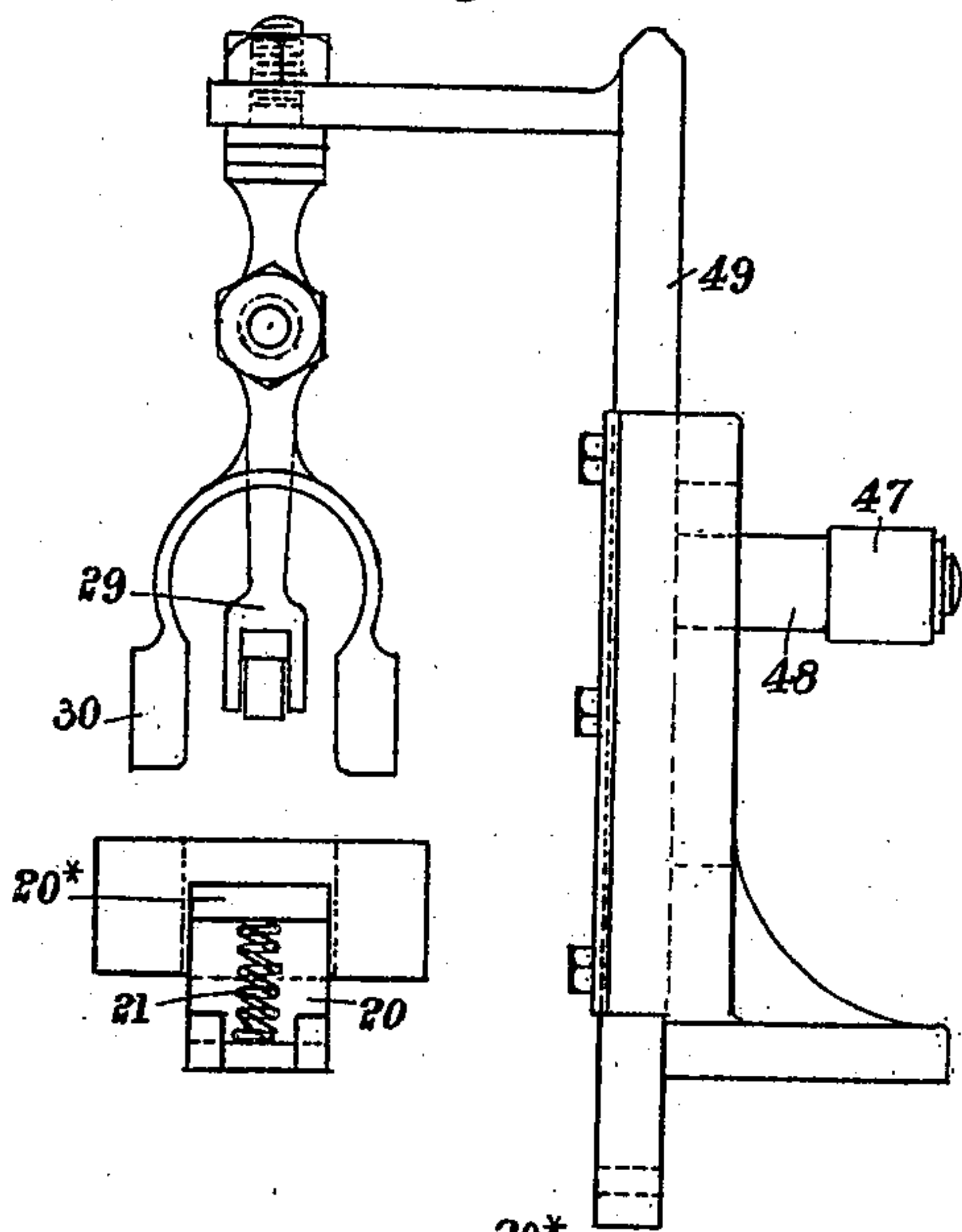


Fig. 22.

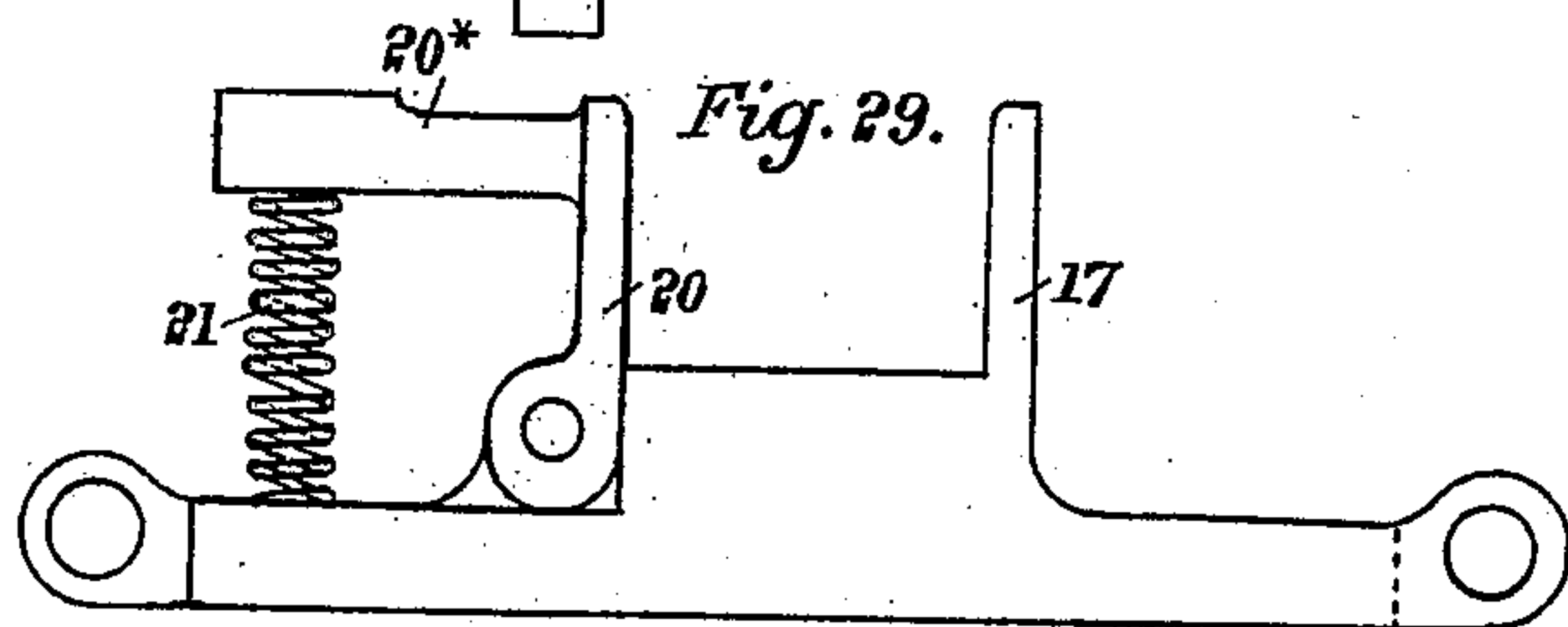
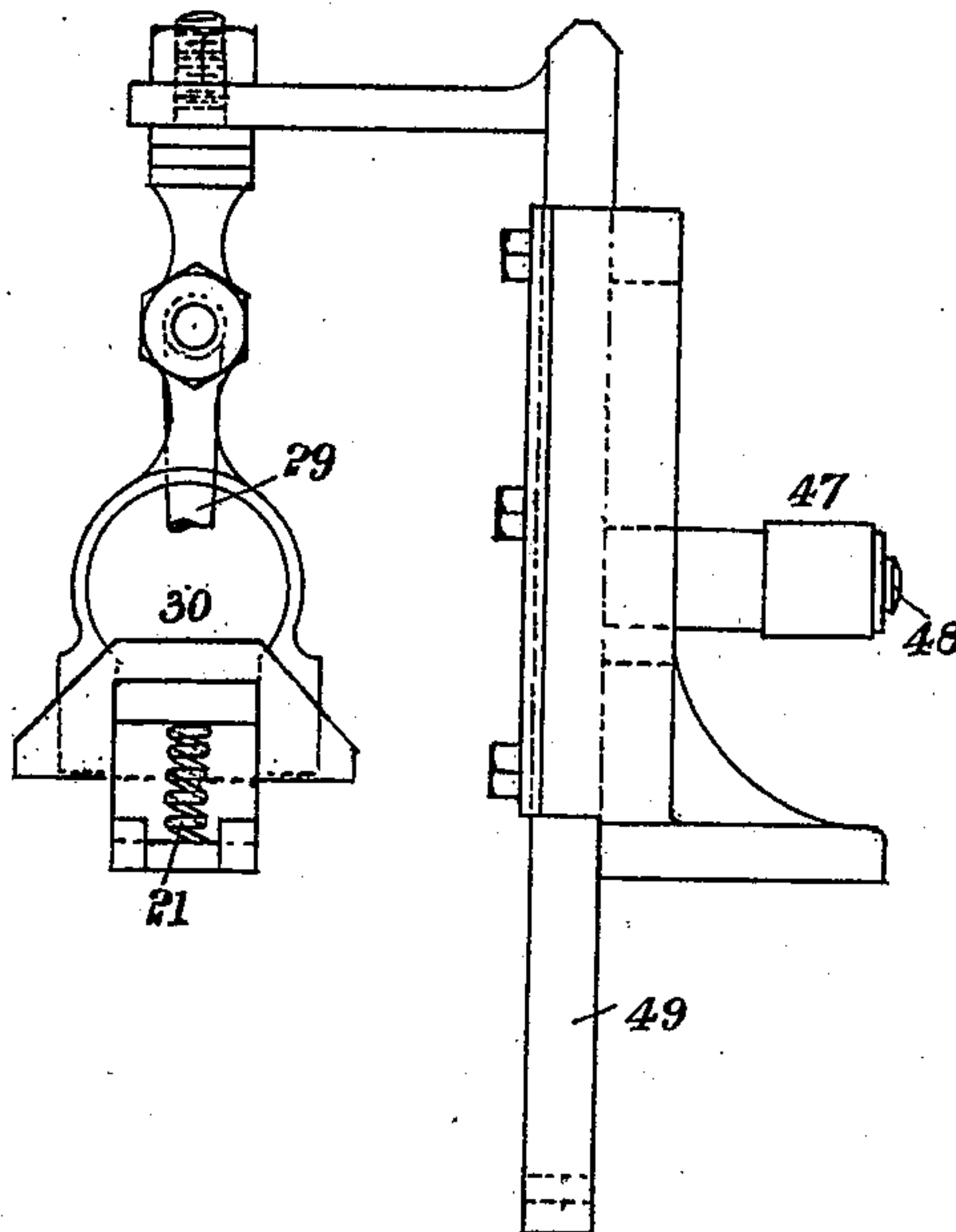


Fig. 29.

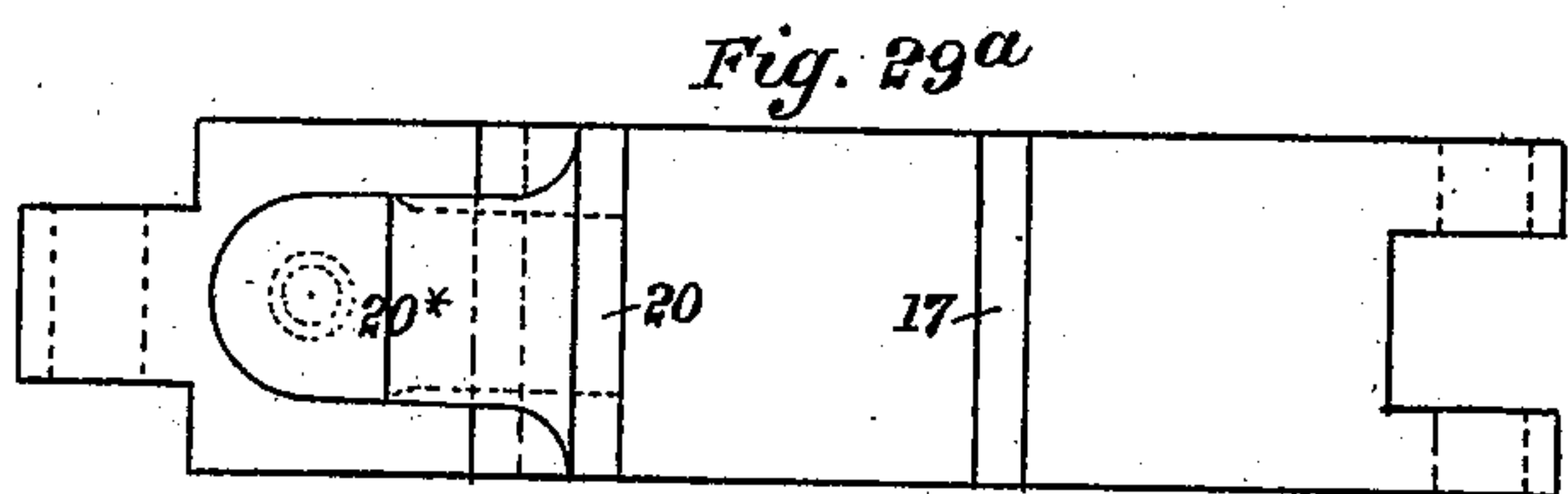


Fig. 29a

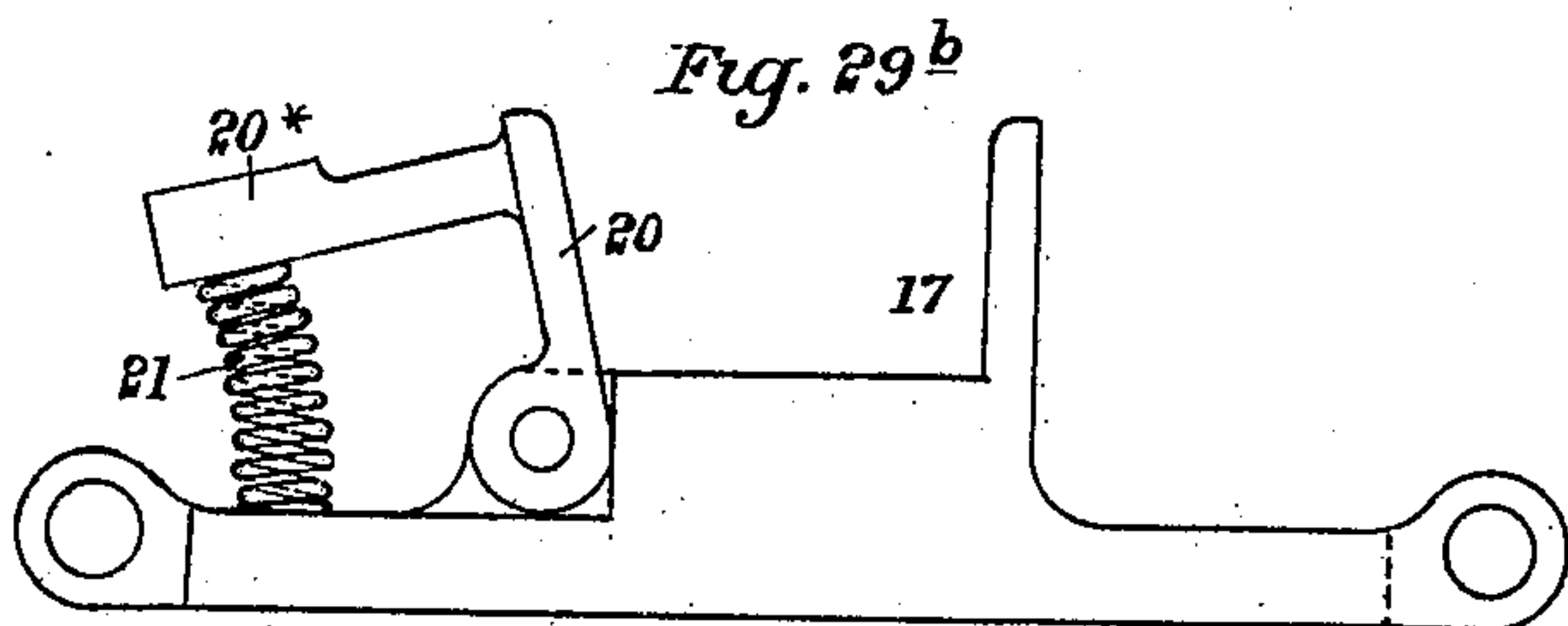


Fig. 29b

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**No. 621,714.**

**Patented Mar. 21, 1899.**

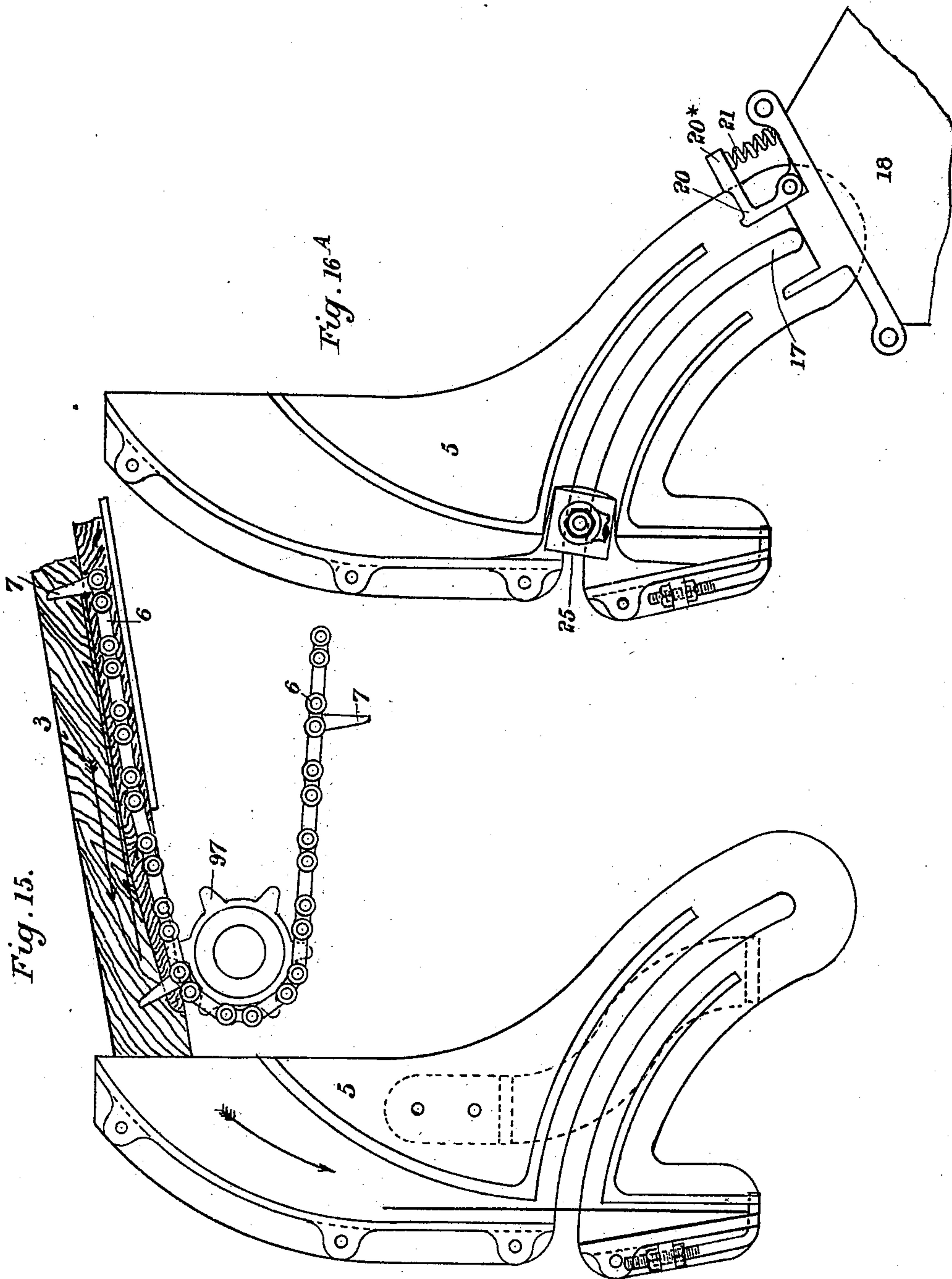
**H. ROSE.**

**WRAPPING MACHINE.**

(Application filed Dec. 21, 1897.)

(No Model.)

**16 Sheets—Sheet 12.**



WITNESSES:

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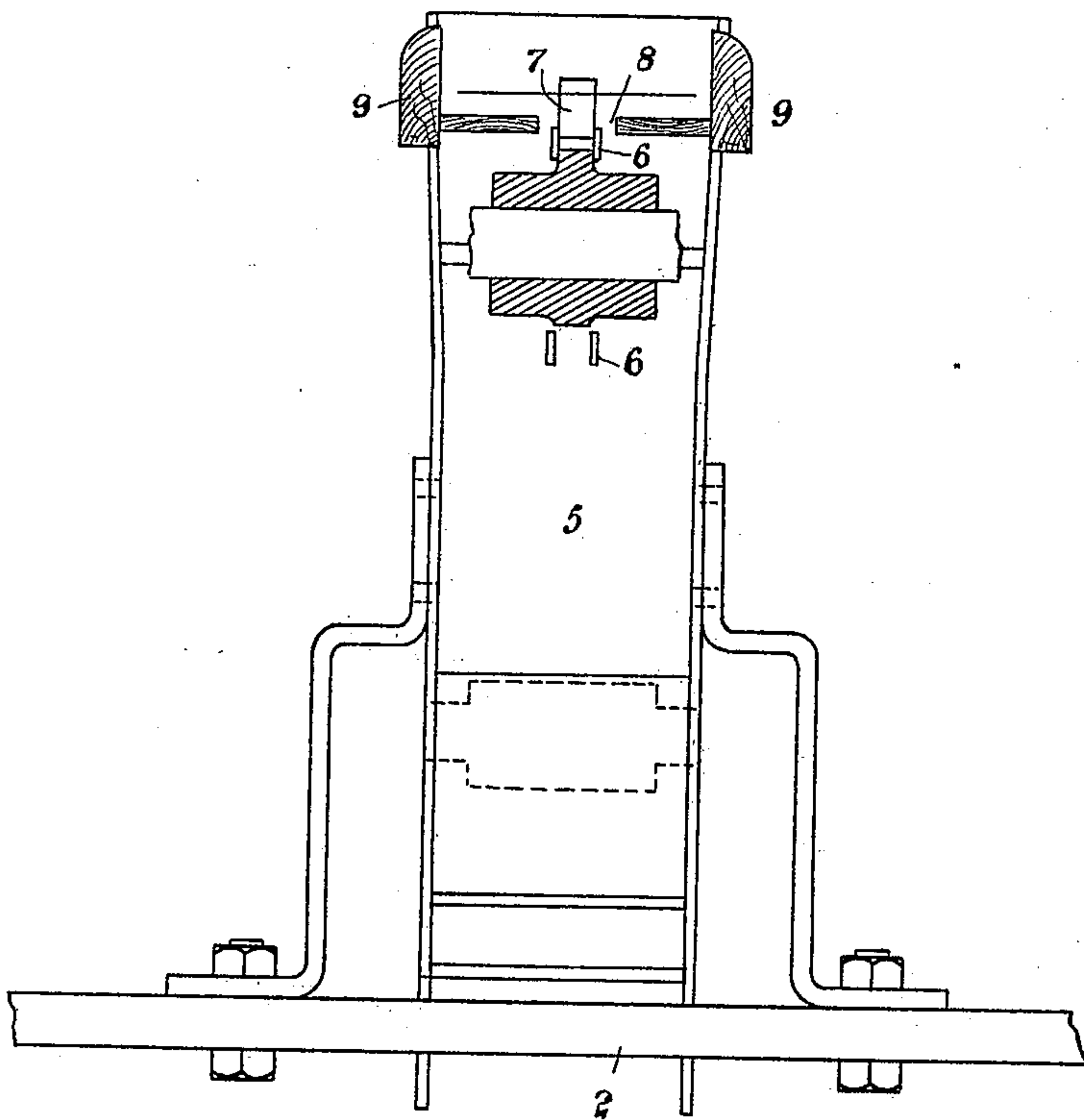
H. ROSE.  
WRAPPING MACHINE.

(Application filed Dec. 21, 1897.)

(No Model.)

16 Sheets—Sheet 13.

Fig. 16.



WITNESSES:

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No. 621,714.

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H. ROSE.  
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(Application filed Dec. 21, 1897.)

(No Model.)

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Fig. 17.

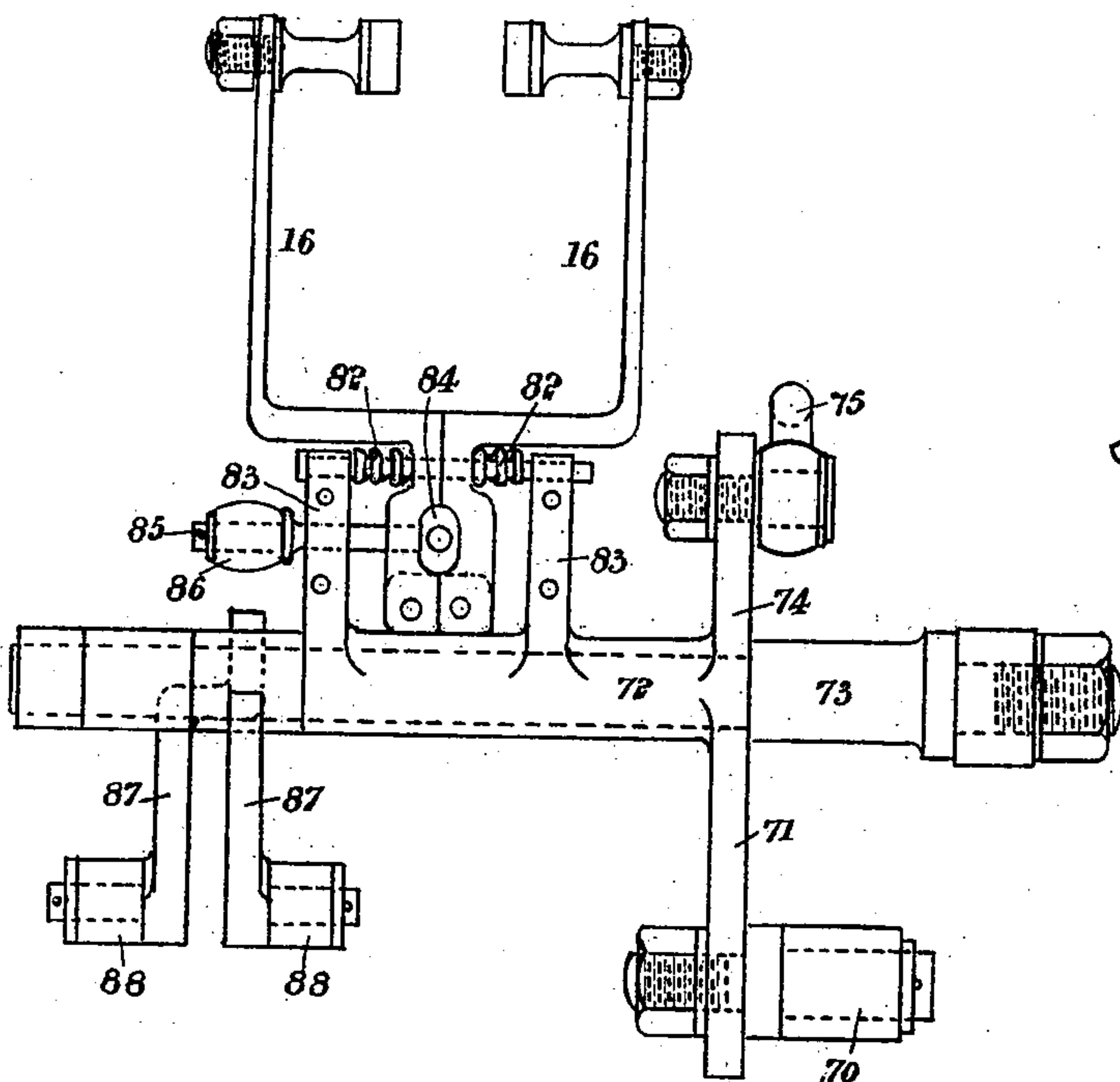


Fig. 18.

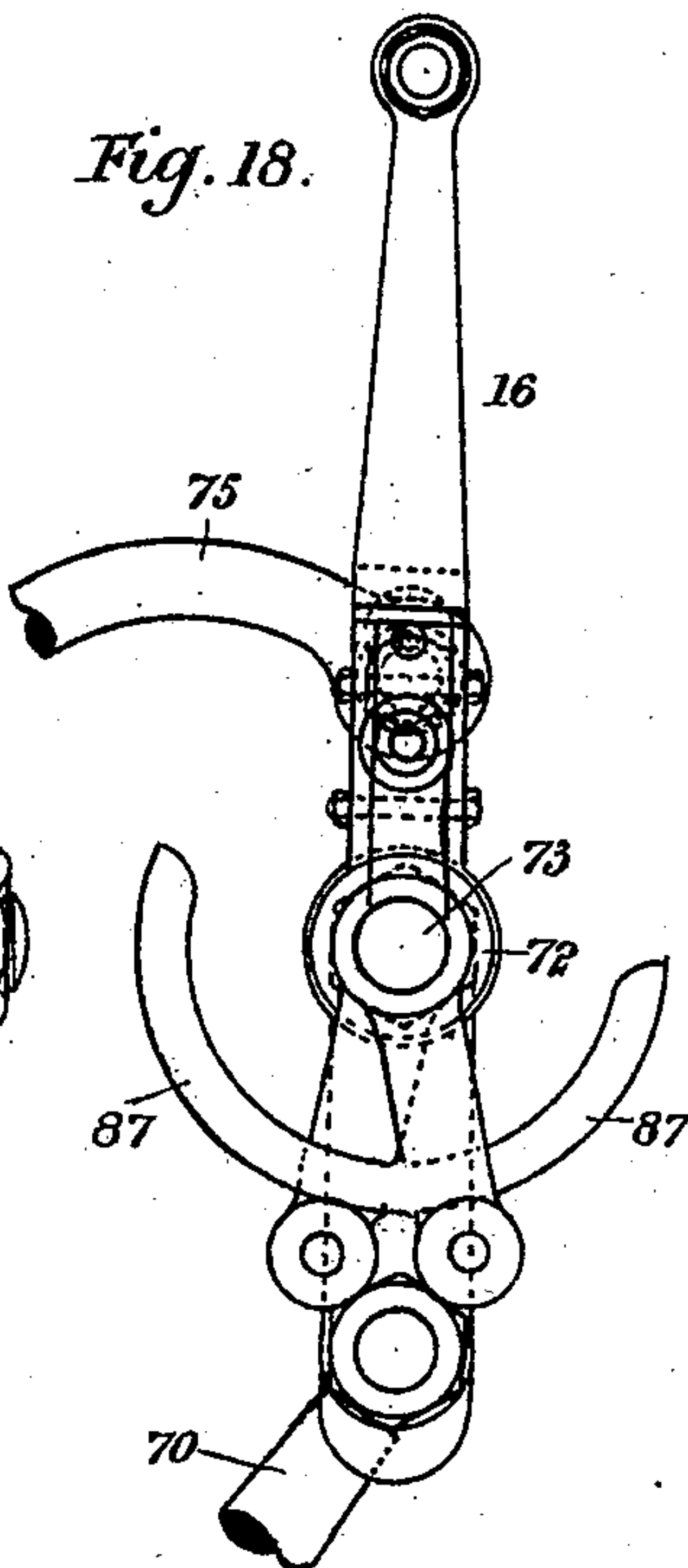


Fig. 19.

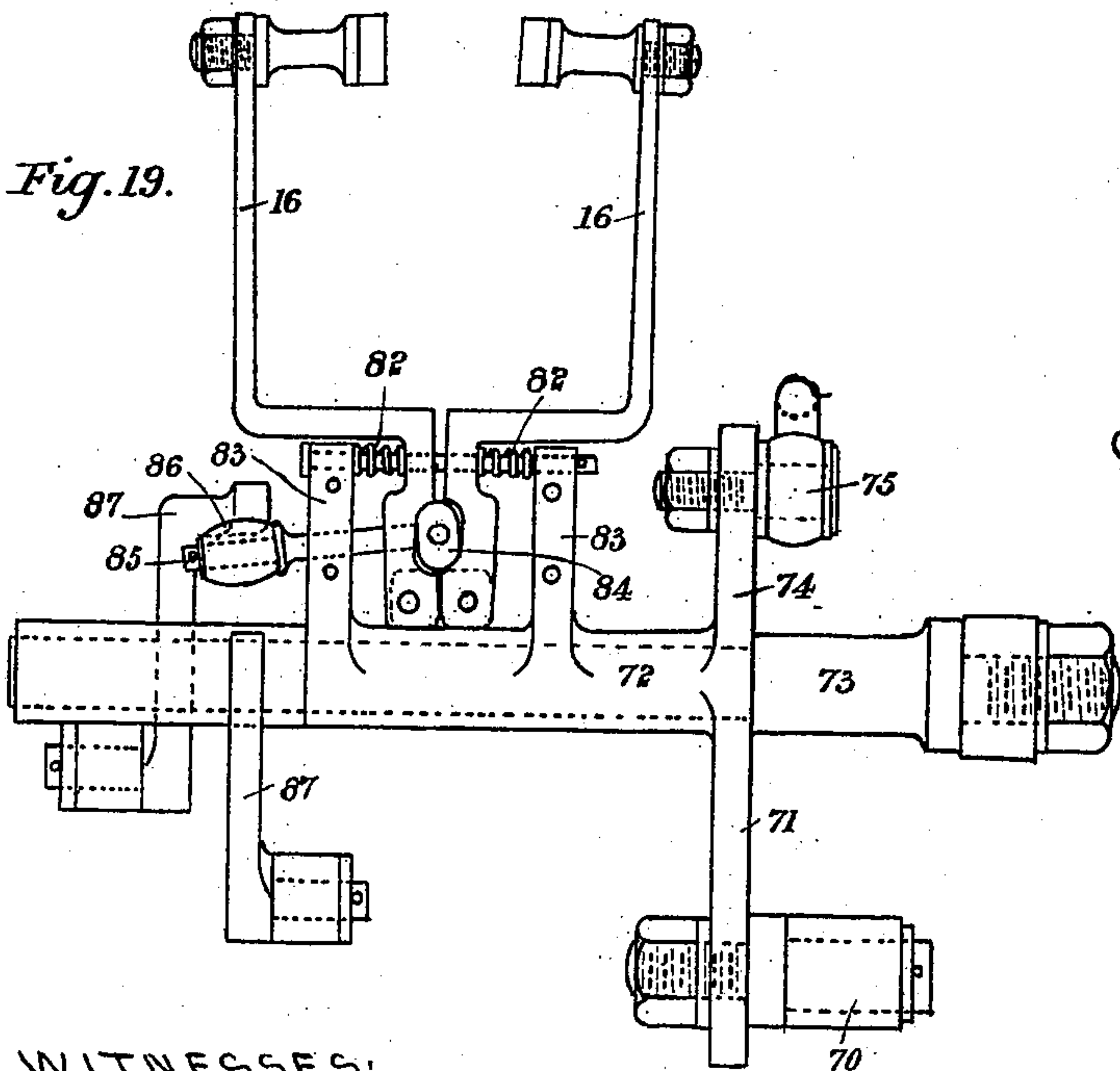
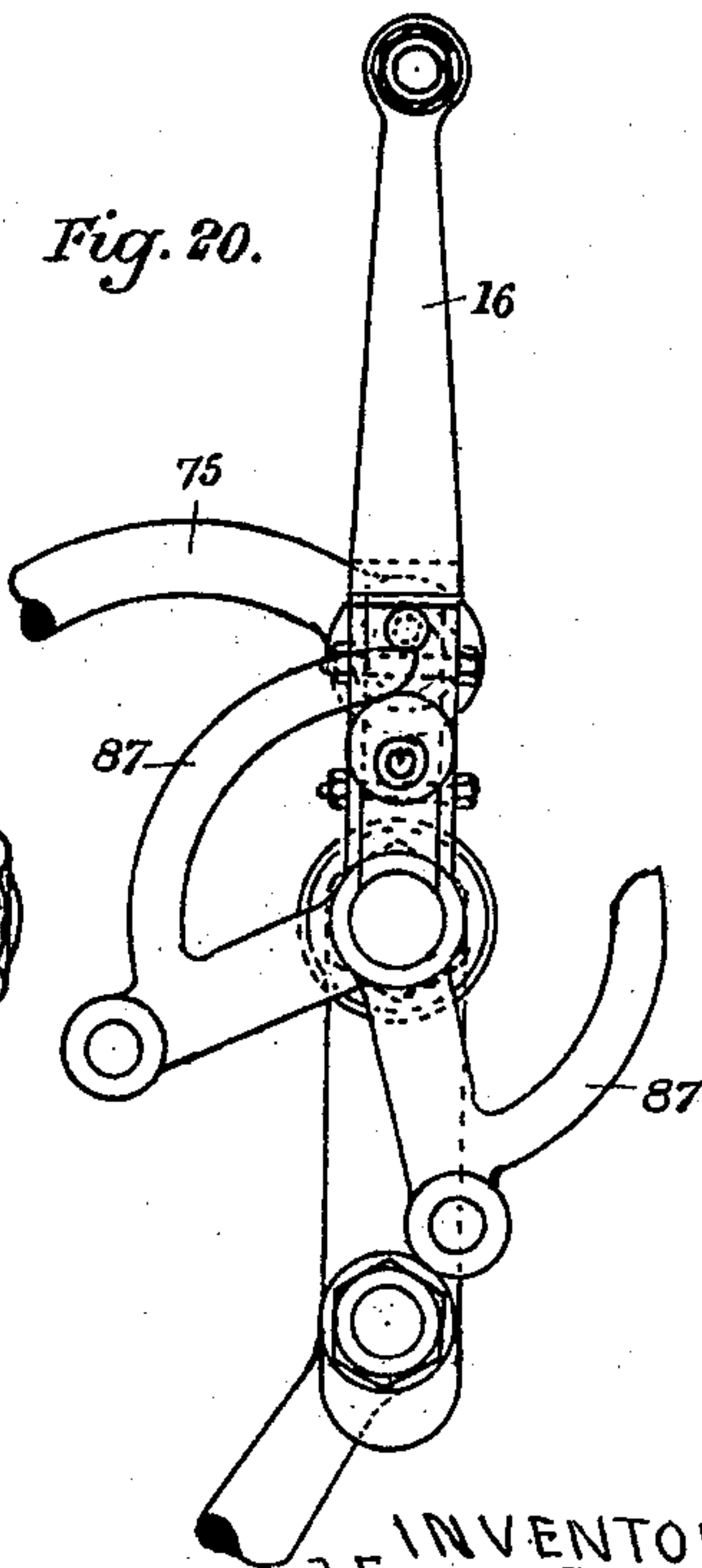


Fig. 20.



WITNESSES:

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*J. C. Connor*

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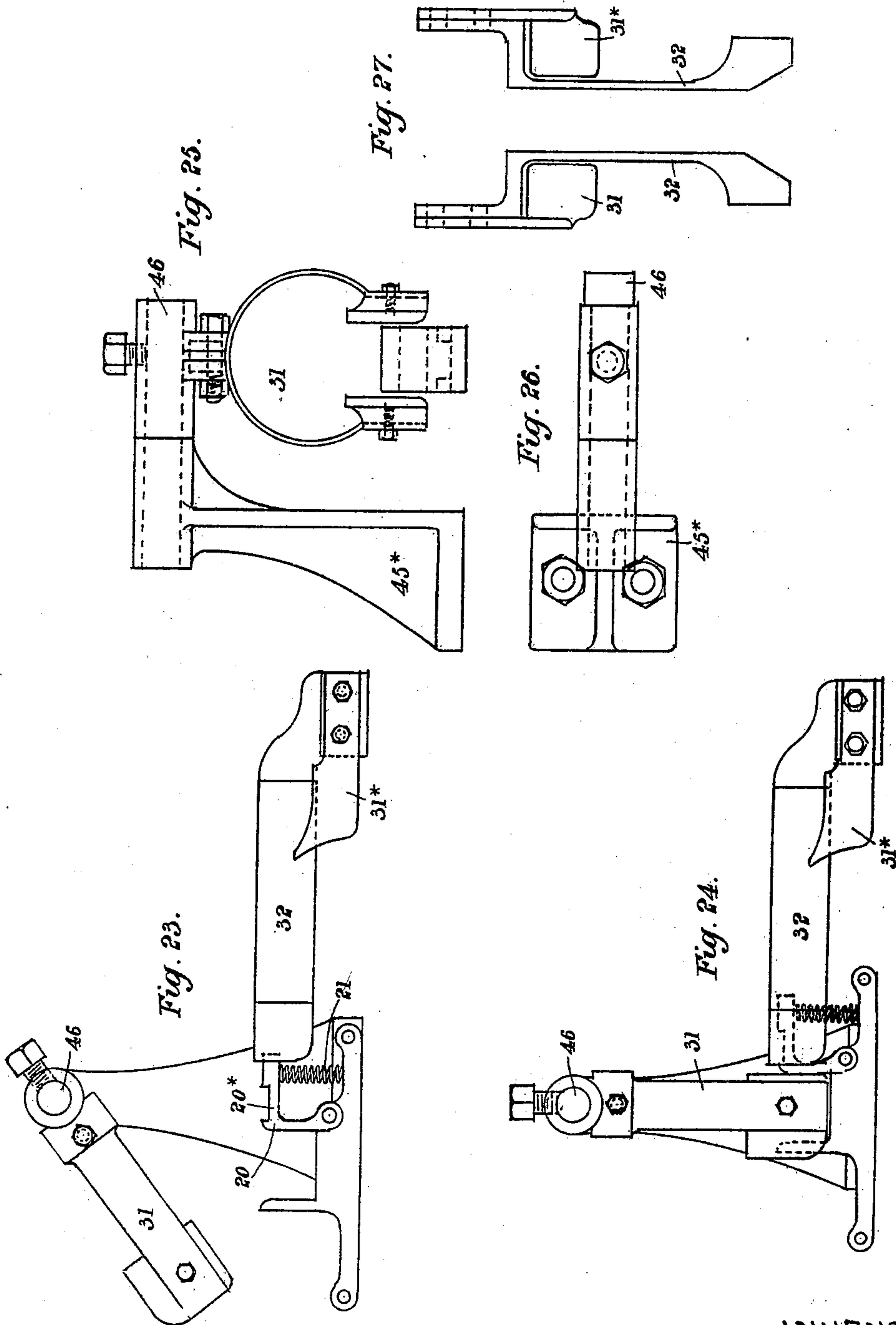
Patented Mar. 21, 1899.

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WRAPPING MACHINE.

(Application filed Dec. 21, 1897.)

(No Model.)

16 Sheets—Sheet 15.



WITNESSES:

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No. 621,714.

Patented Mar. 21, 1899.

H. ROSE.  
WRAPPING MACHINE.

(Application filed Dec. 21, 1897.)

(No Model.)

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Fig. 30.

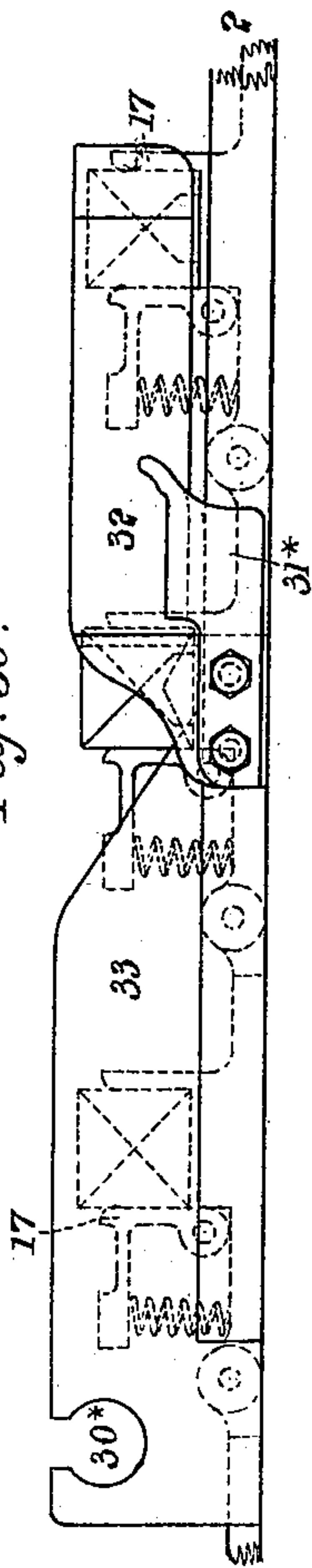


Fig. 31.

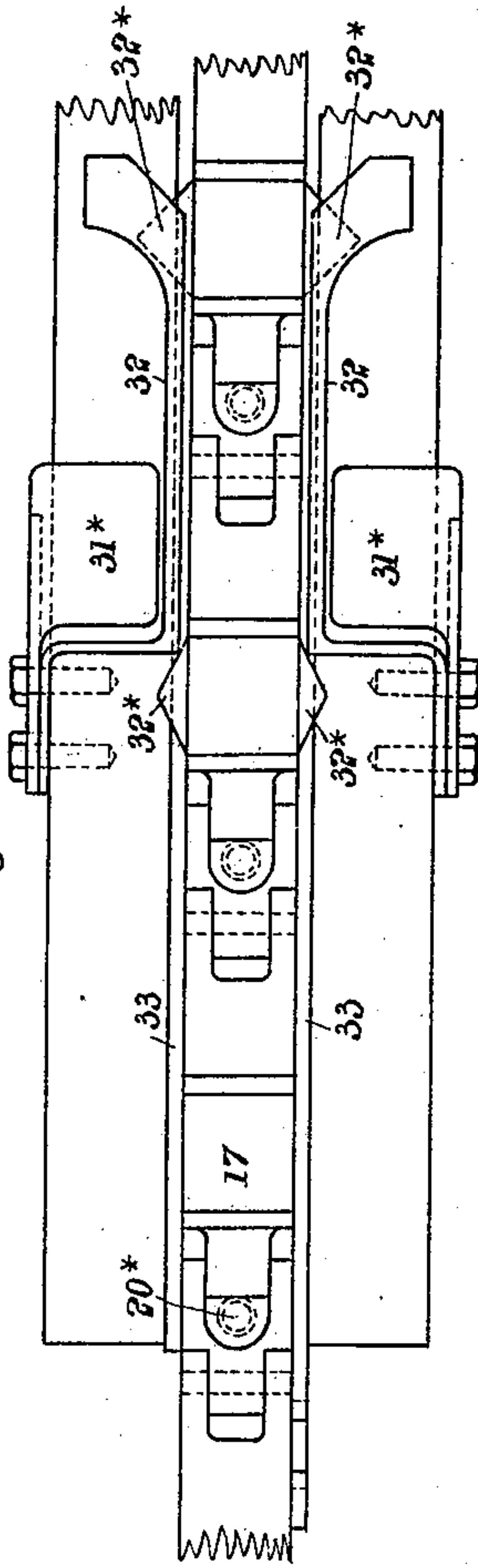


Fig. 27A

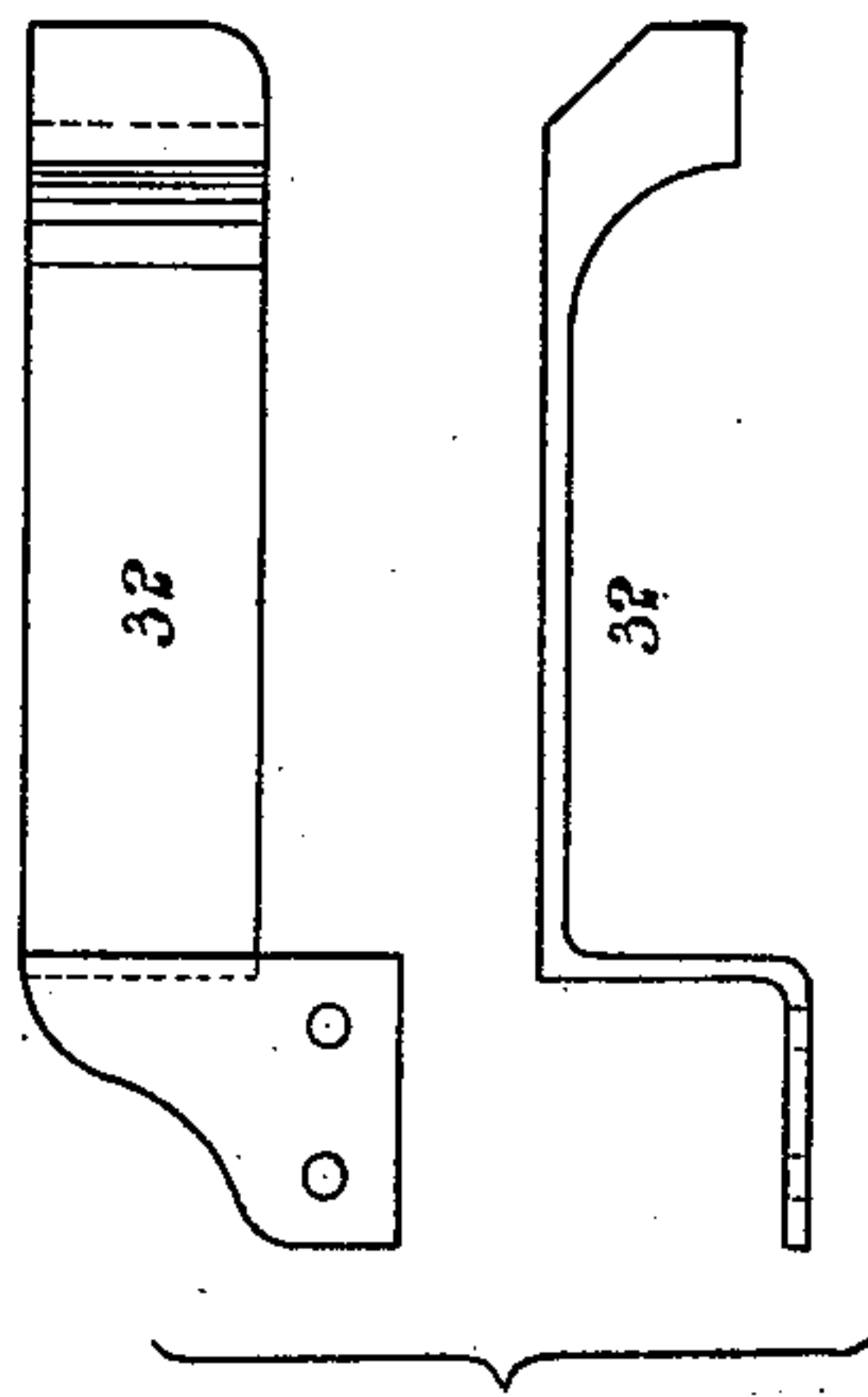
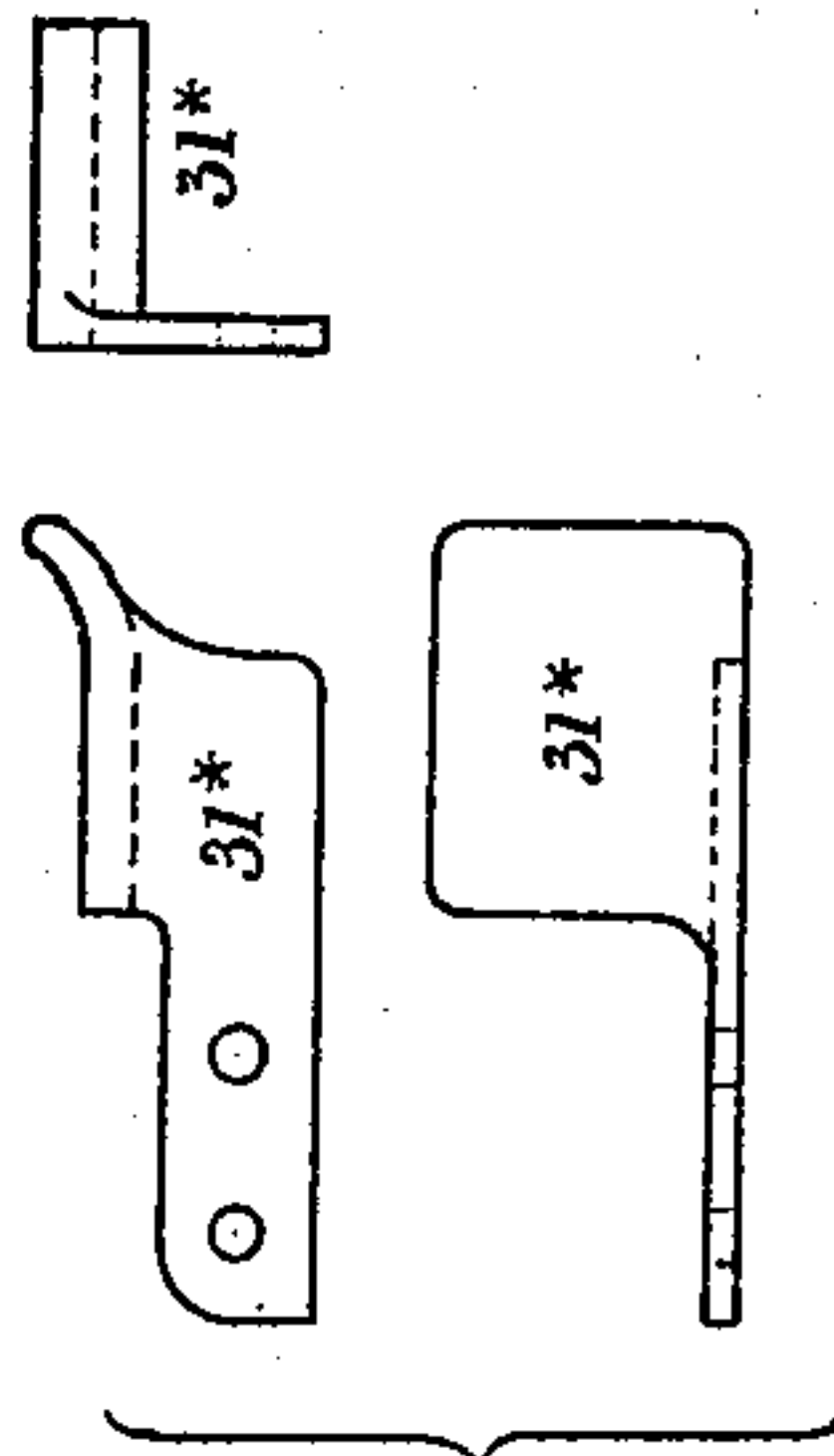


Fig. 28.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

HENRY ROSE, OF GAINSBOROUGH, ENGLAND.

## WRAPPING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 621,714, dated March 21, 1899.

Application filed December 21, 1897. Serial No. 662,871. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY ROSE, engineer, a subject of the Queen of Great Britain and Ireland, residing at Albion Works, Gainsborough, in the county of Lincoln, England, have invented certain new or Improved Machinery for Inclosing in Wrappers Washing-Blue, Black-Lead, Soap, or other Substances, (for which I have obtained a patent in Great Britain, No. 16,992, dated September 6, 1894,) of which the following is a specification.

My invention has for its object to provide machinery or apparatus by means of which washing-blue, black-lead, soap, or other substances can be inclosed in wrappers with rapidity and facility.

The machine or apparatus consists of an arrangement by which the wrappers and the substance to be wrapped are fed to a series of holders which carry the wrappers and substance along while the wrappers are subjected to successive operations, which effect the folding of the said wrappers around the substance and, if required, the securing of the said wrappers by gum or other cement, the packets so formed being ejected from the machine and the holders returning for fresh charges. The holders are mounted upon an endless chain or band driven intermittently by any suitable motor, so that the holders come to rest as required by the successive operations to be performed upon the wrappers. The wrappers can be fed into the machine by hand, but they are preferably fed by an endless chain or band (with projections to carry the wrappers along) into a hopper or chute, from which they are delivered to the holders as they are successively presented in position to receive them. The substance to be packed is also preferably supplied by an endless traveling band or web forming the bottom of a trough and coming to rest at intervals, so that grippers take up from the said band or web the substance to be wrapped and deliver it, together with the wrapper which has been placed in the hopper, into the holder which is in position to receive them. The holders are preferably made with spring or yielding sides the same distance apart as the size from front to back of the packet to be made, but not so deep. The grippers after opening and delivering the substance and the wrapper into the

holder close under the action of springs as they commence to return into position to take up another charge, they opening again just before they reach this position and afterward close, so as to engage the next charge, which is delivered in like manner to the next holder, and so on. By the substance being forced into the holder with the wrapper between, the sides of the substance corresponding to the sides of the holder are covered by the wrapper. Afterward the holder passes to beneath a folder, which folds one of the upstanding ends of the wrapper over the top of the substance, the wrapper being preferably of a size to extend a little beyond the substance, and this part so extending being folded down by a folder which next comes into operation, so as to fold the end of the wrapper down between the substance and the leading side of the holder. The wrapper is preferably not acted upon by this first folder until the second intermittent movement of the series of holders. The holder next passes under a bridge-piece, which folds the other upstanding portion of the wrapper over that last folded, and this completes the transverse or longitudinal folding. The holder next comes to rest beneath folders, which descend on either side of the substance in the holder and fold down the projecting ends of the wrapper from the top. The holder makes another advance, and a folder operates to fold down the projecting ends of the wrapper from the rear side, and as the holder again advances stationary folders cause the ends of the wrapper to be folded from the forward side. Gum or other cement may, if required, then be applied to the portions of the wrapper now left projecting, which can be effected as the said portions pass beneath strips extending up the ends of the package, but with space beneath for the passage of the said portions of the wrapper. The gum or other cement can be applied in any suitable way, but preferably by a pair of disks revolving in a bath of gum or other cement, other disks being used to take the gum or other cement from the first-named disks and from these fingers suitably arranged taking off the gum or other cement and delivering it onto the portions of the wrapper projecting as aforesaid. The holder then advances another stage, and the projecting parts of the wrapper by contact



with stationary folders are folded up and pressed against the parts already folded over the ends of the substance, and the packet is completed and is ejected from the machine, which ejection may be effected by a pusher operating at the next coming to rest of the holder and delivering the packet onto or into any suitable support or receiver.

I do not limit myself to any particular arrangement of mechanism and gearing for giving the motions described. A convenient arrangement is to drive the chain or band carrying the holders by a spring-pawl and ratchet, giving the intermittent motions required, the spring-pawl being oscillated from the first-motion shaft. The moving folders can be mounted on arms or levers operated by a link actuated by a lever oscillated by a crank-disk geared to the first-motion shaft, and the gummer or paster when used can also be operated by gear from the said shaft. The feed band or web for the substance to be packed and for the wrappers can be driven by belts or bands from the same shaft, and the gripper which takes up the said substance and delivers it onto the wrappers and into the holders can be operated by a lever actuated by the same link which operates the movable folders. The gripper may consist of two jaws, which close to grip the substance and are opened to deliver it. This can be effected by means of a conical pin, cam, or wedge-piece actuated by coming into contact at the requisite times with abutments, one of which when the gripper comes over to receive its charge forces the said pin, cam, or wedge in the one direction to release the jaws and allow them to close and grip the substance and the other of which when the gripper is moved over to deliver its charge forces the said pin, cam, or wedge in the other direction to open the jaws.

It will be understood that the various operations are simultaneously effected upon different wrappers as they pass in succession through the machine—that is, while the first operation is being performed on one wrapper the second operation is being performed on the preceding wrapper, the third operation on the next preceding wrapper, and so on.

In order that my said invention may be fully understood, I shall now proceed more particularly to describe the same, and for that purpose shall refer to the several figures on the annexed sheets of drawings, the same numerals of reference indicating corresponding parts in all the figures.

In the following description I will refer to the substance being wrapped as “washing-blue,” it being understood that other substances may in like manner be inclosed in the wrappers.

Figure 1 is a front elevation of a machine constructed according to my invention. Fig. 2 is a plan, Fig. 3 an end elevation, and Fig. 4 a back elevation, of the same. Fig. 5 is a side elevation of the endless chain of holders, showing a cube of washing-blue in the

various stages of the wrapping process; and Fig. 6 is a plan of the same. Fig. 7 represents in side elevation the feeding arrangement for the wrappers and the blocks of blue or the like to be wrapped therein, and Fig. 8 is an end elevation of the same with parts removed. Fig. 9 represents in side elevation the longitudinal folders in one position. Fig. 10 is an end elevation, and Fig. 11 a plan, of the same. Fig. 12 shows in side elevation the longitudinal folders in another position. Fig. 13 is a side elevation of the folder for effecting the first fold in the laterally-projecting ends of the wrappers, and Fig. 14 is an end elevation of the same. Fig. 15 is a side elevation of the hopper into which the wrappers are fed, and Fig. 16 an end elevation of the same. Fig. 16<sup>A</sup> shows the position of a block of blue in its passage through the hopper. Fig. 17 is an end elevation of the grippers in their closed positions, and Fig. 18 a corresponding side elevation of the same. Figs. 19 and 20 are similar views showing the grippers open. Fig. 21 is a side elevation of the folder which folds down the ends of the top portion of the wrapper; and Fig. 22 is an end elevation of the same, the said folder being in its raised position. Figs. 23 and 24 show in two positions the folder for folding in one side of the ends of the wrapper. Fig. 25 is an end elevation, and Fig. 26 a plan, of the same. Fig. 27 is a plan of the stationary folders and smoothers, and Figs. 27<sup>A</sup> and 28 are details thereof. Fig. 29 is a side elevation of one of the boxes or holders detached, and Fig. 29<sup>A</sup> is a plan of the same. Fig. 29<sup>B</sup> is an elevation of the box or holder, showing one side open. Figs. 30 and 31 are respectively an elevation and plan of the folders for completing the wrapping.

Referring to Figs. 1, 2, 3, and 4, supported on standards 1 is a table or platform 2, carrying the wrapper feeding and folding mechanism hereinafter described. Above this table 2 is another table 3, on which the wrappers are placed and along which they are fed to the folding mechanism. This table is supported on brackets 4 on the table 2. A hopper or chute 5 is provided at one end of the table 2, into which hopper the wrappers pass from the table 3. Beneath the table 3 is an endless traveling band 6, provided with projections 7, which enter and travel in a slot or opening 8 in the table 3 and serve to propel the wrappers along the table into the hopper or chute 5, ribs or projections 9 being provided on opposite sides of the slot or opening to keep the wrappers in the proper direction. Adjacent to the end of the table 2, on which the hopper 5 is fixed, is another table or platform 10, from which the blocks of washing-blue or the like are fed to the wrapper-folding mechanism. In this table is a slot or opening 11, in which works the upper portion of an endless traveling band 12, carried on drums or pulleys 13, mounted in bearings in the standards 14, which carry the said table



10, the upper surface of the said traveling band being about flush with or a little below the top surface of the table, so that the blocks of blue or the like can be slid from the table  
 5 onto the band. At the end of this table which is adjacent to the hopper 5 is a recess 15, into which the blocks of blue are deposited by the endless band. Each block of blue as it is deposited in the recess 15 is engaged by a gripper 16, by which the said block is removed  
 10 from the recess and carried forward against the wrapper which had been previously fed into the hopper 5, forcing the said wrapper, with the said block, into a box or holder which  
 15 at the time is in position to receive it and in which the folding of the wrapper around the block is effected.

15<sup>x</sup> is a spring which bears on the block next to that which is in the recess 15 to prevent the said block from being disturbed by the raising of the other block from the recess 15 by the grippers 16. The series of holders 17 are connected together, so as to form an endless chain, the said chain of holders being  
 20 carried on tumblers or pulleys 18 and rollers 18<sup>x</sup> beneath the table 2, in which table there is a slot or opening 19, through which the holders project and along which the said holders travel intermittently in the direction indicated by arrows in Figs. 1 and 4. Each holder consists of a bottom and two sides, as shown clearly in Figs. 29, 29<sup>A</sup>, and 29<sup>B</sup>, one of which sides—viz., the forward side 20—  
 25 being hinged to the bottom, so as to be capable of opening outward, but is normally kept in its closed position by a spring 21.

Each holder 17 is brought in succession at suitable intervals into position to receive a wrapper and block of blue or the like from  
 40 the hopper 5, as shown in Fig. 5 of the drawings, the movable side of the holder being opened when in position to receive the block by an arm 22, so as to prevent the edges of the block from being injured. When the  
 45 wrapper and a block have been delivered into a holder, the chain of holders moves one step forward, thereby bringing the next holder into position to receive a block and a wrapper, after which the chain of holders moves another step forward, thereby bringing a third  
 50 holder into position to receive a wrapper and block from the hopper, and so on with all the holders. When the holder with the block and wrapper therein is in the second position, the ends 23 24 of the wrapper stand up above the  
 55 block 25, as shown in Fig. 5, and when the holder is in the third position the upstanding end 23 of the wrapper is folded down onto the block by a folder 26 and retained in this position by a presser 26<sup>x</sup>, while the extreme end of the wrapper is turned down the leading  
 60 side of the block by a folder 27, the movable side 20 of the holder being opened out by a roller 28 on the arm 29 pressing on a projection from the said movable side, so as to admit of the insertion of the folder 27 between the said movable side and the block. The

folders 26 and 27 then rise and afterward the presser 26<sup>x</sup>, the hinged side of the holder closing so soon as the folder 27 has risen. The  
 70 chain of holders then advances another step, bringing the partially-closed block into position to have the laterally-projecting ends of the wrapper folded down, and in its passage to this position the upstanding end 24 of the  
 75 wrapper is folded down onto the part 23 by a stationary bar or bridge 29<sup>x</sup>. The top laterally-overlapping ends of the wrapper are next folded down by a folder 30, which in its descent also brings down the roller 28 onto the  
 80 projection 20<sup>x</sup> on the movable side of the adjacent rear holder to admit of the folding of the wrapper around the block in that holder by the folder 27, as hereinbefore described. The ends of the wrapper being folded down,  
 85 the chain of holders advances another step forward and the rear sides of the projecting ends of the wrapper are folded by a folder 31, which having folded the said rear sides of the wrapper rises again, and the chain of holders  
 90 then moves forward another step, and by this movement the leading sides of the ends of the wrapper are folded by coming into contact with stationary folders 32, Figs. 30 and 31, thereby forming tabs 32<sup>x</sup>, which then pass  
 95 beneath plates 31<sup>x</sup>, Fig. 28, which smooths or flattens the said tabs or remaining unfolded portions of the wrapper. The chain of holders then moves another step forward, and in making this movement the tabs or unfolded  
 100 portions 32<sup>x</sup> of the ends of the wrapper are acted on by stationary inclined surfaces 33, which fold the said tabs 32<sup>x</sup> against the ends of the block of blue or the like, the said block being then entirely inclosed in the wrapper. 105 If desired, gum or paste may be applied to the tabs 32<sup>x</sup> before they are folded against the block. The chain of holders then moves another step forward, bringing the wrapped  
 110 block opposite an opening 30<sup>x</sup> in the side of one of the inclined surfaces 33, through which opening an ejector 33<sup>x</sup> is caused to move, so as to push the wrapped block from the holder into a suitable receptacle.

The various movements of the parts for  
 115 performing the operations hereinbefore described are effected as follows: On the main driving-shaft 34 is a crank-arm 35, connected by a rod 36 to an arm 37, mounted loosely on the shaft of one of the tumblers or pulleys 18,  
 120 which carry the endless chain of holders. The said arm 37 carries a spring-pawl 38, gearing with the teeth of a ratchet-wheel 38<sup>x</sup>, fast on the said shaft, so that on each revolution of the shaft 34 a motion of partial rotation is given to the ratchet-wheel sufficient  
 125 to bring the holders in succession into positions for the wrappers to be operated on, as hereinbefore described. On the shaft 34 is a spur-wheel 39, gearing with a corresponding  
 130 wheel 40 on a shaft 41, on which is a crank 42, connected by a rod 43 to a bar 44, suspended by arms 45 on spindles 46, mounted in brackets 45<sup>x</sup>, bolted to the table 2. The



bar 44, as shown clearly in Figs. 13 and 21, has an inclined surface 46<sup>x</sup>, on which is caused to bear, under the action of a spring 47<sup>x</sup>, a roller 47, carried on a stud 48 on a slide 49, to which is connected the folder 30, which folds down the laterally-projecting ends of the wrapper, the said folder being caused to rise and fall by the to-and-fro motions imparted to the bar 44. The free end 51 of the bar 44 is connected by a spring 52 (see Figs. 9, 10, 11, and 12) to the folder 26, so that when the bar 44 moves in the direction of the arrow, Fig. 13, the spring 52 draws the said folder 26 down, so as to fold the upstanding end 23 of the wrapper onto the block of blue or the like in the holder, the folder being prevented from moving too far by an arm 55, projecting from a spindle 46<sup>xx</sup>, on which the folder 26 is mounted, coming into contact with a fixed stop 53. When the bar 44 moves in the reverse direction to that indicated by the arrow, the free end 51 thereof strikes against a roller 54 on the arm 55 and forces the said folder out of contact with the block after the wrapper has been folded thereover. On one of the spindles 46 (which are rocked in the brackets 45<sup>x</sup> as the frame 44 is oscillated) is a fork 56, which embraces a roller on one arm 58 of a bell-crank lever, the other arm 33<sup>x</sup> of which bell-crank constitutes the ejector for discharging the wrapped blocks of blue from the holders. This bell-crank is mounted on a stud 59 from a bracket 60, bolted to the table 2. The other spindle 46, from which the bar 44 is suspended, carries the folder 31, which folds in the rear sides of the wrappers. On the shaft 41 is another crank-arm 61, connected by a rod 62 to a crank-arm 63 on a spindle 64, Figs. 10 and 11, on which is an arm 65, which passes through slots 66 and 67 in the arms 66<sup>x</sup> and 67<sup>x</sup>, respectively, of the presser 26<sup>x</sup> and the folder 27. The arms 66<sup>x</sup> and 67<sup>x</sup> are connected by springs 68 to an arm 68<sup>x</sup>, formed in one with the arm 65, the said springs tending to maintain the presser 26<sup>x</sup> and the folder 27 in their lowest position. The said presser and folder 26<sup>x</sup> and 27 are raised by the arm 65 coming into contact with the upper end of the slots 66 and 67 by the rocking motion given to the spindle 64. The folder 27 is mounted loosely on the spindle 64, and the presser 26<sup>x</sup> is mounted so as to turn on the boss of the folder 27, they being retained on the spindle by a flanged screw screwed into the end of the spindle 64.

The slots 66 and 67 are of such relative lengths that when the arm 65 descends it first comes into contact with the lower end of the slots 66 and 67 and depresses both the presser and the folder until the presser comes into contact with the block. Then by the further descent of the arm 65 the folder 27 is further depressed, so as to fold the end of the wrapper down the leading side of the block, after which the arm 65 rises and comes first into contact with the upper end of the slot

67 in the folder 27, thereby raising the said folder, and at the same time the arm 29 rises from the projection 20<sup>x</sup> on the movable side of the holder, which then closes under the action of the spring 21 and secures the folded end of the wrapper in position, after which by the continued rising of the arm 65 the presser 26<sup>x</sup> is raised from the block by the said arm coming into contact with the upper end of the slot 67.

The spur-wheel 40 on the shaft 41 gears with a corresponding wheel 40<sup>x</sup> on a shaft 68, on which shaft is a crank 69, connected by a rod 70 to an arm 71, formed on a sleeve 72, which carries the grippers 16. (See Figs. 17 to 20.) This sleeve is mounted on a stud 73, projecting from a lug on the table 2, a rocking motion being given to the gripper through the said crank 69 and connecting-rod 70, causing the jaws to move in an arc between the recess 15 and the delivery-mouth of the hopper 5. On the sleeve 72 is an arm 74, to which is connected by a rod 75 an arm 76 on a rock-shaft 78, carrying the arm 22, provided with a roller 80, which roller is caused to press at the requisite times on the projections 20<sup>x</sup> of the movable side of the holder at the rear, so as to open the said side to admit of the ready insertion of a block of blue or the like. To the sleeve 72 are hinged the gripper-jaws 16, which are closed or forced toward each other by springs 82, interposed between the said jaws and brackets 83, formed on the sleeve 72. The jaws 16 are opened by means of a cam 84, interposed between the said jaws and having a projecting arm 85, carrying a roller 86, on which roller arms 87 are caused to act, so as to turn the cam at the requisite periods to open the jaws to release the block when in a holder and also in readiness to engage a fresh block to be conducted by the said jaws into the next holder brought into position to receive it. The arms 87 are connected by rods 88 to arms 89 on a sleeve mounted on a stud from a bracket projecting from the under side of the table 2. One of the arms 89 is connected by a rod 90 to a crank 91 on the shaft 68, so that when this shaft is rotated motion will be imparted through the connections described to the jaws 16 of the gripper at the required periods. The wrappers are fed by hand onto the table 3 and are moved therealong by the projection 7 on the endless belt 6, to which belt motion is given from the shaft 68 by means of a chain 98<sup>x</sup>, passing around a pulley 92 on the said shaft and around a pulley 93 on a shaft 94, mounted in the frame 14, on which shaft 94 is another wheel 95, carrying a chain 96, which passes around a wheel 97 on the shaft carrying one of the pulleys around which the endless belt 6 passes. On the shaft 94 is a pinion 99, gearing with a spur-wheel 100 on a stud projecting from the frame 14, which stud carries a wheel or pulley 101, around which passes a chain 102 in gear with a chain-wheel 103 on the shaft of one of the drums 13, which



carries the endless band 12, by which the blocks of blue or the like are fed forward into the recess 15 to be engaged by the gripper 16.

Having now particularly described and as-  
5 certain the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. In a machine for inclosing in wrappers, washing-blue, soap or other substances, an  
10 endless chain, each link of which forms a box or holder consisting of a bottom and two sides, one of which sides is a spring-controlled hinged side, driving-wheels for said chain and means for driving the same intermit-  
15 tently, means for placing the wrappers and the substance to be inclosed therein in the holders, means for operating the hinged sides to hold the same open while the wrappers and the substances are being placed therein, sub-  
20 stantially as described.

2. In a machine for the purpose hereinbe-  
fore described the combination with an end-  
less chain of holders or boxes in which the  
substance is wrapped, a hopper or chute into  
25 which the wrappers are fed, a gripping device for conveying the substance into the chute or hopper, and for forcing the substance into the wrappers from the chute or hopper and delivering them into the holders or boxes  
30 substantially as hereinbefore described.

3. In a machine for the purpose hereinbe-  
fore described the combination of an endless  
band or conveyer for the blocks of substances  
to be wrapped, an endless chain of boxes or  
35 holders in which the wrapping of the sub-  
stance is effected each box or holder having a hinged or yielding side, a chute or hopper into which the wrappers are fed, a gripping device by which the substance is conducted

to the chute or hopper and by which the 40  
wrappers and substance are passed from the  
hopper into the boxes or holders, and means  
for opening out the movable sides of the boxes  
or holders to admit of the easy insertion of  
the wrappers and substance to be wrapped 45  
therein, substantially as hereinbefore de-  
scribed.

4. In a machine for the purpose hereinbe-  
fore described, the combination of an endless  
chain of boxes or holders having spring-con- 50  
trolled hinged sides with means for operating  
on the hinged sides to open them outward  
against the power of their springs and grip-  
pers and means for operating the grippers to  
place in the said boxes or holders blocks of 55  
the substance and the wrappers while the  
hinged sides are being held open, substan-  
tially as hereinbefore described.

5. In a machine for the purpose hereinbe-  
fore described, the combination of a hopper or 60  
chute into which the wrappers are fed, and  
an endless chain of boxes or holders on which  
the wrappers and the substance to be inclosed  
therein are placed, with a gripping device for  
engaging the blocks and inserting them with 65  
the wrappers in the boxes or holders, and an  
endless feeding-band by which the blocks of  
substance are brought into position to be en-  
gaged by the grippers and transferred there-  
by from the endless band to the boxes or 70  
holders, as hereinbefore described.

In testimony whereof I have signed my  
name to this specification in the presence of  
two subscribing witnesses.

HENRY ROSE.

Witnesses:

JOHN RICHARD RAITHEY,  
JAMES EDWARD HEWITT.