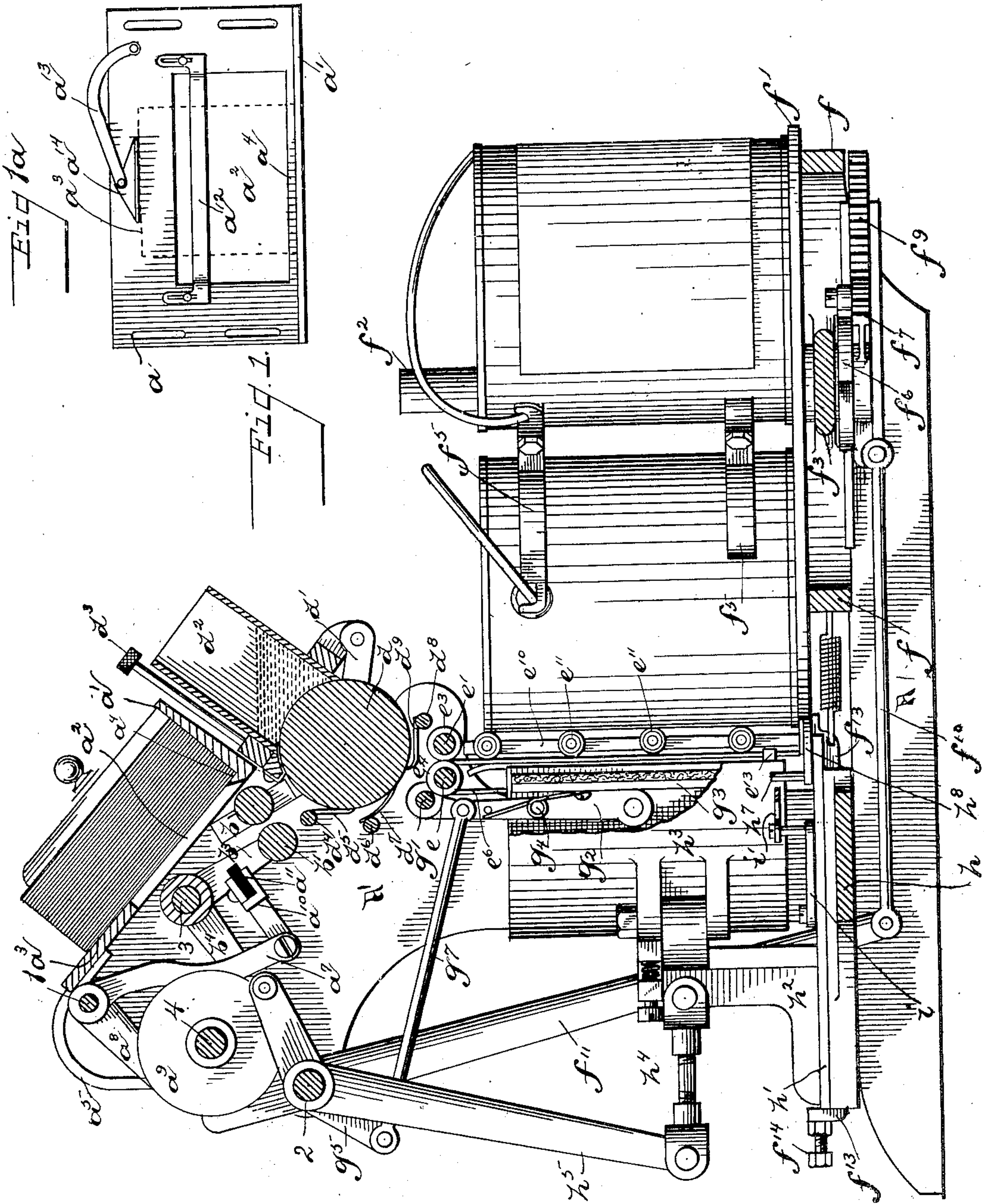


No. 812,936.

PATENTED FEB. 20, 1906.

D. W. KNEISLY.
LABELING MACHINE.
APPLICATION FILED SEPT. 2, 1904.

5 SHEETS—SHEET 1.



WITNESSES:

W. H. Lowell
Chas. J. Welch

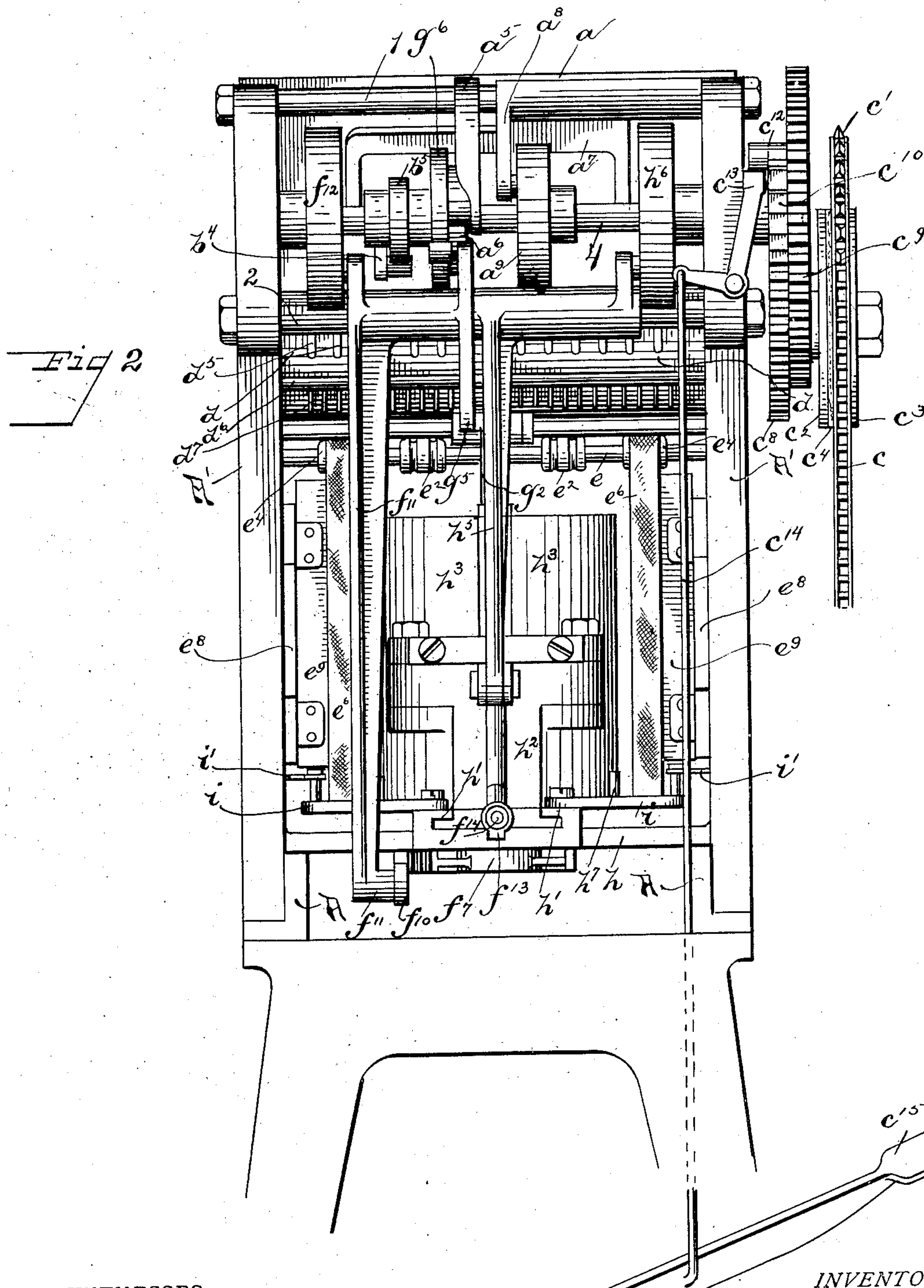
INVENTOR.

David W. Kneisly
BY
Staley & Brown
ATTORNEYS

D. W. KNEISLY.
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5 SHEETS—SHEET 2.



WITNESSES:

J. D. Lavellyn Walker
Chas. J. Welch

INVENTOR.

David W. Kneisly
BY
Staley & Brown
ATTORNEYS

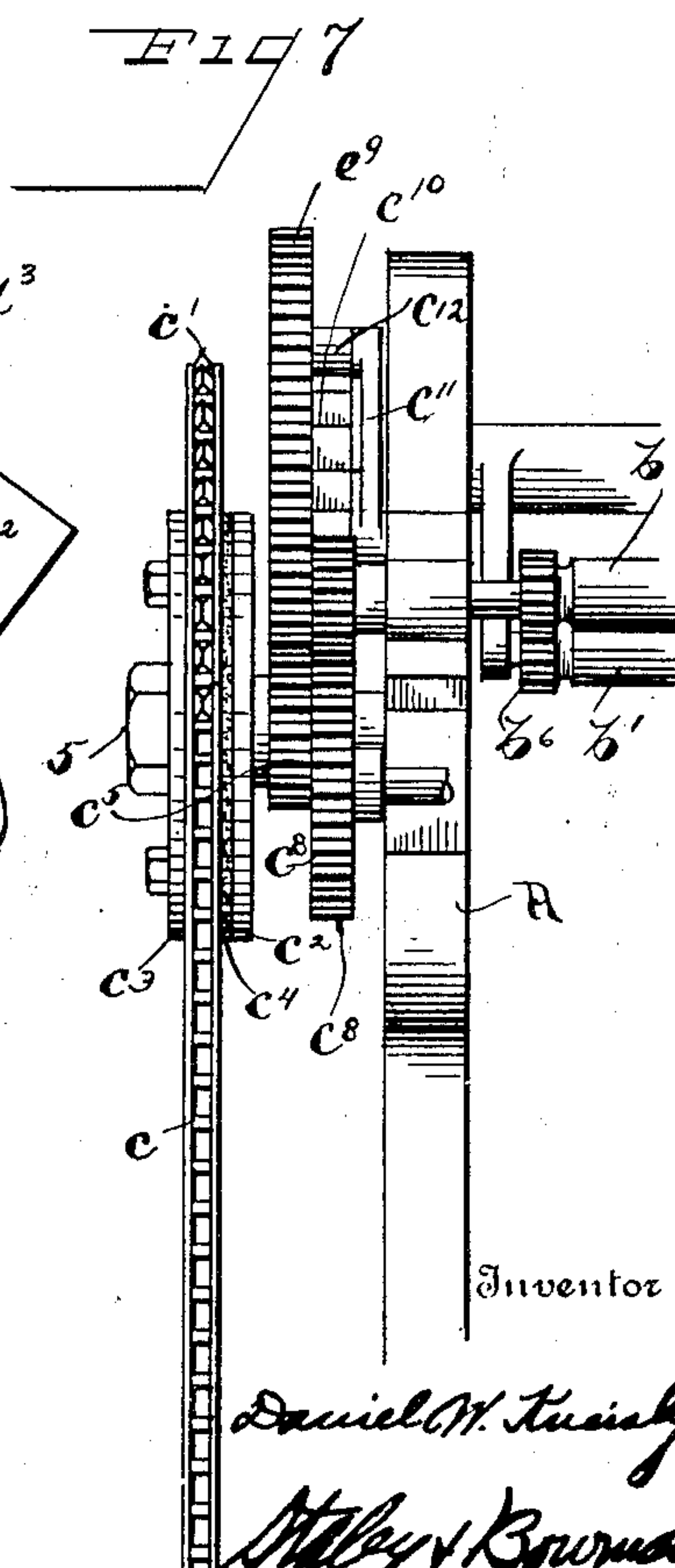
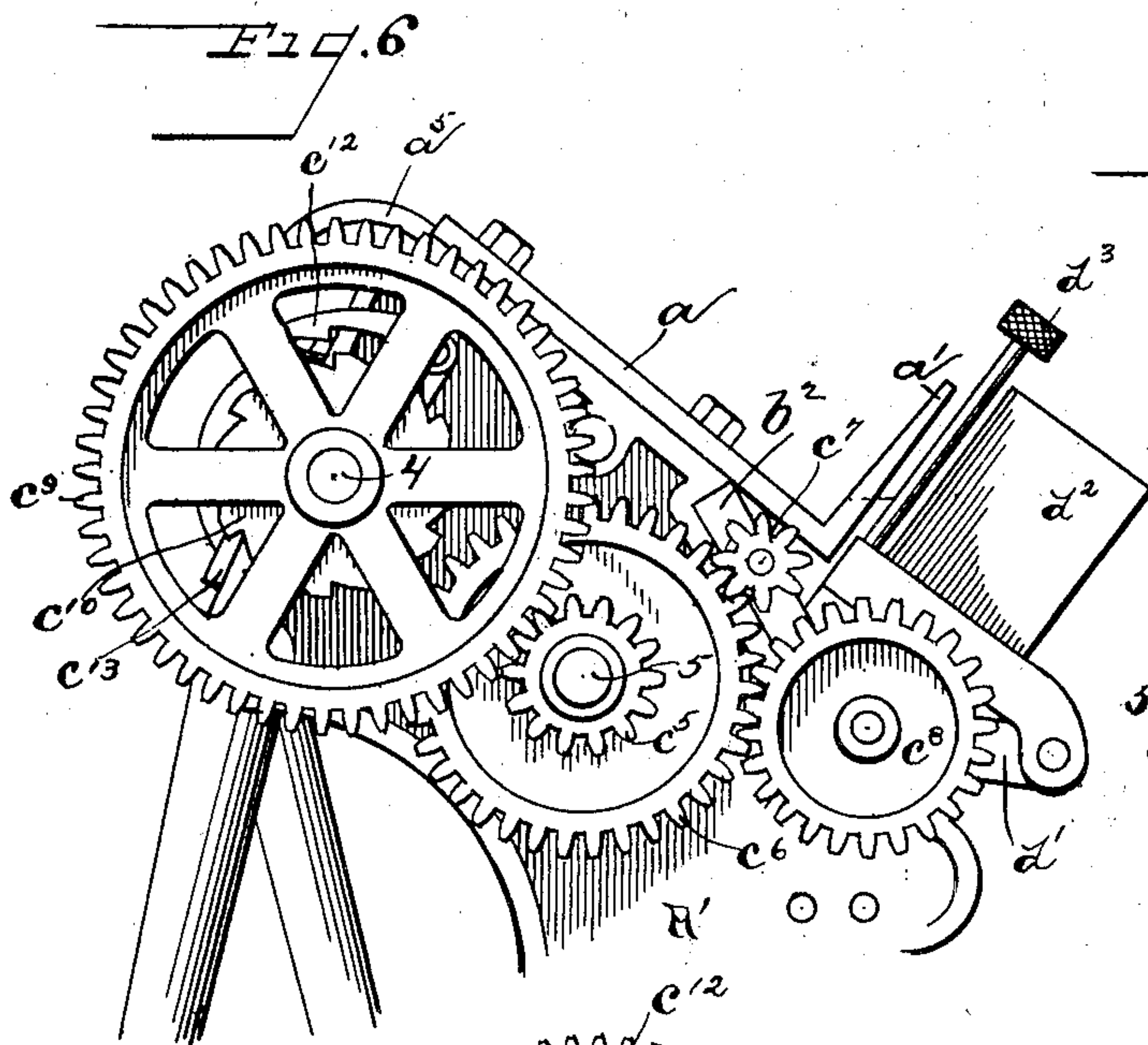
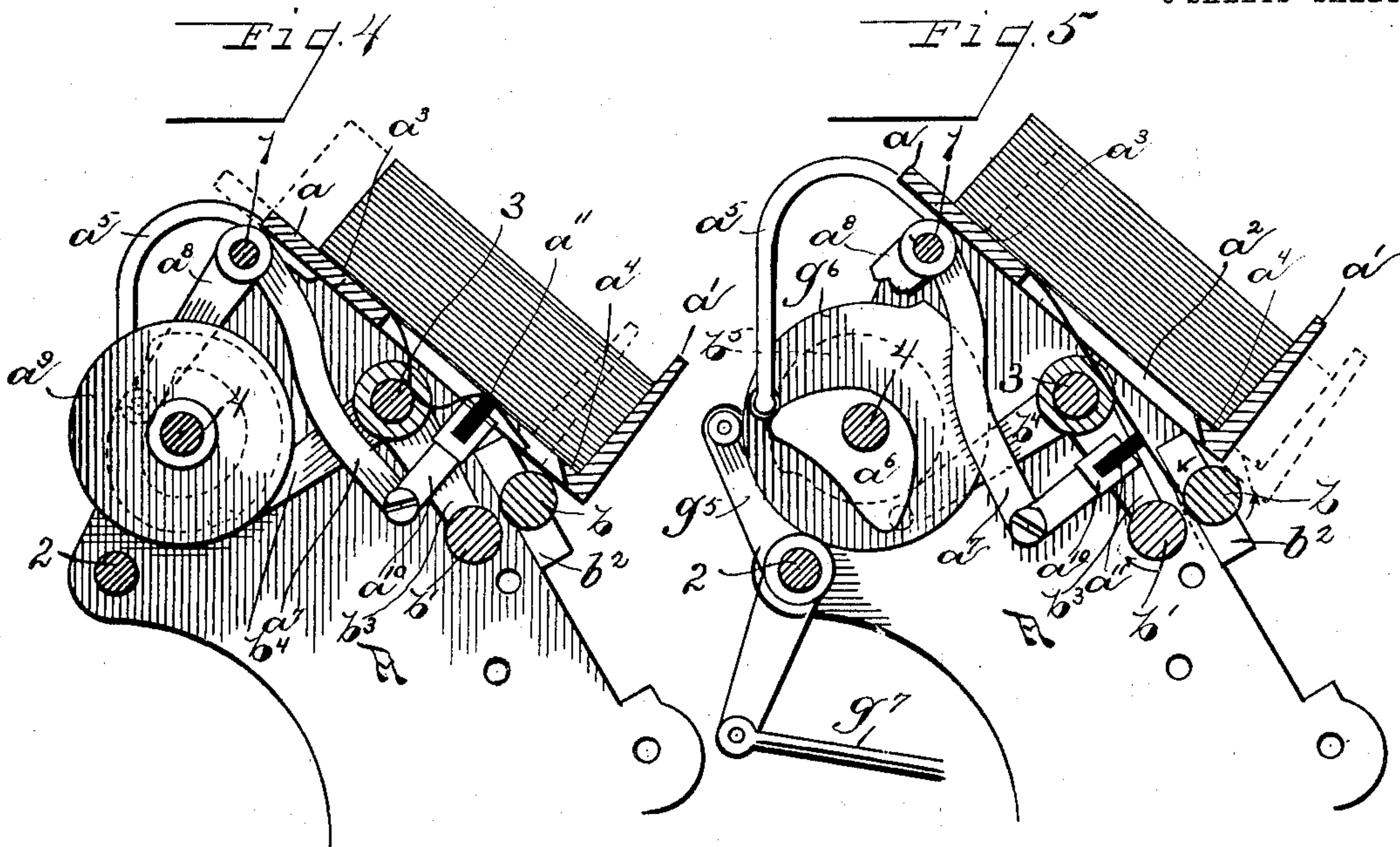
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5 SHEETS—SHEET 4.



Inventor

Daniel W. Kucich

Attesty & Brown
Attorneys

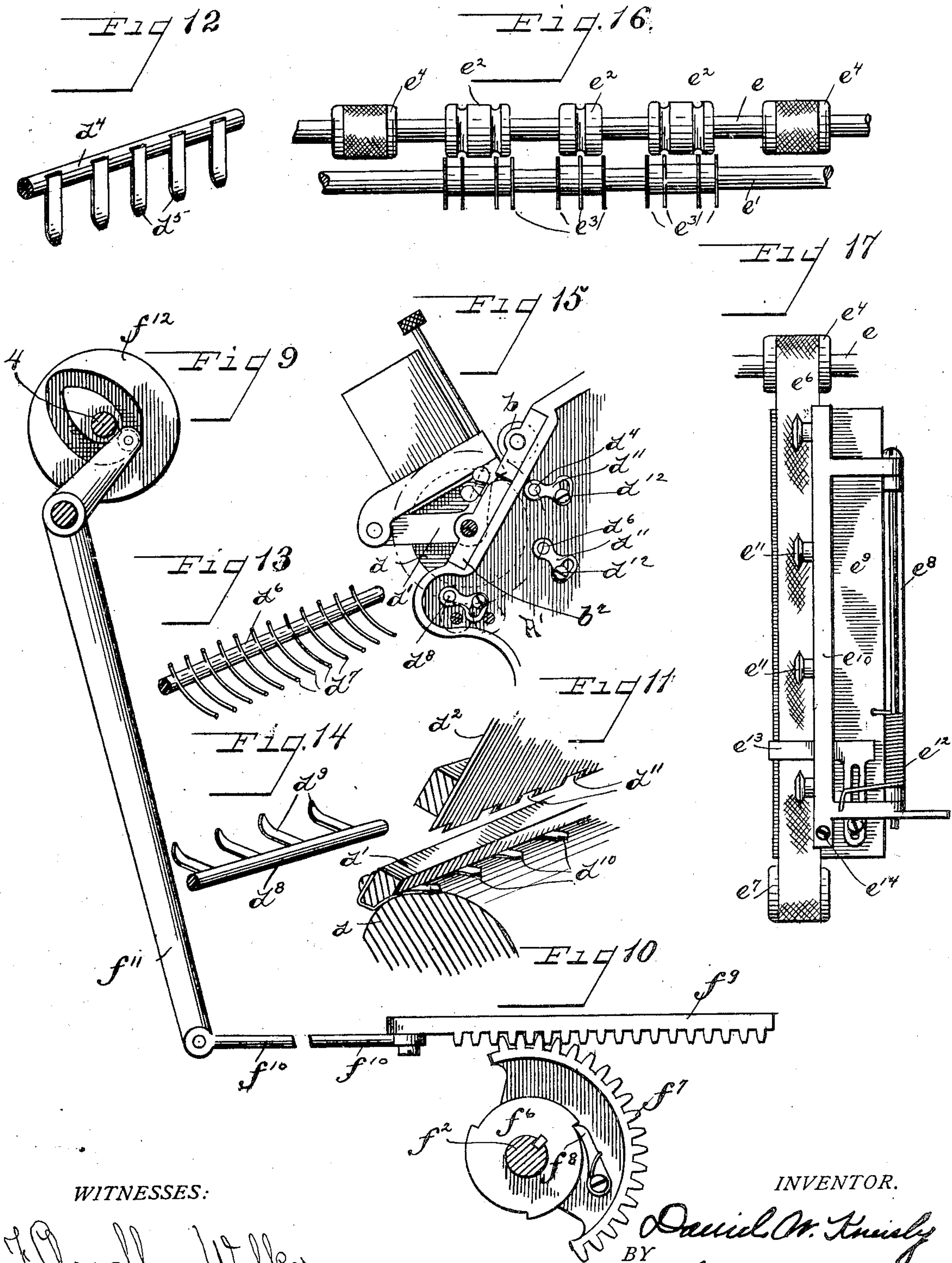
Attorneys

Witnesses

Chas J. Welch
Newbury, Mass

D. W. KNEISLY.
LABELING MACHINE.
APPLICATION FILED SEPT. 2, 1904.

5 SHEETS—SHEET 5.



WITNESSES:

J. Lowell Walker
Chas. D. Welch

INVENTOR.

BY *David W. Kneisly*
Stacy & Bowman
ATTORNEYS

UNITED STATES PATENT OFFICE.

DANIEL W. KNEISLY, OF DAYTON, OHIO, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE DRURY-KNEISLY MANUFACTURING COMPANY, OF DAYTON, OHIO, A CORPORATION OF OHIO.

LABELING-MACHINE.

No. 812,936.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed September 2, 1904. Serial No. 223,166.

To all whom it may concern:

Be it known that I, DANIEL W. KNEISLY, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Labeling-Machines, of which the following is a specification.

My invention relates to the application of labels to articles such as cans, buckets, and packages generally.

The application consists in giving to the label to be attached a partial preliminary attachment to the article and subsequently completing the application of the label. In the machine I have shown the label is preliminarily attached at the central part and is held in proper position while being attached at the center, and subsequently the parts of said label on each side of the center are attached to the can or other article and the holding means for the ends are thrown out of operative position.

The object of this invention is to provide novel means whereby labels may be rapidly and accurately placed upon articles having concave, convex, or flat surfaces, independent of any skill exercised by the operator, and also to simplify the construction and render it easy of operation.

With the above primary and other incidental objects in view my invention consists of the means, mechanism, construction, and mode of operation hereinafter described, and set forth in the claims.

In the drawings, Figure 1 is a longitudinal sectional view of the machine. Fig. 1^a is a detail plan view of the label-platen. Fig. 2 is an end elevation. Fig. 3 is a plan view of the machine with the top portions broken away. Figs. 4 and 5 are details of the label-feeding mechanism. Figs. 6, 7, and 8 are details of the driving mechanism. Figs. 9 and 10 are details of the article-feeding mechanism. Figs. 11, 12, 13, 14, and 15 relate to the pasting devices. Figs. 16 and 17 are details of the feeding mechanism for the pasted labels.

Like parts are represented by similar characters of reference in the several views.

A A represent shears, on which are supported upright portions A' A'. The upright portions A' are connected by a series of shafts 1 2 3 and form bearings for a revoluble cam-

shaft 4, which carries a series of cams by which various movable parts of the machine are operated in proper sequence.

Briefly stated, the operation of the machine is as follows: The articles to be labeled are placed by the operator on a revoluble table which is automatically moved to bring the article to proper position to be operated upon. The supply of labels is placed on a movable platen *a*, slidingly mounted on the upright frame portions A'. At each operation of the machine the lowermost label of the supply is withdrawn from the pile and caused to pass partially about the periphery of a paste-roll, by which it is given a thin even coat of paste. It is thence fed downwardly in a vertical position in proximity to the article to be labeled. The center of the label is pressed into contact with the article and the portions on either side are simultaneously stretched from the center and pressed until the whole is firmly in contact with the article.

Driving mechanism, (Figs. 6 and 7.)—The machine is adapted to be driven from a motor or other source of power by a chain *c*, which passes over a sprocket-wheel *c'*, Fig. 7, mounted on a stud 5, extending from the frame A'. The sprocket-wheel preferably consists of a ring clamped between two plates *c² c³*, with an intermediate leather disk *c⁴*, thereby constituting a frictional drive. By this construction in case the machine from any cause becomes disarranged the sprocket-ring not being positively connected would give, and thereby prevent the breakage of the parts. Also mounted on the stud 5 and secured to and adapted to rotate with the sprocket-wheel *c'* is a pinion *c⁵* and a gear *c⁶*, Fig. 6. The gear *c⁶* meshes with a pinion *c⁷* on the trunnion of the feed-roll *b* and also with the gear *c⁸* on the trunnion of the paste-roll *d*. Loosely mounted on the cam-shaft 4 is a gear *c⁹*, meshing with the pinion *c⁵*, and rigidly secured to the gear *c⁹* is a ratchet-wheel *c¹⁰*. An arm *c¹¹* is secured to the cam-shaft 4, Fig. 8, and carries at its upper end a spring-pressed pawl *c¹²*. A stop-arm *c¹³* is pivoted to the frame A', as shown in Fig. 2, and is provided with a connecting-link *c¹⁴* to a foot-lever *c¹⁵*, preferably secured to the lower part of the machine-frame. The stop-arm *c¹³* normally holds the spring-pressed

pawl c^{13} out of engagement with the ratchet-wheel c^{10} . The sprocket c' being continuously driven, the feed-rolls $b b'$ and the paste-roll d are also given a continuous rotary motion through their connecting-gears, and the gear c^9 and ratchet c^{10} revolve loosely on the cam-shaft 4. Upon operation of the foot-lever c^{15} the stop-arm c^{13} is withdrawn from its engagement with the pawl c^{12} , and said pawl drops into engagement with the ratchet-wheel c^{10} , and the shaft 4 is caused to rotate with said gear c^9 and ratchet-wheel c^{10} . As the shaft 4 nears the completion of its cycle the pawl c^{12} again contacts with the end of the stop-arm c^{13} and is disengaged from the ratchet-wheel c^{10} until the next operation of the foot-lever c^{15} at the will of the operator.

Label-feeding mechanism.—Slidingly mounted on the inclined top of the frame portions A' either by means of gibs or slotted connections is the platen a , adapted to carry the supply of labels. The platen is formed with an upwardly-extending wall a' on its lower edge against which the labels abut and a central opening a^2 . The labels when in position to be fed extend across this opening, one end of the pile resting on the portion a^3 of the platen and the other end on the ledge a^4 adjacent to the wall a' . The ledge a^4 is preferably undercut, as shown in the drawings. Rigidly secured to the platen a is an arm a^5 , equipped at its extremity with a roller which is in engagement with a cam a^6 on the cam-shaft 4. The shape of the cam a^6 is such that the platen will be twice moved upwardly and returned to normal position with each revolution of the cam-shaft 4. Pivotaly mounted on the shaft 1 is a yoke a^7 , provided with a rearwardly-extending arm a^8 , which engages a cam a^9 on a shaft 4, Figs. 1, 2, and 4. Secured to the yoke a^7 is a transverse bar a^{10} , having secured thereon a rubber strip a^{11} .

The process of feeding the labels from the pile is as follows: The shaft 4 being revolved, as hereinbefore described, the platen a , through the contact of the cam a^6 with the roller at the extremity of the arm a^5 , will cause the platen to slide upwardly, as indicated by dotted lines in Fig. 4. During this movement the cam a^9 , acting upon the arm a^8 , has moved the yoke a^7 until at the limit of the upward movement of the platen a the rubber strip a^{11} is pressed tightly against the bottom of the pile of labels, which will be at a point in proximity to the ledge a^4 . As the platen a with its load of labels begins its return movement the lowermost label adhering to the rubber strip a^{11} , which is still held in close contact therewith, will be pulled from its support upon the ledge a^4 , and as the return movement continues the lower label will be buckled behind the transverse bar a^{10} , as shown in Fig. 4. The label is now free at its forward edge and extends through the opening a^2 . The platen a through the cam a^9

is again returned to its upper position and the yoke a^7 is permitted to drop back to normal position, as shown in Fig. 5. Upon the second return of the platen a to its normal position, as indicated by dotted lines, Fig. 5, the free end of the label will be projected between the feed-rolls $b b'$. The feed-roll b is stationary and provided with bearing-blocks b^2 , secured to the frame A' . The roller b' is mounted in a yoke b^3 , mounted on the shaft 3 and provided with a rearwardly-extending arm b^4 , which is operated upon by the cam b^5 on the cam-shaft 4 to rock the yoke b^3 upon its shaft 3 and bring the rolls $b b'$ into contact and impinge the end of the label. The normal position of the feed-rolls is slightly separated, as shown in Figs. 1, 4, and 5, with the end of the label projecting between said rolls, as hereinbefore explained. Near one end of the rolls $b b'$ are intermeshing gears b^6 , Fig. 7, and the rolls are caused to continuously rotate, as indicated by the arrows in Fig. 5, as hereinbefore described. Upon operation of the foot-lever c^{15} the first movement will be the impinging of the end of the label by the feed-rolls $b b'$. The rotary movement of the rolls, together with the upward movement of the platen a preliminary to the feeding of the next label, will pull the rear end of the label from its engagement on the portion a^3 of the platen and the label will pass between the rolls $b b'$ to the pasting devices. In feeding very thin labels which buckle more readily than those of heavier material the adjustable bar a^{12} , Fig. 1^a, is employed, by which the size of the opening a^2 in the platen a may be regulated. Adjustably secured to the platen a there may also be an arm a^{13} , having a head a^{14} , which is useful in keeping the pile of labels in proper position on the platen, as shown in dotted lines in Fig. 1^a.

Pasting devices.—The pasting devices consist of a metal roller d , journaled in a frame d' , removably secured to the frame A' . As hereinbefore mentioned, the roller d is given a revoluble movement through the gear c^8 on one of the trunnions thereof and meshing with the gear c^6 on the stud 5. Hinged to the frame d' is a paste-reservoir d^2 , which consists of a rectangular box, whose bottom is formed by the upper surface of the roller d . An adjusting-screw d^3 , passing through an extended portion of the reservoir d^2 and into the frame d' , provides means whereby the relation of the lower edge of the reservoir with the surface of the roller may be regulated, and thereby the thickness of the film of paste carried from said reservoir upon the surface of the roller. Adjacent to the paste-roller d and below the feed-rolls $b b'$ is a transverse rod d^4 , provided with pendent fingers d^5 , which press upon the roller d . (Detail Fig. 12.) As the label is projected upon the rollers $b b'$ it is carried between the paste-roller d and the rod d^4 and by fingers d^5 is

pressed against said paste-roller. Below the rod d^4 is a second transverse rod d^6 , equipped with a plurality of transverse spring-wires d^7 , (see detail Fig. 13,) forming a flexible brush, by which every portion of the label is pressed closely into contact with the paste-roller. By thus being pressed into contact with the paste-coated roller the label is given a thin film of paste. Below the paste-roller d is a transverse rod d^8 , having a plurality of lateral fingers d^9 , Fig. 14, upturned at the end and extending in a direction opposite to the course of travel of the label. The object of the fingers d^9 is to disengage the paste-coated label from the roll. In order that the fingers d^9 shall not gather paste from the roll, a series of corresponding fingers d^{10} are secured to the frame d' within the paste-reservoir d^2 . These fingers d^{10} scrape the paste from the roll in narrow paths which correspond to the paths of the fingers d^9 . To accommodate the fingers d^{10} , the lower edge of the paste-reservoir d^2 is indented, as at d^{11} , Fig. 11. To regulate the pressure of the various fingers d^5 d^9 on the paste-roll d , each of the shafts d^4 , d^6 , and d^8 are provided outside the frame A' with a slotted arm d^{11} and a set-screw d^{12} , as shown in Fig. 15. Immediately below the paste-roll d are two transverse shafts e e' . Intermediate of its ends the shaft e is provided with several grooved rollers e^2 , and mounted on the shaft e' in positions corresponding to the ends and grooves of the rolls e^2 are a plurality of disks e^3 . The peripheries of the disks e^3 and the rolls e^2 are tangent. Located near either end of the shaft e is a roller or pulley e^4 , over which passes an endless tape e^6 . The tape e^6 at its lower end passes over an idler-pulley e^7 , attached to the frame of the machine. The shafts e and e' with the rollers and disks thereon are caused to rotate by gears mounted on the ends thereof and meshing with a gear on the trunnion of the paste-roll d , as indicated by dot-and-dash lines in Fig. 15. Mounted in brackets e^8 , which in turn are secured to the frame A' , are vertical plates e^9 , which extend between the pulleys e^4 and e^7 , and with the surfaces of which the downwardly-moving sides of the endless tapes e^6 are in contact. Hinged to the respective brackets e^8 is a spring-pressed frame e^{10} , having pivotally mounted on its inner edge a series of disks or wheels e^{11} , having comparatively narrow faces, which by means of the spring e^{12} are normally held in contact with the moving tapes e^6 , the pressure of the disks e^{11} on the tapes e^6 being variable through means of a set-screw e^{14} . Adjustably secured to the plates e^9 is an adjustable stop e^{13} , which extends laterally over the surface of the tape e^6 . As the label is directed away from the paste-roll d by the fingers d^9 it passes between the rolls e^2 and the disks e^3 and is fed downwardly in a vertical position by said rolls and disks with the assistance of

the endless tapes e^6 until limited by the adjustable stop e^{13} . The disks e^3 and wheels e^{11} , having comparatively small bearing-surfaces, do not remove an appreciable amount of paste from the paste-coated side of the label over which they travel. The paste-coated label now resting on the lower edge of the adjustable stop e^{13} and supported at its sides between the endless tapes e^6 and the wheels e^{11} is in position to be applied to the article.

Article-feeding mechanism.—During the time the label is being fed and coated with paste, as has been described, the article will have been brought into position to be operated upon. Upon the shears A there is formed a circular run f , which constitutes a supporting-track for a rotary table f' , having a central shaft f^2 , provided with a bearing in the cross-tree f^3 between the shears A . The rotary table has been shown in a trifoliate form, each lobe of which forms a support for one article to be labeled. Upon the shaft f^2 are located collars f^4 , to which are secured concave arms f^5 , whose radii are equal to the outside diameter of the article, by which means the article is properly located on the rotary table. Preferably below the cross-tree f^3 there is secured to the shaft f^2 by a key, set-screw, or otherwise a ratchet-wheel f^6 , having three teeth therein corresponding to the three lobes of the table. Adjacent to the ratchet-wheel f^6 there is loosely mounted on the shaft f^2 a gear-segment f^7 , carrying a spring-pressed pawl f^8 , which engages the ratchet-wheel f^6 . (See Fig. 10.) Mounted in suitable ways in the machine-frame and engaging the teeth of the gear-segment f^7 is a longitudinally-movable rack f^9 , having a link connection f^{10} with an arm f^{11} , pivoted on the shaft 2 and engaging with a cam f^{12} on the cam-shaft 4. By this construction the cam f^{12} gives to the rack a reciprocating movement which causes the gear-segment f^7 to move freely in one direction; but when moved in the opposite direction the ratchet-wheel f^6 will be engaged by the pawl f^8 and moved therewith, causing the rotary table to be moved so as to bring at each operation the next succeeding lobe of said table to operative position, where it will be engaged and held by the nose of a spring-actuated latch-bar f^{13} , slidably mounted in the cross-tree h . Each lobe of the table is provided with a notch f^{14} for the engagement of said latch.

Label-pressing devices.—Midway of the machine on a transverse shaft g' is pivoted a pendent arm g^2 , having at its lower end a versatile connection with a narrow plate g^3 , coated with some resilient material, preferably sponge-rubber. This plate g^3 is normally held in position by a spring g^4 , attached thereto and engaging a projection on the arm g^2 . Pivoted on the shaft 2 is a lever g^5 , (see Figs. 1 and 5,) the upper end of which is engaged

by a cam g^8 , and the lower end having a link connection g^7 with the pendent arm g^2 . Upon the revolution of the cam-shaft 4 the arm g^5 will be moved about its pivotal point by the cam g^6 , and through the link g^7 will cause the pendent arm g^2 to swing toward the article upon the rotary table f' . The plate g^3 will contact with the central portion of the label and press it into contact with the article, the resilient covering of the plate and its hinged connection with the pendent arm g^2 permitting the pressure to be applied firmly and evenly. Mounted in gibs h' on the cross-tree h is a sliding head h^2 . Hinged to the head h^2 are two concave wings h^3 , whose interior surfaces correspond to the surfaces of the articles to be labeled, said interior surfaces being lined with sponge-rubber or other resilient material. The head h^2 with its wings h^3 is given a reciprocating movement within its gibbed ways through the link connection h^4 with the lever h^5 , pivoted on the shaft 2 and adapted to be operated upon by the cam h^6 upon the cam-shaft 4. As the head h^2 moves forward the forward edges of the wings h^3 , which have been during the previous rearward movement of said head forced toward each other by contact with the pins h^7 in the cross-bar h^8 , attached to the gibs h' , contact with the label on either side of the plate g^3 , and as the head h^2 continues to move forward the wings are forced apart by being pressed against the article and interposed label and by the friction of the forward edges upon the label stretch it in opposite directions from the plate g^3 until at the limit of the stroke of the head h^2 the wings are in perfect contact with the labeled article, and together with the plate g^3 exert an even pressure over the entire label. In order that sufficient friction may be had between the edges of the wings h^3 and the label to properly stretch the latter, brake devices are provided for the hinges of said wings h^3 , which consist of the cross-bar h^9 , secured to the head h^2 , having shoulders h^{10} , against which abut spring-pressed brake-shoes h^{11} , which bear upon the hinged joints of the wings and head h^2 . Screws h^{12} are provided by which the pressure of the brake-shoes h^{11} may be regulated. At the rear limit of the stroke of the head h^2 it contacts with an adjusting-screw f^{14} in the upturned rear end of the latch-bar f^{13} , which slides in independent ways, either in the bottom of the ways provided for said head h^2 or in the under side of the head itself. The contact of the head h^2 with the adjusting-screw f^{14} will move the latch-bar f^{13} sufficiently to release the rotary table f' , so that it may be turned to bring the next article to proper position. In order that as the label is being pressed toward the article by the action of the wings h^3 a portion of the paste shall not be scraped from the label by the wheels e^{11} upon the spring-pressed frame e^{10} , said frame

carrying said wheels is caused to move outwardly, as in dotted lines, Fig. 3, and so release the sides of the pasted label. The mechanism by which this movement is accomplished is as follows: Pivoted upon the respective gibs h' are two L-shaped levers i , one arm of each extending into the path of the head h^2 . Links i' connect the extremities of the opposite arms with arms i^2 on the respective spring-pressed frames e^{10} . As the head h^2 travels forward it contacts with the arms of the levers i , extending within its path, and presses these arms outwardly, which movement is transmitted through the links i' to the spring-pressed frames e^{10} , causing them to move about their hinged connections with the brackets e^8 , as indicated by dotted lines in Fig. 3.

While the operations are separately described, it is to be understood that the various cams on the shaft 4 are so timed that several of the operations shall be performed simultaneously. Thus while the label is being pasted and fed to position the rotary table is being moved to bring the article to position to be operated upon, and while the paste-label is being pressed into position the label for the next operation is being fed from the platen a preparatory to being pasted.

It will thus be seen that I provide a machine which is automatic in operation, simple, cheap, and durable in construction, by which articles having convex surfaces may be accurately and rapidly labeled.

Having thus described my invention, I claim—

1. The combination, in a labeling-machine, of means for supporting labels, devices for feeding same, supporting devices for the article to be labeled, means for giving a partial attachment of the label to the article to be labeled, and additional devices, shaped to conform to the contour of said article, to engage said label at or near the point of first attachment and stretch same about said article and then apply pressure to substantially all parts of said label, substantially as and for the purpose specified.

2. In a labeling-machine, the combination of feeding devices for labels and pasting devices therefor, means for holding the labels in proper position for applying same to the article to be labeled, and, while said label is being held in proper position, means for finishing the application of said label to the article to be labeled, and means for throwing out of operative position the holding devices for said label simultaneously with the final applying of the label to the article.

3. The combination, in a labeling-machine, of means for supporting labels, devices for feeding same, supporting devices for the article to be labeled, means for giving a partial attachment of the label to the article to be labeled, and devices adapted for stretching said

label and at the end of its movement for pressing all parts of said label to said article, substantially as specified.

4. The combination, in a labeling-machine, of means for supporting labels, devices for feeding same, supporting devices for the article to be labeled, means for giving a partial attachment of the center of the label to the article to be labeled, and a pivoted device on each side of the center of said label shaped to conform to the contour of said article adapted to stretch and apply the free ends of said label to said article, substantially as specified.

5. In a labeling-machine, a supporting device for the labels, a buckling device, means for operating each of said devices, means for causing the supporting device to have two complete operations during the time said buckling device is given one complete operation, and pasting and applying devices, for the purpose specified.

6. In a labeling-machine, the combination of a main operating device, a movable support for the labels, a support for the articles to be labeled, a device cooperating with said label-support to effect the disengagement of one of the labels from said support by the movement of said support, feeding devices normally out of engaging position, and means for throwing said feeding devices into position for engaging the end of said labels, substantially as specified.

7. The combination of a supporting device with a buckling device, a main operating device for both of said devices, feeding-rolls located in proximity to said buckling device, one of said rolls being normally out of engaging position, a ratchet-and-pawl connection between said last-mentioned feeding-roll and the main operating device, and controlling means for connecting said ratchet-and-pawl connection for throwing the feeding-roll into engaging position, and means for pasting and applying the label after same has been fed by said feeding-rolls.

8. The combination of a supporting device, a buckling device, and a main operating device for each of said devices, feeding-rolls, one out of engaging position, a ratchet-and-pawl connection between said last-mentioned feeding-roll and said main operating device, a plurality of springs connected with said pawl, and a controlling device adapted to contact against one of said springs for disconnecting said pawl-and-ratchet mechanism, and pasting and applying devices for said labels after same have been fed by said feeding-rolls.

9. The combination of a supporting device, a buckling device, feed-rolls, a main operating device for said devices, a pasting-roll, additional feeding devices consisting of grooved rolls and rotating disks, and applying mechanism, for the purpose specified.

10. The combination of a supporting device, a buckling device, feeding-rolls, a main

operating device for said devices, a pasting-roll, a plurality of fingers located in proximity to said paste-roll, two of said fingers having their ends approaching each other, and applying devices, for the purpose specified.

11. The combination of feeding devices, pasting devices, additional feeding devices comprising an endless band and a plurality of movable rolls, and means for limiting the pressure with which said rolls bear against said band, and applying devices, for the purpose specified.

12. The combination of feeding devices, pasting devices, additional feeding devices comprising an endless band and a plurality of spring-pressed movable rolls, and means for limiting the pressure with which said rolls bear against said band, and applying devices, for the purpose specified.

13. The combination of feeding devices for labels, supplemental feeding devices, applying devices consisting of a bar covered with resilient material, and a plurality of wings also covered with resilient material, one located on each side of said bar, and means for operating said applying devices, for the purpose specified.

14. The combination of means for feeding labels, means for feeding the articles to be labeled to applying position, means for yieldingly pressing one part of said label to the article, and means for stretching the ends of said label and simultaneously pressing the entire label to said article.

15. In a labeling-machine, the combination of feeding devices for the labels and pasting devices therefor, means for holding the label in its proper position for applying same to the article to be labeled and means for pressing the ends of said label against the article to be labeled, and spring-pressed brake devices for regulating the pressure against the labels, substantially as specified.

16. In a labeling-machine, a revoluble article-carrying table, movable label-support, label-pasting devices, label-pressing devices, a label-buckling device, and intermittent impinging label-feeding rolls, substantially as specified.

17. In a labeling-machine, an article-carrying table, label-pasting devices, label-pressing devices, a movable label-support, a buckling device cooperating with said movable support to buckle the lowermost label, and label-feeding rolls, substantially as specified.

18. In a labeling-machine, an article-supporting table, label-pasting devices, label-pressing devices, means for supporting the supply of labels at two opposite sides, means for disengaging the lowermost label at its forward side, and label-feeding rolls, substantially as specified.

19. In a labeling-machine, article-feeding means, label-feeding devices, label-pasting

devices, label stretching and pressing devices, means for actuating said devices comprising a cam-shaft and a series of cams thereon, driving mechanism, means for engaging
5 said driving mechanism and cam-shaft and means for automatically disengaging said driving mechanism and cam-shaft at the completion of the operation, substantially as specified.

10 20. In a labeling-machine, article-feeding mechanism, label-pasting mechanism, label-pressing mechanism, a label-support, means for withdrawing the forward edge of the lowermost label from said support, feed-rolls, and
15 means for retaining the pasted label in an upright position until applied to the article, substantially as specified.

21. In a machine as described, the combination with label-feeding devices, label-applying devices, of a supporting-frame, a roller
20 mounted in said frame, actuating means for said roller, a paste-inclosure surmounting said roller, and adjusting means for varying the relation of said inclosure and roller whereby
25 by the thickness of the film of paste carried by said roller from said inclosure may be regulated, substantially as specified.

22. In a machine as described, the combination with label-feeding devices, article-supporting devices, and label-applying devices,
30 of a paste-inclosure, a movable bottom for said paste-inclosure, and means for adjusting the relation of said inclosure and movable bottom, whereby the thickness of the film of
35 paste discharged from said inclosure may be regulated substantially as specified.

23. In a machine as described, article-supporting devices, label-feeding devices, and label-applying devices, label-pasting devices,
40 feeding devices for the pasted labels comprising a roll having a series of offsets thereon, a shaft carrying a series of disks registering with the offsets of said roll, endless carrier-belts, supporting-rolls cooperating therewith,
45 substantially as and for the purpose specified.

24. In a machine as described, article-supporting devices, label-feeding devices, label-pasting and applying devices, means for advancing the pasted label comprising an endless
50 belt, rollers of comparatively narrow face cooperating with said belt, an adjustable stop for the pasted label, and means for moving said rollers from contact with the pasted label, substantially as specified.

55 25. In a machine as described, article-supporting devices, label-feeding devices, label-pasting and label-applying devices, advancing mechanism for the pasted label comprising endless belts engaging the face of said label,
60 a series of rollers engaging the pasted side of said label, a supporting-frame for said rollers, an adjustable stop for said pasted label, and means for releasing the pasted label from said belts and rollers, substantially as specified.
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26. In a machine as described, the combination with label-feeding, article-supporting, label-pasting and label-applying devices, of feed-rolls for the pasted labels comprising a
70 roller having a series of offsets thereon and a roller composed of a series of comparatively narrow-faced members registering with the offsets of the first-named roller, substantially as specified.

27. In a machine as described, the combination with label-feeding, article-supporting,
75 label-pasting and label-applying devices, of advancing devices for the pasted label comprising an endless belt, a series of rollers normally in contact with said belt, a hinged supporting-frame for said rollers, an adjustable
80 stop for the pasted label, and means to move said supporting-frame on its hinged connection, substantially as specified.

28. In a machine as described, article-supporting, label-feeding, and label-pasting
85 devices, of a preliminary pressure member, a reciprocating member, hinged wing members on said reciprocating member adapted to be moved about their hinged connection by contact
90 with the article to be labeled, and tenacious material on said wing members, substantially as specified.

29. In a machine as described, article-supporting mechanism, label-feeding and label-
95 pasting devices, a preliminary pressure member, a reciprocating member, hinged wing members on said reciprocating member, means for pressing said wing members into contact with the article to be labeled, means
100 for turning said hinged wing members toward each other upon the retraction of said reciprocating member, substantially as specified.

30. In a machine as described, article-supporting mechanism, label feeding and pasting
105 devices, label stretching and pressure devices comprising a reciprocating member, wing members hinged thereto whose forward edges are normally separated by a distance less
110 than the cord of the surface-segment to which the label is applied, but whose forward edges are adapted to be spread by contact with the article to be labeled, the inner surface of said
115 wing members being so shaped as to conform to the surface of the article to be labeled, and at the forward limit of their stroke to simultaneously press all parts of said label, substantially as specified.

31. In a machine as described, article-supporting, label-feeding, and label-pasting
120 devices, a pivoted spring-pressed pressure member, a reciprocating member, wing members carried thereby and so shaped as to conform to the segment of the article to be labeled, means for operating said reciprocating member
125 to simultaneously press all parts of the label after same has been preliminarily applied by said pressure member.

32. In a machine as described, article-supporting, label-feeding, and label-pasting de-
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vices, a preliminary pressure member, a reciprocating member, engaging surfaces on said reciprocating member, means for moving said surfaces laterally for the purpose of stretching the label at the end of the movement of the reciprocating member, said engaging surfaces being so shaped as to conform to the surface-segment of the article to be labeled at the limit of their movement for the purpose specified.

33. In a machine as described, movable ar-

ticle-supporting, label-feeding, and label-pasting devices, a reciprocating member, a lock for said article-supporting devices, and means for releasing said lock by the reciprocating member, for the purpose specified.

In testimony whereof I have hereunto set my hand this 10th day of August, A. D. 1904.

DANIEL W. KNEISLY.

Witnesses:

CHAS. I. WELCH,

CLIFTON P. GRANT.