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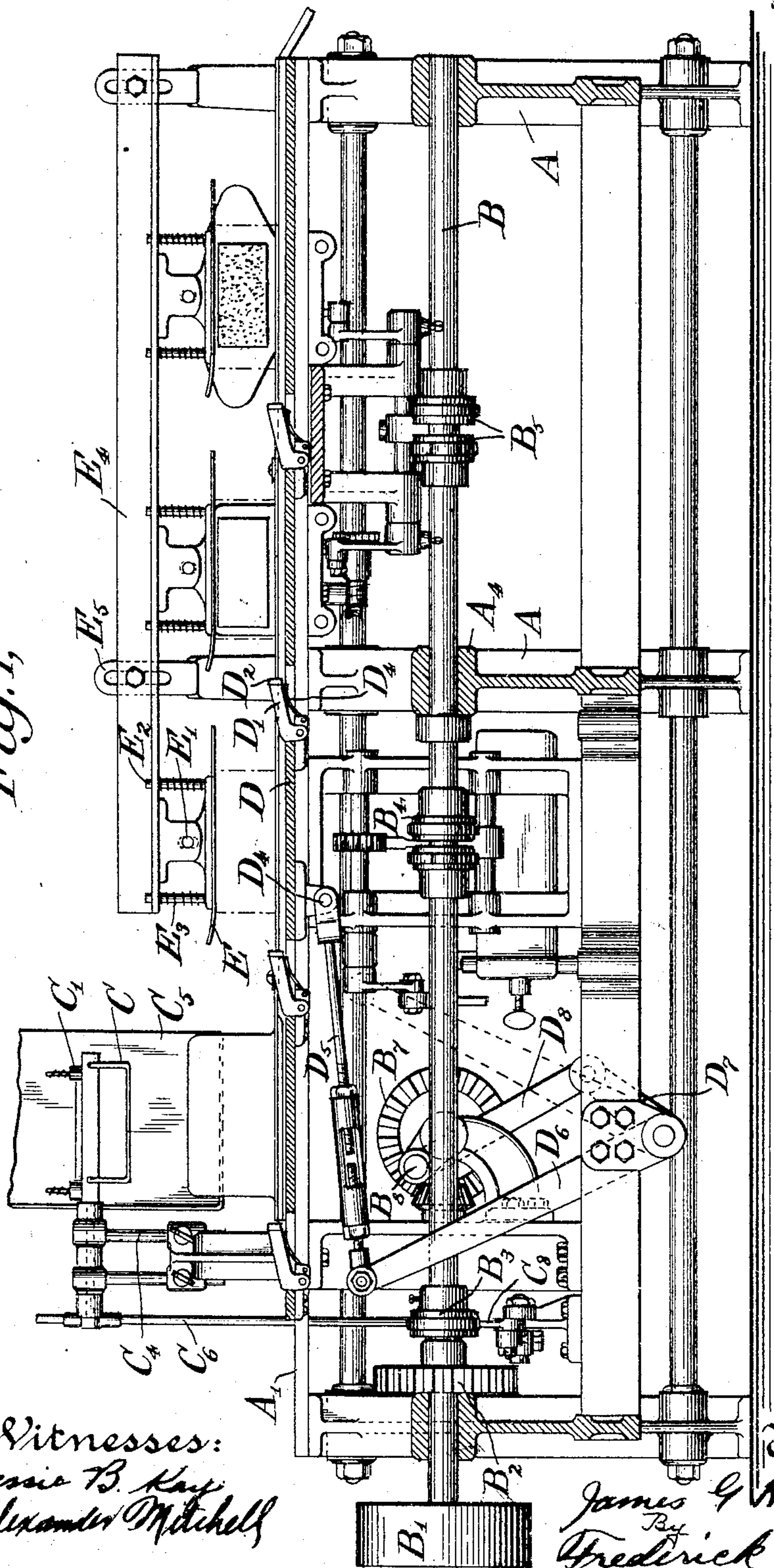
PATENTED JAN. 10, 1905.

J. G. HENDRICKSON.
DOUBLE LABELING MACHINE.

APPLICATION FILED APR. 3, 1902.

3 SHEETS—SHEET 1.

Fig. 1.



Witnesses:
Jessie B. Kay
Alexander Mitchell

Inventor
James G. Hendrickson
By
Frederick S. Duncan
Attorney

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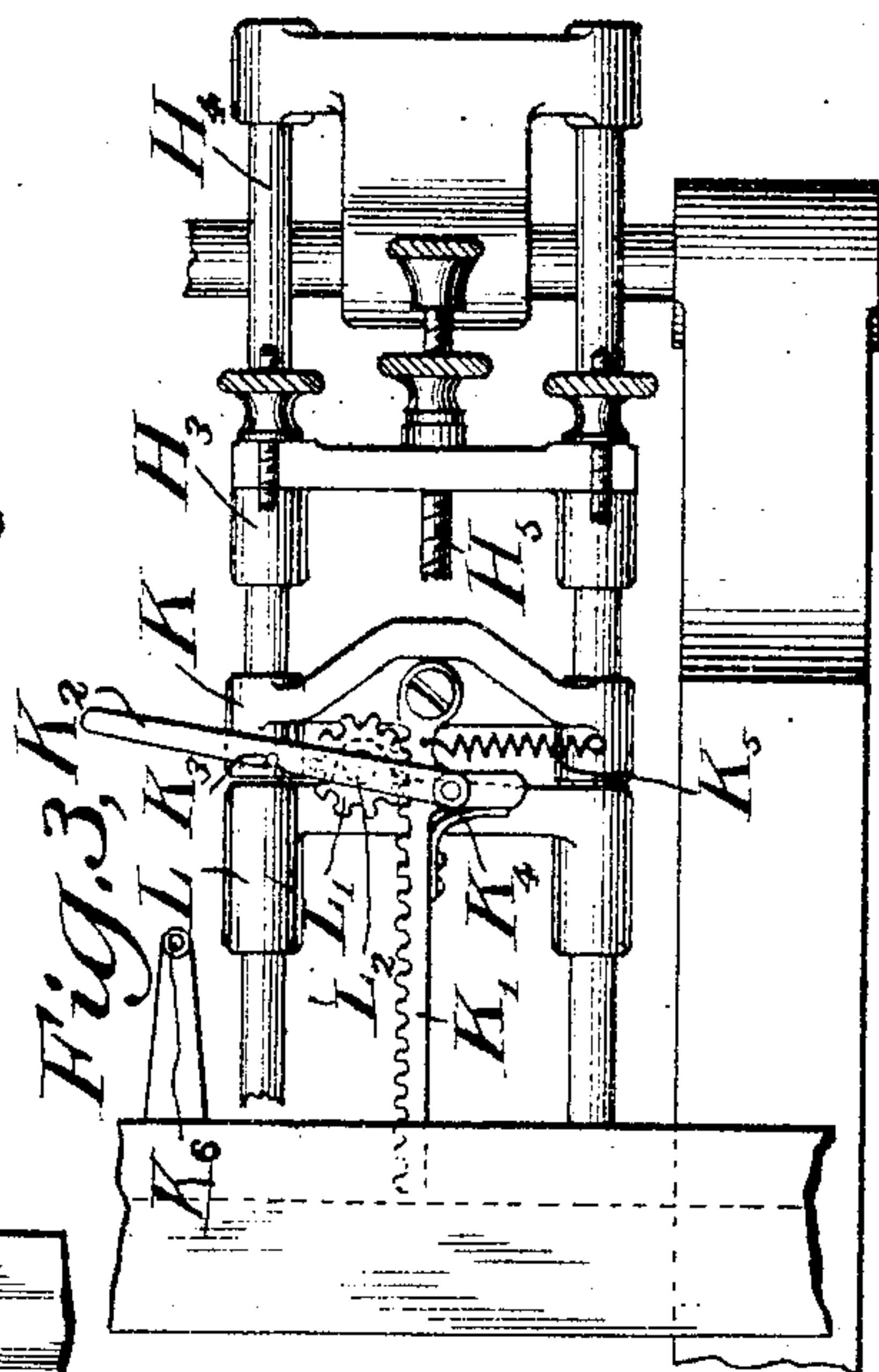
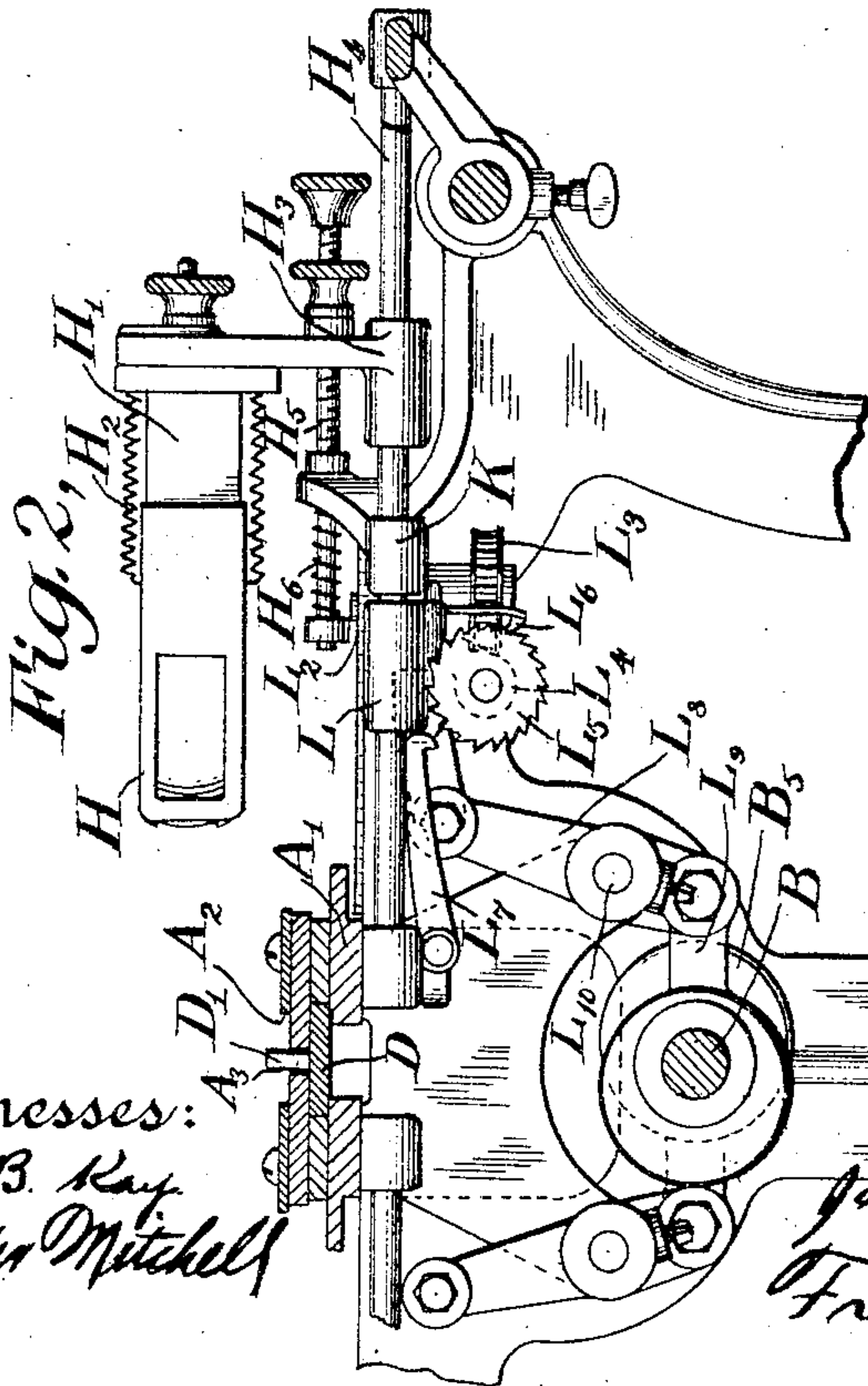
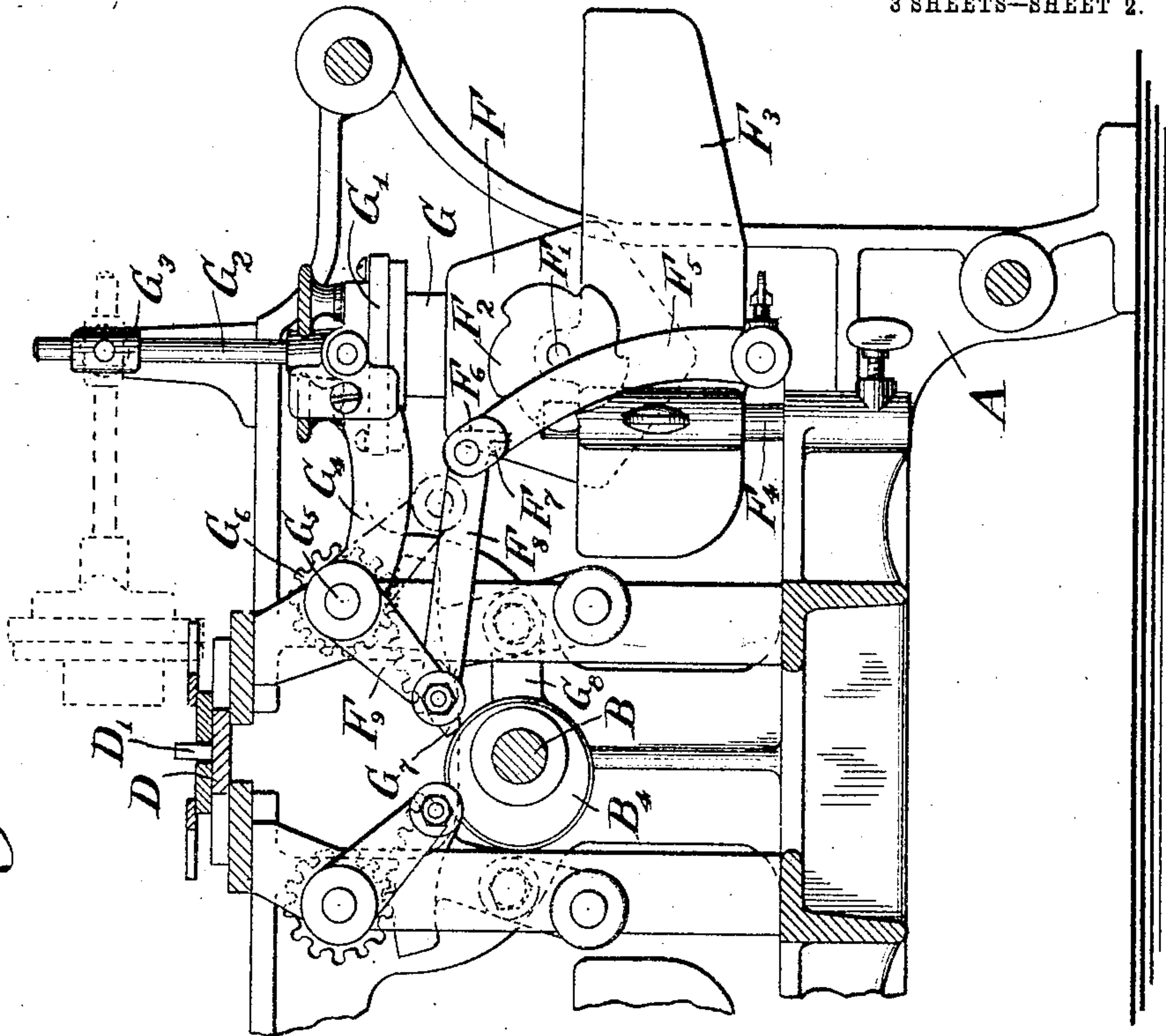
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3 SHEETS—SHEET 2.

Fig. 4,



Witnesses:
Jessie B. Ray
Alexander Mitchell

Inventor
James G. Hendrickson
By
Frederick S. Huneeus
Attorney.

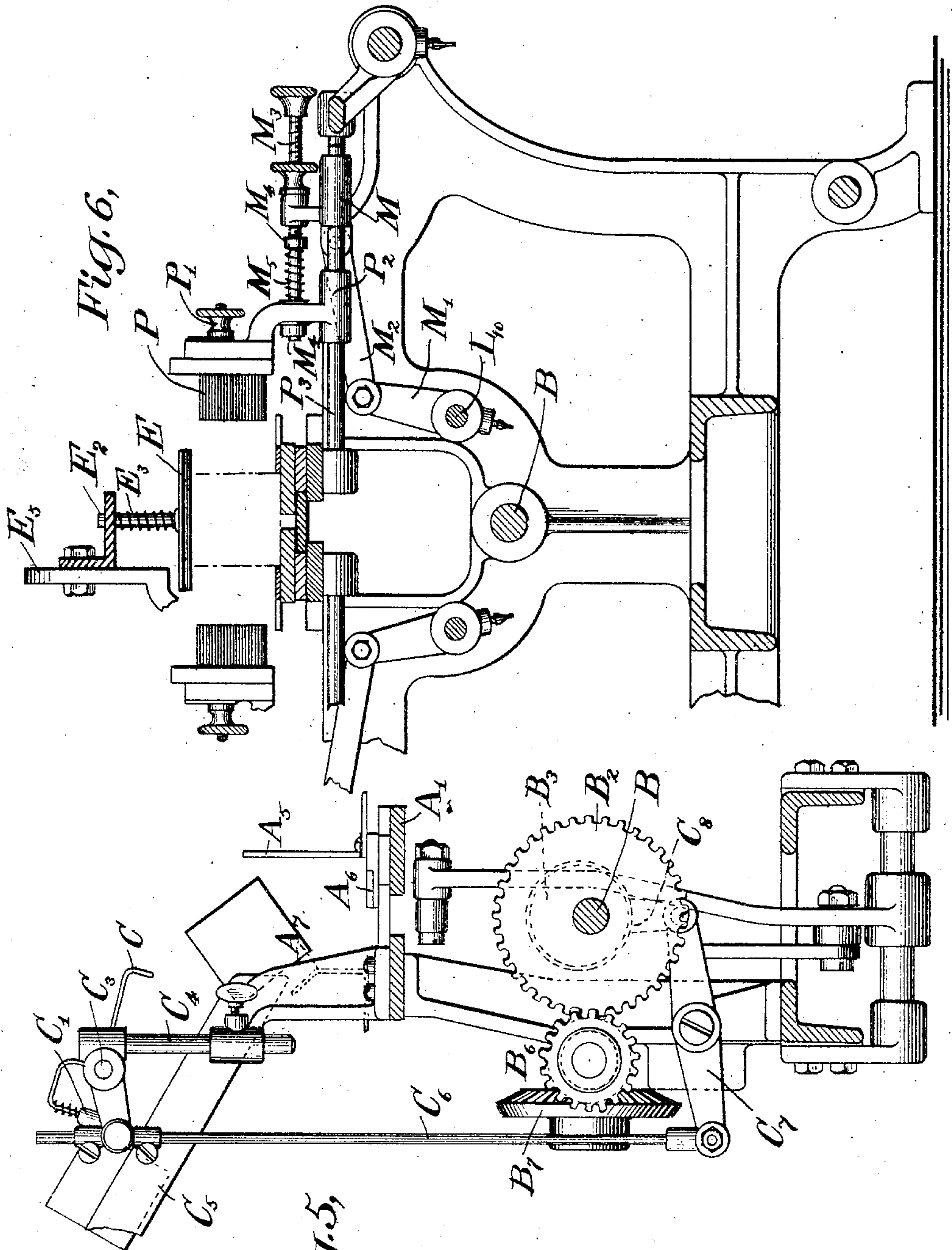
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3 SHEETS—SHEET 3.



28 Witnesses:

Jessie B. Ray

Alexander Mitchell

Fig. 5,

Inventor
James G. Hendrickson
By
Frederick S. Humeau
Attorney.

UNITED STATES PATENT OFFICE.

JAMES G. HENDRICKSON, OF BAYONNE, NEW JERSEY, ASSIGNOR TO
NEW YORK LABELLING MACHINE COMPANY, A CORPORATION OF
NEW YORK.

DOUBLE-LABELING MACHINE.

SPECIFICATION forming part of Letters Patent No. 779,933, dated January 10, 1905.

Application filed April 3, 1902. Serial No. 101,172.

To all whom it may concern:

Be it known that I, JAMES G. HENDRICKSON, 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 Double-Labeling Machines, of which the following is a specification, taken in connection with the accompanying drawings, which form a part of the same.

This invention relates to double-labeling machines which are adapted to apply labels to both sides of a series of articles as these articles are fed intermittently along the runway.

In the accompanying drawings, in which the same reference characters refer to similar parts in the several figures, Figure 1 is a vertical section taken longitudinally through a machine embodying this invention. Fig. 2 is a vertical transverse section showing the label-box and mechanism for operating the same. Fig. 3 is a partial plan view of this device. Fig. 4 is a transverse sectional view illustrating the paste apparatus. Fig. 5 is a transverse sectional view showing the controller. Fig. 6 is a similar view showing the presser mechanism.

The machine illustrated in the drawings comprises a rigid frame formed of a number of transverse members A, connected by suitable braces. Upon the top of this frame and extending longitudinally of the machine is a table A', formed of two members on either side of the center of the machine and adapted to support the feeder D so that it can reciprocate longitudinally. Upon the table are adjustably secured the guides A², which may be set so as to form a runway of any desired width. As is illustrated in Fig. 1, the feeder B has pivoted to it a number of feeding-pawls D', which are preferably spring-pressed upward, so as to project into the runway through the slot A³. These pawls are also preferably provided with a face D² of yielding material. The feeder is reciprocated by the feeder-link D⁵, which is adjustable in length, as is indicated, and which is pivoted to the pin D⁴ in the feeder. This link is connected at its rear

end to the feeder-lever D⁶, the other arm D⁷ of this lever being connected to the link D⁸. The power-shaft B extends longitudinally of the machine and is mounted in suitable bearings A⁴ in the frame members A. This shaft is driven by any desired means, such as the pulley B'. Upon this shaft is mounted the gear B², which, as is indicated in Fig. 5, meshes with the pinion B⁶. A bevel-gear on the same shaft as this pinion engages the corresponding bevel-gear B⁷, which operates the feeder-crank B⁸. This crank is connected to the link D⁸, and by this mechanism a reciprocation is given to the feeder D to intermittently feed a series of articles along the runway. In order to hold these articles in proper position at the several stations along the runway, retainers E are provided to engage these articles and hold them down upon the guides. These retainers are preferably formed of flat plates, as indicated in Figs. 1 and 6, and the pins E', secured to the retainer-bar E⁴, loosely engage slots in the retainers, so that they are allowed a considerable vertical movement. The retainers are, however, guided by the pins E², secured to them, which pass through suitable openings in the retainer-bar, so that the springs E³, which engage the retainers and press them downward, act in a regular manner, and the retainers are maintained in substantial horizontal position. The retainer-bar is adjustably mounted in supports E⁵, secured to the frame of the machine, so that the retainers may be used in connection with articles of any desired size to properly hold them upon the runway. It is understood, however, that it is not necessary to employ retainers of this form, and other means may be used to hold the articles upon the runway so that the labeling devices coact with them properly.

The articles are fed one by one into the rear end of the runway by the controller. (Shown in Fig. 5.) A number of the articles are arranged in the inclined chute C⁵ and tend to slide down the same, so as to be guided by the gage-pieces A⁵ and A⁷ into the rear end of the runway, these articles engaging suitable yield-

ing material A⁶ at this point. The controller C is secured to the pin C³, which is mounted in suitable bearings in the vertically-adjustable frame C⁴, and it is oscillated about this
 5 pin by the link C⁵, connected to the lever C⁷, which in turn is operated by the eccentric-strap C⁸, which engages the eccentric B³ on the power-shaft. This controller C is adapted to engage the foremost article of the series when
 10 it is moved downward, or when moved upward into the position indicated in Fig. 5 the first article of the series is released and allowed to enter the runway, as is indicated. When the controller assumes this position, the spring-
 15 stop C' on the rear of the same engages the succeeding article and holds it upon the chute until the controller is once more oscillated, so that the stop is released from this article, which thereupon moves downward against the
 20 controller.

It is very desirable in many instances that labels shall be applied simultaneously to both sides of articles, and this is accomplished in this machine by arranging labeling devices on
 25 either side of the runway which are simultaneously actuated and apply labels accurately to both sides of articles fed along the runway. While in this instance the labeling devices are shown as mounted to move horizontally into
 30 engagement with the articles on the runway, this is not necessary in all cases, and the labeling devices may be arranged in any desired way so as to properly coact with the runway. These labeling devices preferably comprise
 35 paste apparatus, label-boxes, and presser-pads, which operate successively upon each article to apply labels to it.

The paste apparatus, which is indicated in Fig. 4, comprises paste-receptacles F³, which,
 40 as indicated, are adjustably mounted upon the rods F⁴. In each of these receptacles is mounted the paste-drum F¹, secured to the shaft F², upon which is mounted the drum-ratchet F². If desired, a suitable holding de-
 45 vice may be used in connection with this paste-drum, or the bearings in which it is mounted may be adjusted so as to hold it frictionally with the desired force. This paste-drum is given an intermittent rotation by the
 50 drum-pawl F⁶, which is pivoted to the arm F⁵ and which when the arm is moved in one direction engages the pin F⁷ and operates, in connection with the drum-ratchet, to feed the drum around one step. The paste apparatus is
 55 operated by the pair of eccentrics B⁴, secured upon the power-shaft and arranged in opposite phase. Each one of these eccentrics operates the geared sector G⁷ through the eccentric-arm G⁸. This sector oscillates the shaft G⁵ by
 60 engaging the pinion G⁶, secured to this shaft. The crank F⁹ is secured to the shaft G⁵ and operates the drum-pawl by the link F⁸, which is pivoted to this crank and to the member F⁵. The paste-pad G, which receives paste from
 65 drum and which when moved into the posi-

tion shown in dotted lines in Fig. 4 applies paste to articles upon the runway, is adjustably clamped to the pad-support G'. This support is secured to the pad-stem G³, which passes loosely through the swiveling sleeve
 70 G³, mounted in a suitable support. The pad-arms G⁴, secured to the shaft G⁵, are pivoted to the pad-support, and when these arms are oscillated the pad is moved into the position
 75 indicated in dotted lines, so that the pad is turned at substantially right angles to the position in which it engages the paste-drum by the engagement of the guiding-stem with the sleeve. It will thus be seen that the pad-arm,
 80 which is pivoted to the pad, serves to rotate the same and that the pad-stem, which has loose connection with the support through the swiveling sleeve, serves to oscillate the pad during its rotation, so that the pad is simul-
 85 taneously rotated and oscillated through the means shown. At each rotation of the power-shaft, therefore, the paste-pads on either side of the runway are moved out of engagement with the paste-drums and forced into contact with either side of an article upon the run-
 90 way, thus applying paste to it. Since the paste-pads are readily removable from the pad-supports, they may be replaced by pads of other sizes, so as to readily adjust the paste apparatus to apply paste throughout any de-
 95 sired extent of the articles upon the runway. It is of course apparent that at each oscillation of the power-shaft each of the paste-drums is turned through the mechanism described, so as to present another face to the action of
 100 the paste-pad, the drum dipping into the paste in the reservoir.

The label-boxes operating on either side of the machine to attach labels to the pasted articles on the runway are formed, as indicated
 105 in Fig. 2, and each of them comprises the label-box H, formed with the open end indicated and with the projecting ribs at this end of the label-box, the outer label projecting from the end of the box, as indicated. The
 110 label-box fits loosely over the plunger H' and is lightly held upon the same by the springs H² or by any other desired means. The plunger is adjustably secured to the label-support H³, which, as is indicated in Figs. 2 and 3, is
 115 mounted to slide upon the guides H⁴, supported in any desired way from the frame of the machine. The equalizer-slide K is also mounted on these guides and is connected with the label-support by the adjusting-rod H⁵, which
 120 may be secured in any desired position in the label-support. The inner end of this rod is formed with suitable collars, which loosely engage the equalizer-slide, and the spring H⁶, arranged as indicated, forms a yielding con-
 125 nection between the label-support and equalizer-slide which may be readily adjusted. The actuator-slide L is mounted on the guides, preferably inside of the equalizer-slide, and is connected with the latter by the equalizer-
 130

gear, so as to gradually feed the plunger forward as the labels are withdrawn from the label-box. This equalizer-gear comprises the rack K', pivoted in the equalizer-slide and connected with the spring K⁵, as indicated. The latch K² is pivoted to this rack and is engaged by the spring K⁴, as shown in Fig. 3. This latch when it engages the pin K³ upon the equalizer-slide K holds the rack in position to engage the pinion L', secured to the shaft L². Upon the lower end of this shaft is mounted the worm-wheel L³, which is engaged by the worm L⁴, driven by the ratchet-wheel L⁵, all of these elements being mounted upon the actuator-slide L, as is shown in Fig. 3. This ratchet-wheel is engaged by the holding-pawl L⁶, and at each reciprocation of the actuator-slide the feeding-pawl L⁷ engages this ratchet and feeds it around, so as to give a gradual feed to the pinion L'. It will be seen by reference to Fig. 3 that when the labels have become nearly exhausted from the label-box, as is shown in Fig. 2, the latch will engage with the stationary stop or striker K⁶ on the frame of the machine upon the forward movement of the parts. The outer end of this latch will thus be forced backward, so that the latch is disengaged from the pin K³. The spring K⁵ then acts to swing the rack K' about its pivot, so as to disengage it from the pinion L'. The outward movement of the actuator-slide carries the equalizer-slide with it; but since the rack and pinion are disengaged the equalizer-slide and label-support remain stationary at the outer ends of the guides H⁴, so that the label-box no longer engages the articles of the runway. If desired, a spring may be employed between these two slides to force the equalizer-slide outward and as soon as it is released from the actuator-slide. The eccentrics B⁵ on the power-shaft operate the label-boxes, the rock-shafts L¹⁰ being oscillated by the eccentric-straps L⁹. The arms L⁸ on these rock-shafts are connected with the actuator-slides, so as to cause the label-boxes to simultaneously approach articles on the runway at each rotation of the power-shaft.

The presser-pads P are adjustably secured to the pad-supports P² by the thumb-nut P'. These pad-supports are slidably mounted on the guides P³ and are reciprocated by the actuator-slides M upon these guides through the yielding connection indicated in Fig. 6. This connection comprises the threaded rod M³, adjustably secured in the actuator-slide, and the forward end of this rod loosely engages the presser-slide. The nuts M⁴, acting in connection with the springs M⁵ on each side of the machine, yieldingly press the pads into contact with the articles. The actuator-slides M on either side of the machine are simultaneously operated by the rocker-arms M' on the rock-shafts L¹⁰, which are connected by the links M² with the actuator-slides.

In the operation of this machine the articles upon the chute are fed into the runway one by one by the controller, one article being fed into the runway at each revolution of the power-shaft. The reciprocating feeder then moves forward, the feeding-pawls engaging the articles upon the runway and feeding each of them forward one station. Then the labeling devices simultaneously move inward into contact with the articles, which are held downward by the spring-pressed retainers. After these labeling devices move outward, so as to be free from the articles, the reciprocating feeder moves backward, and the cycle of operations of the machine is completed.

Instead of using this machine to apply labels to both sides of articles it is evident that the articles may be fed into the runway in pairs and may be fed forward side by side, so that the labeling devices will apply labels to both of these articles simultaneously.

Parts of this machine may be used without employing all of the same, and certain parts of this machine may be used in connection with other devices without departing from the spirit of this invention. I do not, therefore, wish to be limited to the disclosure which I have made in this case; but what I claim as new, and what I wish to secure by Letters Patent is set forth in the appended claims.

I claim—

1. In a labeling-machine, laterally-adjustable guides to form a runway, a controller to feed articles into said runway, a reciprocating feeder to simultaneously feed a series of articles from station to station along said runway, spring-pressed retainers to hold articles at said stations upon said runway and labeling devices mounted on either side of said runway at the several stations to operate successively upon each article fed along said runway to apply labels to both sides of said articles.

2. In a labeling-machine, a runway, a feeder to simultaneously feed a series of articles from station to station along said runway, retainers to hold articles upon said runway at said stations and labeling devices mounted on either side of said runway at the several stations to operate successively upon each article fed along said runway to apply labels to both sides of said articles.

3. In a labeling-machine, a runway, a feeder to simultaneously feed a series of articles from station to station along said runway and labeling devices mounted on both sides of said runway at the several stations to operate successively upon each article fed along said runway to apply labels to both sides of said articles.

4. In a labeling-machine, a runway, means to simultaneously and intermittently feed a series of articles along said runway, spring-pressed retainers mounted at stations along said runway to hold articles upon said runway at said stations and labeling devices com-

prising pairs of paste devices, label-boxes and presser-pads mounted on either side of said runway at said stations to apply labels to both sides of said articles.

5 5. In a labeling-machine, a runway, a controller to intermittently feed articles into said runway, a reciprocating feeder to positively and simultaneously feed a series of articles from station to station along said runway and
10 labeling devices mounted on both sides of said runway at the several stations to operate successively upon each article fed along said runway to apply labels to both sides of said articles.

15 6. In a labeling-machine, guides to form a runway to support articles by engaging one side of the same, a feeder engaging said articles on the same side as the guides to simultaneously and positively feed a series of articles from station to station along said runway,
20 means engaging the opposite sides of said articles to clamp them upon said runway at the several stations and labeling devices mounted on both sides of said runway at the several
25 stations to operate successively upon each article to apply labels to both sides of the same.

7. In a labeling-machine, a paste-drum having a horizontal pasted surface, a pivoted sleeve mounted substantially above said drum,
30 a paste-pad having a stem secured to the same and passing through said sleeve, a pad-arm pivoted to said pad to carry said pad into engagement with said drum and into engagement with a vertical surface of an article, said
35 stem and sleeve serving to oscillate said pad as it is rotated by said arm.

8. In a labeling-machine, guides engaging articles along one side of the same to form a runway, a reciprocating feeder engaging said
40 articles on the same side as said guides to positively and intermittently feed a series of said articles from station to station along said runway, retainers engaging the opposite sides of said articles to hold the same down upon
45 said guides at the several stations and labeling devices mounted on either side of said runway at the several stations to operate successively upon the articles fed along said runway to apply labels to the free sides of the same.

50 9. In a labeling-machine, guides to engage articles along one side of the same to form a runway, a feeder between said guides to simultaneously feed a series of articles from station to station along said runway and labeling
55 ing devices mounted on either side of said runway at the several stations to operate successively upon articles fed along said runway to apply labels to both sides of said article.

10. In a labeling-machine, a label-box
60 mounted on guides, an equalizer-slide mounted on said guides and yieldingly connected with said label-box, an actuator-slide mounted on said guides, means to reciprocate said actuator-slide and compensating gear between
65 said actuator-slide and said equalizer-slide.

11. In a labeling-machine, guides to form a runway to support articles by engaging one side of the same, a feeder mounted below said runway to engage said articles on the same
70 side as the guides to feed articles along said runway, means engaging the opposite sides of said articles to clamp them upon the runway, labeling devices mounted on both sides of said runway, a power-shaft mounted below said
75 runway and substantially parallel thereto and eccentrics upon said shaft to simultaneously operate said labeling devices.

12. In a labeling-machine, a runway, a feeder to simultaneously feed a series of articles from station to station along said runway
80 and labeling devices comprising paste apparatus, label-boxes and presser-pads mounted on both sides of said runway at the several stations to operate successively upon each article fed along said runway to apply labels to
85 both sides of said articles.

13. In a labeling-machine, a runway, a feeder to simultaneously feed a series of articles from station to station along said runway
90 and labeling devices comprising paste apparatus and label-holders mounted on both sides of said runway at said stations to operate successively upon each article fed along said runway to apply labels to both sides of said articles.
95

14. In a labeling-machine, a runway, a feeder mounted below said runway to engage the lower side of articles to simultaneously
100 feed a series of articles from station to station along said runway, retainers engaging the tops of said articles to hold them upon said runway at said stations and labeling devices mounted on either side of said runway at the several stations to operate successively upon the articles fed along said runway.
105

15. In a labeling-machine, a runway, a feeder mounted below said runway to simultaneously feed a series of articles from station to station along said runway, retainers mounted
110 above said runway to engage the tops of said articles to hold the same upon said runway and labeling devices mounted on either side of said runway at the several stations to operate successively upon the articles fed along said runway.
115

16. In a labeling-machine, a runway, a feeder, to simultaneously feed a series of articles from station to station along said runway, retainers engaging one side of said articles to hold them upon said runway and labeling
120 ing devices mounted on opposite sides of said runway at the several stations to operate successively upon the free sides of articles fed along said runway.

17. In a labeling-machine, a runway, a controller to feed articles into said runway, a feeder to simultaneously feed a series of articles from station to station along said runway
125 and labeling devices mounted on either side of said runway at the several stations to op- 13

erate successively upon the articles fed along said runway.

18. In a labeling-machine, a runway, a feeder to feed articles from station to station along said runway, labeling devices mounted on either side of said runway at said stations to successively operate upon articles fed along said runway and a longitudinal power-shaft adjacent said runway provided with operating mechanism to operate said feeder and said labeling devices in unison.

19. In a labeling-machine, a runway, a feeder to feed articles from station to station along said runway, labeling devices at said stations to cooperate with said runway, a controller to feed articles into said runway and a longitudinal power-shaft parallel to said runway to operate said controller, said feeder and said labeling devices in unison.

20. In a labeling-machine, a runway, labeling devices mounted on either side of said runway, a power-shaft parallel to said runway, eccentrics on said power-shaft in opposite phase and connections to simultaneously operate said labeling devices from said eccentrics.

21. In a labeling-machine, a label-support carrying a label-box and mounted upon guides, an equalizer-slide mounted upon said guides and having an adjustable spring connection with said label-support, a reciprocating actuator-slide mounted upon said guides, equalizer-gear on said actuator and equalizer-slides to cause the gradual relative movement of said slides during their reciprocation, said equalizer-gear comprising a latch and a projection adjacent the path of said latch to disengage the same when the labels in said label-box are exhausted to disengage said equalizer-gear.

22. In a labeling-machine, a label-support mounted upon guides and carrying a label-box, a reciprocating actuator-slide, equalizer-gear to connect said actuator-slide and said label-support to cause the gradual relative movement of the same during their reciprocation, said equalizer-gear comprising a latch to disengage said actuator-slide and said label-support on the exhaustion of labels in said label-box.

23. In a labeling-machine, a label-support mounted on guides and carrying a label-box, a reciprocating actuator-slide and equalizer-gear connecting said label-support and said actuator-slide, said equalizer-gear comprising a pivoted latch and a projection in the path of said latch to disengage said equalizer-gear on the exhaustion of labels in said label-box.

24. In a labeling-machine, a label-support mounted upon guides and carrying a label-box, a reciprocating slide to operate said label-support and a spring-pressed threaded rod adjustably connecting said label-support and said slide.

25. In a labeling-machine, a polygonal paste-drum mounted on a paste-reservoir, a paste-

pad to engage a horizontal face of said drum provided with a stem passing through a swiveling sleeve, an oscillating paste-arm pivoted to said pad and means connected to said paste-arm to cause the intermittent rotation of said paste-drum.

26. In a labeling-machine, a polygonal paste-drum mounted in a paste-reservoir, a swiveling sleeve mounted substantially above said paste-drum, a paste-pad having a stem secured thereto passing through said sleeve and an oscillating paste-arm pivoted to said paste-pad and means operated by said paste-arm to intermittently rotate said paste-drum.

27. In a labeling-machine, a label-support mounted upon guides and carrying a label-box, a reciprocating actuator-slide, compensating gear connecting said label-support and said actuator-slide to cause the gradual relative movement of the same during their reciprocation and means to disengage said label-support and said actuator-slide when the labels in said box are exhausted.

28. In a labeling-machine, a label-support mounted upon guides to support a stack of labels, a reciprocating actuator-slide, compensating gear connecting said label-support and said actuator-slide to cause the gradual relative movement of the same during their reciprocation and means to disengage said label-support and said actuator-slide upon the exhaustion of said labels.

29. In a labeling-machine, a label-support to support a stack of labels, means to reciprocate said support and compensating gear between said support and said reciprocating means to cause a gradual relative movement of the same during their reciprocation, each reciprocation of said parts being accompanied by a corresponding relative movement of said support and reciprocating means.

30. In a labeling-machine, a label-support to support a stack of labels, a movable actuator, compensating gear to connect said support and said actuator and to cause the gradual relative movement of the same during their operation and means to disengage said actuator and said support when said labels are exhausted.

31. In a labeling-machine, a label-support to support a stack of labels, a movable actuator and compensating gear to connect said support and said actuator to cause the gradual relative movement of the same during their operation.

32. In a labeling-machine, a label-box, a plunger within said label-box, a reciprocating actuator-slide, compensating gear to connect said plunger and said actuator-slide and to cause the gradual relative movement of the same during their operation and means to disengage said plunger and said slide upon the exhaustion of labels in said label-box.

33. In a labeling-machine, a label-box, a plunger within said label-box, a reciprocating actuator-slide and compensating gear to con-

nect said plunger and said actuator-slide to cause the gradual relative movement of the same during their operation.

34. In a labeling-machine, a label-support,
5 a reciprocating actuator-slide and compensating gear between said support and said slide comprising a pivoted rack, a pinion gradually rotated during the reciprocation of said slide and means to releasably hold said rack and
10 pinion in engagement.

35. In a labeling-machine, a label-support, a reciprocating actuator-slide and compensating gear connecting said support and said slide, said compensating gear comprising a
15 rack, a pinion and a ratchet connected to said

pinion to rotate the same, said ratchet being actuated during the reciprocation of said actuator-slide.

36. In a labeling-machine, a runway, guides extending transversely of said runway, a label- 20 support mounted on said guides, a plunger detachably connected to said support, a label-box fitting over said plunger to contain labels, an actuator-slide mounted upon said guide below said label-box and a connection between said 25 slide and said label-support.

JAMES G. HENDRICKSON.

Witnesses:

HARRY L. DUNCAN,

ELLIS B. SOUTHWORTH.