

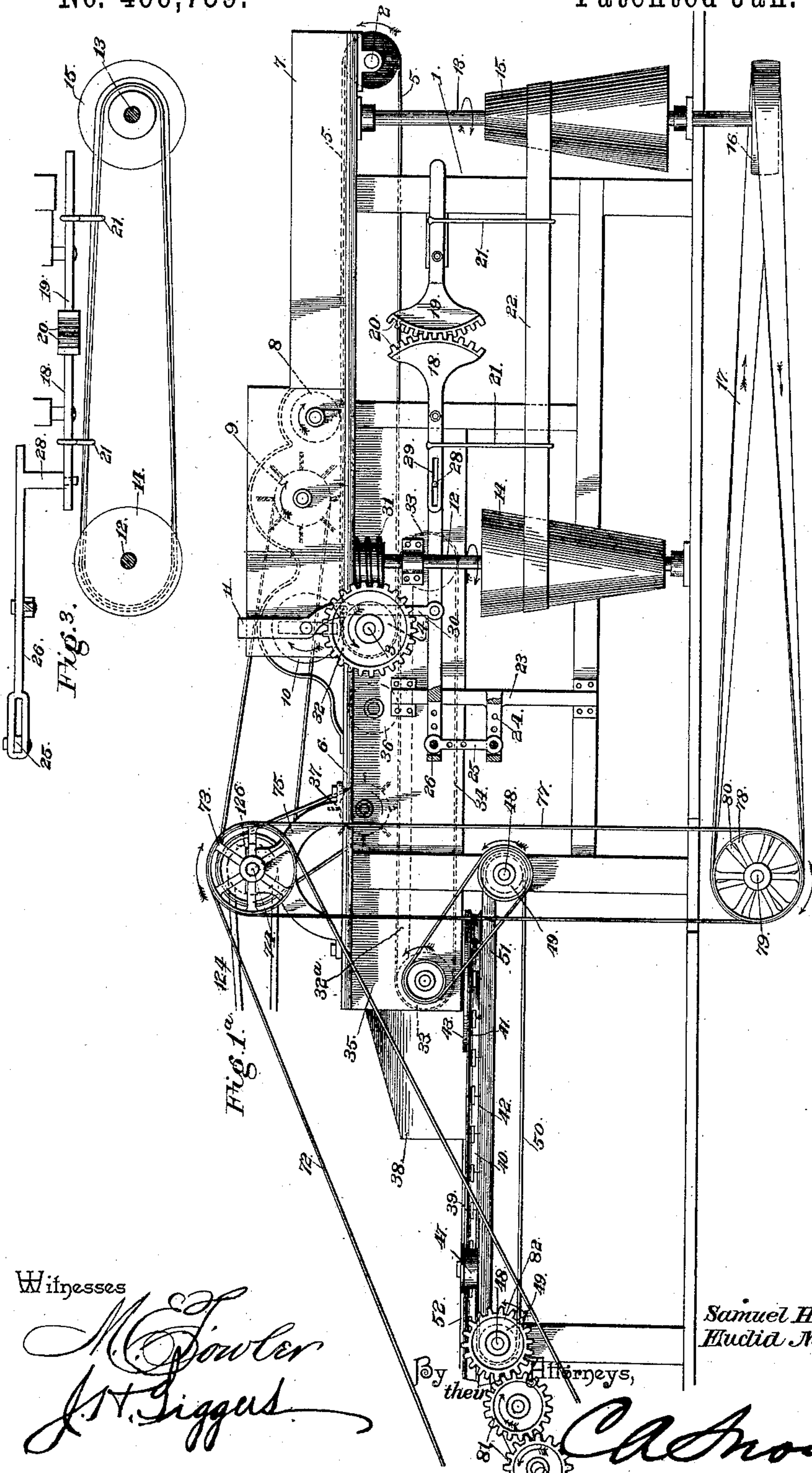
(No Model.)

7 Sheets—Sheet 1.

S. H. THOMPSON & E. M. COOKE.
CIGARETTE MACHINE.

No. 466,759.

Patented Jan. 5, 1892.



Witnesses

M. C. Fowler
J. H. Siggus

By their Attorneys,

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Inventors

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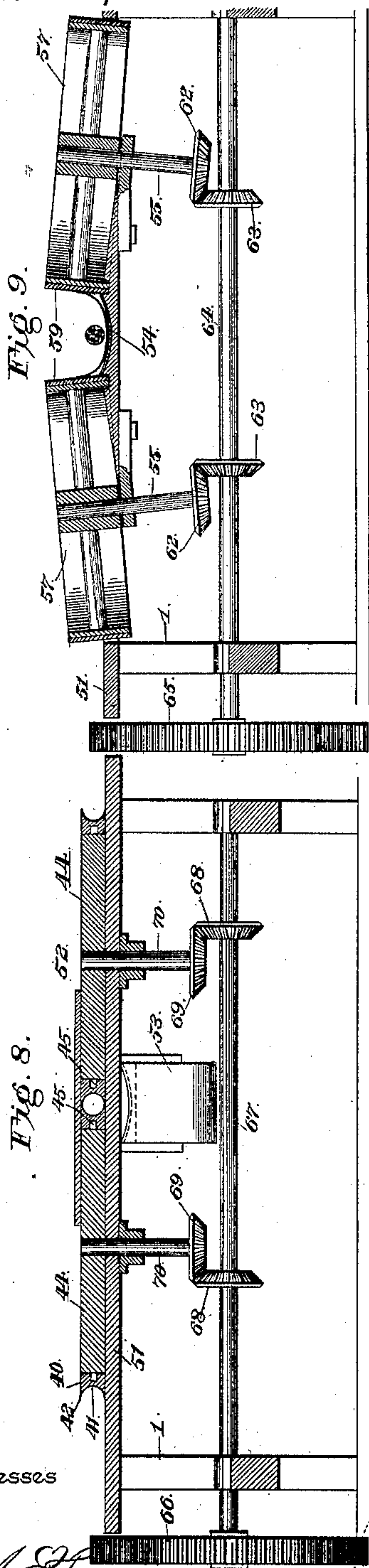
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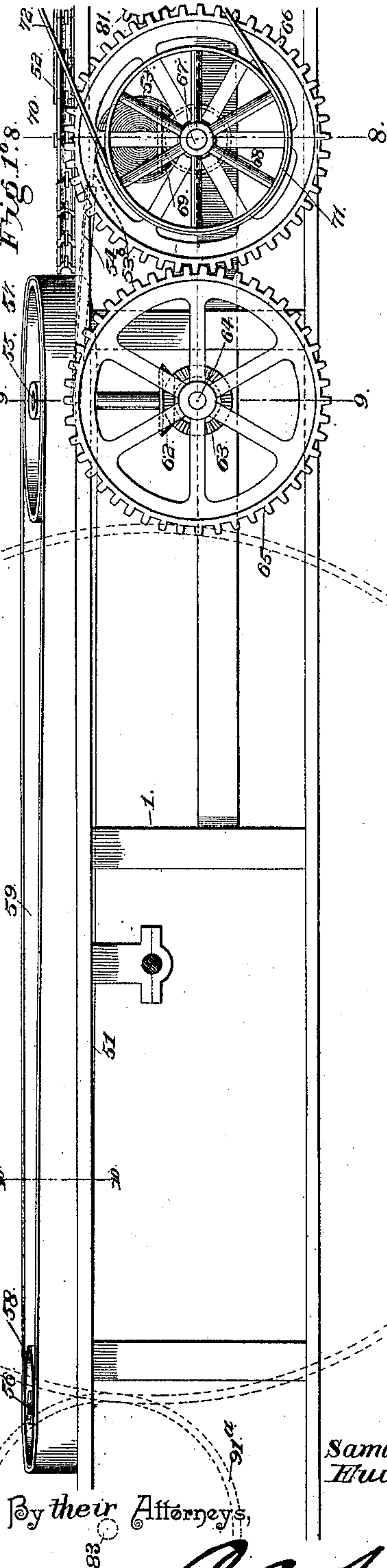
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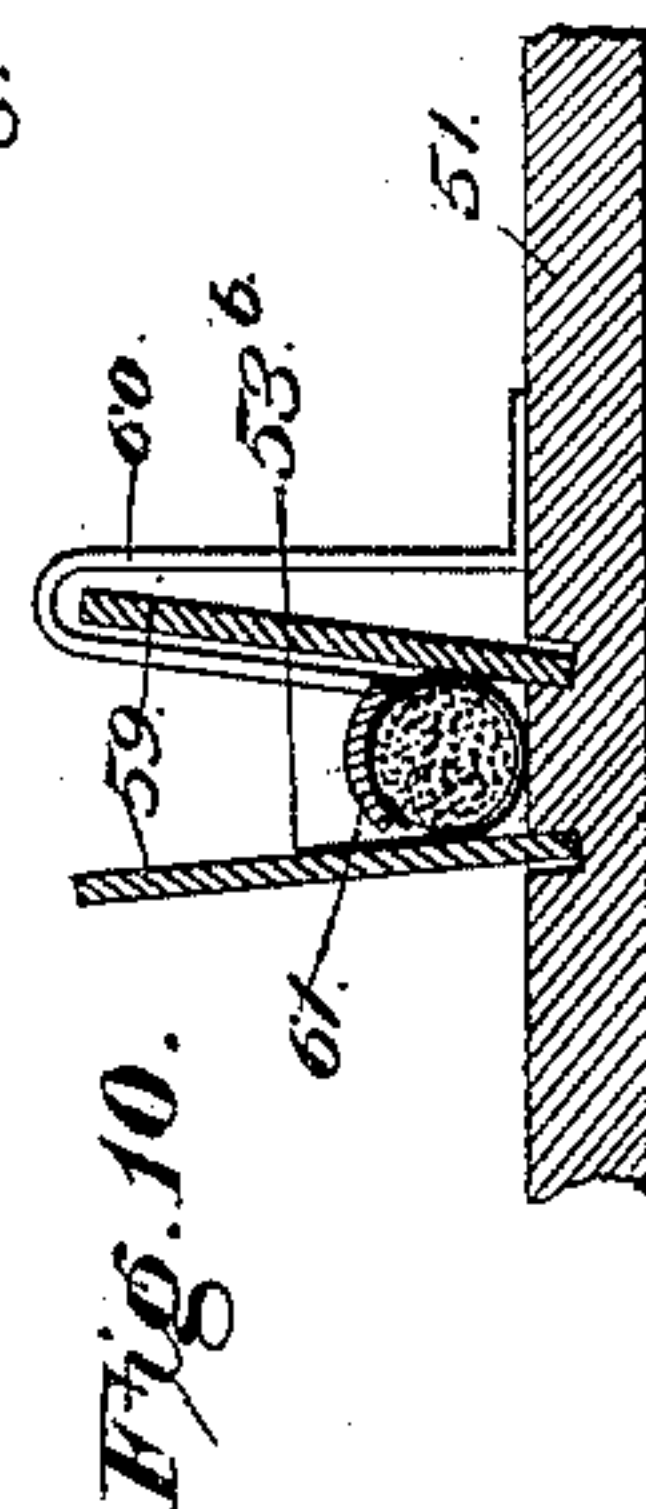
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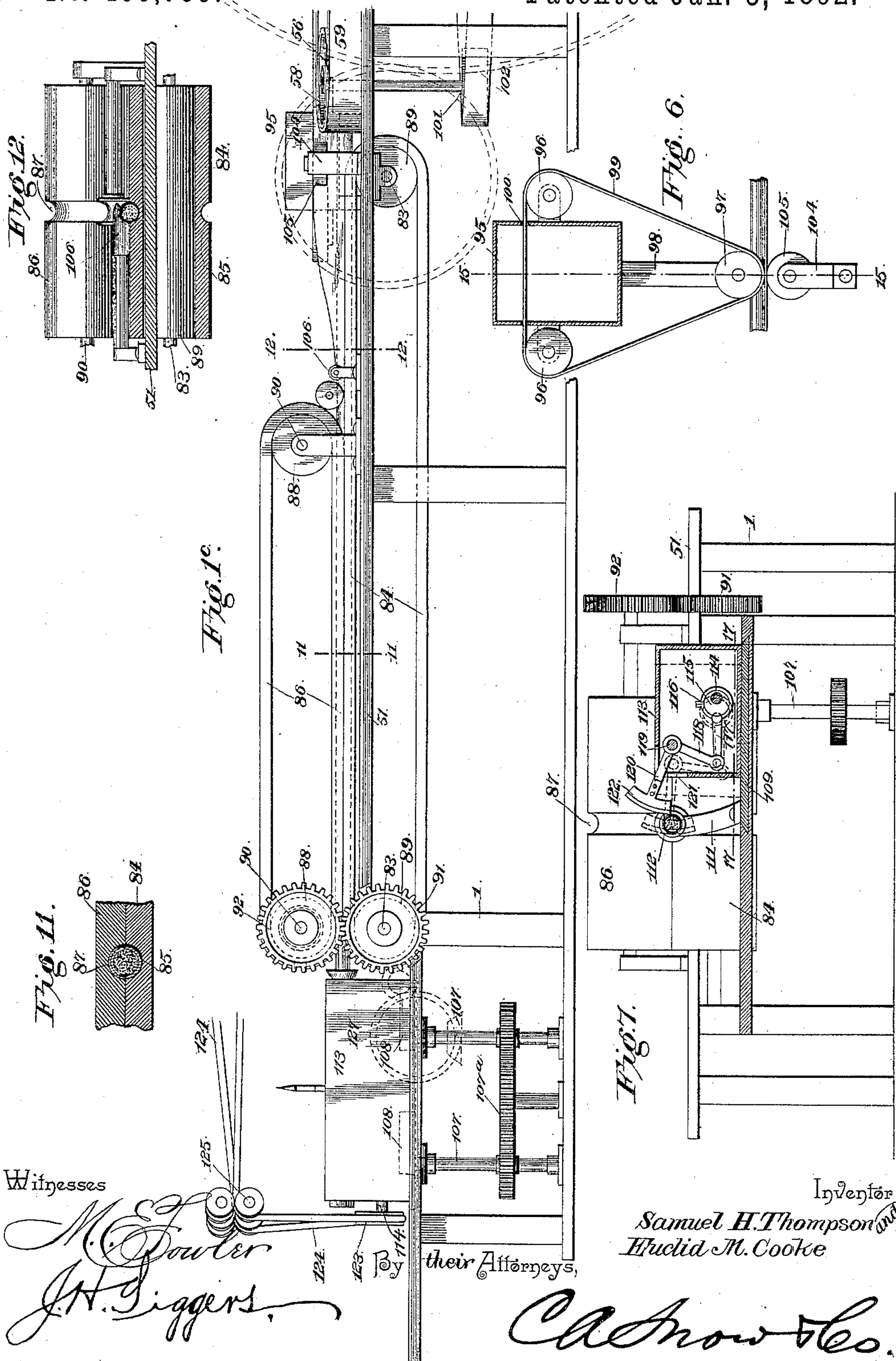
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Fig. 4.

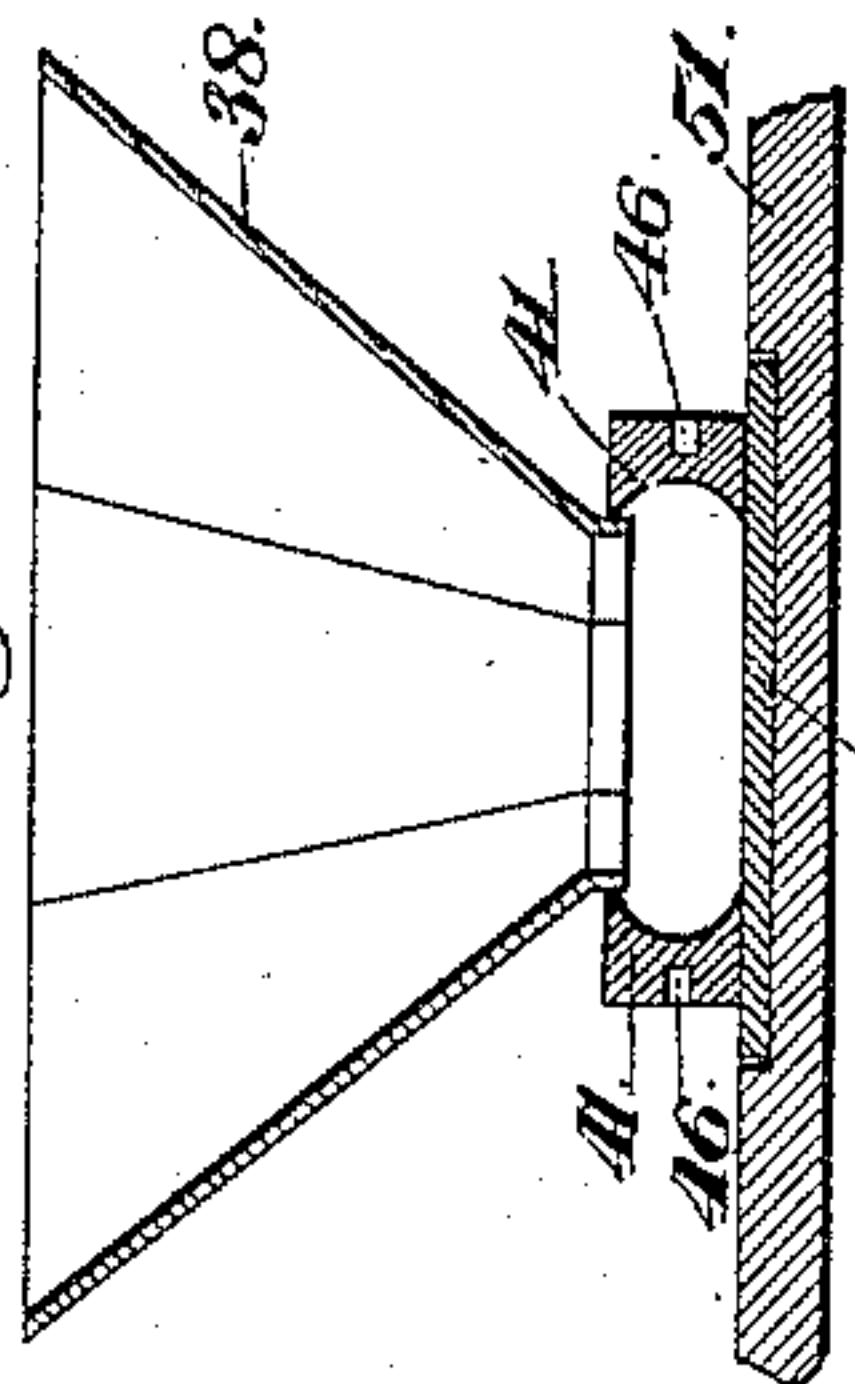


Fig. 2.

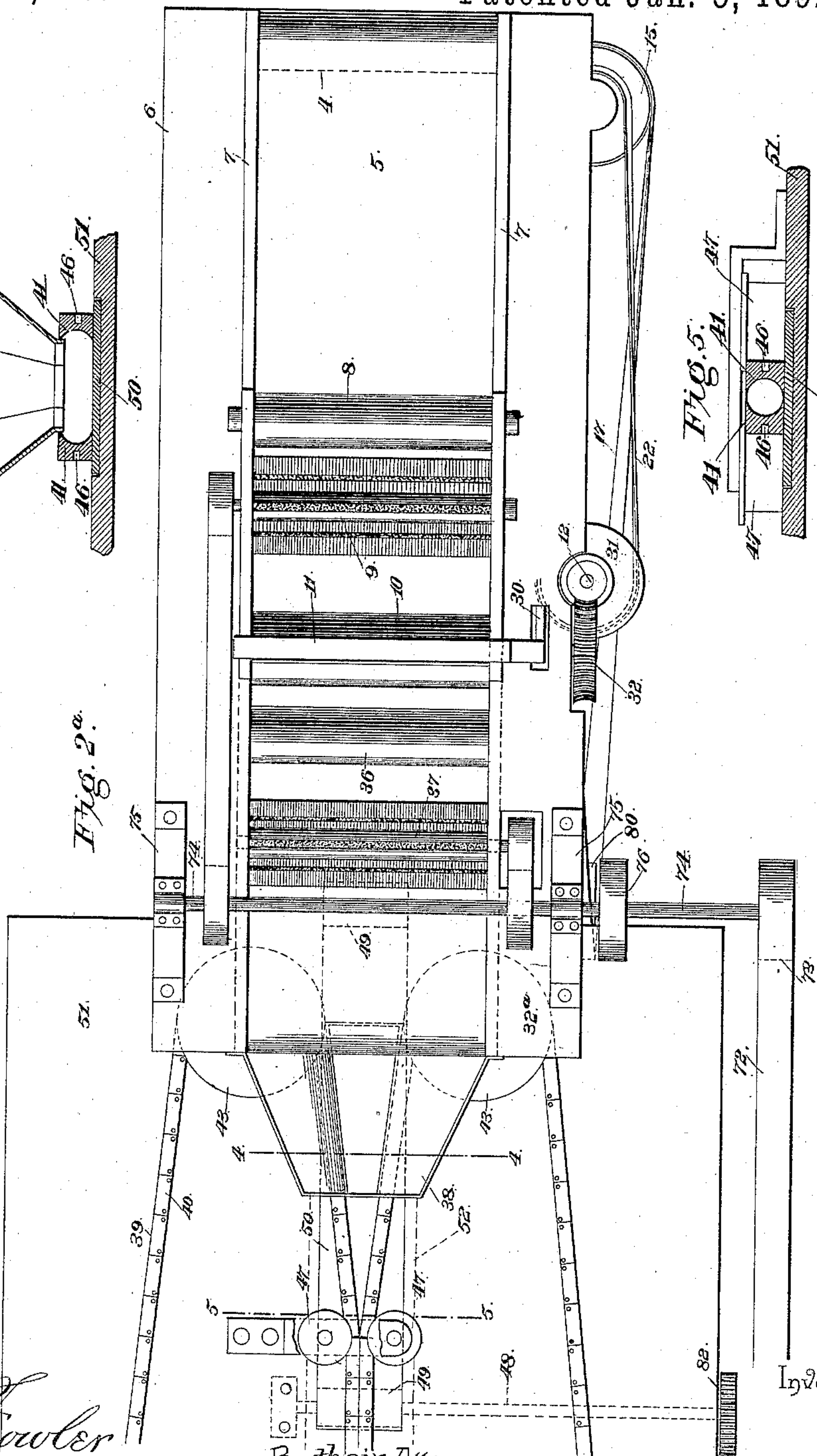
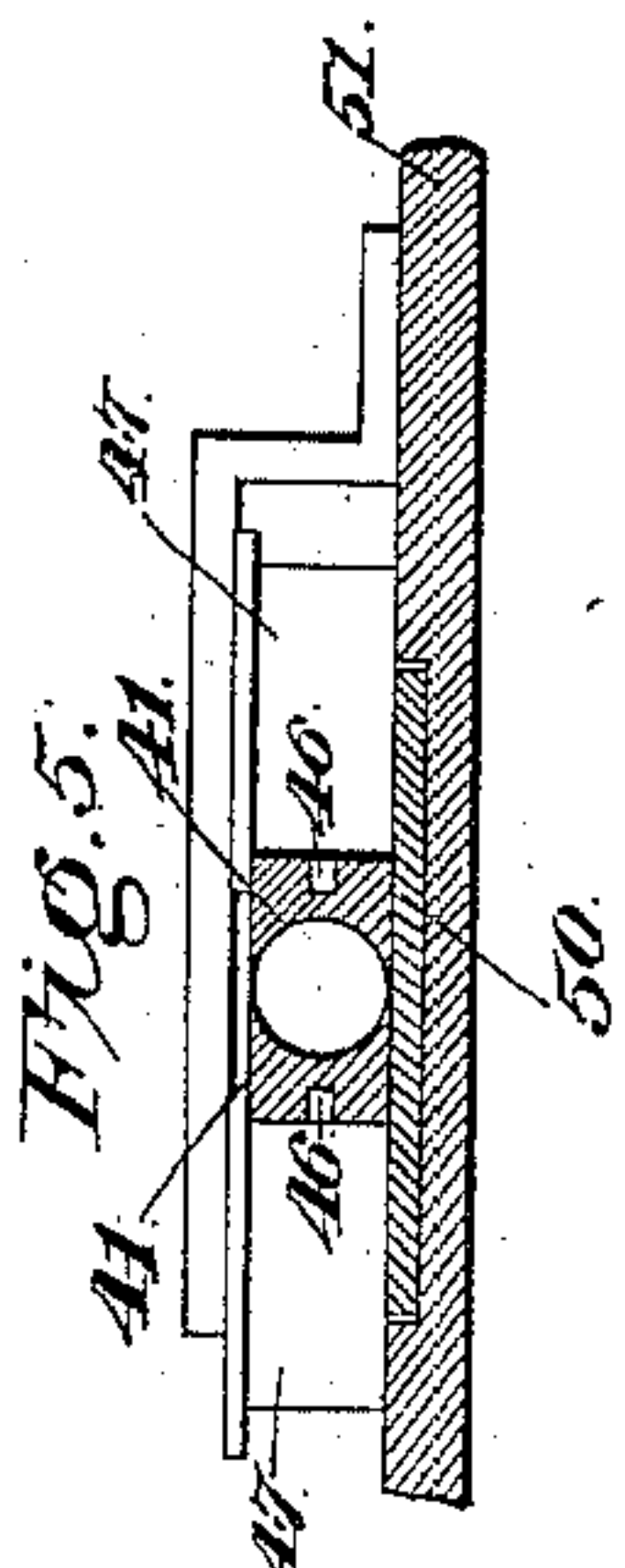


Fig. 5.



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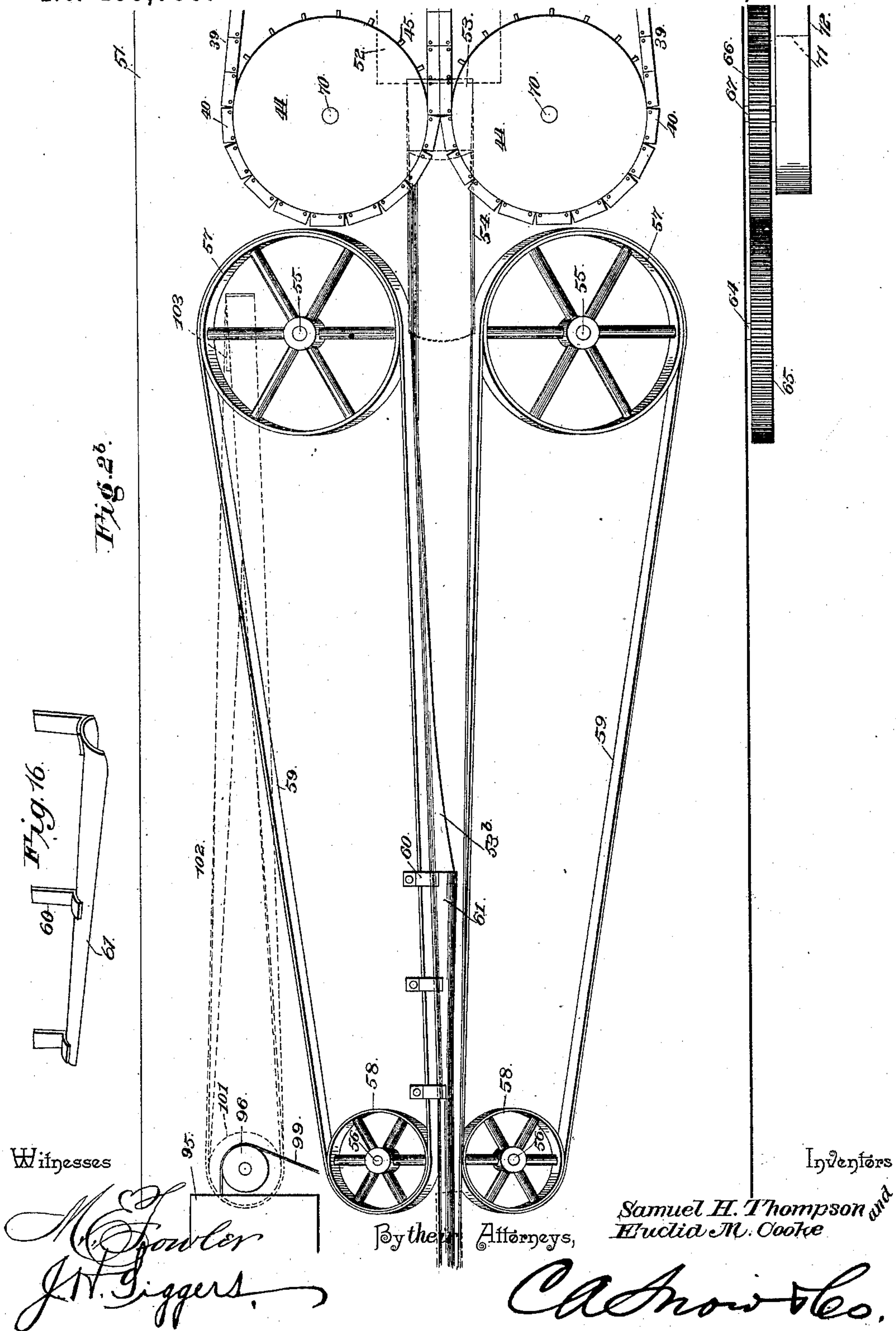
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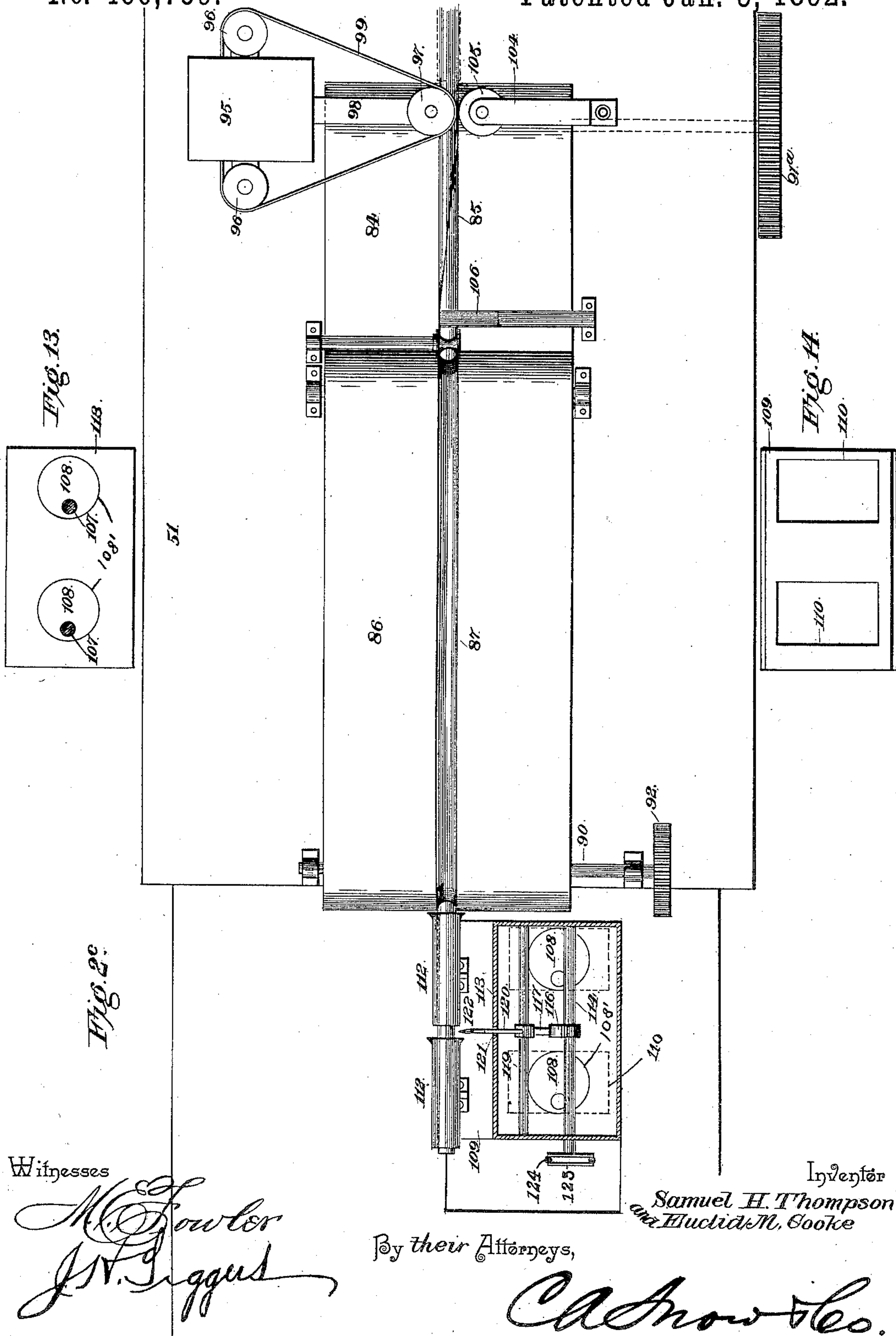
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(No Model.)

7 Sheets—Sheet 7.

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Fig. 15.

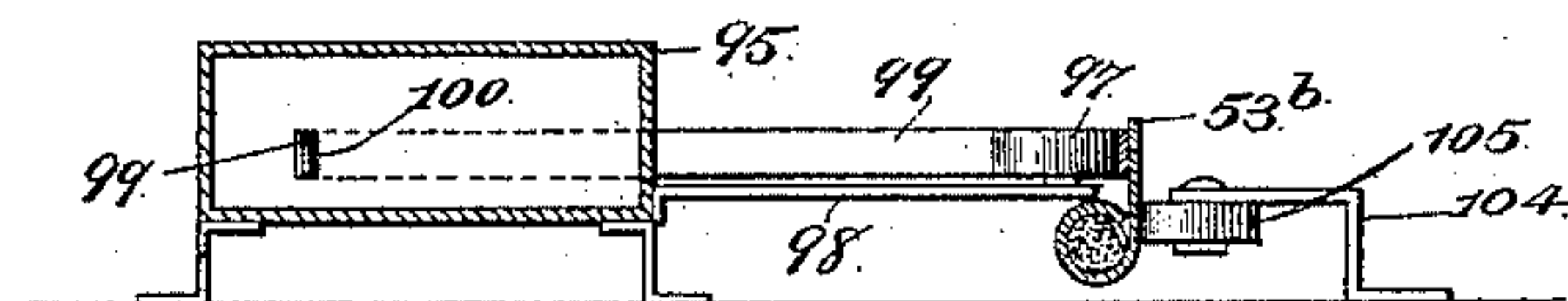


Fig. 17.

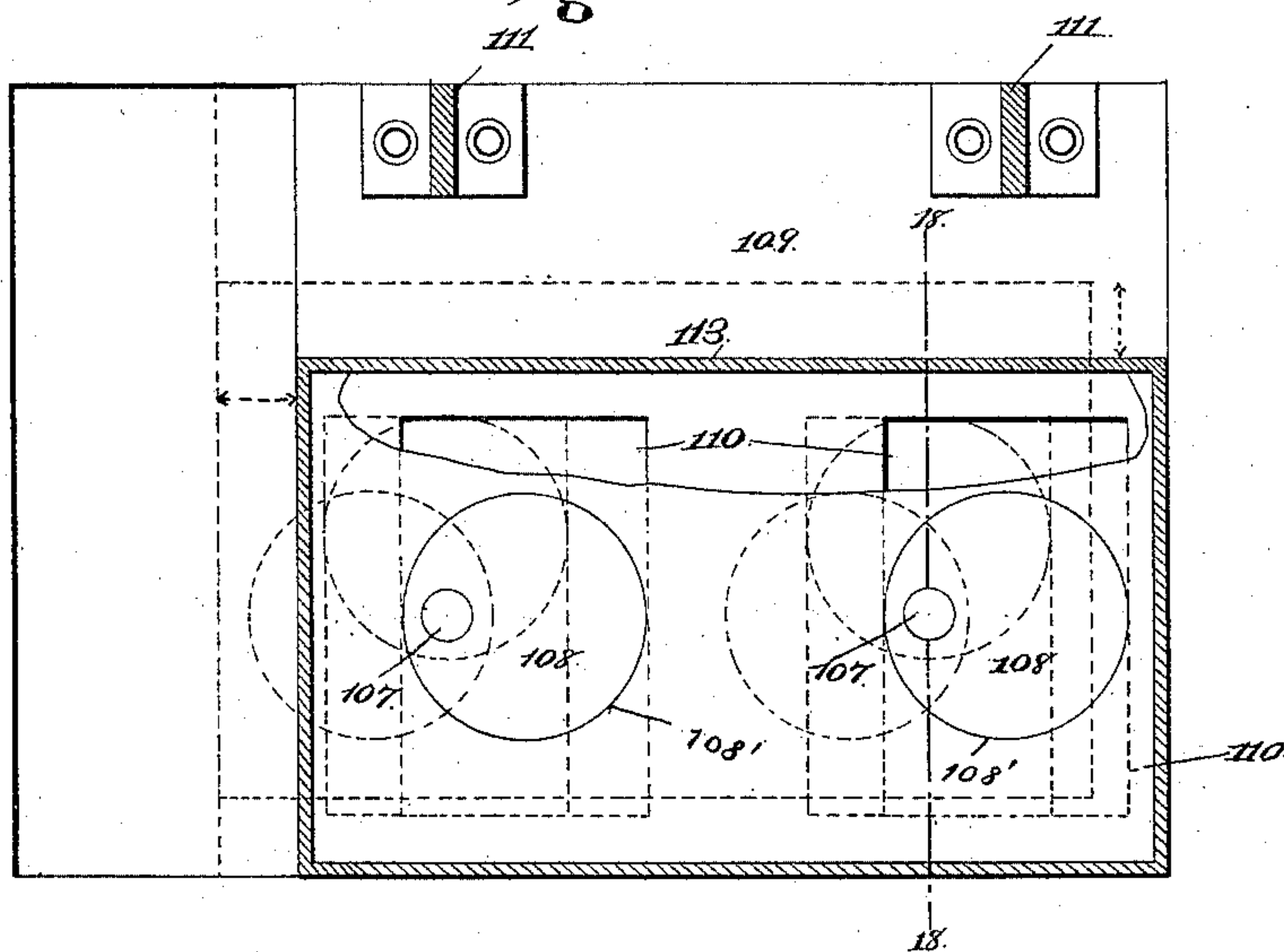
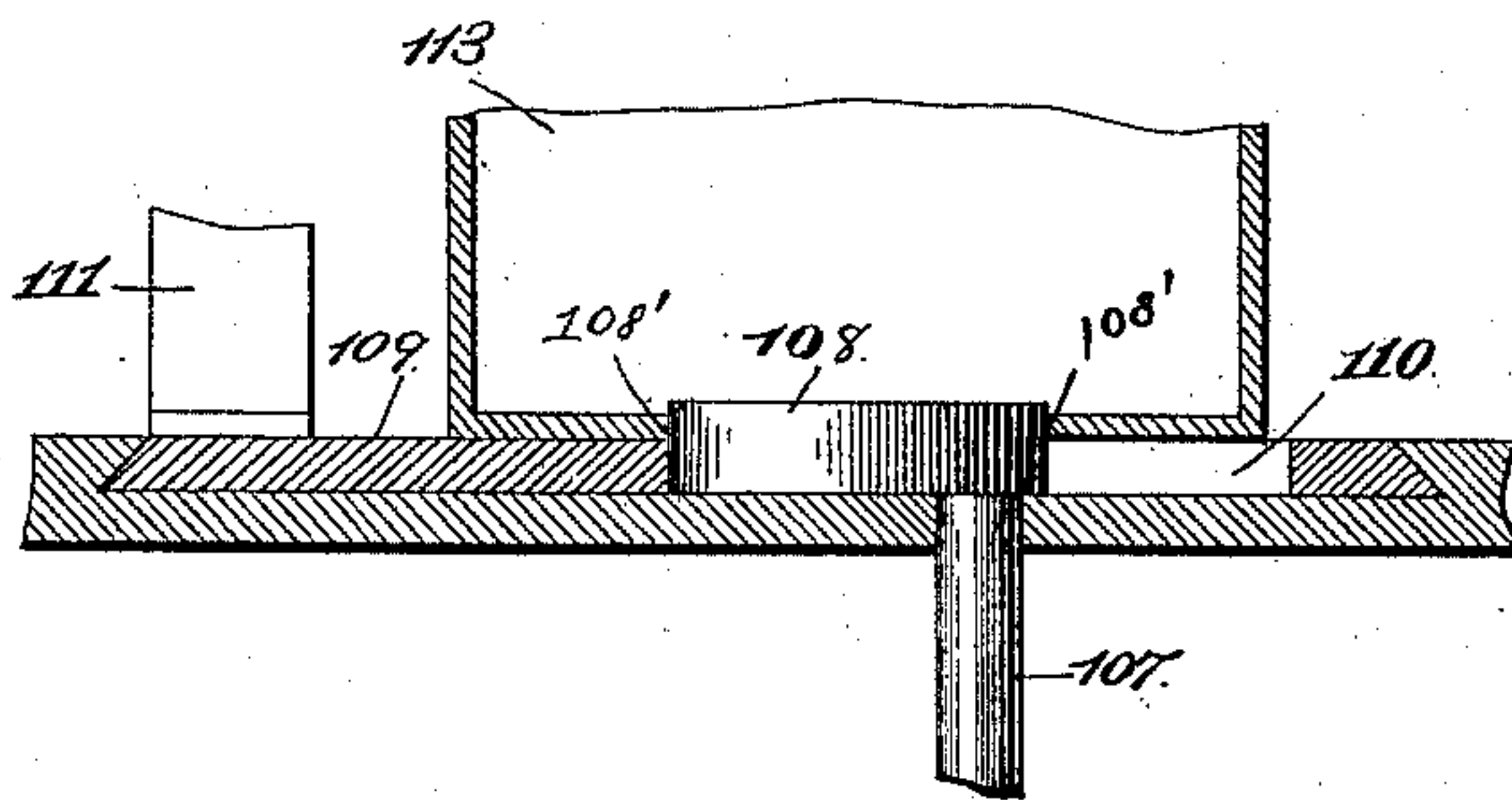


Fig. 18.



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UNITED STATES PATENT OFFICE.

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CIGARETTE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 466,759, dated January 5, 1892.

Application filed November 28, 1890. Serial No. 372,900. (No model.)

To all whom it may concern:

Be it known that we, SAMUEL H. THOMPSON, of South Boston, Halifax county, Virginia, and EUCLID M. COOKE, of Swepsonville, in the county of Alamance and State of North Carolina, citizens of the United States, have invented certain new and useful Improvements in Cigarette-Machines, of which the following is a specification.

This invention relates to that class of cigarette-machines which are adapted to manufacture cigarettes in continuous length; and it has for its object to construct a machine of this class which shall be simple, durable, and efficient in operation and in which mechanism shall be provided whereby the supply of tobacco shall be automatically regulated, so that the cigarettes shall contain an even quantity of tobacco and be free from lumps and soft portions caused by an oversupply of tobacco or an insufficient supply of the same.

With these ends in view the invention consists in the improved construction, arrangement, and combination of parts which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, Figures 1^a, 1^b, and 1^c are side elevations of our cigarette-machine. Figs. 2^a, 2^b, and 2^c are plan views of the same. Fig. 3 is a detail plan view showing the belt-shifting device. Fig. 4 is a detail sectional view on line 4 4 of Fig. 2^a. Fig. 5 is a similar view on line 5 5 of Fig. 2^a. Fig. 6 is a plan view, partly in section, of the mechanism for applying the paste. Fig. 7 is a rear elevation, partly in section. Fig. 8 is a transverse sectional view on line 8 8 of Fig. 1^b. Fig. 9 is a similar view on line 9 9 of Fig. 1^b. Fig. 10 is a detail sectional view on line 10 10 of Fig. 1^b. Fig. 11 is a detail sectional view on line 11 11 of Fig. 1^c. Fig. 12 is a similar view on line 12 12 of Fig. 1^c. Fig. 13 is a view showing the box or casing 113, containing the cigarette-cutting mechanism, in an inverted position and showing also the eccentric disk 108, supporting said box, mounted upon the shafts 107, the latter being shown in section. Fig. 14 is a detail view of plate 109. Fig. 15 is a detail sectional view on line 15 15

of Fig. 6. Fig. 16 is a detail perspective view of the rider or folder. Fig. 17 is a horizontal sectional view on line 17 17 of Fig. 7. Fig. 18 is a vertical sectional view on line 18 18 of Fig. 17, the parts being shown as in the dotted position in Fig. 17.

The frame of the machine, which is designated by 1, is provided at and near its front end with bearings for the transverse parallel shafts 2 and 3, carrying rollers 4, over which passes an endless belt 5, the upper portion of which travels over the top of a table 6. The latter is provided with side flanges or guards 7.

8 designates a roller the shaft of which is journaled in the flanges 7, said roller being arranged to press or bear against the upper surface of the endless belt 5. Directly in rear of the roller 8 is arranged the revolving brush 9. The endless belt 5 constitutes the feeding-belt, upon which the loose tobacco is placed by the operator.

The roller 8 serves to compress and compact the tobacco, and the revolving brush 9 has for its object to distribute the tobacco evenly upon the endless belt.

At the rear end of the table 6 is arranged a vertically-movable roller 10, the shaft of which is journaled in suitable bearings in a yoke 11, which is suitably arranged in such a manner as to be capable of moving vertically. The frame of the machine below the table 6 is provided with bearings for vertical shafts 12 and 13, upon which are mounted the conical pulleys 14 and 15. The shaft 13 is also provided with a band-wheel or pulley 16, which may be driven by a belt 17 from any suitable source of power.

18 and 19 represent a pair of levers, which are suitably pivoted in the frame, and the meeting ends of which are provided with segmental racks 20, meshing with each other. The outer ends of the levers 18 and 19 are provided with fingers 21 engaging the belt or band 22, which connects the conical pulleys 14 and 15.

23 is a bracket having a slotted arm 24, in which is pivoted a link 25, the upper end of which is pivotally connected with a lever 26. The opposite end of the latter has a laterally-

extending stud 28, the outer end of which engages slot 29 in the lever 18. A connecting-rod 30 connects the yoke 11 with the lever 26. The ends of the link 25 are adjustably pivoted in their respective slots, in order that the throw of the lever 26 may be regulated as may be desired. The upper end of the shaft 12, carrying the cone-pulley 14, is provided with a worm 31, meshing with a gear 32 upon the end of the shaft 3, thus transmitting motion to the said shaft and to the endless belt 5.

By the mechanism which has been just described it will be seen that when tobacco is supplied to the machine to a rapidly or in too great quantities the vertically-movable roller 10 will be raised or lifted. The end of the lever 26 which is connected by the stud 28 with the lever 18 will thus also be lifted and the levers 18 and 19 will be manipulated to shift or move the belt 22 in an upward direction upon the cone-pulleys 14 and 15, the latter of which is mounted with its large end or base downward, while the former is inverted. The speed of the feed mechanism will thus be instantly slackened. If, on the other hand, there is an insufficient supply of tobacco, the operation is reversed and the speed of the feed mechanism is instantly increased. It will thus be seen that by this mechanism the tobacco will be fed evenly and regularly under the roller 10.

32^a designates a supplementary feed-table, at the ends of which are mounted rollers 33, carrying an endless belt 34. Between the flanges 35 of this table are mounted the pressure-roller 36 and revolving distributing-brush 37. To the latter, as well as to the roller 8 and brush 9, motion may be transmitted in any suitable manner from the driving mechanism. The tobacco passing under the brush 37 will be distributed evenly and accurately over the surface of the feeding-belt 34.

At the rear end of the table 32^a is a spout or hopper 38, the mouth of which is contracted so as to fit between the endless chains 39, by means of which the tobacco is to be compacted into a continuous rod or filler for a cigarette. The said chains 39 are composed of links 40, suitably connected and provided in their opposing faces with semi-cylindrical grooves or recesses 41, having sharp edges 42. The said chains are mounted upon horizontally-arranged wheels 43 and 44, the former of which are grooved to accommodate the chains and the latter of which are provided with teeth or sprockets 45 to engage recesses 46 in the rear sides of the links 40, which are thereby prevented from slipping. The wheels 43 are placed a suitable distance apart, so as to space the chains 39 sufficiently to admit the spout of the hopper 38. The wheels 44 are placed closely together, so as to press the sharp meeting edges of the links of the two chains 39 into contact with each other. Intermediately between the wheels 43 and 44, at a point directly in rear of the hopper 38, idlers 47 are

arranged to press the chains 39 in the direction of each other.

In the frame or table of the machine, below the front ends of the chains 39, are journaled a pair of shafts 48, carrying rollers 49, over which passes an endless belt 50, the upper portion of which travels over the table 51 directly below the chains 39. The rear ends of the latter are covered by a plate 52, between which and the table 51 the said chains are closely fitted. These semicircular recesses in the said chains will thus, together with the table 51 and covering-plate 52, form a close passage, in which the tobacco is gradually compressed until it issues from the meeting ends of the chains in the form of a cylindrical rod or filler, which is now ready to receive the paper cover.

The spool or roll from which the paper is supplied as a continuous ribbon is suitably arranged under the table of the machine, as shown at 53, and the ribbon 53^b is carried in an upward and rearward direction under the wheels or pulleys 44. In rear of the said wheels is arranged a slightly-curved trough 54, over which the paper ribbon passes, so as to receive the rod or filler as the latter issues between the said wheels 44.

Suitably mounted in the frame of the machine, in rear of the wheels 44, are two pairs of shafts 55 and 56, which are placed slantingly or inclined, with their upper ends tilted in an outward direction. Upon the said shafts are mounted the band-wheels or rollers 57 and 58, the former of which are larger than the latter and are placed a greater distance apart, so as to receive the paper ribbon containing the filler from the trough 54. The latter, being slightly curved, as above described, will impart to the ribbon a slight curve as the latter enters between the endless belts 59, which are mounted upon the rollers 57 and 58. The rear ends of the belts 59, passing over the rollers 58, are placed a distance apart at their lower ends which is equal to the diameter of a cigarette. It will thus be seen that the belts 59 will serve to fold the edges of the paper ribbon in an upward direction against the sides of the rod or filler.

Suitably mounted upon the table or frame of the machine near the rear end of one of the belts 59 is a series of brackets 60, which are curved over the upper edge of the belt 59 and serve to support a curved shield or rider 61, which serves to fold one edge of the paper ribbon down against the rod or filler. In order to retain the paper in this position, an additional shield or rider may be suitably arranged in rear of the rollers 55, so as to bear against the folded edge of the paper as the latter issues between the endless belts 59. This additional rider, however, may be dispensed with when desired.

The frame or table of the machine is provided with grooves to accommodate the lower edges of the endless belts 59, which latter are thus prevented from becoming entangled with

the paper and injuring the same. Between the belts 59 the bed of the table supporting the paper and tobacco is flat, as will be seen in Fig. 10 of the drawings.

5 The lower ends of the shafts 55 are provided with bevel-pinions 62, meshing with pinions 63 upon a transverse shaft 64. The latter is provided at one end with a gear-wheel 65, meshing with and receiving motion from
10 a gear-wheel 66 upon a transverse shaft 67, having pinions 68 meshing with pinions 69 upon the lower ends of the shafts 70, carrying the chain-wheels 44. The pinions 68 are placed on the outside of the pinions 69, while
15 the pinions 63 are placed on the inside of the pinions 62, so that motion shall be transmitted in the proper direction to the chains 39 and belts 59. The shaft 67 is also to be provided with a band-wheel 71, which is con-
20 nected by a belt 72 with a pulley 73 upon a counter-shaft 74, which is suitably journaled in brackets 75, extending upwardly from the sides of the frame of the machine. The counter-shaft 74 is driven directly from the source
25 of power, and it is provided with a wheel or pulley 76, from which motion is transmitted by a belt 77 to a pulley 78, mounted upon a short shaft 79, which has an additional pulley 80, connected by the quarter-twisted belt 17
30 with the pulley 16, to which motion is in this manner transmitted to drive the feed-belt 5. The belt 34 is driven from one of the transverse shafts 48. The revolving brush 37 may be driven directly from the counter-shaft 74,
35 and the revolving brush 9 may be driven from the counter-shaft 74. The carrying-belt 50 is driven from the gear-wheel 66 upon the shaft 67 by interposing a pair of idlers 81 between the said gear-wheel 66 and a spur-wheel
40 82 upon one of the shafts 48, carrying the rollers 49, upon which the said belt is mounted.

The frame of the machine is provided in rear of the endless belts 59 with bearings for a pair of transverse shafts 83, carrying rollers 89, over
45 which passes an endless belt 84, which is made of leather of about five-eighths of an inch in thickness and which is provided with a central semicircular groove 85. A similar belt 86, having a groove 87, is mounted upon rollers 88, the
50 shafts of which 90 are suitably mounted in the frame. The belt 86 is shorter than the belt 84, the rear portion of which only is in contact with the said belt 86. The meeting faces of the said belts are in contact with
55 each other, and the grooves 85 and 87 together form a cylindrical tubular passage. The two rear shafts 83 and 90 are provided with gear-wheels 91 and 92, meshing with each other, and motion is thus transmitted to the upper
60 shaft 90 from the lower shaft 83. The gear-wheel 91^a of the forward shaft 83 is driven by an idler 93, interposed between itself and the gear-wheel 65 upon the transverse shaft 64. The gear-wheel 94 in turn meshes with
65 the gear-wheel 66 upon the shaft 67, from which it receives motion.

95 designates a paste-box, which is located

adjacent to the front end of the belt 84. At each side of said paste-box is located a pulley 96, and a third pulley 97 is mounted in a
70 bracket 98, which extends over the edge of the belt 84. An endless band or ribbon 99, which is preferably made of steel, is mounted to run over the pulleys 96 and 97 and through
75 slots 100 in the sides of the paste-box, where the said band thus receives a coating of paste. The shaft of one of the pulleys 96 carries an additional pulley 101, which is connected by
80 a band 102 with a pulley 103 upon the transverse shaft 64, from which the endless pasting-band is thus driven. A bracket 104, extending over the opposite edge of the belt 84, carries an idle-pulley 105, which simply serves
85 to retain the partially-finished cigarette in the groove 85 of said belt. The unfolded edge of the paper receives by contact with the endless pasting-band a light coating of
90 paste, and it is subsequently folded down over the edge which has previously been folded by a suitable brush 106, which is extended over the edge of the belt 84 directly
95 in front of the superimposed belt 86. The latter, in connection with the belt 84, serves to compress and to finish the cigarette. An annularly-grooved guide-roller, as 162, may be
arranged in front of the belt 86 to guide the cigarette between the latter and the belt 84.

On issuing from the belts 84 and 86 the cigarette is to be cut into pieces of proper length, and this cutting operation is performed by
100 mechanism which we shall now proceed to describe.

Suitably mounted in the frame of the machine adjacent to the rear ends of the belts 84 and 86 are a pair of vertical shafts 107,
105 the upper ends of which carry eccentric disks 108. 109 designates a longitudinally-reciprocating plate, which is mounted to slide in suitable bearings, which may be dovetailed to retain the said plate in position. The plate 109
110 is provided with slots 110, engaging the eccentrics 108, which will thus serve to impart a reciprocating motion to the said plate. The shafts 107 are geared together by an inter-
115 posed idler 107^a, so as to rotate in unison. The reciprocating plate 109 is provided with brackets 111, carrying the guide-tubes 112, the front ends of which are made slightly flaring or funnel-shaped for receiving the cig-
120 arettes.

113 is a box having circular holes 108' in its bottom, wherein fit loosely the eccentrics 108. The box stands above the reciprocating
125 plate 109 and carries a transverse shaft 114, having an eccentric 115, upon which is mounted a strap 116, having an arm or connecting-rod 117, which is pivotally connected with an
130 arm 118, extending downwardly from a rock-shaft 119, which is journaled in one of the upper corners of the box. The rock-shaft 119 has an additional arm 120 extending through
a slot 121 in the box and carrying a curved knife or cutter 122, which extends between the guide-tubes 112. One end of the shaft

114, which extends through the side of the box, is provided with a pulley 123, which may be driven by a band 124, passing over suitable guide-pulleys 125 to a pulley 126 upon the counter-shaft, the guide-pulleys 125 being sufficiently remote from the pulley 123 to allow the belt to yield slightly as the plate and box move, and thus not interrupt the rotation of the shaft 114. Shafts 107 may be suitably geared to gear-wheel 91 upon shaft 83.

By the mechanism which has just been described it will be seen that only a longitudinal reciprocating motion is imparted to the plate 109, while to the box 113 a curvilinear motion is imparted by the eccentrics, which extend through its bottom. The speed of the said plate and box which have these different movements in unison is so gaged as to correspond with the speed at which the cigarette issues between the belts 84 and 86. To the knife or cutter 122 a rapid vibratory motion is imparted, which enables it to cut through the cigarette whenever by the motion of the box the said cutter is carried into contact therewith. The cutting mechanism, it will thus be seen, moves along with the cigarette while the latter is being severed, and the length of the pieces that are cut off may be determined by the degree to which the disks 108 are mounted eccentrically upon the shafts 107.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantages of our improved cigarette-machine will be readily understood. The loose tobacco is placed by the operator upon the feed-belt 5, by which it is conveyed under the roller 10 to the belt 34, said roller 10 serving to actuate the mechanism whereby the quantity of tobacco permitted to pass over onto the belt 34 is regulated. The tobacco then passes under the roller 36 and brush 37, whereby it is evenly distributed over the surface of the belt 34. From the latter the tobacco passes through the hopper 38 to the endless chains 39, which serve to compress and compact the tobacco into the continuous rod, which, on issuing from said chains, is delivered upon the paper ribbon. The latter, by the action of the inclined belts 59 and the shield or rider 61, is partially folded upon the filler, and the unfolded edge is subsequently supplied with paste from the band 99. The brush 106 next serves to fold the pasted edge of the paper upon the edge which has been previously folded, and the endless grooved belts 84 and 86 serve to compress and carry forward the cigarette, which is finally cut by the mechanism described above into pieces of the desired length.

Suitable covers are to be provided at the proper places to protect the operating parts of the machine. Such covers are especially to be applied over the revolving brushes 9 and 37, in order to prevent the said brushes from scattering the tobacco.

While we have in the foregoing described

what we consider to be the preferred construction of our cigarette-machine, we desire it to be understood that we reserve the right to any modifications which may be resorted to without departing from the spirit of our invention.

Having thus described our invention, we claim and desire to secure by Letters Patent of the United States—

1. In a cigarette-machine, the combination of the endless feed-belt, a pressure-roller, and a revolving brush arranged above and in contact with the said belt, a vertically-movable roller mounted above the delivery end of the said belt, the conical pulleys connected by an endless belt, a worm mounted upon the shaft of one of said pulleys, a gear-wheel mounted upon the shaft of one of the rollers carrying the feed-belt and meshing with said worm, and belt-shifting mechanism actuated by the vertically-movable roller to regulate the speed of the feed-belt, substantially as set forth.

2. In a cigarette-machine, the combination of the feed-belt, a vertically-movable roller arranged above the delivery end of said feed-belt and adapted to press against the tobacco passing over the latter, and mechanism for regulating the speed of the feed-belt actuated by said vertically-movable roller to decrease the speed when the roller is elevated, and vice versa, substantially as and for the purpose set forth.

3. In a cigarette-machine, the combination of a feed-belt, the vertically-movable roller mounted in a suitable yoke, the cone-pulleys, the belt connecting the latter, a pair of levers having fingers engaging the belt connecting said cone-pulleys and provided with segmental racks meshing with each other, a lever connected pivotally and adjustably with a link which is mounted pivotally and adjustably in a slot in a suitable bracket, a connection between the said lever and the vertically-movable yoke carrying the roller, and a stud adjustably connecting the free end of said lever with one of the belt-shifting levers, substantially as and for the purpose herein set forth.

4. In a cigarette-machine, the horizontally-arranged endless chains composed of links having grooved opposing faces provided with sharp meeting edges held in contact with each other for a portion of the length of the chains and arranged to receive between them the tobacco from the feed-belt and to compress or compact the tobacco into a continuous rod or filler, substantially as herein set forth.

5. In a cigarette-machine, the combination, with the horizontally-arranged endless chains composed of grooved links, of the supporting wheels or disks, two of which are provided with sprockets to engage recesses in the rear sides of the links, the supporting-table, the idlers arranged to force the said chains into contact with each other, an endless band arranged under the front ends of said chains, which are spread apart, a hopper arranged to

supply tobacco between the front ends of the chains, and a top plate forming a cover for the rear ends of the latter, substantially as set forth.

5 6. In a cigarette-machine, the combination, with the mechanism for forming the rod or filler and the paper-supply, of the endless folding-belts mounted upon slanting or inclined rollers, the upper ends of which are
10 tilted in an outward direction, and means for drawing the paper, carrying the paper and the rod or filler between said folding-belts, substantially as and for the purpose set forth.

7. In a cigarette-machine, the combination,
15 with the curved guide-trough, the means for forming and feeding the rod or filler, and the paper-supply, of the endless folding-belts mounted upon slanting or inclined rollers, the front ends of said belts being spaced to
20 receive the paper ribbon upon which the rod or filler of tobacco has been placed and the rear ends of said belts being spaced at their lower edges a distance apart equal to the diameter of the cigarette, substantially as and
25 for the purpose set forth.

8. In a cigarette-machine, the combination, with the endless folding-belts mounted upon slanting or inclined rollers, of the curved guide-trough, and the supporting-table hav-
30 ing grooves to receive the lower edges of said belts, substantially as and for the purpose herein set forth.

9. In a cigarette-machine, the combination of the endless grooved chains arranged hori-
35 zontally and adapted to compress the tobacco into a continuous rod or filler, the curved trough or supporting-plate arranged at the delivery ends of said chains and adapted to guide the paper ribbon under the rod or filler as the latter issues from between the said
40 chains and to impart to the said paper ribbon a preliminary fold or curve, and the endless folding-belts mounted upon slanting or inclined rollers, the rear ones of which are
45 placed more closely together than the front ones, substantially as and for the purpose set forth.

10. In a cigarette-machine, the combination of the folding-belts mounted upon slanting
50 or inclined rollers, the rear ones of which are placed more closely together than the front ones, and a curved shield or rider supported upon suitable brackets between the rear ends of said folding-belts to fold one edge of the
55 paper ribbon over the rod or filler, substantially as set forth.

11. In a cigarette-machine, the combination of an endless supporting-belt having a semi-circular groove to receive the partially-fin-
60 ished cigarette as it issues from between the folding-belts, an endless metallic band mounted upon suitable supporting-pulleys, a paste-box the sides of which are provided with slots for the passage of said band, and suitable op-
65 erating mechanism, one of the supporting-pulleys of said endless band being journaled upon a bracket extending over the support-

ing-belt to hold the said endless band in contact with the unfolded edge of the paper ribbon by which the rod or filler is partially en- 70
veloped, substantially as and for the purpose set forth.

12. In a cigarette-machine, the combination, with the grooved supporting-belt, of an end-
less pasting-band mounted upon suitably-ar- 75
ranged pulleys, the paste-box having slotted sides for the passage of said band, and a wheel or idler mounted in a bracket extending over the edge of the supporting-belt, substantially
80 as and for the purpose set forth.

13. In a cigarette-machine, the combination of the endless supporting-belt having a semi-circular groove, and the superimposed corre-
spondingly-grooved carrying-belt the under 85
face of which is in contact with the upper face of the supporting-belt, and the pasting and folding mechanism, said mechanism comprising, essentially, the paste-box having
90 slotted sides, the endless band mounted upon suitable rollers holding it in contact with the unfolded edge of the paper cover of the cigarette, and the folding-brush, substantially as and for the purpose set forth.

14. In a cigarette-machine, the cutting
95 mechanism comprising a longitudinally-reciprocating plate carrying a pair of guide-tubes, and a box moving on said plate in a curvilinear path and carrying a rock-shaft provided with an outwardly-extending arm
100 having a knife or cutter, and mechanism for operating the said reciprocating plate and box and for imparting motion independently to the rock-shaft carrying the knife or cutter, substantially as set forth.

15. In a cigarette-machine, the combination, 105
with the eccentrics 108, moving in unison, and the plate 109, having slots 110 engaging said eccentrics, said plate carrying the guide-tubes, of the longitudinally and laterally reciprocating box mounted on said plate and carrying
110 a vibrating cutter, and mechanisms for independently operating the said box and cutter, substantially as set forth.

16. In a cigarette-machine, the combination, 115
with the eccentrics 108, moving in unison, the plate 109, mounted in guides longitudinal of the machine and having lateral slots 110, through which said eccentrics project, and aligned guide-tubes on said plate, of a box
120 resting on said plate and having holes in its bottom loosely fitting said eccentrics, a rock-shaft journaled in the box and supporting a knife, a pulley on said shaft, and a belt leading from said pulley upwardly to a source of
125 power at some distance above the plate and box, substantially as described.

17. In a cigarette-machine, the combination, with the mechanism for feeding the tobacco and the paper ribbon for compressing the to-
bacco into a cylindrical rod or filler and for 130
folding and pasting the paper wrapper, of a pair of vertical shafts arranged at the delivery end of the machine and having eccentric disks at their upper ends, mechanism for ro-

tating the said shafts in unison, a longitudi-
nally-reciprocating plate having transverse
slots engaged by the said eccentrics, support-
ing and guiding devices for the said plate, and
5 a box mounted upon and moved in a curvilinear path by the said eccentrics above the re-
ciprocating plate and having a vibrating knife
or cutter, and mechanism for operating the
same, substantially as and for the purpose
10 herein shown and specified.

In testimony that we claim the foregoing as
our own we have hereto affixed our signatures
in presence of two witnesses.

SAMUEL H. THOMPSON.
EUCLID M. COOKE.

Witnesses:

J. H. SIGGERS,
E. G. SIGGERS.