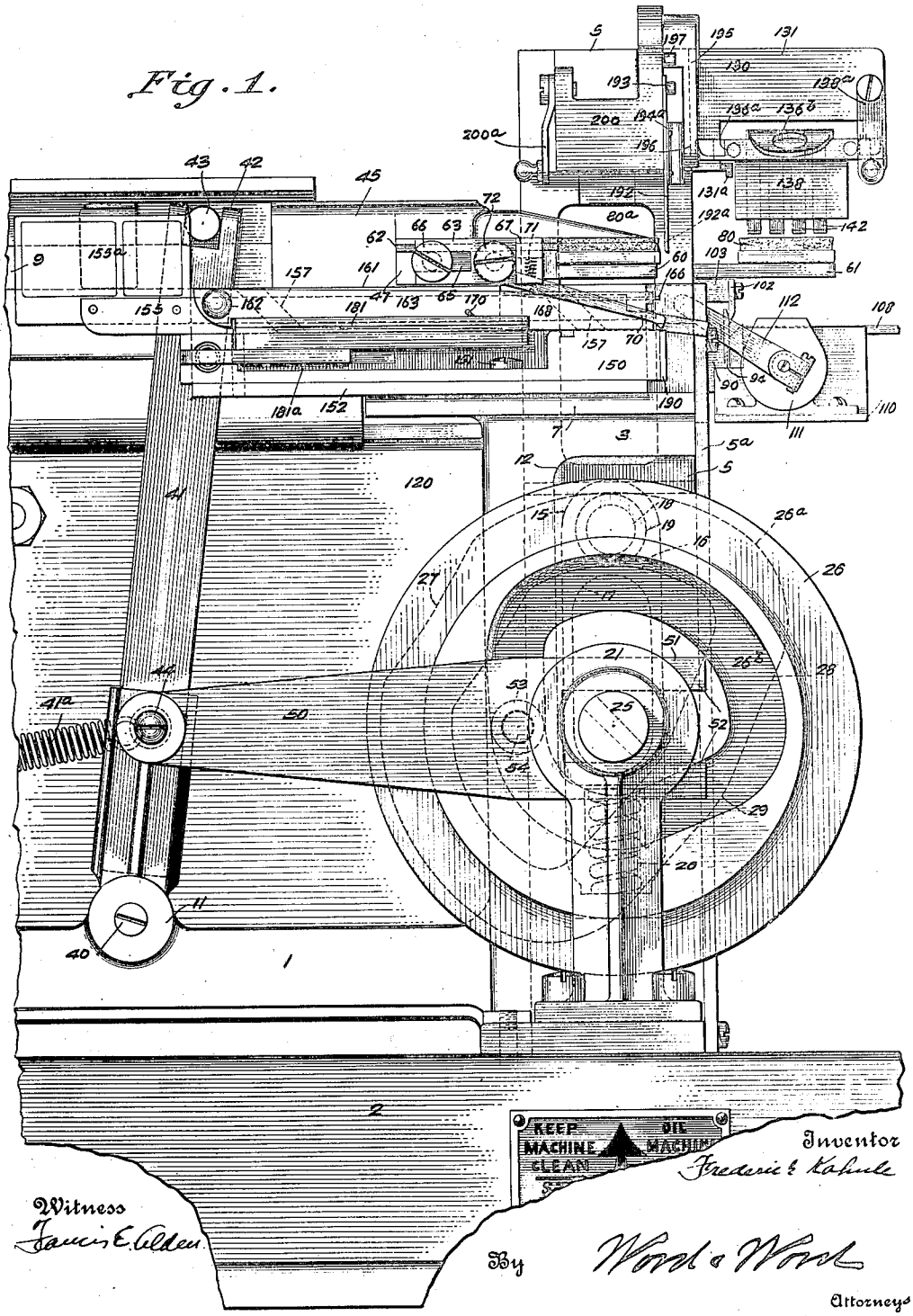
Nov. 20, 1923. 1,474,782

F. KOHNLE

TAG MARKING MACHINE

Filed July 28, 1921 5 Sheets-Sheet 1

Fig. 1.



Witness
Francis E. Belden

Inventor
Frederic F. Kohnle

By Wood & Wood
Attorneys

Nov. 20, 1923. 1,474,782

F. KOHNLE

TAG MARKING MACHINE

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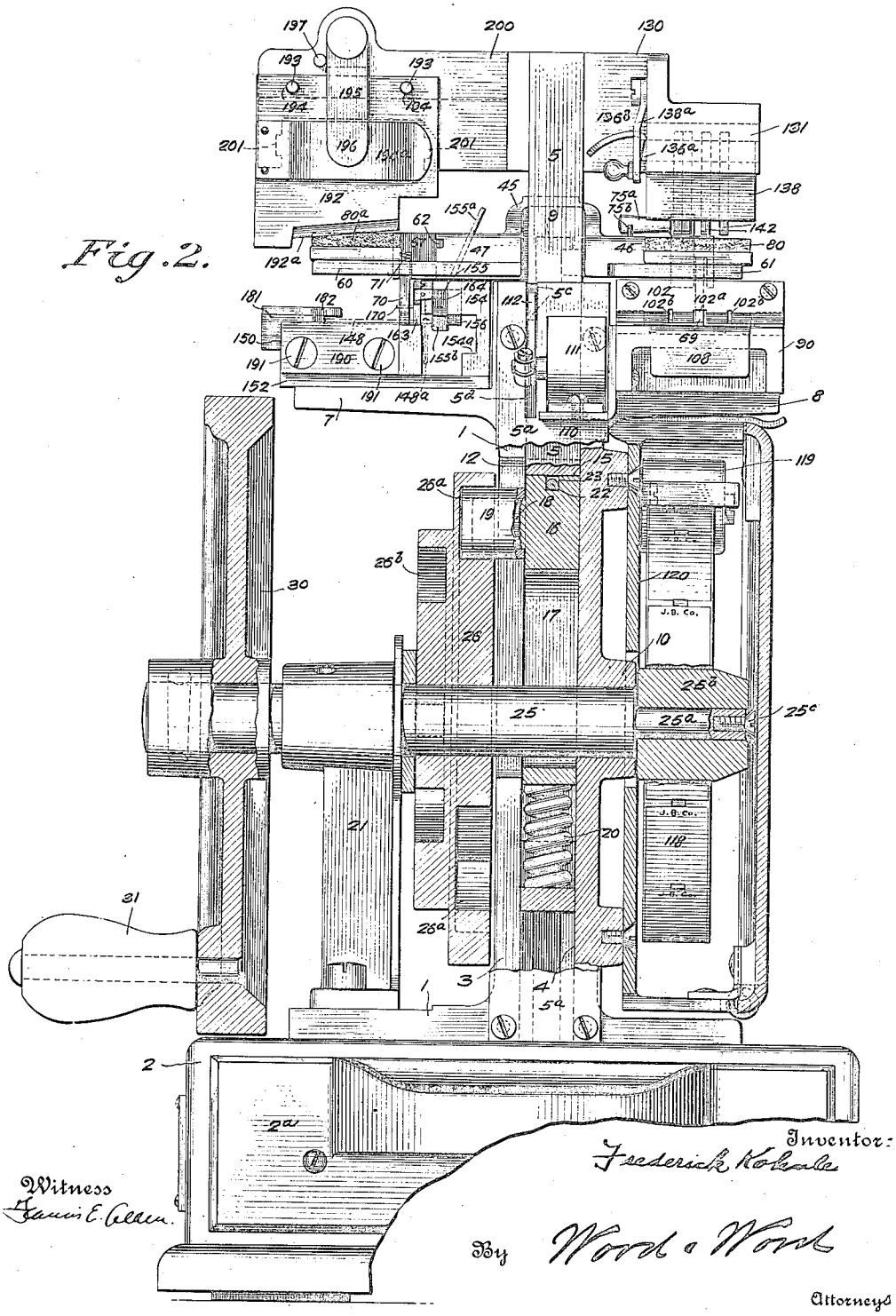
Fig. 2.



Witness
Francis E. Allen.

Inventor:
Frederick Kohnle

By Wood & Wood

Attorneys

Nov. 20, 1923. 1,474,782

F. KOHNLE

TAG MARKING MACHINE

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Fig. 3.

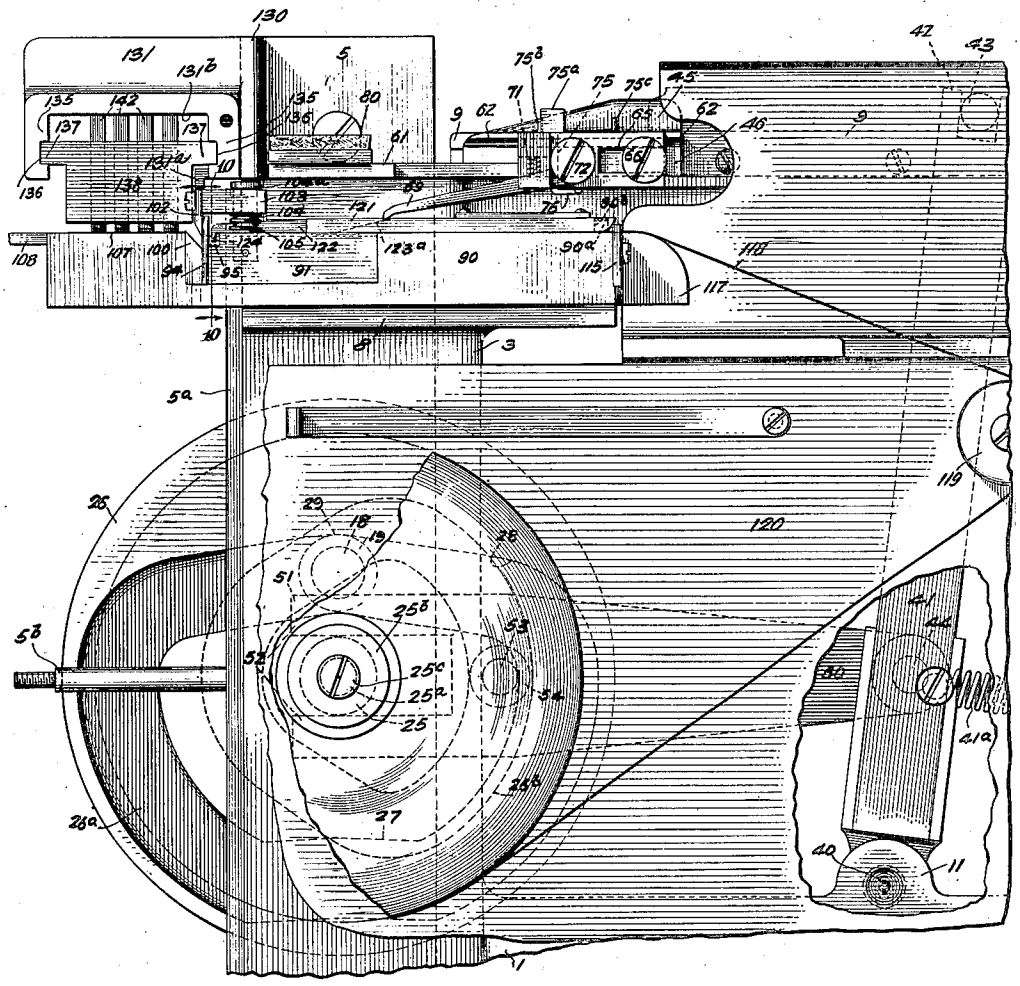


Fig. 11.

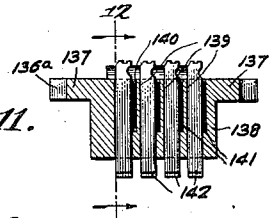


Fig. 12.

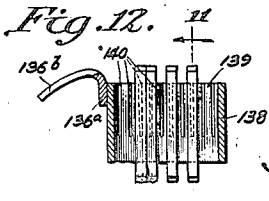
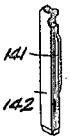


Fig. 13.



Witness
Francis E. Geeden.

Inventor
Frederick Kohnle

By Wood & Wood

Attorneys

Nov. 20, 1923. 1,474,782

F. KOHNLE

TAG MARKING MACHINE

Filed July 28, 1921 5 Sheets-Sheet 4

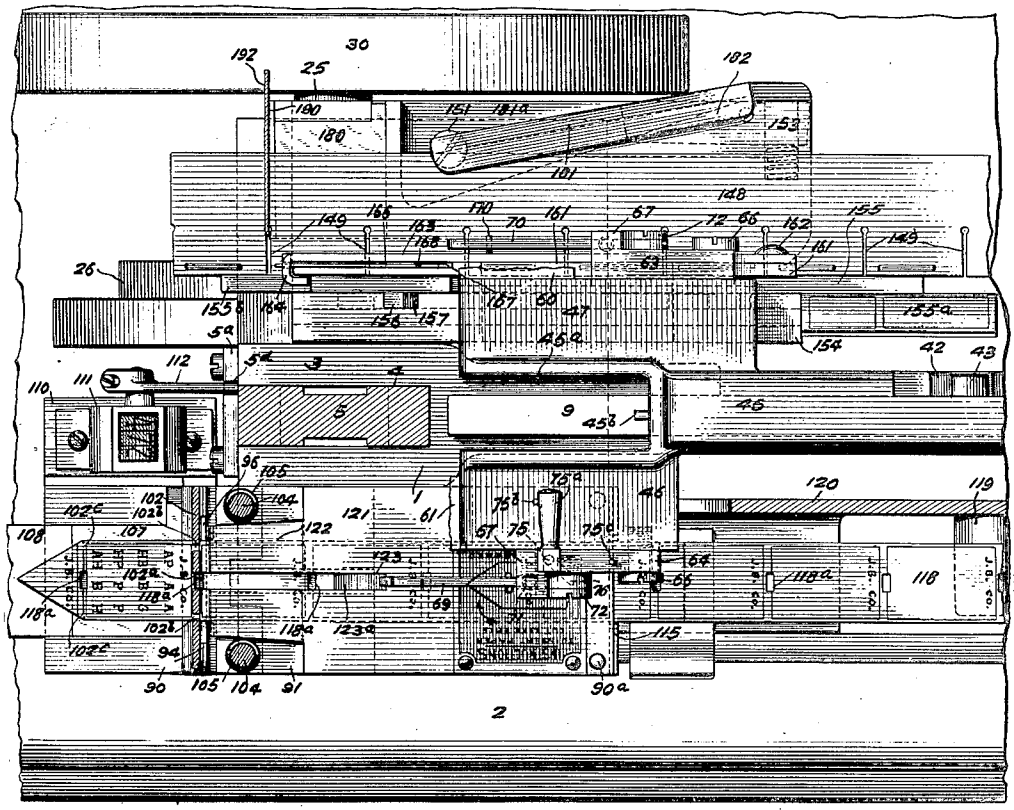


Fig. 4.

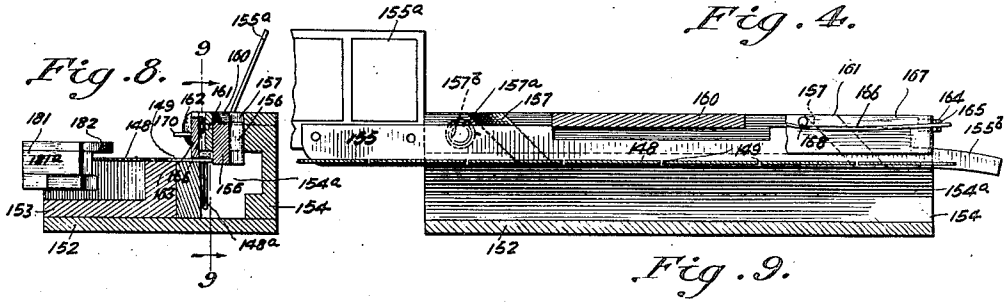


Fig. 8.

Fig. 9.

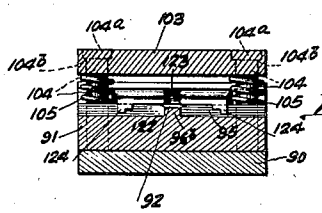


Fig. 10.

Witness
Jean E. Keeler

Inventor
Frederick Kohnle

By Wood & Wood

Attorneys

Nov. 20, 1923. 1,474,782

F. KOHNLE

TAG MARKING MACHINE

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Fig. 5.

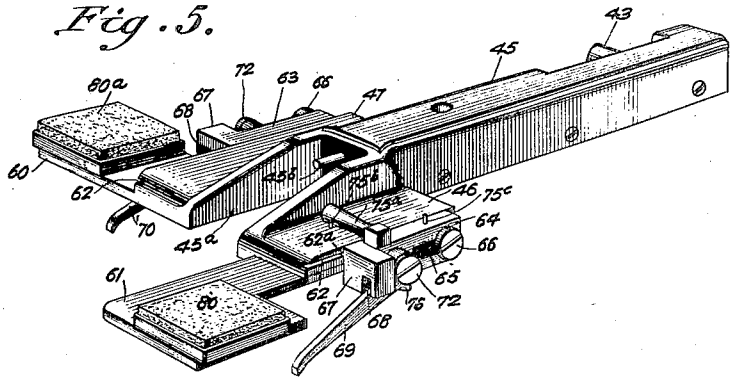


Fig. 6.

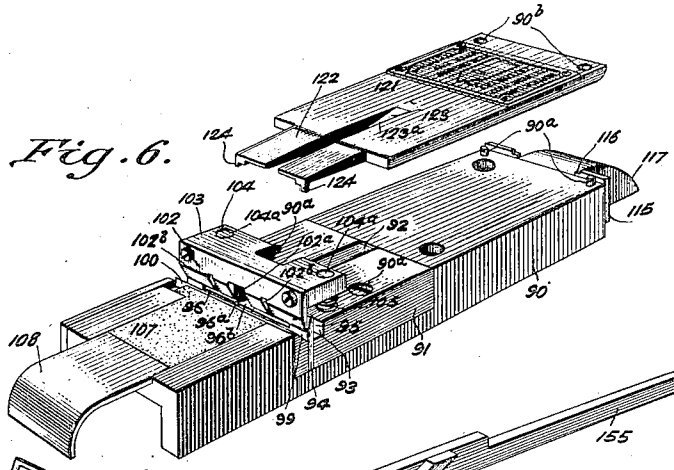


Fig. 7.

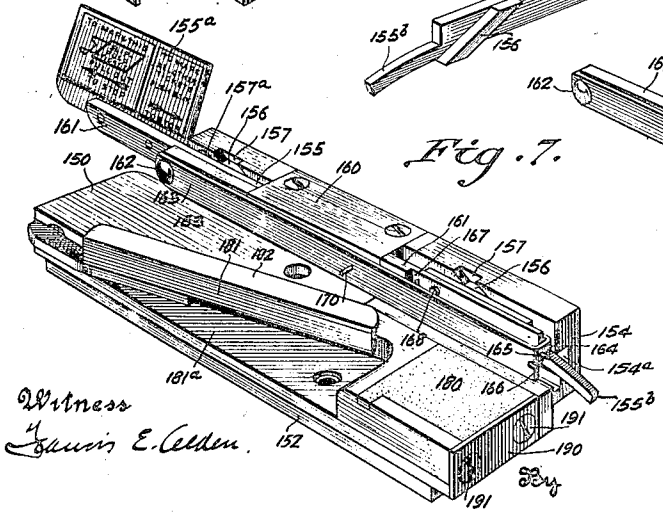


Fig. 7b

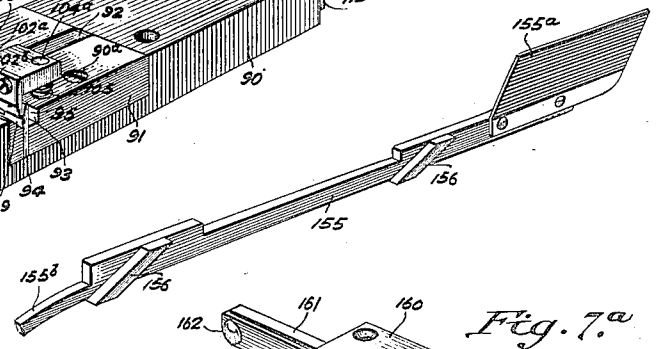
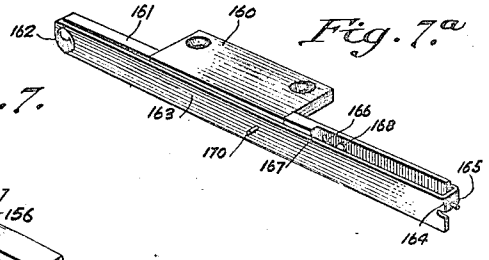


Fig. 7a



Witness
Jamin E. Cullen.

Inventor
Frederick Kohnle

Wood & Wood

Attorneys

Patented Nov. 20, 1923. 1,474,782

UNITED STATES PATENT OFFICE.

FREDERICK KOHNLE, OF DAYTON, OHIO, ASSIGNOR TO THE MONARCH MARKING SYSTEM COMPANY, OF DAYTON, OHIO, A CORPORATION OF OHIO.

TAG-MARKING MACHINE.

Application filed July 28, 1921. Serial No. 488,176.

To all whom it may concern:

Be it known that I, FREDERICK KOHNLE, a citizen of the United States, and residing at Dayton, in the county of Montgomery and State of Ohio, have invented a new and useful Improvement in Tag-Marking Machines, of which the following specification is a full disclosure.

The invention relates to a machine for printing and cutting tickets, pin-tags, and gummed labels, introduced into the machine in strip form, the tag or label widths or lengths being defined by spaced openings or slots, which openings or slots function as supplementary means for feeding said tags or labels to printing and cutting positions.

This machine is designed to feed, print and cut cardboard pin-tags or tickets in strip form and of varying widths and styles, and to similarly operate upon, gummed paper strips in ribbon form, the said tickets, strips and ribbons having openings or slots therein, spaced conformably to the desired tag or label width or length, two distinct styles of strips and labels being fed, printed and cut, either simultaneously, or independently of one another.

An object of the invention is to provide a machine, which will simultaneously operate upon two or more distinct styles of tags or labels, in strip form, to feed, print and to cut said strips or ribbons in tag or label lengths.

Another object is to provide means for handling, in the above mentioned manner, strips of varying widths, formed of relatively thick cardboard and having fastening staples placed at intervals thereon, corresponding to tag width or length.

Another object is to provide an interchangeable printing head, which may be used in conjunction respectively with the gummed label handling mechanism or with the mechanism for handling cardboard tag strips.

An additional object is to provide means for partically cutting the gummed ribbon in label lengths, in such a manner that the individual labels may be afterwards easily separated from one another.

Other objects and certain advantages will be disclosed in the description of the drawings forming a part of this specification and reference is made to said drawings, in which:

Fig. 1 is a side elevation of my pin-tag and label, printing and severing machine, showing the mechanism for handling pin-tags in the form of cardboard strips.

Fig. 2 is a front elevation, partly in section of my improved machine.

Fig. 3 is a side elevation of the mechanism for handling gummed labels in ribbon form, showing in printing position.

Fig. 4 is a plan view, portions of the mechanism being removed to better illustrate the underlying structure.

Fig. 5 is a perspective view of the feed-frame.

Fig. 6 is a perspective view of the work-block, upon which gummed labels are printed and cut.

Fig. 7 is a similar view of the work-block, upon which pin-tags in strip form are printed and cut.

Fig. 7^a is a detail perspective view of the presser-foot and mounting therefor.

Fig. 7^b is a detail perspective view of the adjustable guide-plate.

Fig. 8 is a transverse section through the work-block for handling pin-tags, a tag strip being shown positioned thereon.

Fig. 9 is a vertical longitudinal section on line 9—9 of Fig. 8.

Fig. 10 is a detail vertical section on line 10—10 of Fig. 3, the movable knife support being in its uppermost position.

Fig. 11 is a vertical detail sectional view on line 11—11 of Fig. 12, showing the type-head structure, with type positioned therein.

Fig. 12 is a similar view on line 12—12 of Fig. 11.

Fig. 13 is a perspective view of one of the type.

The numeral 1 generally designates the supporting frame of the machine, which may be mounted upon a suitable base 2, such as a cabinet having a type-drawer 2^a therein. The frame is in the form of a skeleton casting, providing an open-front boxing 3, which forms a guide and slide-way 4, for a vertically reciprocating slide member 5, having horizontal extending arms 130 and 200 formed integrally therewith.

The slide 5 is held within the slide-way 4 by a cover plate 5^a and to this cover plate, a suitable finishing cover casing (not shown) is attached through means of a screw-threaded projecting pin 5^b. The slide 5 is also provided with a notch 5^c, coactable with the end of a lever of a counting device suitably mounted as shown, for the purpose of regis-

tering the number of machine operations or the number of tag or label deliveries. A slot 5^d is provided in the cover plate 5^a to permit movement of the counting device lever.

The arms 130 and 200 have formed thereon similarly dimensioned guide ways for the alternate reception of a type carrying member, all hereinafter described in detail. The frame 1 is further provided with laterally extending horizontal tables 7 and 8, in the same plane, and projecting from opposite sides of the boxing 3; with a horizontal grooved slide-way 9, at the top portion thereof; with a bearing 10 at one side of and as a part of the boxing 3, and with a lower rear horizontal bearing 11. The boxing 3 is further provided at the side opposite that of the bearing 10, with an elongated slot 12. The functions of the above mentioned parts will be described in detail hereafter.

Disposed lengthwise of and traversing the slide member 5, is a slot 15, slidingly engaged within which is a block 16 slotted lengthwise as at 17, and provided with an outstanding integral pin 18, with a roller 19 rotatively mounted thereon. The block 16 is normally held and thrust upwardly within the slot 15, by a relatively strong compression spring 20. The lateral movement of the block 16 is prevented by a pin 22 traversing a slot 23 therein, this construction allowing a slight downward movement of the block against the pressure of the spring 20 without disengagement of said block from its slot 15. The slot 17 of the block 16, is traversed by a horizontal drive-shaft 25, rotatively stepped at one side in the bearing 10 and at its opposite side in a detachable bearing 21, fastened as by screws to a base-foot of the frame 1. Between the bearing 21 and the face of the boxing 3 and mounted integrally upon and for rotation with the shaft 25, is a double-faced cam 26, the cam groove 26^a thereon being engaged with the roller 19, for the purpose of reciprocating the slide member 5, for furthering the inking, printing and cutting operations, the slot 12 being provided to allow for the reciprocative movement of said roller 19, within the boxing 3. The outer end of the shaft 25, adjacent the bearing 10, is reduced as at 25^a, for the reception of the core 25^b of a roll of gummed labels positioned rotatively thereon. The opposite end of the said shaft, beyond the bearing 21, has keyed thereon a machine operating wheel 30, provided with a suitable handle 31. The cam groove 26^a (see Fig. 3) is formed to cause a reciprocation of the member 5 for two distinct operations respectively, cutting and printing, and inking, and the groove is further formed to provide for the properly timed pauses of the member 5 during the feed operation.

A feed cam groove 26^b, of the cam 26, is designed to initiate the operation of the tag and label feed mechanism, a description of which follows:

Pivotally attached as at 40 to the bearing 11 of frame 1, on the same side with the bearing 21, is a lever 41 provided at its top with a fork 42, engaged with a pin 43, carried by a reciprocating frame 45, suitably gibbed to the slide-way 9, at the top of the frame 1. Upon forward lateral table-extensions 46 and 47, of the frame 45, are adjustably mounted the feed dogs, and inking pads, hereinafter described in detail. Pivotally attached as at 44 to the lever 41 above its pivot 40, and disposed in a horizontal position, is a link 50, having a forwardly disposed fork 51, between the arms 52 of which the shaft 25 passes, and the said fork is disposed to slide between and to lie flatly against the faces of the cam disk 26 and of the bearing 21, and to overlap the feed cam groove 26^b. A roller 53 is mounted upon a pin 54, attached to and projecting from the side of the link 50, and engages the groove 26^b. The rotation of the cam disk causes the link to operate the lever 41 to communicate reciprocatory motion to the frame 45, to feed the strips and labels, to position the inking pads for proper cooperation with the type, and to withdraw the pads during the subsequent printing and cutting operations.

The tension spring 41^a retracts the lever 41, and feed frame 45, after the feeding and inking operations.

The shaft 25 forms a guide for the link 50, through its engagement with arms of the fork 51.

The feed frame 45, (see Fig. 5) as before stated, is gibbed to reciprocate upon the slide-way 9, and is provided at its forward end with the laterally extending flat horizontal tables 46 and 47, forming an integral part of said frame. The outer side edge of each table is grooved as at 62, for the reception of adjustable pawl blocks 63 and 64. The pawl blocks are similar in construction, except that the block 64 is provided with means mounted thereon for raising and lowering its pawl, while the pawl on the opposite side is raised by a pin mounted upon the presser-foot. Each block is of L-shaped configuration and is provided with a fin 62^a engaging the groove 62, and with a slot 65, traversed by an adjusting and clamping screw 66, having threaded engagement with the tables 46, 47, the head of the screw engaging the outer face of the block. The screw may be loosened and the block properly adjusted to bring the pawl thereon into desired relation, with respect to the openings of the strips to control the strip feed. Lateral projections 67 of the pawl blocks are provided with slots 68, designed to ver-

tically guide the pawls 69 and 70, compression springs 71 being placed within said slots to force the pawls downwardly. The pawls are pivoted to the pawl blocks as at 72, directly behind the projections 67. The pawl block 64 is provided with a pawl raising and lowering device, comprising a spring actuated pin shaft 75 (see Fig. 3) vertically traversing the block and having a lower horizontal finger 76 forming a part thereof and underlying the pawl, the upper end of the pin shaft being provided with an operating handle 75^a, and pins 75^b and 75^c to limit its movement in each direction. As shown, the finger 76 is out of engagement with the pawl 69 and the handle 75^a is engaged with pin 75^b. When it is desired to raise the pawl from strip engaging position the handle is turned to abut the pin 75^c, swinging the finger 76 horizontally through an arc of 90° to engage and raise the pawl, in which position no label-strip feed can take place. Extending forwardly and then laterally from the table 46 is shelf 61 providing a support for an inking pad 80, and forwardly of the block 63 and extending laterally from the table 47 is a similar shelf 60, also supporting an inking pad 80^a. These pads are so located that during the dwell of the feed frame 45 in its forward position (see Fig. 1) they will be engaged by the type, carried upon and lowered by the slide member 5, to ink the said type.

The feed frame 45 is bifurcated at 45^a to straddle the slide member 5 when the said frame moves to its forward position, and a pin 45^b is provided as an auxiliary frame stopping means, this pin contacting the rear surface of the slide member 5.

Inasmuch as this machine is designed to handle two styles of labels or tags, one in gummed label thin paper form and the other in the form of relatively thick cardboard strips, two differently designed mechanisms are required, and although the function of each mechanism is similar, the structures differ in certain regards. A description of the mechanism for feeding, printing and cutting gummed labels in their ribbon form, follows.

Mounted in stationary position upon the table 8 projecting from the side of the boxing 3, is a printing and cutting block generally designated at 90 (see Fig. 6). This block provides means for guiding the paper strip or ribbon and for cutting the same through the medium of knives mounted thereon and operated by the slide member 5, when in its lowermost position (see Figs. 3, 4, 6 and 10). Forwardly of the block 90, fitting, and held by screws 90^a, within a depression thereof, is a knife carrying plate 91, having a longitudinal central shallow groove 92 upon its upper face, intercepting a transverse notch 93, extending entirely across the plate 91. A lower vertical stationary bevelled knife 94 projects slightly above the upper surface of the plate 91, to form with the notch 93 a channel 95. The knife 94 is notched at its upper edge downwardly, as at 96, bottom of the notch being in a plane with the upper face of the block 90, and its width being less than that of said block. The bottom of the notch has also a small central downwardly directed notch 96^a, within which is fitted an extension 96^b crossing the channel 95 and resting within the notch 96^a, its upper surface being collinear with the bottom of the shallow groove 92. The width of the groove 92 and extension 96^b is of slightly greater width than the pawl 69, and the said pawl is designed to slide within the groove 92 and across the extension 96^b to carry the notched gummed tag strip to cutting position at which time it rests across the groove 96. Forwardly of the stationary knife 94 is a V-shaped groove 99 formed by the opposing faces of the knife 94 and of a second stationary bevelled knife 100, whose edge projects slightly above the plane of the surface of the block 90. A downwardly and vertically acting knife 102 is attached to a plate 103, the said plate being held horizontally and vertically movable upon the headed stop pins 104 stepped and held in the plate 91, the heads 104^a of said pins engaging the shoulders 104^b in said plate 103, and compression springs 105 are interposed between the bottom of said plate 103 and the top of the plate 91, to normally force the plate and knife 102 upwardly. The knife 102 lies against and coacts with the stationary knife 94, to sever the gummed labels properly positioned therebetween, the said knife 102 being actuated by a lug 131^a carried by the housing 131, movable with the slide member 5. Forwardly of the knife 100 and imbedded within the block 90 is a rubber platen 107 upon which the strip lies while being printed, and an extension 108 is provided forwardly of the platen to support the strip or tag. At the forward inner face of the block 90 is attached a shelf 110 and mounted thereon is a counting device 111 of any preferred form, operated by a lever 112 engaged within the notch 5^b of slide 5 and operable by said slide in its oscillatory movements.

At the rear of the block 90 is placed and held a step-notched guide plate 115 within the notch 116 of which the paper is placed and guided, the strip passing over a curved guide projection 117 (see Fig. 3).

The gummed labels in strip or ribbon form are coiled upon a core 25^b, the core being slipped over the reduced extension 25^a of the shaft 25 and held rotatively thereon by a screw 25^c. The ribbon indicated at 118 is carried rearwardly from the coil and passes over a guide roller 119, attached to

a suitable case 120 designed to enclose the coil, and from this roller the end of the strip passes over the projection 117, through the notch 116 and across the block 90.

In order to hold the strip or ribbon 118 in flat position upon the block 90 to prevent buckling and to supply a certain amount of friction opposed to its forward travel, a plate 121 is provided and is designed to rest thereupon, the plate being held from displacement by pins 90^a engaged with openings 90^b. As best shown in Figs. 3 and 6 it is provided with a reduced forward extension 122 and is slotted centrally at 123, an inclined portion 123^a being provided upon which the pawl 69 travels in its forward movement to successively engage each opening 118^a of the ribbon or strip 118 to carry the same forwardly to printing and cutting position. At the outer end of the extension 122 are formed downturned inwardly notched projections 124 designed to lie within the notch 93 and channel 95, the strip passing between the notched downturned projection 124 to be guided thereby (see Figs. 3 and 10). The strip is cut at the end to favor its introduction, (as shown in Fig. 4) and is passed under the plate 121 between the projections 124, through the notch 96, between the knives 94 and 102, across the knife 100 and over and against the platen 107, in which position the printing and cutting operations take place. The knife 102 is notched centrally at 102^a, the width of the notch being slightly greater than the width of the pawl 69, so that the pawl may enter the said notch in bringing the label division line to cutting position. Narrow notches 102^b are provided at equal distances on each side of the notch 102^a, the distance between these notches being slightly less than the width of the label strip, and their function being to cause a partial cutting of the strip, as shown at 102^c, Fig. 4. As shown in that figure, the notch 102^a is of such width that the strip opening 118^a is cut entirely through at each side. The partial cutting of the strip allows of easy separation of the tags after removal.

The slide member 5, as before stated, is provided with upper horizontally and laterally disposed arms. One of these arms 130 is in the form of a casting extending laterally of the slide and then forwardly of the same to over-lie the platen 107. This arm has the form of an inverted rectangular housing 131 open at two opposite ends and at the bottom. Within its side walls 135 are formed horizontal co-planar grooves 136, designed to slidingly receive flanges 137 of a type head 138. The type head may be of any preferred form but as herein shown has a block-like configuration providing the flanges 137. Vertically disposed parallel type-receiving slots 139 are provided, and each slot has at one side a row of equally spaced vertical grooves 140 extending thereacross, and from the top surface of the type head 138 downwardly within the slots 139, the same stopping short of the bottom of the head 138 to form shoulders.

The grooves 140 are for the purpose of receiving a fin 141 of the type 142 and the bottom of said grooves form stops to limit the downward movement of said type. It will thus be seen that the slots correspond in number to the lines to be printed and that the grooves form spacing means for the individual type, providing equal spacing therefor, and also providing stop means to bring the faces of all of the type in the coplanar relations necessary for a clean impression. The type shanks extend a short distance above the upper surface of the head 138, but do not normally contact the upper inner surface 131^b of the housing 131. When, however, the type are lowered to either inking or printing positions, their contact with the ink-pad or platen causes them to slide upwardly a short distance within the grooves 140, until their tops strike the surface 131^b, when, upon further downward movement of the slide member 5 and boxing 131, the type are held aligned to be either inked or to make an impression. This slight vertical movement of the type within the grooves 140 tends to eliminate the jars incident to the inking and printing operations.

The type-head 138 is held in printing position within the grooves 136 by a pivoted latch 138^a engaging a stop-plate 136^a, this stop-plate acting to limit the depth of insertion of the head within the grooves 136, the said plate having a finger-piece 136^b forming a part thereof for manipulating the head.

A description follows of the mechanism for feeding, printing and cutting pin-tags of relatively thick cardboard, the said tag being fed to the machine in strip form.

Upon the table 7 on the opposite side of the frame, to that of the mechanism above described, is mounted and held by screws 151, a metallic block 150, which carries adjustable devices for guiding the strips; is provided with a stationary knife, cooperating with a movable knife, for cutting the strip; and carries a platen upon which the tags lie while being printed. The functions performed by these various devices are similar to those above described for the mechanism at the opposite side of the machine, but the structure is modified conformably to the style of tag operated upon, the machine being capable of handling several styles and widths of pins, tags or tickets in strip form.

As heretofore described, the strip of gummed labels is provided with equidistantly spaced openings 118^a corresponding to label length, and these openings are successively

engaged by the pawl 69 to feed the strip or ribbon. The mechanism on the opposite side of the machine is designed to feed relatively thick cardboard strips 148, the pawl 70 engaging slots 149 thereon, (see Fig. 4), these slots defining the tag width and extending only partially transversely of the strips.

Figures 7, 7ª, 7ᵇ, 8 and 9 show the details of the block 150 and of the devices mounted thereon.

The block comprises a base plate 152, and a work plate 153, mounted thereon, upon the upper surface of which the strips lie flatly in feeding position, (see Figs. 4 and 8).

At the inner side of the base plate is fastened an upstanding grooved guide plate 154 between which and the inner side of the work plate 153 is formed a longitudinal passage or channel 154ª, open at each end. This passage is designed to house the overhanging portion of the strips and of the staples carried thereby, and the inner surface of the guide plate 154 acts to guide the wider form of strip. In order to guide the narrower form of strip, such as that herein shown, an auxiliary adjustable guide plate is provided (see Figs. 7ᵇ, 8 and 9), comprising a bar 155, having inclined lugs 156 upon its one side slidingly engaging similarly inclined grooves 157 of the plate 154. By this construction the bar may be raised or lowered in the grooves, and when in the lower position its side forms a stop and guide for the strip, (see Fig. 8), inasmuch as the lower edge of the bar extends below the plane of the upper surface of the work plate 153. A stop plate 155ª limits the movement of the bar in its downward direction, the said stop engaging the end of the guide plate 154, (see Figs. 4 and 7).

The upward movement is limited by an attachment plate 160, mounting and supporting a strip 161 lying parallel with and flatly against the bar 155, the strip 161 having pivoted to it as at 162, a spring-actuated presser-foot 163 designed to rest upon the strip to resiliently hold the same upon the work plate 153, while said strip is being fed to printing and cutting positions by the pawl 70. The end of the presser-foot is reversely bent as at 164 loosely about but spaced from the end of the strip 161 and this bent portion is traversed as at 165 by a wire spring 166, (see Fig. 9), mounted within a notched portion 167 of the strip 161 and flexed about a pin 168. Projecting from the side of the presser foot is a pin 170 designed to be engaged by and to raise the pawl 70 from engagement with the strip when the said pawl is moved rearwardly by the frame 45 and connected mechanism, by means of the cam groove 26ᵇ. This pin raises the pawl and permits its engagement only with one of the slots 149 of the strip, at a time. The guide bar 155 is also provided with a forwardly curved projection 155ᵇ designed to guide the projecting portion of the strip when in cutting position. The bar 155 is frictionally held in its adjusted positions by a felt washer 157ª slidingly fitting an opening in the face of the guide plate 154 and pressed outwardly by a compression spring 157ᵇ, the strip 161 forming on one side a thrust-receiving and friction guide for the bar 155. The work plate 153 is provided at its forward end with a platen 180, and with a pivoted and spring-actuated outer guide arm 181 mounted to swing within a recess 181ª and engageable with the outer side of the strip for holding the same yielding and slidingly against the bar 155 or guide plate 154. This guide arm has a horizontal leaf portion 182 which overlies and houses the strip.

As shown in Fig. 8, the staples 148ª of the strip lie within the passage 154ª and against the inner side of the work plate. When the bar 155 is pushed rearwardly, its under surface lies above the work plate a sufficient distance to allow a wider form of tag or tag strip to traverse the passage 154ª and to engage the inner surface of the guide plate 154. At the forward end of the work plate 153 is mounted a stationary knife 190, held by screws 191.

This knife is so positioned that it cooperates with a movable knife 192 mounted upon an arm 200 of the slide member 5, for cutting the strips in tag lengths conformably to and along the slot spacing of the said strips.

The movable knife 192 is formed of sheet steel; is provided with the cutting edge 192ª at its lower portion, and is fastened in a vertical position against the face of the laterally projecting arm 200. Pins 193 project from the arm 200, and are engaged by openings 194 of the knife to properly position said knife. Upon the outer face of the knife is fastened a bowed spring 194ª, the lower end 196 of pivoted lever 195 being swung to position against said spring to yieldingly hold said knife in operative position, and a stop pin 197 limits the movement of the lever in one direction. The arm 200 is in the form of a housing similar to that of the arm 130, and provides coplanar grooves 201, designed to receive the type-head 138, which can be placed on either side of the machine, it being understood that a plurality of type-heads may be used interchangeably within the coplanar grooves 136 and 201. The arm 200 has a latch 200ª which functions similarly to the latch 138ª for holding the type head properly positioned for printing.

The gummed labels, in paper ribbon form, are simultaneously cut and printed, but the cardboard tickets are first printed and then fed to cutting position, one ticket being cut while the one following is being printed.

A description of the operation of the machine follows: it being understood that the gummed labels and cardboard tickets may be fed, printed and cut simultaneously or independently, at the will of the operator.

In Fig. 1 of the drawings, both pawls 69 and 70 are at the forward limit of the feeding movement, the slide member 5 is in its uppermost position, and the inking pads 80 and 80ª are positioned for engagement by the type upon the downward movement of the said slide member. As shown in dotted lines, the roller 19 engages a concentric portion of the cam groove 26ª, at which time the slide member 5 is in its uppermost position. Upon rotation of the cam in a clockwise direction, a flat portion 27 of the cam groove engages the roller and depresses the slide 5 sufficiently to bring the type into engagement with the inking pads, the feed cam groove 26ᵇ remaining inactive with respect to the roller 53 mounted upon the link 50, thus causing a dwell of the feed frame 45 and attached mechanism during the type-inking operation. Directly after the inking operation the slide 5 is raised to its uppermost position and immediately thereafter the cam 26ᵇ operates the link 50 and lever 41 to throw the feed frame 45, pawls, and inking pads rearwardly, to avoid contact with the knife 192, and type-heads 138, which are now carried downwardly to printing and cutting positions by the slide 5, operated by the portion 28 of the cam 26ª, this portion being so formed centrally at 29, that the slide 5 is slightly lowered against the action of the spring 20, to firmly press the type faces against the tags and labels.

After the printing and cutting operations, the slide 5 is raised to its uppermost position and simultaneously therewith the frame 45 is actuated to feed the strips.

Having described my invention, I claim:

1. In a machine of the class described, a support having co-planar work tables, adapted for guiding strip material having apertures therein defining tag lengths, a reciprocatory carriage having extensions overlying said tables, pawls upon said extensions adapted to engage, advance said strips, and release the same on reverse carriage stroke, a reciprocatory member having means thereon for operating upon said material, and means for reciprocating said carriage and member in timed relation.

2. In a machine of the class described, a support providing on opposite sides co-planar work tables, adapted for guiding strip material having apertures therein defining tag lengths, a reciprocatory carriage having extensions overlying said tables, a finger upon each extension adapted to engage and advance said strips, and to release the same on reverse carriage stroke, a reciprocatory member operative between said guides and in a plane at right angles to said carriage, having means for printing and cutting said strips, and means for operating said carriage and member in timed relation.

3. In a machine of the class described, a frame providing on opposite sides co-planar work tables adapted for guiding strip material having apertures therein defining tag lengths, a carriage reciprocable between said tables and having extensions, one overlying each table, an adjustable finger on each extension engageable with the apertures of the material for advancing the same and for releasing upon reverse carriage stroke, a member reciprocable in a plane at right angles to said carriage, having means thereon for printing and cutting said strips, and means for reciprocating said carriage and member in timed relation.

4. In a machine of the class described, a support providing co-planar work tables having means thereon for guiding tag strips having apertures therein defining tag lengths, a reciprocatory carriage movable between said tables, having thereon tag strip feeding means engageable with said apertures, inking pads upon said carriage adapted to overlie said strips, and printing members alternately contactable with said inking pads and said tag strips.

5. In a machine of the class described, a support providing co-planar work tables, means upon said tables for guiding paper strips having apertures therein defining tag lengths, a carriage slidable between said tables, swinging fingers upon said carriage for engaging the apertures of said strips for tag length advance, inking pads upon said carriage overhanging said strips, printing means movable transversely of and in timed relation to said tag feeding means for alternately contacting said strips and inking pads, carried by said carriage.

6. In a machine of the class described, a support providing co-planar work tables, capable of guiding paper strips, said strips having apertures therein defining tag lengths, said apertures providing abutments engageable by feeding means comprising a carriage adapted to reciprocate between and above said tables in a direction parallel with said strips, said carriages having swinging fingers engaging said apertures to advance said strips a determined distance at each forward movement of said carriage, means for holding said strips in advanced position, inking pads upon said carriage overhanging said strips, means reciprocable transversely of said carriage in alternately timed relation thereto, and supporting printing heads cooperative with said strips and with inking pads on said carriage.

7. In a device of the class described, a

support carrying co-planar work tables at opposite sides thereof, said tables adapted to track paper strips, a carriage slidable between and above said tables having swinging fingers for engaging and feeding said strips a determined distance at each feeding stroke, inking pads upon said carriage overhanging said strips, means, carrying printing devices, reciprocatory transversely of and in timed relation to said carriage for alternately moving said printing devices into cooperation with said inking pads and strips.

8. In a machine for feeding paper strips, having apertures therein defining tag lengths, printing upon each tag of the strip, and cutting each tag from the strips, co-planar work tables respectively carrying means for guiding said strips, pressure means for holding the strips upon the tables, a carriage slidable between and above said tables having fingers thereon for engaging and feeding said strips, inking pads upon said carriage and overhanging said strips, means, carrying printing devices reciprocating transversely and in timed relation to said carriage for alternately moving said printing devices into cooperation with said inking pads and strips.

9. In a machine of the class described, a frame providing co-planar work tables, means upon said work tables for guiding strip material having apertures therein defining tag lengths, a carriage reciprocable between said tables and having extensions, one overlying each table, a finger on each extension engageable with the apertures of said material for advancing the same, an inking pad upon each extension movable in unison with said fingers, a member reciprocable in a plane at right angles to said carriage, having extensions, one overlying each table, printing means upon said extensions cooperable with said inking pad, and means for reciprocating said carriage and member in timed relation.

10. In a machine of the class described, a support providing upon opposite sides guides adapted for tracking paper tag strips having notches therein defining tag lengths, a reciprocatory carriage having extensions, one overlying each table, each extension having thereon a pawl for engagement with the notches of respective strips for advancing the same on the feed stroke, means for applying frictional pressure to said strips, for holding the same stationary during a retreat stroke of the carriage, a reciprocatory member having extensions, one overlying each table, means upon said extensions for operating upon said strips, and means for causing said member and carriage to operate in timed coordination.

11. In a machine of the class described, a support providing co-planar work tables adapting to track strip material having apertures therein defining tag lengths, a carriage reciprocable between and lengthwise of said tables, said carriage having extensions, one overlying each table, a finger on each extension for engaging respective strips, an inking pad upon each of said extensions movable in unison with said finger, strip severing means upon said tables, a member reciprocable between said tables in a plane at right angles to said carriage, having thereon printing means cooperable with said inking pad, and means for causing coordinate timed movement between said carriage and reciprocatory member, whereby at the end of an advance stroke of the carriage said printing means will contact said inking pads, and whereby at the end of the full retreat stroke of the carriage the printing means will engage the material.

12. In a machine of the class described, a support having co-planar work tables, each having means for tracking a paper strip, the strip having apertures therein defining tag lengths, a reciprocatory carriage, having extensions overlying said tables, means upon said extensions for engaging and advancing said strips, through engagement with said apertures, an inking pad upon each extension overlying said table, strip severing means upon each table, a reciprocatory member having arms overlying said tables, each arm having a printing arm thereon adapted to engage respective strips and pads, and each arm adapted for operating respective strip severing means to sever the strips as the printing members engage the same.

13. In a machine of the class described, a table for supporting and guiding gang tag strips, having divisional apertures defining tag lengths, said apertures being in longitudinal alignment providing shoulders engageable by the feed means on the face side of the strips, a reciprocating carriage having a feed member to engage said shoulders, and means for rendering said feed member inoperative on the reverse stroke of the carriage.

In witness whereof, I hereunto subscribe my name, as attested by the two subscribing witnesses.

FREDERICK KOHNLE.

Witnesses:
L. A. Beck,
N. M. Schmidt.