

No. 748,428.

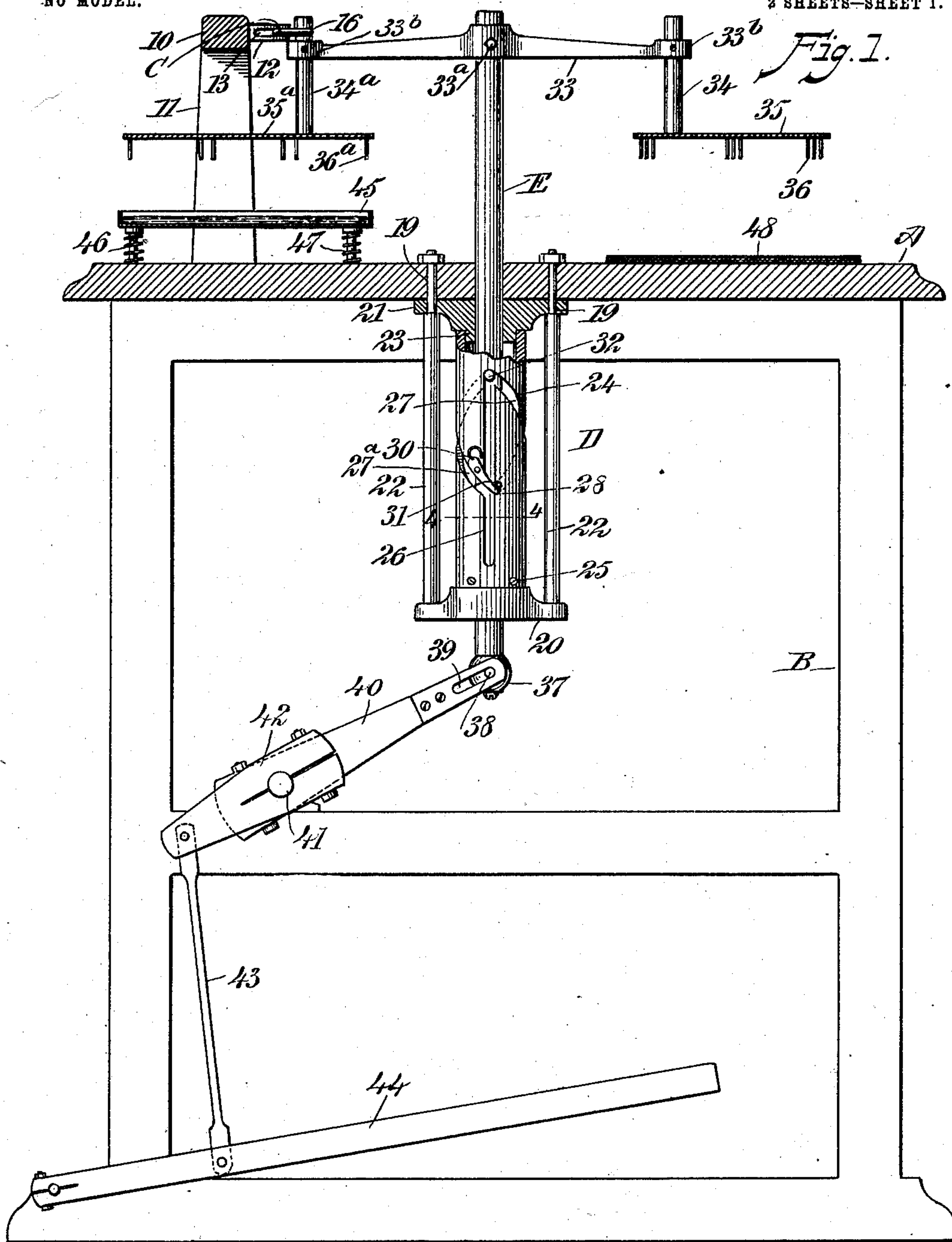
PATENTED DEC. 29, 1903.

A. SIMONSON.
PASTING MACHINE.

APPLICATION FILED APR. 24, 1903.

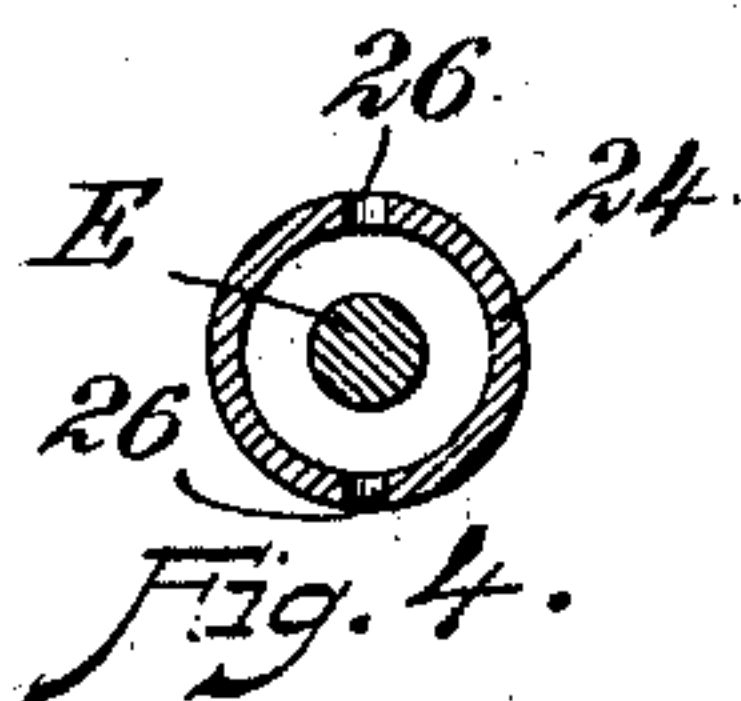
NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

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2 SHEETS—SHEET 2.

Fig. 2.

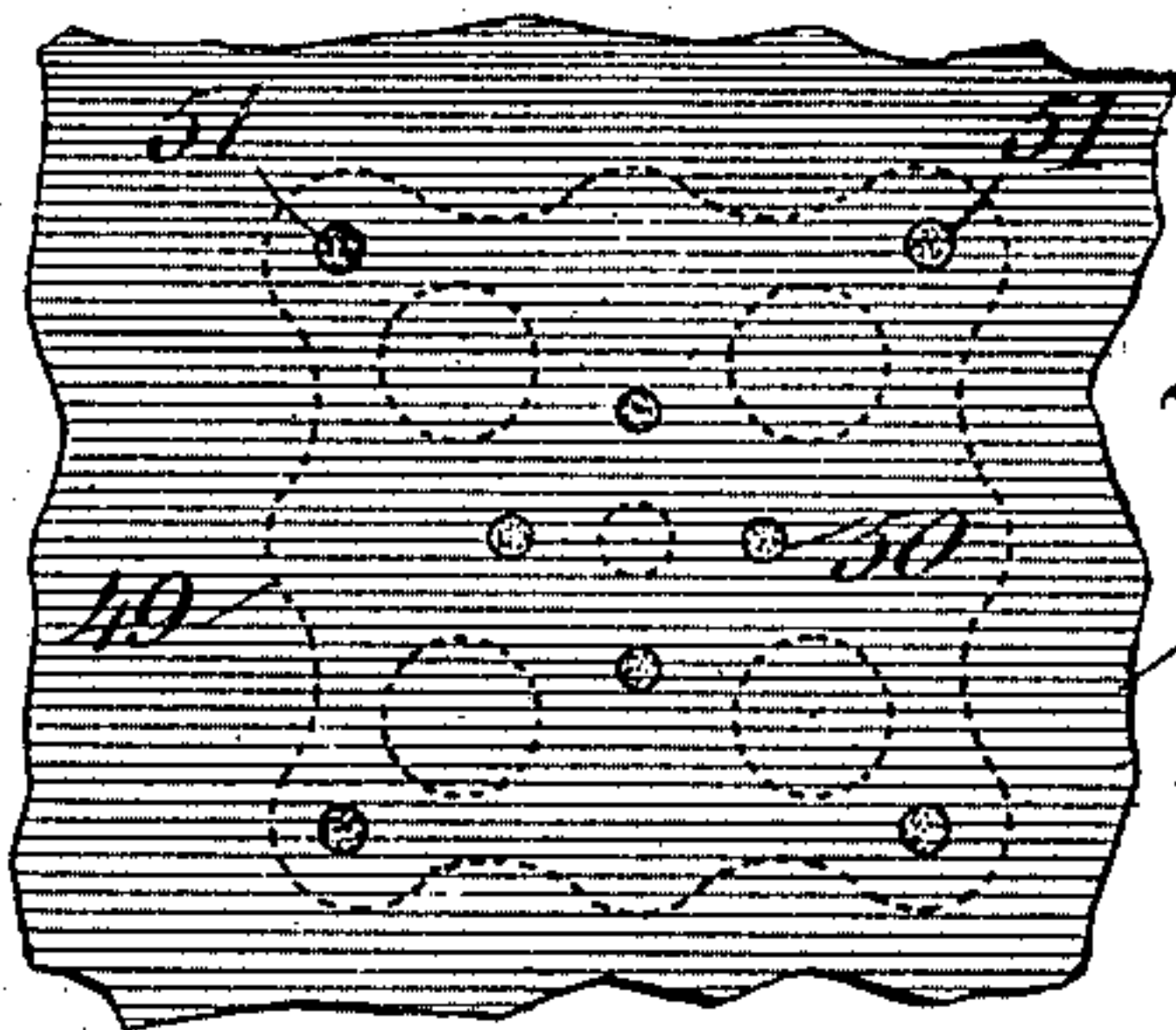
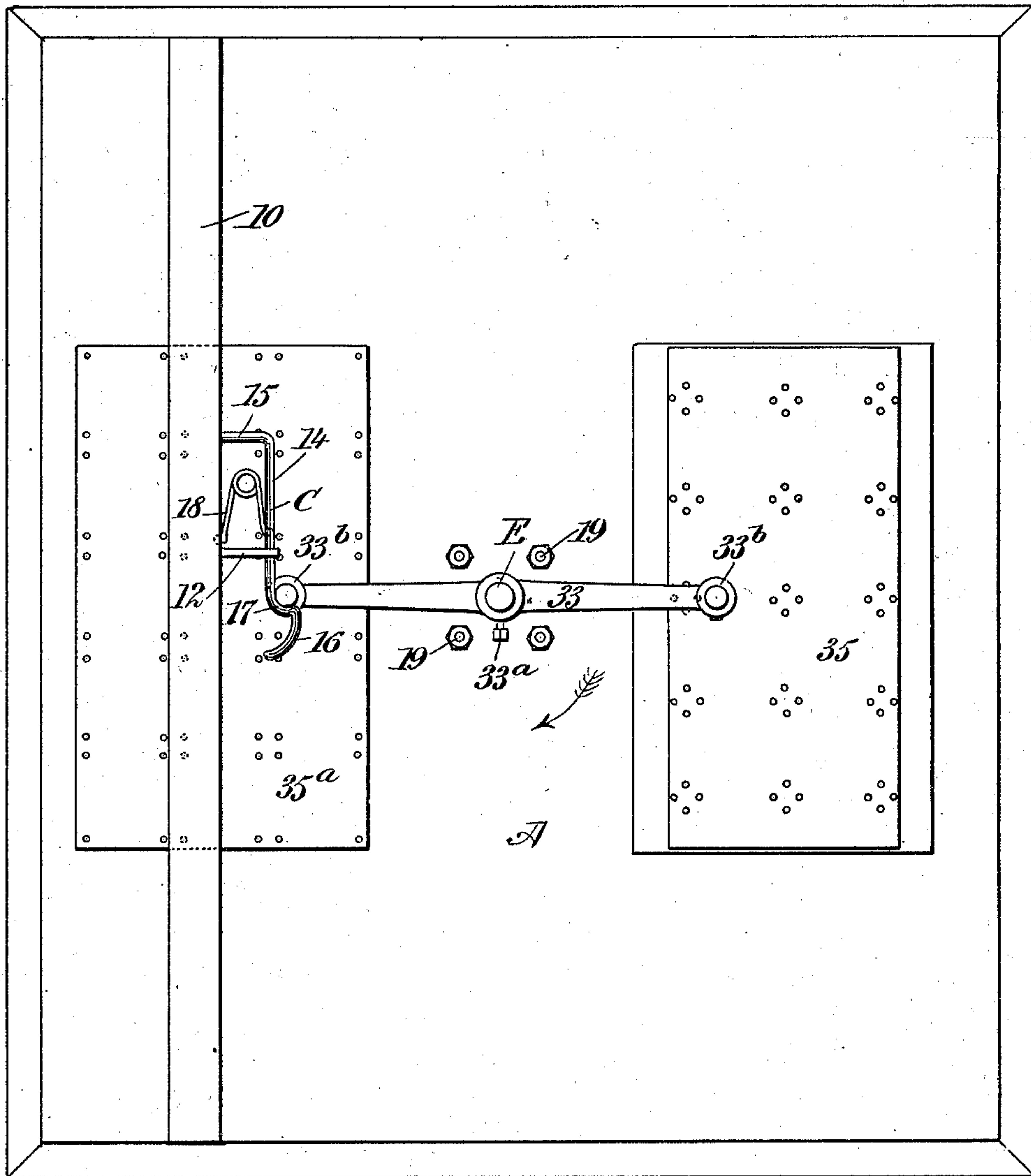


Fig. 3.

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UNITED STATES PATENT OFFICE.

ABRAHAM SIMONSON, OF NEW YORK, N. Y.

PASTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 748,428, dated December 29, 1903.

Application filed April 24, 1903. Serial No. 154,140. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM SIMONSON, a citizen of the United States, and a resident of the city of New York, (Port Richmond,) in the
 5 borough of Richmond, in the county of Richmond and State of New York, have invented a new and Improved Pasting-Machine, of which the following is a full, clear, and exact description.

10 My invention relates to an improvement in pasting-machines capable of use in a general way, being adapted, however, particularly for applying paste or mucilage to sheets of paper adapted to lie one upon the other to form a
 15 pad of sheets connected at certain intervals, from which pad what is known as "paper garlands" are cut.

The purpose of the invention is to so construct the pasting-machine that it will be
 20 simple, durable, and economic and will be provided with opposing pasting members and an operating mechanism for said members, whereby one member will be receiving an adhesive material while the other is depositing
 25 such material and whereby at each operation of the machine the support for the pasting members will be given a half-turn in addition to a downward and following upward movement, causing the opposing members to
 30 be alternately shifted, the depositing member at the upward movement of the support being placed in position to receive a fresh supply of adhesive material, while the member just supplied with such material will be
 35 placed in position to deposit the adhesive material upon an object placed to receive it.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth,
 40 and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

45 Figure 1 is a vertical transverse section through the machine. Fig. 2 is a plan view of the machine. Fig. 3 is a plan view of a pasted pad, showing in dotted lines the out-

line of the paper garland to be cut from the pad and in positive lines the points within
 50 such outline where the adhesive material is deposited upon the overlying sheets constituting the pad, and Fig. 4 is a transverse section taken practically on the line 4 4 of Fig. 1.

A represents a table of any desired dimensions which is supported by a frame or legs
 55 B in a suitable manner, the said supports being preferably placed at the ends of the table, and these supports may be connected, if desired.
 60

At one side of the center of the table a longitudinal beam 10 is supported above the upper face of the table by suitable standards
 11, as is shown best in Fig. 1, and at or about the central portion of the said upper beam 10
 65 a guide 12 is secured, extending horizontally and inwardly therefrom, and the said guide is provided with a slot 13, as is shown in Fig. 1, extending from its outer end a predetermined distance toward its attached end.
 70

A keeper-arm C is attached to the upper beam 10 at one side of the guide 12, and this keeper-arm C is preferably made of spring-wire of suitable gage and comprises a longitudinal horizontally-located body member 14,
 75 which is for a greater portion of its length parallel with the inner face of the upper beam 10, as is shown in Fig. 2, and is provided with an attaching member 15, which extends into the said beam 10 and is formed at one end of
 80 the keeper, while at the opposite end of the keeper, which end is free, a hooked or curved projection 16 is formed, the curvature being in direction of the center of the table, whereby at the rear of this hook projection 16 a recess 17 is produced in the keeper for a purpose to be hereinafter described. In order
 85 that the said keeper C when depressed at its free end will positively return to its normal position, a spring 18 is located between the
 90 beam 10 and the body-section 14 of the keeper, as is shown in Fig. 2, the spring acting to force the body-section of the keeper away from the said beam.

At the central portion of the table A rods
 95 19 are located, which extend in cage form

down through the said table, having suitable nuts at their upper ends, and these rods 19 are secured at their lower ends to a bottom plate 20 and passed at their upper portions through a corresponding upper plate 21, which is in engagement with the under face of the table A. This upper plate 21 is held in position by sleeves 22, carried by the said rods 19, the sleeves having bearing against the upper face of the bottom plate 20 and against the lower face of the upper plate 21, as is shown in Fig. 1. Each of these two plates 20 and 21 is provided at opposing faces with a reduced collar 23, and over these collars 23 the ends of a tube 24 are fitted, the tube being secured by screws 25 or their equivalents to both of the collars 23 of the plates 20 and 21 of the cage D.

A vertical slot 26 is produced in the tube 24 of the cage D at diametrically opposite sides, and with the upper end of these vertical or longitudinal slots 26 the upper ends of spiral slots 27 and 27^a connect. The lower ends of the spiral slots 27 and 27^a connect with the vertical or longitudinal slots 26 at opposite sides of the tube, also at a point about centrally between the upper and lower ends of the said vertical slots, as is shown in Fig. 1. Where the lower end of the spiral slot 27^a connects with one of the vertical or longitudinal slots 26, a spring-controlled switch-point 30 is pivoted, adapted in its normal position to follow the outline of the upper edge of the spiral slot 27^a where it connects with the said vertical slot 26 in the tube 24, as is also shown in Fig. 1. This switch-point, while it is free to move downward against the resistance of its spring, cannot move upward beyond its normal position, as the lower end of the switch-point, which normally crosses the vertical slot 26, engages with a pin 31, carried by the said tube 24, and the two spiral grooves 27 and 27^a are oppositely disposed, as is also shown in Fig. 1.

A spindle E is mounted to slide freely at the central portion of the table A, and this spindle is likewise made to slide freely in the top and bottom plates of the cage D and through the tube 24 of this cage and is provided with a pin 32, which in the normal position of the spindle E is at the upper junction of the spiral slots 27 and 27^a with the vertical slots 26 in the said tube 24 and extends through both of the slots 26.

A cross-bar 33 is attached to the upper end of the spindle E by means of a set-screw 33^a or its equivalent, and eyes 33^b are formed at the ends of the said cross-bar. In one of these eyes a rod 34 is adjustably attached, and a similar rod 34^a is likewise adjustably secured in the opposing eye 33^b. The rod 34 supports a pasting-plate 35 and the rod 34^a a corresponding pasting-plate 35^a. The plate 35 is provided with a series of downwardly-extending pins or fingers 36, and the plate 35^a is pro-

vided with downwardly-extending pins or fingers 36^a. These fingers or pins 36 and 36^a may be grouped, as may be found desirable; but when the machine is to be used for pasting the leaves of a pad together from which a paper garland is to be cut the plate 35 has its pins or fingers 36 arranged thereon in groups of lozenge shape, usually four in number, while the plate 35^a has its fingers or pins 36^a in rectangular groups and in single and double formation at its marginal portions, the rectangular groups being at the central portion of the said plate, as is shown in Fig. 2.

At the lower end of the spindle or shaft E a ball 37 is preferably formed, having a pin 38 extending through it, and this pin is passed through a slot 39 in a crank-arm 40, secured to a shaft 41, journaled in bearings carried by the supports for the table A. At a convenient point in the length of the shaft 41 a second crank-arm 42 is secured, and at the outer end of this crank-arm 42 a pitman 43 is pivotally attached, and the said pitman 43 is likewise usually attached to a foot-lever 44, suitably pivoted in the framework of the machine, as is shown in Fig. 1.

At one side of the table A, below the upper beam 10, a receptacle 45 is located, adapted to receive adhesive material of any description, and preferably this receptacle 45 is held to slide on guide-pins 46, around which cushion-springs 47 are placed, so that in the downward movement of the pasting-plate when it enters the said receptacle 45 the said receptacle will move downward or in direction of the table as the fingers or pins of the plate engage with the bottom thereof, and at the opposite side of the table A the sheets 48 to be pasted are placed, one sheet being placed upon the other, but not until the under sheet has received adhesive material from one or the other of the pasting-plates 35 or 35^a.

In the operation of this machine when the shaft E is drawn downwardly the pin 32 will travel down the vertical slots 26 in the tube 24 of the cage, bringing the fingers of one plate—the plate 35, for example—in engagement with a sheet 48, while the fingers of the pasting-plate 35^a will be immersed in the adhesive material in the receptacle 45. As the shaft E is carried downward its pin 32 will trip the switch-point 30, which will immediately close after the pin and prevent the pin of the shaft E at the upward motion of the shaft, which motion takes place when pressure on the foot-lever 44 is applied, from passing directly up through the said vertical slots 26, compelling the pin 32 to enter the lower portions of the spiral slots 27 and 27^a and travel through said slots to their upper portions. As the pin 32 passes up the spiral slots 27 and 27^a, one end of the pin being in each spiral slot, the shaft E is given a half-turn, and one pasting-plate is carried from the paste pot or receptacle 45 and the other

upward from engagement with the sheet 48, with which it may have engaged, and at the same time the position of the two pasting-plates is reversed, the pasting-plate which
 5 left the sheet being carried over the paste-receptacle 45, while the plate the fingers of which had been immersed in the adhesive material of the paste-receptacle will be brought in position to engage with another sheet at
 10 the next downward movement of the shaft E.

In Fig. 3 I have shown a portion of a sheet 48 and the outline of a garland to be cut therefrom. In the operation of the two pasting-plates 35 and 35^a when one sheet, 48, is
 15 laid upon the table and, for example, the pasting-plate 35 is carried downward to deposit adhesive material thereon it will deposit such material at what would be the central portion of the garland to be cut, as is
 20 shown at 50 in Fig. 3. The second sheet is then placed on the first sheet, and the machine is again operated, reversing the plates and bringing the pasting-plate 35^a over the second laid sheet, and this plate 35^a will de-
 25 posit adhesive material at what will be the corner portions of the paper garland, as is shown at 51 in Fig. 3. This operation is repeated until the desired number of sheets have been pasted together at various points
 30 from which the garland may be cut.

The direction of rotation of the cross-bar 33 is indicated by the arrow in Fig. 2, and as the said cross-bar is revolved to change the position of the pasting-plates the upper por-
 35 tion of one of the bars 34 or 34^a, whichever is passed over the paste-receptacle 45, will engage with the bow or hook portion 16 of the spring-controlled keeper C and will occupy a position in the recess 17 of the said
 40 keeper, as is shown in Fig. 2, and said keeper will serve to prevent the cross-bar 33 from moving farther down than is desired and will insure one pasting-plate being directly over the paste-receptacle 45 and the other pasting-
 45 plate directly over the sheet upon which the adhesive material is to be deposited.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

50 1. In a pasting-machine, a support, a shaft having a rotary end movement in the support, opposing pasting-plates carried by the said shaft, and means substantially as described, for imparting first end movement
 55 and second a rotary and opposing end movement to the said shaft, whereby to bring the pasting-plates first in direction of the support and next upwardly from the support, simultaneously changing the position of the
 60 plates, as described.

2. In a pasting-machine, a support, a shaft having rotary and end movement in the support, opposing pasting-plates carried by said shaft, and means substantially as described,
 65 for imparting first end movement and second

a rotary and opposing end movement to the said shaft, whereby to bring the pasting-plates first in direction of the support and next upwardly from the support, simultaneously changing the position of the plates, and a
 70 keeper for regulating the extent of the movement of the said pasting-plates, as specified.

3. In a pasting-machine, a table, a cage carried thereby, including a tube having a vertical and a spiral slot therein, the spiral slot
 75 connecting with the vertical slot at its upper end and at a point between its ends, and a spring-controlled switch-point extending across the vertical slot where the lower portion of the spiral slot connects, a shaft loosely
 80 mounted in the cage, being adapted to turn and slide therein, a projection from the shaft, adapted to travel in the slots of the tubular section of the cage, means for raising and lowering the shaft, an arm at the upper por-
 85 tion of the shaft, pasting-plates carried by the said arm and provided with members adapted to receive adhesive material, and a fountain for adhesive material, arranged relatively to one of the pasting-plates, being adapted to
 90 receive the members thereof, as set forth.

4. In a pasting-machine, the combination with a table, a cage secured to the table, extending downwardly therefrom, which cage includes a tube having a vertical slot therein,
 95 and a spiral slot which at its upper end connects with the upper end of the vertical slot and at its lower end connects with the vertical slot at a point between its ends and a switch-point capable of downward movement and
 100 limited upward movement, which switch-point crosses the vertical slot in the tubular section of the cage where the lower portion of the spiral slot connects therewith, of
 105 a shaft mounted to slide and turn in the tubular section of the cage, a pin on the said shaft adapted to travel in the slots of the said tubular section of the cage, means for raising and lowering the said shaft, a cross-bar at-
 110 tached to the said shaft above the table, pasting-plates supported from the ends of the cross-bar, each pasting-plate being provided with fingers adapted to receive adhesive material, means for limiting the movement of
 115 the cross-bar in a rotary direction, and a receptacle for adhesive material, carried by the table and so located as to be beneath one of the said pasting-plates to supply the fingers thereof with adhesive material, as described.

5. In a pasting-machine, a plurality of paste-
 120 plates each having a set of paste-applying fingers, and means for successively bringing said sets of fingers alternately into engagement with the work, said fingers being arranged in alternating positions on their re-
 125 spective plates, whereby to apply glue to the leaves of a tablet in positions correspondingly alternating with each other.

6. In a pasting-machine, a support, a shaft adapted for rotary and end movement in the
 130

support, opposing pasting-plates carried by
said shaft, and mechanism for imparting first
a simple end movement and secondly a com-
bined rotary and opposing end movement to
5 the said shaft, simultaneously changing the
position of the plates, said mechanism includ-
ing means for stopping the shaft between each
simple and each combined movement per-
formed thereby, and a spring-actuated latch

for engaging and holding said shaft at the 10
close of each of its partial revolutions.

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

ABRAHAM SIMONSON.

Witnesses:

WALDEN M. BRAMAN,
BENJ. L. VAN PELT.