

(No Model.)

2 Sheets—Sheet 1.

L. H. BRITTON.
DRUGGIST'S LABEL CASE.

No. 574,780.

Patented Jan. 5, 1897.

Fig. 1.

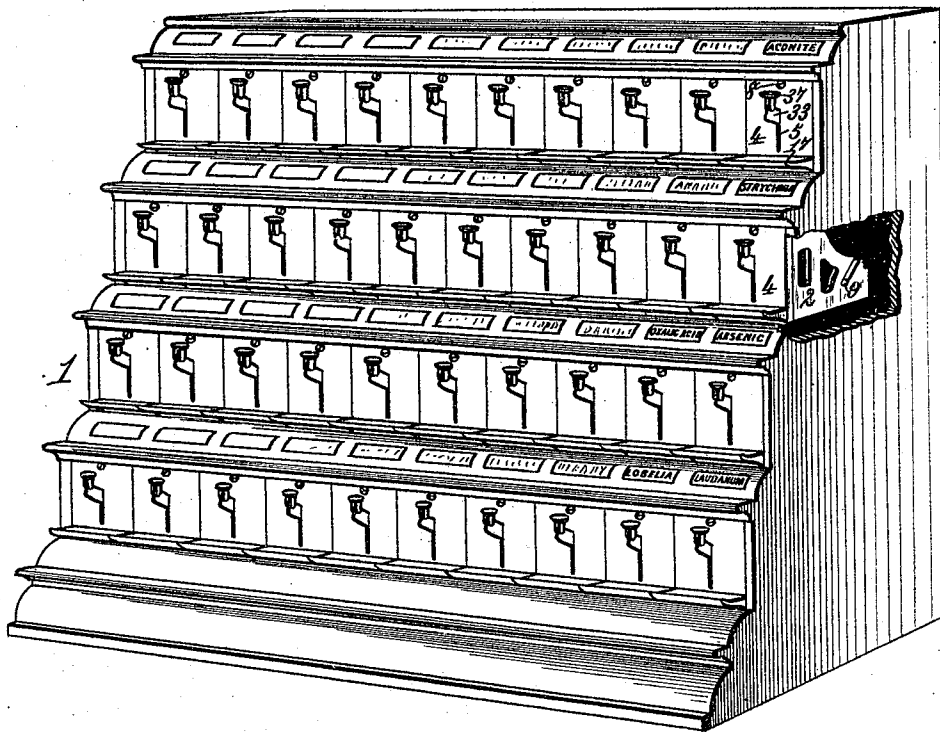
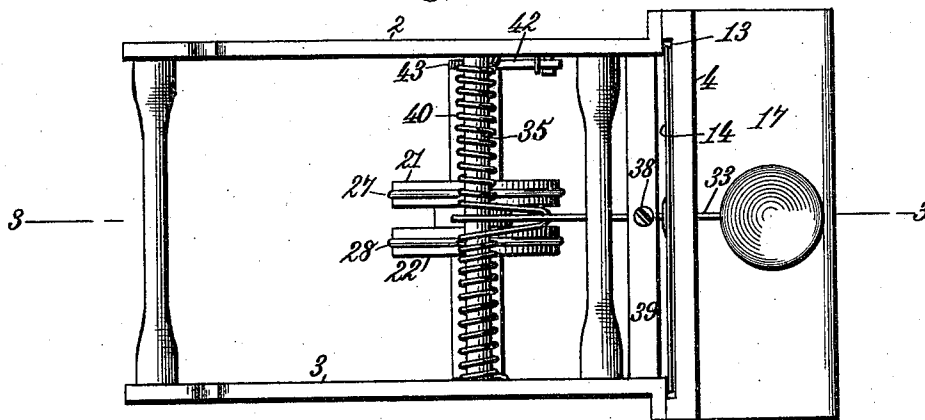


Fig. 2.



Witnesses:
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Thos. A. Burr

Inventor.
Louis H. Britton.
By James L. Norris.
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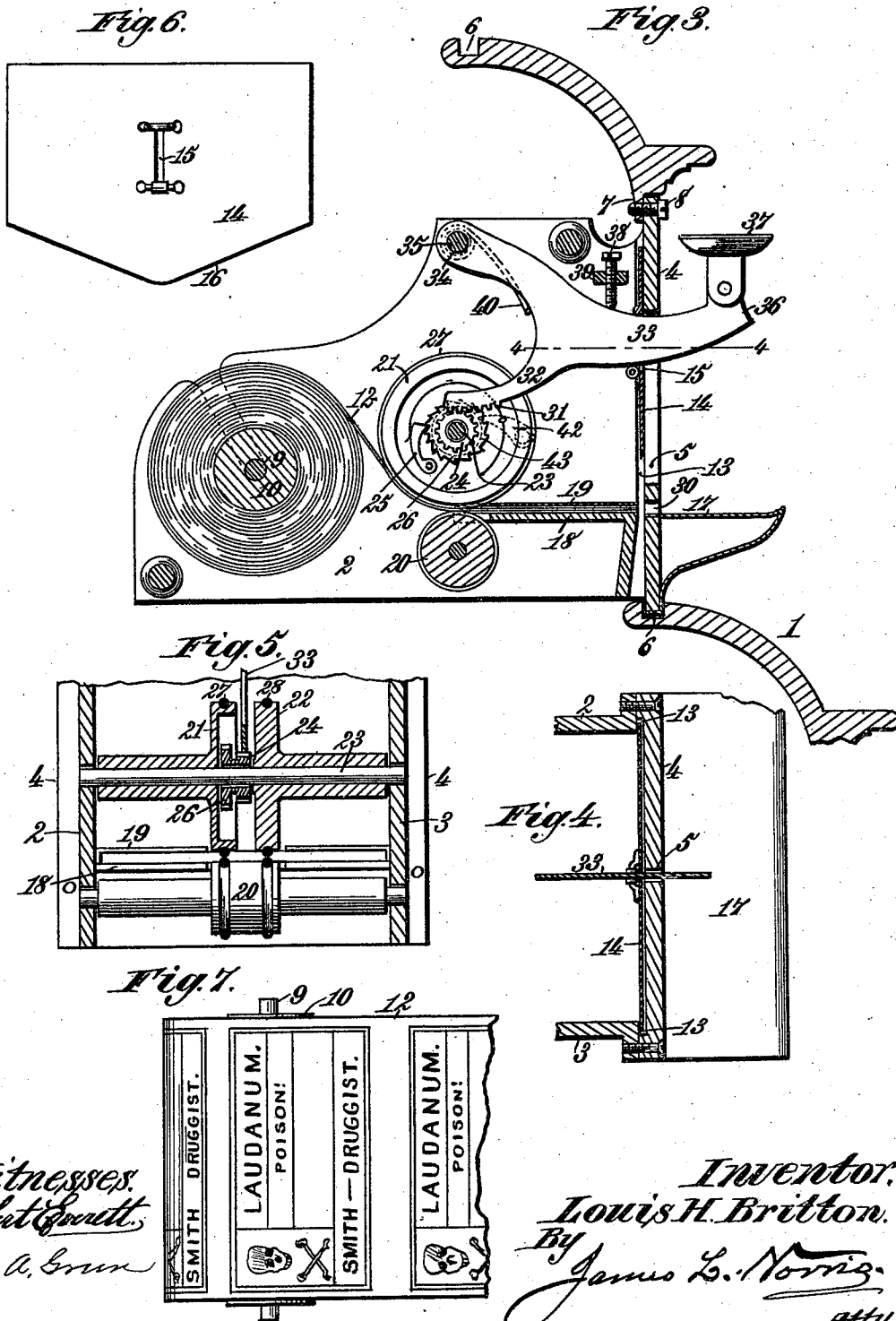
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

LOUIS H. BRITTON, OF LISBON, OHIO, ASSIGNOR OF TWO-THIRDS TO JOSIAH B. MORGAN AND WILLIAM H. PRITCHARD, OF SAME PLACE.

DRUGGIST'S LABEL-CASE.

SPECIFICATION forming part of Letters Patent No. 574,780, dated January 5, 1897.

Application filed February 21, 1896. Serial No. 580,255. (No model.)

To all whom it may concern:

Be it known that I, LOUIS H. BRITTON, a citizen of the United States, residing at Lisbon, in the county of Columbiana and State of Ohio, have invented new and useful Improvements in Druggists' Label-Cases, of which the following is a specification.

The chief object of my present invention is to provide a new and improved druggist's label-case having means for mechanically moving a web of druggists' labels and successively severing the labels, so that they are prepared ready for immediate application to the bottles, boxes, packages, or wrappers to indicate the druggists' medicines or substance contained therein.

The object of my invention is accomplished in the manner and by the means hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a broken perspective view of one form of druggist's label-case embodying my invention. Fig. 2 is a detail plan view of one compartment or section of the label-case. Fig. 3 is a vertical sectional view taken on the line 3 3, Fig. 2. Fig. 4 is a detail horizontal sectional view taken on the line 4 4, Fig. 3. Fig. 5 is a detail vertical sectional view taken longitudinally through the web advancing or feeding rolls. Fig. 6 is a detail front elevation of the shear-cutting knife, and Fig. 7 is a plan view of the rolled label-web with a portion unrolled to show the manner in which the label impressions are repeated.

In order to enable those skilled in the art to make and use my invention, I will now describe the same in detail, referring to the drawings, wherein—

The numeral 1 indicates the front portion of the druggist's label-case, which may be of any form, shape, or configuration suitable for the purpose and of sufficient size to enable it to be subdivided into fifty sections, more or less, according to the number of drugs, medicines, or substances for which labels are to be provided. The ordinary stock of printed labels kept by a druggist comprises about fifty different names to indicate, for example, arsenic, castor-oil, sweet-oil, laudanum, and other ingredients.

The compartments or sections composing

the improved label-case are each intended to contain a label-web and web operating and severing mechanism constructed according to my invention.

Inasmuch as the form of the label-web and the construction of the devices for advancing or feeding and severing the same into detached or separate labels are the same in all the compartments or sections of the case a description of the parts pertaining to one compartment or section is sufficient for a proper understanding of the parts in all the compartments or sections, and therefore I will only describe in detail a single label-web and the web advancing or feeding and severing devices pertaining to one compartment or section of the case, it being understood that the number of compartments or sections may be increased or diminished to any desired extent to suit whatever conditions may be required by the chemist or druggist.

The label-case proper is a structure adapted to receive a plurality of independent removable and replaceable frames, each composed, essentially, of vertical side plates 2 and 3, connected by a front wall 4, having a perpendicular slot 5 formed centrally therein. The lower edge of the front wall 4 is adapted to detachably engage a groove or seat 6 in the lower part of the front portion of the case 1, while the upper edge of the front wall of the frame is detachably secured to a flange 7, provided on the upper part of the front portion of the case. The connection between the front wall 4 and the flange 7 is preferably through the medium of screws 8, but any other suitable fastening devices may be employed which will render it possible to remove and replace the frame.

The vertical side plates 2 and 3 of the frame are provided with slots to receive the journals 9 of a roller 10, which carries or supports the rolled label-web 12, which is composed of a continuous strip of paper or other flexible material suitable for the purpose of forming labels for the use of druggists in labeling bottles, boxes, or packages of drugs, medicines, compounds, or other materials or substances forming a part of the stock of a druggist. The rolled label-web is provided on one surface with a continuous coating of gum or other adhesive material, so prepared and applied

thereto that it will not adhere until moistened, as usual with articles which are prepared with gum or adhesive surfaces. The opposite surface of the web is provided with manifold label impressions of the same subject-matter, as will be understood by reference to Fig. 7, the impressions being arranged at regular or approximately uniform distances apart for the purpose of rendering the web susceptible of being cut or severed between the impressions to produce detached or separate labels all prepared and ready for immediate application.

The label impressions may be consecutively numbered, and, in addition to the name and address of the druggist, may each contain the name of the drug, medicine, or substance which is to be placed in a bottle, box, or package to which the labels are attached. For example, all the impressions on one web will contain the word "Laudanum," while the label impressions on another web will contain the words "Castor-oil," and so on throughout the webs of the several sections of the label-case. The consecutive numbering of the labels enables the druggist to quickly observe the stock of labels in any particular roll. The label impressions may be prepared in blank and numbered consecutively, thus saving the time and trouble of numbering the labels at the time they are placed upon the bottles, boxes, or packages.

The label-web prepared in the manner described may be first convoluted and then placed upon the roll or web carrier or roller 10, or it may be directly wound into a roll upon the carrier or roller.

The front wall 4 of the removable and replaceable frame is constructed at its vertical side edges with flanges or offsets, as at 13, to produce a rectangular recess in the inner or rear side of the front wall for the reception of a vertically-reciprocating cutting-knife 14, having an approximately central slot 15, which is coincident with the slot in the front wall.

The lower end of the cutting-knife is formed or otherwise provided with an approximately V-shaped or convex cutting edge 16 for the purpose of severing the web by a shear-like cut, as will hereinafter appear.

The lower portion of the front wall 4 is provided with a horizontally-arranged shelf 17, having its upper surface approximately flush or coincident with the upper surface of a web-supporting platform or plate 18, secured between the side plates 2 and 3 of the removable and replaceable frame. A horizontal guide-plate 19 is arranged in proximity to and parallel with the top surface of the platform 18 in such manner that the label-web can be caused to traverse the space between the platform and the guide-plate, so that the platform sustains the web and the guide-plate holds the web down thereupon and guides the same in a proper manner to the cutting-knife. The guide-plate also prevents the web from being raised out of correct position when the

cutting-knife rises after it has been depressed to cut or sever a label from the web.

In juxtaposition to the inner edges of the web-supporting platform 18 and guide-plate 19 are journaled two web advancing or feeding rolls, which coöperate, when rotated, to advance or feed the web between the platform and the guide-plate such distance that at each depression of the cutting-knife it will strike the web at the exact point to cut or sever a label therefrom. The lower roll 20 is provided with a shaft journaled in the side plates of the removable and replaceable frame. The upper roller, as here shown, is composed of two cylindrical sections 21 and 22, mounted on a shaft 23, which is journaled in suitable bearings in the side plates of the frame. A pinion 24 is arranged upon the shaft 23 at a point between the adjacent ends of the roll-sections 21 and 22, and pawl and ratchet devices 25 and 26 are arranged in connection with this pinion, so that when the pinion rotates in one direction it will turn the roll-sections 21 and 22, but a reverse motion of the pinion is possible without imparting a reverse motion to the roll-sections. In the present example the roll-sections 21 and 22 are attached to and rotate with the shaft 23, while the pinion 24 is loose on the shaft. The ratchet device is in the form of a ratchet-wheel, forming a part of the pinion, and the pawl 25 is pivoted in a recess in the inner end of the rolled section 21. Obviously this construction enables the handle-carrying arm of the bell-crank lever 33 to be depressed for the purpose of rotating the feed-rolls and causing the cutting-knife to descend, while the parts can resume their normal position without imparting motion to the feed-rolls.

The label-web is designed to pass between the lower roll 20 and the upper roll-sections 21 and 22, and as the web is advanced or fed forward by the roll-sections the roll 20 is rotated. This may be accomplished in any suitable manner, but preferably I employ rubber or other elastic or flexible bands or tires 27 and 28, arranged, respectively, in grooves in the roll-sections 21 and 22, and serving by frictional contact with the web to force the same to advance or move forward, and concurrently therewith to rotate the lower roll 20.

The front portion of the removable and replaceable frame is provided with a slot or recess extending downward from a point immediately at the front edge of the platform 18, so that when the cutting-knife descends its cutting edge gradually enters this slot or recess and severs the web by a shear cut.

The front of the removable and replaceable case is provided with a horizontally-arranged delivery orifice or slot 30, through which the leading end of the web passes onto the shelf 17, so that the web is properly sustained at all points and a clean cut is obtained.

The pinion 24, by which the feed-roll sections 21 and 22 are positively rotated in the proper direction to advance the label-web, is

actuated by a segmental gear 31, formed with or provided on one arm 32 of the bell-crank lever 33, which is pivoted or mounted at its angle, as at 34, on a rod or shaft 35, secured at its ends in the side plates of the removable and replaceable frame. The other arm 36 of the bell-crank lever extends through the perpendicular slot in the front wall 4 of the frame, and is provided with a finger or handle piece 37 of any suitable form, shape, or construction for the purpose of enabling the arm 36 of the bell-crank lever to be conveniently depressed for the purpose of actuating the mechanical devices to advance or feed the label-web and sever the label therefrom.

The construction and arrangement of the devices for actuating the feed-rolls and the cutting-knife must be such that at each depression of the handle-carrying arm of the bell-crank lever the feed-rolls will be rotated the extent required to advance the web the distance necessary to place one of the labels on the shelf 17 with the space between this label and the next label presented in position to be acted upon by the cutting-knife. Therefore the extent of motion of the feed-rolls should always be the same for each web, but the extent of motion can be regulated or varied by regulating or varying the stroke of the lever. This is easily accomplished through the medium of an adjustable screw 38, carried by a suitable rod or support 39, located over the handle-carrying arm of the bell-crank lever. The adjustment of the screw controls the extent to which the handle-carrying arm of the lever rises under the influence of a spring 40 after this arm has been released by the operator, and, inasmuch as the handle-carrying arm always moves the same distance in its descent, it will be obvious that if its upstroke is varied the extent of motion of the feed-rolls is varied. The variations in the strokes of the lever may be necessary where the label impressions of one web are wider or narrower than the label impressions of another web.

In Fig. 1 of the drawings the removable and replaceable frames are arranged in rows, one row above another. The number of rows and of the frames in a row may be increased or diminished to any required extent. The arrangement of the frames shown in the drawings is, however, only typical of many different arrangements that may be adopted. For example, all the frames may be arranged side by side in a single horizontal row, but the arrangement in rows one above another is desirable, in that it provides a compact structure having all the operating-levers disposed for convenient operation.

The frames are removable and replaceable, so that any frame can be quickly detached for placing a new rolled label-web in position to be fed forward and severed into detached or separate labels. When the rolled web is placed in position, its leading end is inserted between the upper and lower feed-

rolls and the handle-carrying arm of the bell-crank lever is slightly pressed downward until the leading end of the web approaches the cutting edge of the knife. The handle-carrying arm of the lever is then released and resumes its normal position, after which the frame is replaced in the case and the parts are ready for use. The downstroke of the handle-carrying arm of the lever communicates motion to the feed-rolls, through the medium of the pinion and the segmental gear or rack, until the last tooth of the segmental gear or rack passes from engagement with the pinion, when the feed-rolls cease to revolve. The cutting-knife is now occupying a position with its convex cutting edge immediately over the paper, so that the completion of the downward stroke of the lever forces the cutting-knife through the web into the knife-receiving recess below the same. The lever is now released and the spring 40 restores the lever and cutting-knife to normal position for a subsequent operation.

The spring for automatically restoring the lever and cutting-knife to their normal positions may be arranged in any suitable manner, but as here shown it is coiled upon a transverse rod 41 and is centrally engaged with the lever, so that when the latter is depressed the tension of the spring is increased, and when the lever is released the resiliency of the spring restores it to normal position, as before stated.

If desired, a pawl 42 and ratchet 43 may be provided to prevent back motion of the web advancing or feeding roll. The pawl may be pivoted to one of the side plates of the removable and replaceable frame, while the ratchet forms a part of or is attached to one of the upper feed-roll sections. The pawl and ratchet are preferable, in that they effectually prevent any back motion of the feed-roll, which might disarrange or interfere with the correct feed of the web, so that the space between the label impressions would not be accurately presented to the cutting-knife.

As will be observed by reference to Fig. 3, the journals 9 of the web carrier or roller are arranged in open bearings formed by slots in the side plates of the removable and replaceable frame, whereby it is possible to easily remove and replace the carrier or roller.

The lower feed-roll 20 may also be provided with rubber tires, similar to those applied to the upper feed-roll sections, as shown in Fig. 5, so that the advance of the web is absolutely insured whenever the upper feed-roll is rotated.

It will be obvious that my invention avoids the necessity of applying mucilage or similar adhesive material to each label preparatory to securing it to the bottle, box, package, or wrapper, as is usually practiced by druggists. The prepared or adhesive gummed surface of the web renders it unnecessary to employ a receptacle for holding adhesive material and applying the same to the label after it has

been severed from the web or immediately before it has been severed.

The improved rolled web, possessing the characteristics described and shown, places a large number of labels in one package for convenient separation into detached labels, all of which are prepared ready for immediate application to bottles, boxes, or packages.

Having thus described my invention, what I claim is—

1. The combination of a case constructed with a plurality of compartments, and a plurality of frames fitted into said compartments and removable and replaceable as described, each frame having a removable and replaceable roller carrying a convoluted web of druggists' labels, two feed-rollers between which the said web passes, a vertically-movable label-cutting knife, a pivoted lever having two arms, one arm arranged in operative connection with one of the feed-rollers, and the other arm engaging said label-cutting knife and provided with a finger-piece, a platform located between the feed-rollers and the label-cutting knife, and a shelf in front of the platform by which the label is supported after it is cut from the web, said label-cutting knife moving vertically between said platform and shelf, substantially as described.

2. A druggist's label-case having a removable and replaceable roller carrying a convoluted web of druggists' labels, a lower feed-roller, an upper feed-roller composed of two separated roller-sections, one of which carries a pawl, a pinion loosely mounted between said roller-sections and provided with an attached ratchet-wheel with which said pawl engages, a label-cutting knife, a lever having two arms, one arm having a segmental gear to engage the ratchet-wheel, and the other arm engaging and operating the label-cutting knife and provided with a finger-piece, a platform located between the said knife and the said feed-rollers, and a shelf in front of the platform, said knife moving vertically between said platform and shelf, substantially as described.

3. A druggist's label-case having a removable and replaceable roller carrying a convoluted web of druggists' labels, a lower feed-roller, an upper feed-roller composed of two separable roller-sections, one of which carries a pawl, a pinion loosely mounted between said roller-sections and provided with an attached ratchet-wheel with which said pawl engages,

a vertically-movable label-cutting knife, a pivoted lever having two arms, one arm having a segmental gear to engage the ratchet-wheel, and the other arm engaging and operating the label-cutting knife and provided with a finger-piece, a platform located between said knife and feed-rollers, and a shelf in front of the platform, said label-cutting knife moving vertically between said platform and shelf, substantially as described.

4. A druggist's label-case having a compartment, and a frame removably fitted into said compartments and composed of side walls and a vertically-slotted front wall and having a removable and replaceable roller carrying a convoluted web of druggists' labels, a lower feed-roller, an upper feed-roller composed of two separated roller-sections, one of which carries a pawl, a pinion loosely mounted between said roller-sections and provided with an attached ratchet-wheel with which said pawl engages, a vertically-movable label-cutting knife, a pivoted lever having two arms, one arm having a segmental gear to engage the ratchet-wheel, and the other arm engaging said label-cutting knife and provided with a finger-piece, a platform located between said knife and feed-rollers, a device arranged in proximity to the upper side of the platform to hold the label-web down thereupon, and a shelf in front of the platform, said label-cutting knife moving vertically between said platform and shelf, substantially as described.

5. The combination in a druggist's label-case, of a roller carrying a convoluted web of druggists' labels, a vertically-sliding label-cutting knife, a lower feed-roller, an upper feed-roller composed of two separated roller-sections, one of which carries a pawl, a pinion loosely mounted between said roller-sections and provided with an attached ratchet-wheel with which said pawl engages, and a pivoted lever having two arms, one engaging and operating the label-cutting knife, and the other provided with a segmental gear extending between said roller-sections and adapted to engage said ratchet-wheel, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

LOUIS H. BRITTON.

Witnesses:

J. F. ADAMS,

JOHN COSTELLO.