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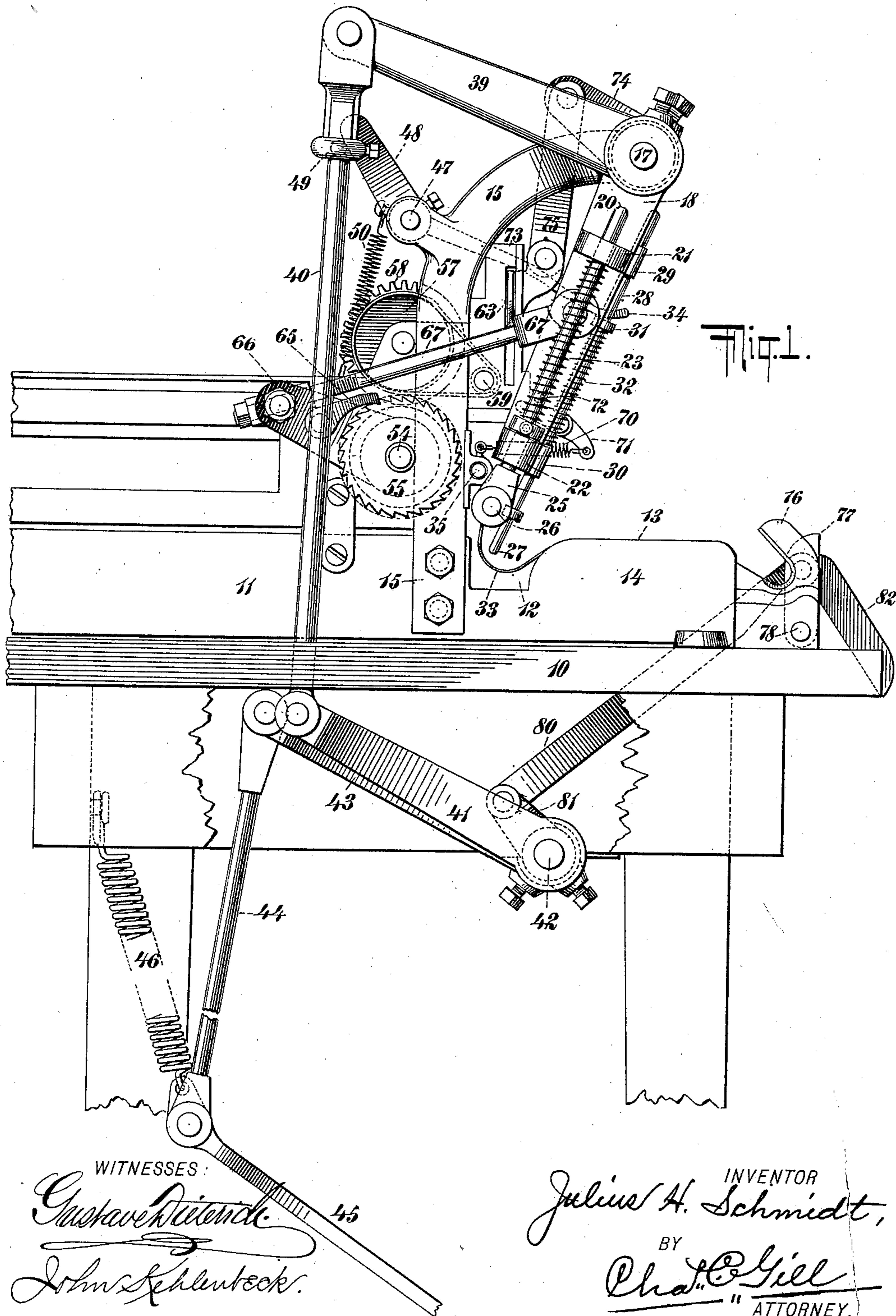
Patented Oct. 25, 1898.

J. H. SCHMIDT.
CIGARETTE MAKING MACHINE.

(Application filed Jan. 25, 1898.)

(No Model.)

4 Sheets—Sheet 1.



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4 Sheets—Sheet 2.

Fig. 3.

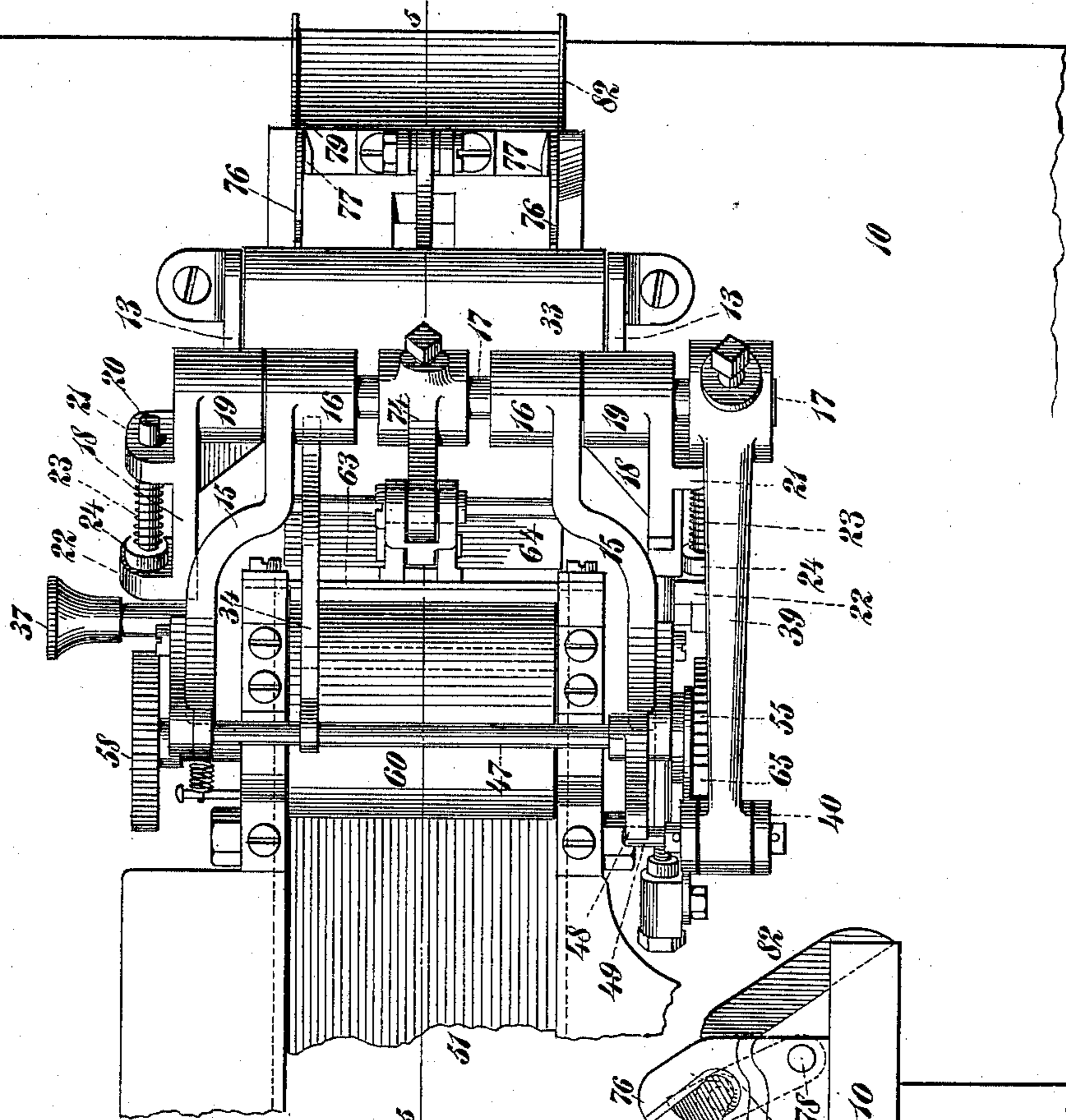
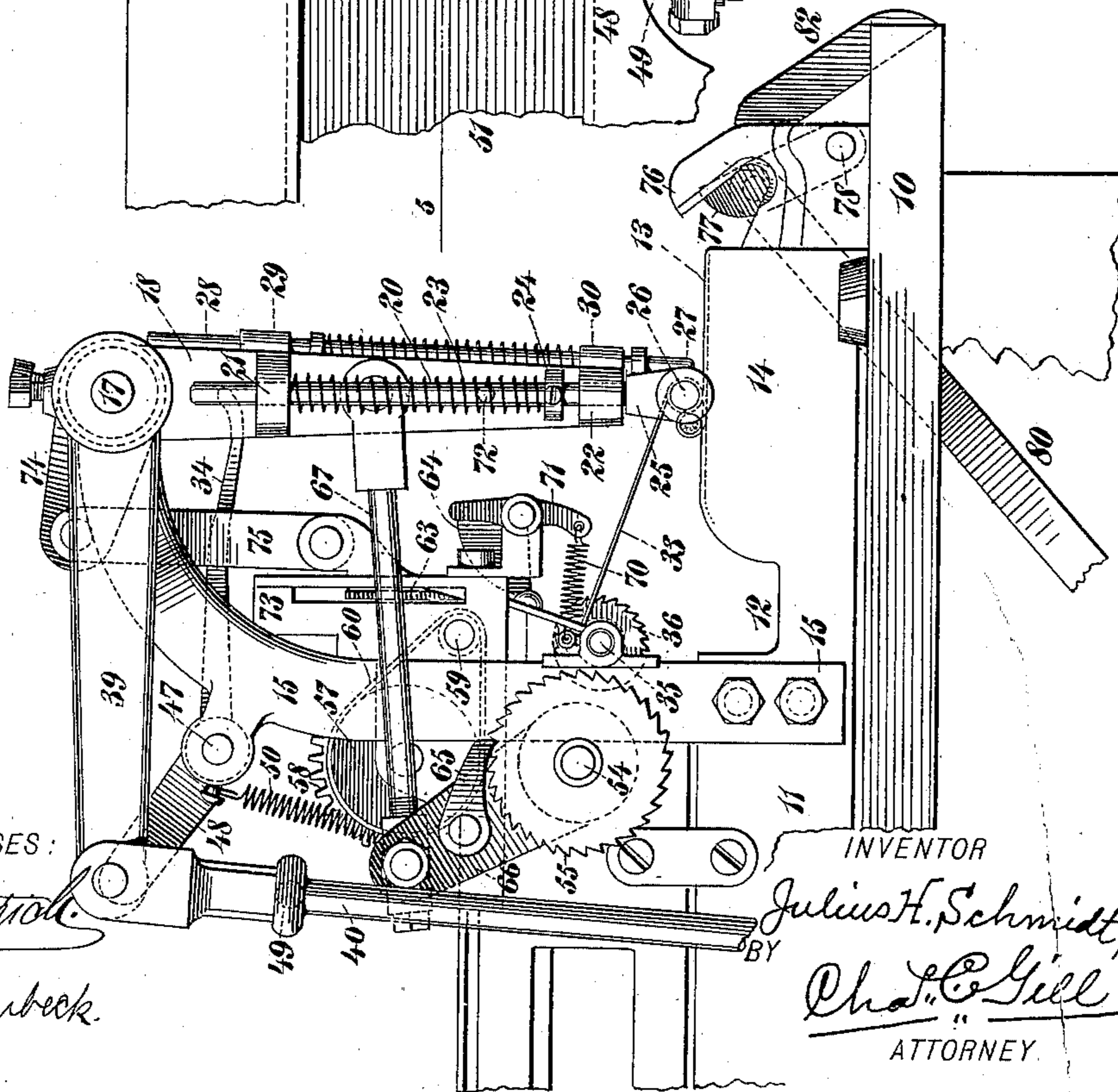


Fig. 2.



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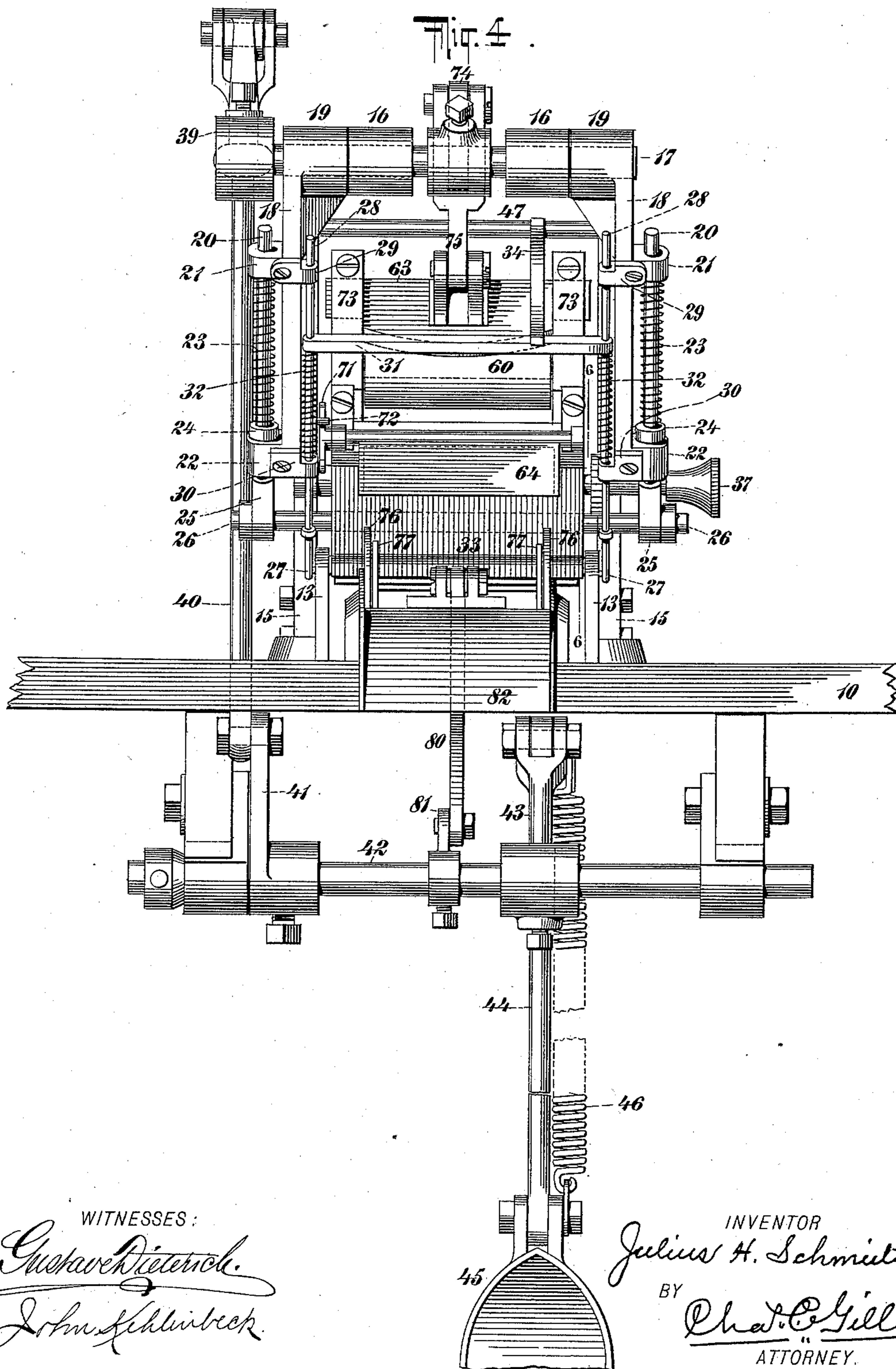
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4 Sheets—Sheet 3.



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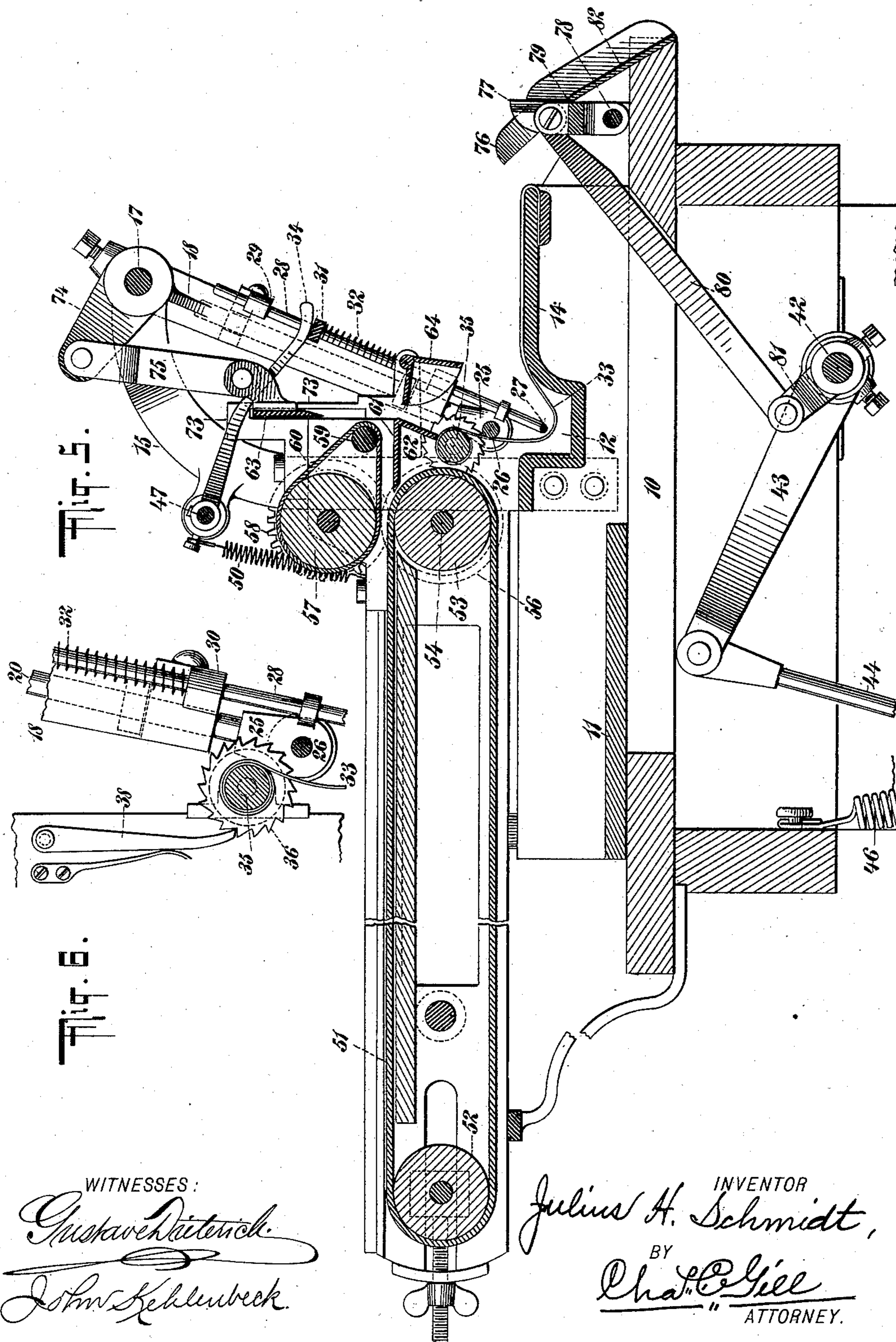
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(Application filed Jan. 25, 1898.)

(No Model.)

4 Sheets—Sheet 4.



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UNITED STATES PATENT OFFICE.

JULIUS H. SCHMIDT, OF BAYONNE, NEW JERSEY, ASSIGNOR OF NINE-SIXTEENTHS TO PETER H. SCHEFFLER, AARON L. FIELD, JOHN C. RYER, AND EDWARD S. HOLMAN, OF SAME PLACE.

CIGARETTE-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 612,872, dated October 25, 1898.

Application filed January 25, 1898. Serial No. 667,854. (No model.)

To all whom it may concern:

Be it known that I, JULIUS H. SCHMIDT, a citizen of the United States, and a resident of Bayonne, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Cigarette-Making Machines, of which the following is a specification.

The invention relates to improvements in cigarette-making machines; and it consists in the novel features of construction and combinations of parts hereinafter described, and particularly pointed out in the claims.

The purpose of the invention is to produce an efficient, small, and inexpensive cigarette making and trimming machine capable of operation by manual power and adapted for individual use or for use in small stores or factories in which the usual power cigarette-machines would be both impracticable for use and unattainable by reason of their expense.

Referring to the accompanying drawings, Figure 1 is a side elevation, partly broken away, of a machine constructed in accordance with and embodying the invention, this figure illustrating the left-hand side of the machine and showing the parts in their normal position ready to be put into operation for the rolling of a cigarette by the pressure of the foot of the operator upon the foot-treadle. Fig. 2 is a like view of a portion of the left-hand side of the machine, the rolling mechanism being shown in an intermediate position in the operation of rolling a cigarette. Fig. 3 is a top view of a portion of the machine, the parts being shown in their normal position presented in Fig. 1. Fig. 4 is a front elevation of the machine. Fig. 5 is a central vertical longitudinal section of the machine on the dotted line 5 5 of Fig. 3; and Fig. 6 is a detached view, partly in section and partly in elevation, of a portion of the rolling mechanism.

In the drawings the numeral 10 indicates any suitable table or base upon which the machine proper may be placed, and 11 denotes the bed or base plate of the machine, which, as illustrated, is oblong in outline and the front portion of which constitutes the rolling-bed,

which is provided at its rear portion with the recess 12 and at its opposite sides with the tramways 13 13, the latter at their upper edges being on a slightly-higher elevation than the upper surface of the rolling-bed proper, 14.

To the base 11 are secured the side standards or frames 15, which extend upward a suitable distance and then turn forward, as clearly indicated in Figs. 1 and 2, and at their upper front ends are provided with the sleeves 16, which form bearings for the shaft 17, located substantially centrally over the rolling-bed 14. Upon the shaft 17 are secured the depending arms 18 18, whose upper ends are formed with the sleeves 19, fitting upon the said shaft 17, adjacent to the outer sides of the sleeves or bearings 16 16, as more clearly shown in Fig. 3. The arms 18 18 are operated by the axial motion of the rock-shaft 17 and extend downward and carry the vertically-yielding side rods 20 20, which pass through lugs 21 22, formed on said arms 18, and between which lugs said rods 20 are encompassed by the coiled springs 23. The rods 20 above the lower lugs 22 are provided with the stops 24 to prevent any undue downward motion of said rods 20, and the lower ends of the rods 20 below the arms 18 are provided with the heads 25, carrying the pressure-roller 26 for rolling the cigarettes. During the forward motion of the pressure-roller 26 the rods 20 may yield upward until the upper edges of the heads 25 contact with the lower edges of the lugs 22, and at such time the rods 20 can have no yielding motion in an upward direction, and the limit of compression on the cigarette being rolled will then have been reached. The parts are so disposed and arranged that the upper edges of the heads 25 will contact with the lower edges of the lugs 22 and thus render the pressure-roller 26 rigid at about the time said pressure-roller 26 is at the middle portion of the rolling-bed 14. The arms 18 also carry a pocket-forming rod 27, which extends transversely between the lower ends of the vertically-movable rods 28 28, the latter being held in guides 29 30, carried by the arms 18 18. The upper portion of the rods 28 below the upper guides 29 are con-

connected with a transverse bar 31, and between said transverse bar 31 and the lower guides 30 the rods 28 are encompassed by the coiled springs 32, whose normal tension is to elevate the transverse pocket-forming rod 27 and the rods 28 with the transverse bar 31. The rods 28, pocket-forming rod 27, and transverse bar 31 constitute a frame carried by the arms 18 and adapted at the proper time to form the loop or pocket in the apron 33, as shown in Fig. 5, the said frame being normally held upward by the springs 32 and depressed at the proper time by the action of the arm 34, hereinafter described, upon the transverse bar 31 of said frame.

The rolling-apron 23 is secured at its front end to the forward edge of the rolling-bed 14 and at its rear edge is secured to the roller 35, (shown on an enlarged scale in Fig. 6,) which roller 35 is provided upon one end with the ratchet-wheel 36 and is adapted to be rotated by a knob or handle 37 for the purpose of winding a part of the rear portion of the apron 33 upon said roller 35 to shorten said apron or to unwind said apron from said roller 35 in order to lengthen said apron. The apron 33 may therefore be adjusted as to its length in accordance with the character of product desired. A spring-pawl 38 (shown in Fig. 6) is provided to engage the ratchet-wheel 36, and thereby lock the roller 35 and apron 33 in their adjusted position and condition.

The arms 18, carrying the pressure-roller 26 and pocket-forming rod 27, have an oscillatory motion over the rolling-bed 14 due to the axial rocking motion of the shaft 17, and the shaft 17 has its axial rocking motion imparted to it by means of the crank-arm 39, secured to the left-hand end of said rock-shaft 17, the connecting-rod 40, secured to the rear end of said crank-arm 39, the crank-arm 41, (see Figs. 1 and 4,) secured to the shaft 42 and connected to the lower end of said rod 40, the additional crank-arm 43, secured to said shaft 42 and having its rear end connected to the treadle-rod 44, the foot-treadle 45, connected with said rod 44, and the spring 46, also connected with said rod 44. The normal position of the arms 18, carrying the pressure-roller 26 and pocket-forming rod 27, is that illustrated in Figs. 1 and 5, and when the pressure of the foot of the operator is brought to bear upon the foot-treadle 45 the shaft 42 will have imparted to it an axial rocking motion through the medium of the treadle-rod 44 and crank-arm 43, and said shaft 42 will impart motion through its crank-arm 41, rod 40, and crank-arm 39 to the rock-shaft 17, whereby when the foot-treadle 45 is depressed the rock-shaft 17 will be turned downward and forward and cause the arms 18, with the parts carried thereby, to have a forward movement along the top of the rolling-bed 14 to effect the rolling of the cigarette, and when the foot of the operator is removed from the foot-treadle 45 the spring 46 will elevate the rod 44 and crank-arm 43 and turn the shaft 42 in a reverse direction, where-

by the crank-arm 41, rod 40, and crank-arm 39 will be elevated and, through the rock-shaft 17, will return the arms 18, carrying the pressure-roller 26, together with the parts carried by said arms 18, to their normal position. (Shown in Fig. 1.)

The upward motion of the rod 40 during the return of the arms 18 and pressure-roller 26 to their normal position is utilized to effect the depression of the pocket-forming rod 27 against the apron over the recess 12 at the rear portion of the rolling-bed 14, the object of this depression of the rod 27 being to force the slack of the apron 33 into said recess 12 and thereby form a suitable pocket in said apron to receive the filler-tobacco. The parts intermediate the rod 40 and the pocket-forming rod 27, whereby the latter is operated by the upward movement of said rod 40, comprise the rock-shaft 47, the arm 34, connected with said rock-shaft 47 and having a bearing upon the transverse bar 31, as hereinbefore explained, the crank-arm 48, secured upon the left-hand end of said rock-shaft 47, and a pin or other projection 49, extending transversely inward from the rod 40 below said crank-arm 48. When the rod 40 is depressed, the pin 49 (shown by dotted lines in Figs. 1 and 2) will move downward from the crank-arm 48, as indicated in Fig. 2, and at such time the rock-shaft 47 will turn downward and forward under the tension of the coiled spring 50, and thereby elevate the front portion of its arm 34 from the transverse bar 31, the effect of which is that the springs 32 will elevate the rods 28 and pocket-forming rod 27 upward to the position they occupy in Fig. 2, the pocket-forming rod 27 being about on the same horizontal plane with the pressure-roller 26. The downward motion of the rod 40 only occurs when a cigarette is being rolled, and hence it is proper at such time to elevate the pocket-forming rod 27. During the upward motion of the rod 40 under the action of the spring 46 the pin 49 carried by said rod will when the latter is about reaching its extreme upward position contact with the crank-arm 48 and impart a reverse motion to the rock-shaft 47, thereby placing the spring 50 under tension and causing the front end of the arm 34 to press downward upon the transverse bar 31 and effect the downward movement of the rods 28 and pocket-forming rod 27 to the position in which said parts are illustrated in Fig. 5. Thus during the rolling of the cigarette the pocket-forming rod is permitted to remain in an elevated position, and upon the return of the rolling mechanism to a normal condition the pocket-forming rod 27 is depressed to drive the slack of the apron into the recess 12 at the rear of the rolling-bed 14 in order to form a suitable pocket to receive the succeeding charge of filler-tobacco.

The filler-tobacco for the cigarettes is fed inward by means of an endless belt 51, upon which the filler-tobacco will be spread in a well-known manner and which by an inter-

mittent motion will convey the tobacco inward toward the rolling mechanism. The traveling belt 51 is mounted upon rollers 52 and 53, the latter being mounted upon a shaft 54, having upon its left-hand end, as shown in Fig. 1, a ratchet-wheel 55 and upon its right-hand end a gear-wheel 56 of usual character. (Indicated by dotted lines in Fig. 5.) Above the roller 53 is mounted the roller 57, whose shaft has upon its right-hand end the gear-wheel 58, in mesh with the gear-wheel 56 of the roller 53, the purpose of the gear-wheels 56 58 being to permit the transmission of motion from the roller 53 to the roller 57 in a well-known manner. In advance of the roller 57 is journaled a small roller 59, and upon the rollers 57 59 is arranged the belt 60, which extends in advance of the main feed-belt 51 and is directly over the plate 61, which constitutes a table in advance of the endless belt 51, upon which the filler-tobacco in the form of a layer is fed, under the pressure of the belt 60. The plate or table 61 is supplemented by a downwardly and rearwardly inclined front plate 62, as shown in Fig. 5, and the front edge of said table or plate 61 constitutes an edge against which that portion of the body of filler-tobacco fed forward beyond the plate or table 61 is severed by the descending knife 63, the removed portion of the filler-tobacco being caught in the charge-box 64 and subsequently by the turning of said charge-box to the position in which it is seen in Fig. 5 discharged into the pocket of the rolling-apron 33 in advance of the pocket-forming rod 27. The belt 60 receives its motion from the roller 57 and the roller 57 receives its motion through the gear-wheels 56 58 and from the shaft 54 of the roller 53. The roller 53 imparts an intermittent motion to the feed-belt 51 and receives its intermittent motion from the ratchet-wheel 55 on the right-hand end of its shaft 54, said ratchet-wheel being operated to turn the roller 53 by and only during the forward movement of the arms 18, carrying the pressure-roller 26. As shown in Figs. 1 and 2, the ratchet-wheel 55 is engaged by a pawl 65, carried by a swiveled plate 66, which is connected by a rod 67 with the right-hand arm 18, and hence during the forward motion of the said arm 18 the rod 67 will pull the pawl 65 against the teeth of the ratchet-wheel 55 and effect the rotation of said ratchet-wheel and the parts connected with it. During the reverse or return motion of the arm 18 the rod 67 will move rearward and at such time the pawl 65 will simply slide over the teeth of the ratchet-wheel 55, allowing the latter and the parts connected with it to remain at rest. Thus during the forward motion of the arms 18 to effect the rolling of a cigarette the feed-belts 51 and 60 will be in motion and will feed inward the filler-tobacco beyond the front edge of the plate or table 61 and into the charge-box 64, and during the return of the arms 18 to their normal position after the

cigarette has been rolled the feed-belts 51 and 60 will remain at rest.

The charge-box 64 is of triangular shape and is in its discharging position, as shown in Fig. 5, when the arms 18, carrying the pressure-roller 26, are in their rear or normal position. When the arms 18 are moving forward to effect the rolling of a cigarette, the charge-box 64 closes against the plate 62, depending downward and rearward from the front edge of the plate or table 61, so as to receive the tobacco cut from the main layer or body of filler-tobacco by the knife 63. The box 64 has a pivotal motion and is held in its closed position, as shown in Fig. 2, by means of the coiled spring 70, connected with the lever-arm 71, rigid with the pivotal end of said box 64. As soon as the arms 18 start forward the spring 70 closes the box 64 to the position shown in Fig. 2, and as soon as the arms 18 return to their rear position a pin 72, (shown in Fig. 4,) carried by the right-hand arm 18, contacts with the upper end of the lever-arm 71 and by extending the spring 70 turns the box 64 to its open or discharging position, (shown in Fig. 5,) in which position said box 64 is constantly maintained until the arms 18 start forward, and thereby relieve the pin 72 from the lever-arm 71 and permit the spring 70 to pull the box 64 to its closed position.

The knife 63, by which the charges of filler-tobacco are severed from the main body of filler-tobacco at the front edge of the plate or table 61, has a vertical reciprocation in the guides 73 from the rock-shaft 17 through the medium of the crank-arm 74 on said shaft and the connecting-arm 75, intermediate the rear end of said crank-arm 74 and said knife 63. The downward motion of the crank-arm 74, due to the rocking of the shaft 17, causes the knife 63 to descend and sever a charge of filler-tobacco, the severed charge being caught in the box 64, and the upward motion of the crank-arm 74, due to the movement of the rock-shaft 17, effects the return of the knife 63 to its upward position, as shown in Fig. 5.

The cigarettes as they are rolled from the front end of the rolling-bed 14 have their ends trimmed by means of the stationary knives 76 and movable knives 77, located in advance of the rolling-bed 14. The trimming of the cigarettes is effected from the rock-shaft 42 and during the upward motion of the rod 40 and the rearward motion of the arms 18 and pressure-roller 26. The movable knives 77 are pivotally mounted upon a shaft 78 and are connected by a bar 79, to which is pivotally secured the connecting-rod 80, whose lower end, as shown in Fig. 5, is pivotally secured to a crank-arm 81, mounted upon the rock-shaft 42. The stationary knives 76 are of hooked form and are adapted to receive the cigarettes rolled from the rolling-bed 14 and retain them while the movable cutters 77 ascend against the ends of the cigarettes. When the arms 18, carrying the pressure-roller 26, are in their rear position, the mov-

able cutters 77 are in the vertical position in which they are illustrated in Figs. 1 and 5, but during the forward motion of the arms 18 and pressure-roller 26 to effect the rolling of a cigarette the rock-shaft 42, through the intermediate connections, pulls the movable knives 77 downward and rearward, as indicated by the intermediate position of said knives in Fig. 2, so that when the pressure-roller 26 has reached its extreme forward movement the knives 77 will have reached their extreme downward and rearward movement and leave the knives 76 entirely free to catch and retain the cigarette. During the rearward motion of the arms 18 and pressure-roller 26 the reverse motion of the rock-shaft 42 will, through the intermediate connections, drive the knives 77 upward against the ends of the cigarette projecting laterally from the knives 76, and thereby effect the trimming of the cigarette, the trimmed ends falling laterally upon the table 10 and the cigarette passing down the chute 82 to any receptacle placed to receive it.

The operation of the machine will probably be understood from the foregoing description with but slight further explanation.

The filler-tobacco will in the usual manner be placed upon the traveling belt 51 and be by the said belt and the belt 60 carried inward toward the rolling mechanism. The wrapper for the cigarette will be placed upon the apron 33 over the rolling-bed 14 and will have an edge of paste, as usual, applied to its outer portions. During the onward feeding of the filler-tobacco by means of the belts 51 and 60 the charge-box 64 will be in its closed position. (Shown in Fig. 2.) The outward motion of the arms 18, with the pressure-roller 26, to effect the rolling of a cigarette is simultaneous with the downward motion of the knife 63, by which a charge of the filler-tobacco is severed and left within the charge-box 64, then in its closed position. Upon the return of the arms 18 and pressure-roller 26 to their rear position the pin 72, carried by the left-hand arm 18, will strike the lever 71 above its pivotal center and turn the charge-box 64 to its open or discharge position, (shown in Fig. 5,) the charge of filler-tobacco thus being allowed to descend to the pocket in the rolling-apron 33. The pocket in the apron 33 is formed as soon as the arms 18, carrying the pressure-roller 26, return to their rear position, and said pocket is formed by the pocket-forming rod 27, which is depressed by the action of the lever-arm 34 upon the transverse bar 31. The depression of the lever-arm 34 against the transverse bar 31 is effected during the upward movement of the rod 40 by the pin 49 thereon coming into contact with and elevating the crank-arm 48, and thereby turning the rock-shaft 47 to move its arm 34 aforesaid downward against the said transverse bar 31. As soon as the arms 18 and pressure-roller 26 start forward to effect the rolling of a cigarette the pin 49 on the rod 40

will lower from the crank-arm 48 and permit the spring 50 to reverse the motion of the rock-shaft 47, and thereby turn the lever-arm 34 upward from the transverse bar 31 and permit the springs 32 to elevate the side rods 28 and the pocket-forming rod 27. When the pocket-forming rod 27 is in its upward position, it will be in line with the pressure-roller 26, as shown in Fig. 2, and the belt or apron 33 will lie between said rod 27 and the said roller 26, and hence the rod 27, while serving to form the pocket, also materially aids in preserving the uniformity of the apron 33 during the forward and rearward motions of the arms 18 and pressure-roller 26. The cigarettes as formed are rolled in the usual manner from the front end of the rolling-bed 14, and they pass into the hook-shaped knives 76, wherein they are trimmed by the upward movement of the knives 77, the ends cut from the cigarettes falling laterally upon the table 10, while the finished cigarettes pass down the chute 82 into any suitable receptacle placed to receive them. The downward motion of the foot-treadle 45 under the pressure of the foot of the operator and the upward motion of said treadle under the action of the spring 46 effect the feeding of the tobacco, the severing of the charges, the formation of the pocket in the rolling-apron, the rolling of the cigarette, the trimming of the cigarette, and the return of the parts composed in the rolling mechanism to their initial condition preparatory to the rolling of another cigarette. The attention of the operator is required to place the wrapper upon the apron 33, over the rolling-bed 14, and to see that the filler-tobacco is properly upon the feed-belt 51. The feeding-belts 51 and 60 receive their movement through intermediate mechanism connecting them with the arms 18, and hence with every rolling of one cigarette sufficient filler-tobacco is fed inward to the charge-box for the next cigarette to be rolled. The mechanism connected to operate the arms 18, carrying the pressure-roller 26, is also connected with the movable knives 77, and hence with certainty the knives 77 are moved downward and rearward with every forward motion of the arms 18 and pressure-roller 26, and then moved upward and forward to trim the cigarette with every rearward motion of said arms 18 and pressure-roller 26. Thus with the rolling of each cigarette the knives 76 and 77 are in position and condition to receive and trim the ends of same.

As above indicated, the feed-belts 51 60 feed the filler-tobacco onward, and the knife 63 descends while the arms 18, carrying the pressure-roller 26, are moving forward to effect the rolling of the cigarette. The onward movement of the feed-belt 51 continues for a very short time after the knife 63 passes downward to sever the charge of filler-tobacco, and the purpose of thus having the feed-belt 51 continue its movement after the knife 63 has descended is to cause the feeding inward of

the layer of filler-tobacco against said knife 63 in order that the forward edge of the layer of filler-tobacco may be uniform and full and without any doubt as to the matter that sufficient filler-tobacco will, after the knife 63 has ascended, be fed into the charge-box 64 to meet the requirements of the next cigarette to be rolled.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a machine of the character described, the rolling-bed and the apron thereon, combined with the side frames, the rock-shaft mounted in the upper ends of said side frames, and extending transversely over the rolling-bed, the arms 18 secured to said rock-shaft, the pressure-roller carried by said arms, the rods 28 also carried by said arms, the pocket-forming rod 27 carried by said rods 28, the springs for imparting to said rods 28 and said pocket-forming rod 27 a normal upward tension, and means for driving said rods 28 and rod 27 to their downward position when said arms 18 are at their rear or initial position, whereby said rod 27 is caused to form the pocket in the said rolling-apron; substantially as set forth.

2. In a machine of the character described, the rolling-bed and the rolling-apron thereon, combined with the side frames, the rock-shaft mounted in the upper ends of said side frames and extending transversely over the rolling-bed, the oscillating arms 18 secured to said rock-shaft, the pressure-roller carried by said arms, the rods 28 also carried by said arms, the pocket-forming rod 27 connecting the lower ends of the rods 28, the transverse bar 31 connecting the upper portions of said rods 28, the coiled springs 32 intermediate said transverse bar 31 and the lower guide for said rods 28, the rock-shaft 47 having the lever-arm 34 in position to engage said transverse bar 31, the crank-arm 48 on said rock-shaft 47, means operable from the foot-treadle for actuating said rock-shaft 47 to depress the arm 34 upon said bar 31, and the spring connected to said rock-shaft 47 for effecting a normal upward tension of said lever-arm 34 from said transverse bar 31; substantially as set forth.

3. In a machine of the character described, the rolling-bed and the rolling-apron thereon, combined with the side frames, the rock-shaft mounted in the upper ends of said side frames and extending transversely over said rolling-bed, means for actuating said rock-shaft, the oscillating arms 18 carried by said rock-shaft, the pressure-roller 26 carried by said arms 18, the guides 29, 30, on said arms 18, the rods 28 mounted in said guides, the pocket-forming rod 27 carried by said rods 28, the transverse bar 31 connecting the upper portions of said rods 28, the springs 32 intermediate said transverse bar 31 and said guides 30 for maintaining said rod 27 in its upward position, means for depressing said rod 27 to form the pocket in the rolling-apron

when the pressure-roller 26 is at its rear position, and means for maintaining said rod 27 in close relation to said roller 26 during the forward motion of said roller to effect the rolling of a cigarette, whereby said rod 27 is enabled to form the pocket in the rolling-apron and also during the oscillating motion of said roller 26 aid in preserving the rolling-apron in a uniform even condition; substantially as set forth.

4. In a machine of the character described, the rolling-bed and rolling-apron on said bed, combined with the rock-shaft extending transversely over said rolling-bed, means for actuating said rock-shaft, the oscillating arms 18 carried by said rock-shaft and having the guiding-lugs 21, 22, 29 and 30, the rods 20 mounted in said lugs 21, 22, and having the heads 25 at their lower ends, the springs 23 on said rods 20, the reciprocating roller 26 carried in said heads 25, the rods 28 mounted in said guiding-lugs 29, 30, the pocket-forming rod 27 connecting the lower ends of said rods 28, the springs 32 upon said rods 28 for imparting to said rod 27 an upward tension, means for imparting to said rods 28 and rod 27 a downward motion when the said arms 18 and roller 26 are at their rear position, and means for maintaining said rod 27 in close relation to the roller 26 during the forward and rearward motions of said roller, whereby said rod 27 when at its rear position may form the pocket in the rolling-apron and may also during the oscillating motion of said arms 18 maintain said rolling-apron in uniform even condition; substantially as set forth.

5. In a machine of the character described, the rolling-bed and the rolling-apron thereon, combined with the rock-shaft mounted transversely above said rolling-bed, the arms 18 carried by and extending downward from said rock-shaft, the pressure-roller 26 carried by said arms 18, the reciprocating rods 28 carried by said arms 18, the pocket-forming rod 27 connecting the lower ends of said rods 28, the transverse bar 31 connecting the upper portions of said rods 28, the springs imparting to said rods 28 and rod 27 a normal upward tension, the rock-shaft 47 having its arm 34 in position over said transverse bar 31 to depress the pocket-forming rod 27 when said arms 18 are at their rear position, the crank-arm 48 connected with said rock-shaft 47, the crank-arm 39 connected with said rock-shaft mounted transversely over the rolling-bed, the rod 40 connected with said crank-arm 39 to operate the same, the foot-treadle operatively connected with said rod 40, and the pin 49 on said rod 40 for engaging said crank-arm 48 during the upward motion of said rod 40 for the purpose of depressing said arm 34 against said transverse bar 31 for the purpose of driving the rod 27 downward to form the pocket in the rolling-apron; substantially as set forth.

6. In a machine of the character described, the rolling-bed and the rolling-apron thereon,

combined with the transverse rock-shaft 17 extending over the said rolling-bed, the oscillating arms 18, carried by said rock-shaft, the pressure-roller 26 carried by said arms 18, the feed-belt 51 for filler-tobacco, the rollers upon which said feed-belt is mounted, the table 61 in advance of the forward one of said rollers, the knife for severing the charges of filler-tobacco from the body of tobacco fed inward upon said belt 51, the crank-arm 74 mounted upon said rock-shaft 17, the rod 75 connecting said crank-arm 74 with said knife for severing the charges of tobacco, the charge-box 64 to receive the severed charges of filler-tobacco and discharge them into the pocket of the rolling-apron, means intermediate said arms 18 and said feed-belt 51 whereby, the said arms 18, during their forward motion, effect the movement of said belt 51, means for maintaining said charge-box in its closed position during the forward motion of said arms 18, and pressure-roller 26, and means connected with said arms 18 for tilting said charge-box into its open or discharge position as said arms 18 reach their rear position; substantially as set forth.

7. In a machine of the character described, the rolling-bed, the rolling-apron thereon, the rock-shaft extending transversely over said rolling-bed, means for operating said rock-shaft, the oscillating arms 18 carried by said rock-shaft, and the pressure-roller 26 carried by said arms 18, combined with the endless feed-belt 51 for the filler-tobacco, the rollers upon which said belt is mounted, the table 61 in advance of said feed-belt, the knife for severing the charges of filler-tobacco as the body of tobacco is fed inward upon said belt 51, means intermediate said knife and said rock-shaft for operating said knife from said shaft, the pivotally-mounted charge-box 64 in advance of said table 61, the spring for maintaining said charge-box during the forward and rearward motion of the said roller 26, the lever 71 connected with said charge-box, the stud connected with one of said arms 18 for contact with said lever 71 to turn said charge-box to its open position upon the arrival of said arms 18 at their rear position, and means intermediate said arms 18 and said feed-belt 51 for imparting an inward motion to said feed-belt during the forward motion of said arms 18 while effecting the rolling of a cigarette; substantially as set forth.

8. In a machine of the character described, the rolling-bed, the rolling-apron thereon, the transverse rock-shaft 17 over said rolling-bed, means for operating said rock-shaft, the oscillating arms 18 carried by said rock-shaft and the pressure-roller 26 carried by said arms, combined with the feed-belt 51 for filler-tobacco, the rollers upon which said feed-belt is mounted, the table 61 in advance of said feed-belt, the knife for severing the charges of filler-tobacco from the body of tobacco fed inward upon said belt 51, means for operating said knife to descend during the forward mo-

tion of said arms 18 and roller 26, the charge-box for receiving the severed charge of filler-tobacco, means for maintaining said charge-box in its closed position during the forward motion of said arms 18 and roller 26, means for opening said charge-box to discharge its contents when said arms 18 and roller 26 are arriving at their rear position, and means intermediate said arms 18 and said feed-belt 51 for effecting the onward travel of said feed-belt during the forward motion of said arms 18 and roller 26, the relation of the parts being such that the inward travel of the feed-belt 51 continues for a short space of time after the said knife has descended in order that the body of filler-tobacco may be fed up against said knife prior to the ascent of the latter; substantially as set forth.

9. In a machine of the character described, the rolling-bed, the rolling-apron thereon, the rock-shaft 17 extending transversely over said rolling-bed, means for operating said rock-shaft, the oscillating arms 18 carried by said rock-shaft, and the pressure-roller 26 carried by said arms, combined with the feed-belt 51, the rollers 52, 53, upon which said feed-belt is mounted, the table 61 in advance of said feed-belt 51, the roller 57 mounted over the roller 53, the small roller 59 mounted over the forward portion of said table 61, the belt 60 upon said rollers 57, 59, the intermeshing gear-wheels connecting said rollers 53, 57, whereby motion from said roller 53 is communicated to said belt 60, the knife 63 for severing the charges of filler-tobacco, means intermediate said knife and said rock-shaft 17 for operating said knife from said shaft, the pivotally-mounted charge-box 64 in advance of said table 61, means for maintaining said charge-box in its closed position during the forward travel of said arms 18 and pressure-roller 26, and means for opening said charge-box to discharge its contents upon the said rolling-apron upon the arriving of said arms 18 and pressure-roller 26 at their rear position; substantially as set forth.

10. In a machine of the character described, the rolling-bed, the rolling-apron thereon, the transverse rock-shaft 17 mounted over said rolling-bed, means for operating said rock-shaft, the oscillating arms 18 carried by said rock-shaft and the pressure-roller 26 carried by said arms, combined with the feed-belt 51 for the filler-tobacco, the rollers upon which said feed-belt is mounted, the table 61 in advance of said feed-belt, the rearwardly-inclined plate 62 extending downward from the front edge of said table 61, the triangular-shaped charge-box 64 pivotally mounted in advance of said table and having one of its sides adapted to engage said rearwardly-inclined plate 62, means for maintaining said charge-box in its closed position against said plate 62 during the forward motion of said arms 18 and roller 26, means for turning said charge-box to its open position upon the arriving of said arms 18 and roller 26 at their rear

position, the knife for severing the charges of filler-tobacco, and means for operating said knife; substantially as set forth.

11. In a machine of the character described,
5 the rolling-bed, the rolling-apron thereon, the transverse rock-shaft over said rolling-bed, the arms 18 carried by said rock-shaft, and the pressure-roller 26 carried by said arms, combined with the rock-shaft 42 below the
10 rolling-bed, the crank-arms 39 and 41 on said rock-shafts respectively, the rod 40 connecting said crank-arms 39, 41, means connected with said rock-shaft 42 for operating the same and through it said rock-shaft over the roll-
15 ing-bed, the stationary knives 76 of hook shape at the front of said rolling-bed, the pivoted movable knives 77 coöperating with said knives 76, the rod 80 connected with said knives 77, the crank-arm 81 on said rock-
20 shaft 42 and connected with said rod 80 and

means for actuating said rock-shaft 42 and through it said movable knives 77, the construction and arrangement of the parts being such that when said oscillating arms 18 and pressure-roller 26 are in their rear position 25 the said knives 77 will be in their upper forward position, and that during the forward motion of said arms 18 and said roller 26 the knives 77 will recede to their rear downward position, leaving the knives 76 free to receive 30 the cigarette to be trimmed by the subsequent upward and forward motion of said knives 77; substantially as set forth.

Signed at New York, in the city and county of New York, this 24th day of January, 1898. 35

JULIUS H. SCHMIDT.

Witnesses:

CHAS. C. GILL,

E. JOS. BELKNAP.