H. G. DAVIS.

PIN TICKET MACHINE.

APPLICATION FILED AUG. 4, 1913.

1,156,672.

Patented Oct. 12, 1915.

4 SHEETS—SHEET 1.

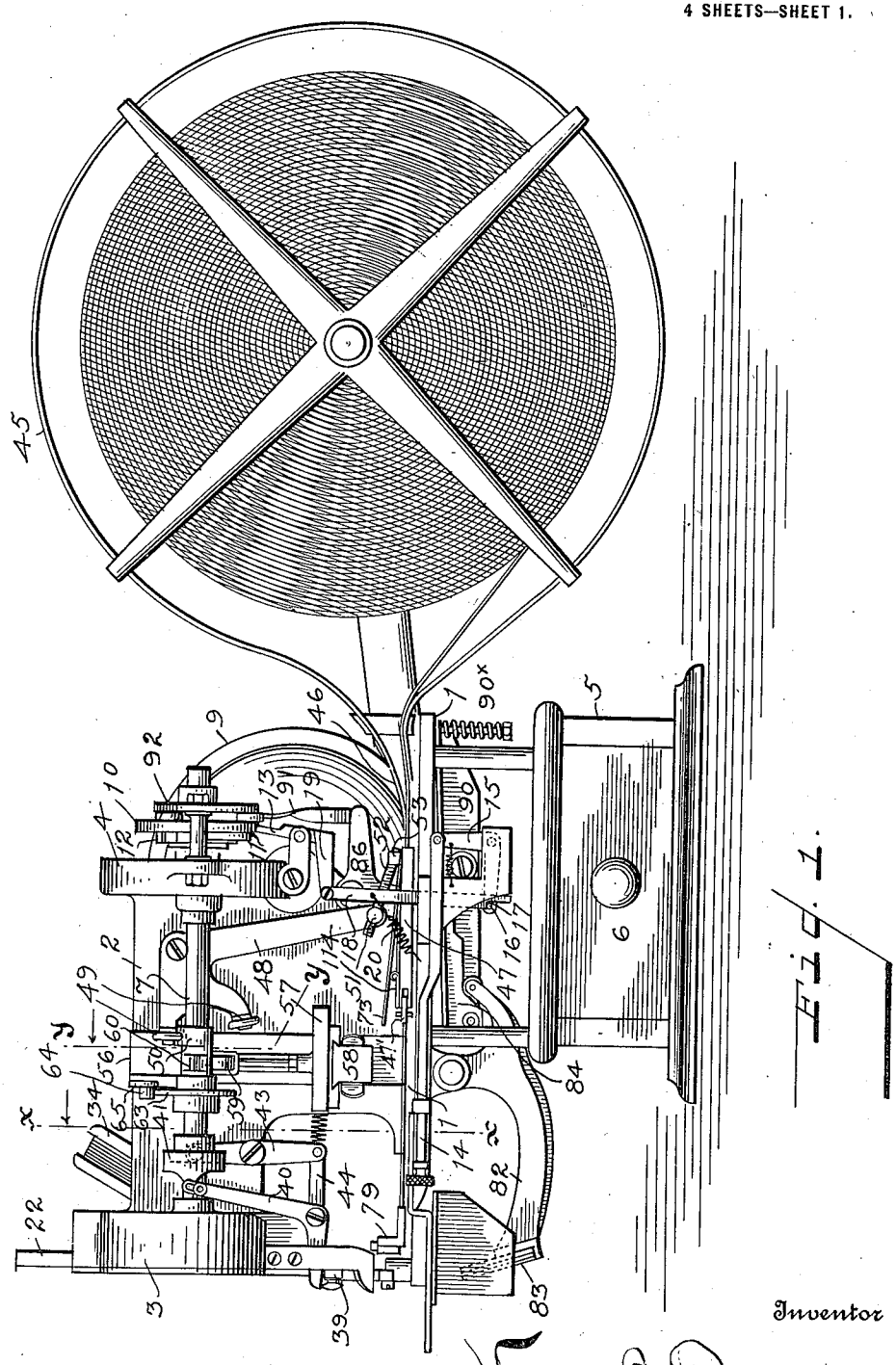


Fig. 1.

Witnesses

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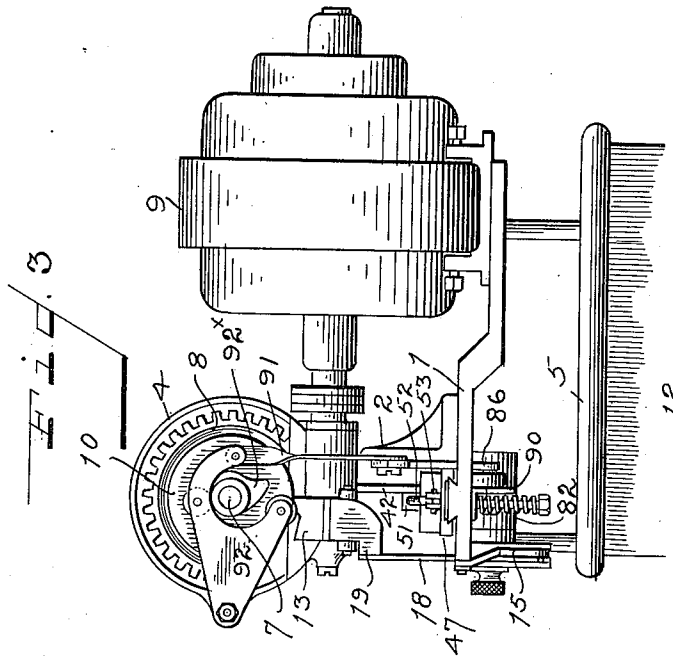


Fig. 3.

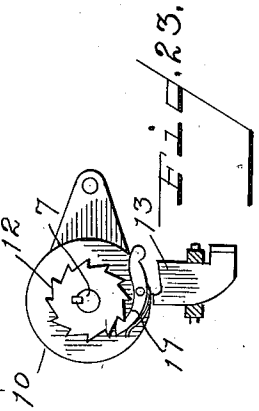
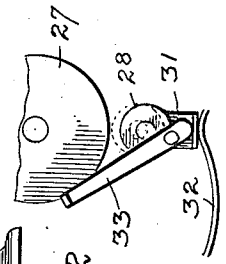


Fig. 23.



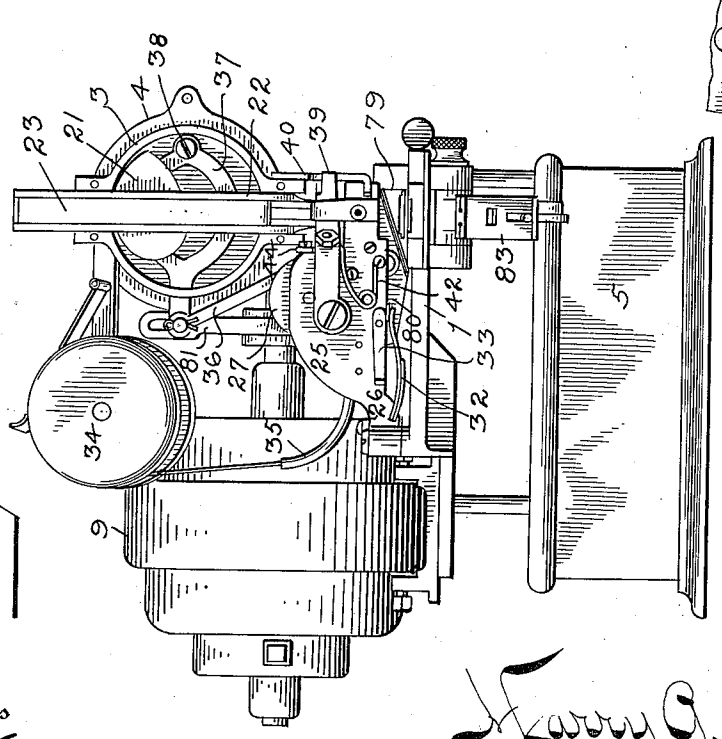


Fig. 22.

Fig. 2.

Witnesses

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4 SHEETS—SHEET 3.

Fig. 4.

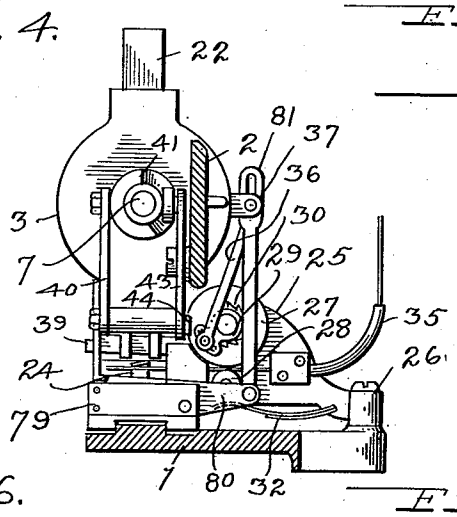


Fig. 5.

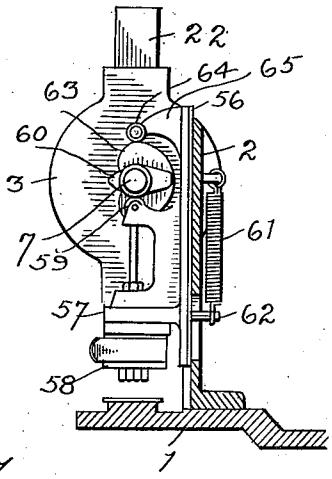


Fig. 6.

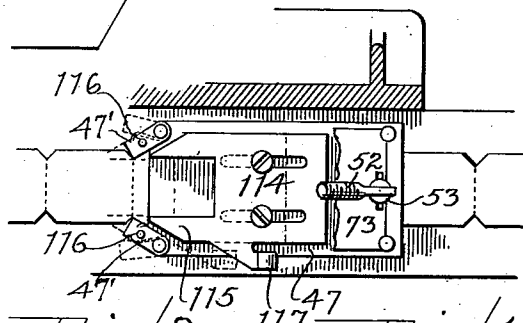


Fig. 7.

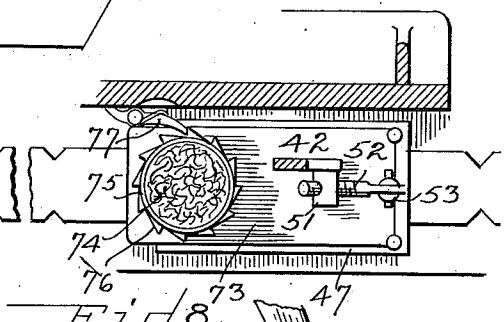


Fig. 9.

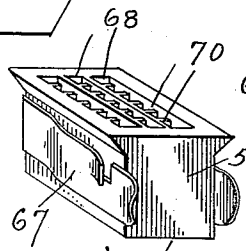


Fig. 10

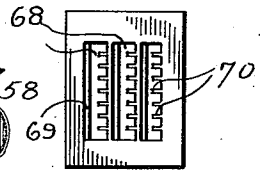


Fig. 8.

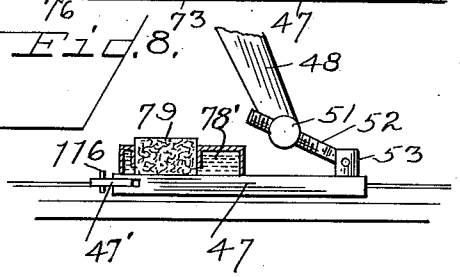


Fig. 12

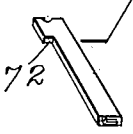
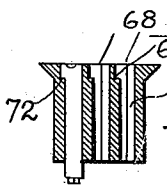


Fig. 11.



Witnesses

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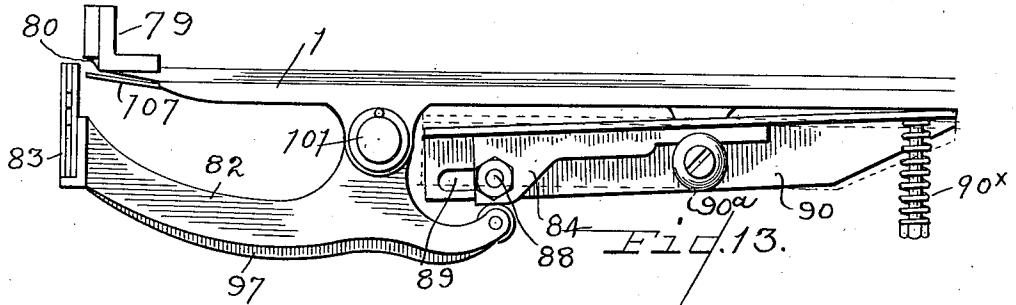


Fig. 13.

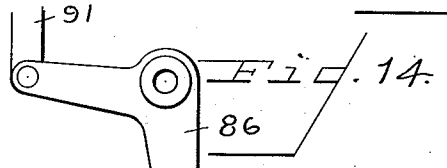


Fig. 14.

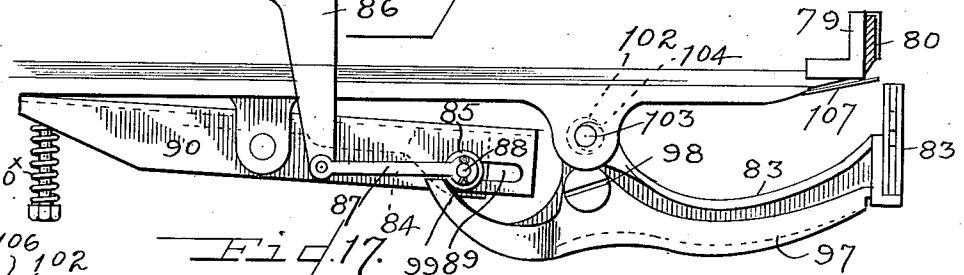


Fig. 17.

Fig. 15.

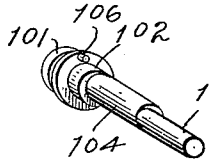
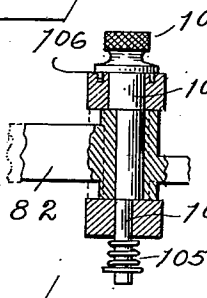


Fig. 16.



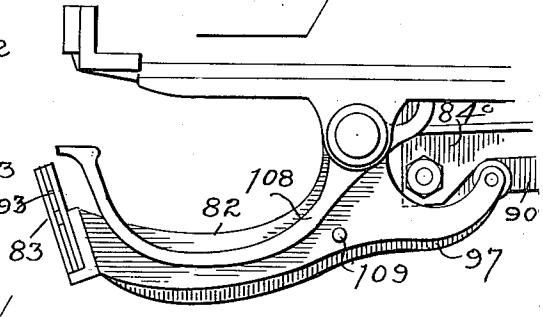
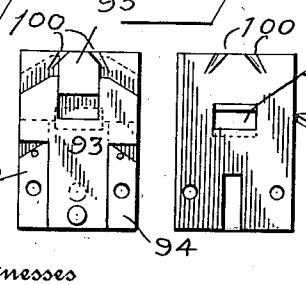
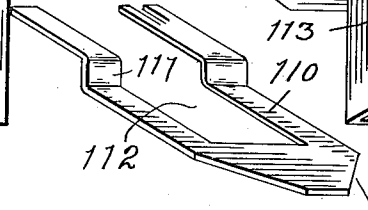


Fig. 18.

Fig. 19.

Fig. 20.





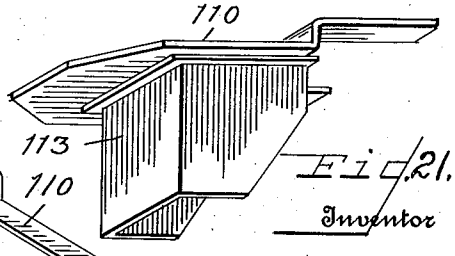


Fig. 21.

Witnesses

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UNITED STATES PATENT OFFICE.

HARRY G. DAVIS, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE H. G. DAVIS MANUFACTURING COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

PIN-TICKET MACHINE.

1,156,672. Specification of Letters Patent. Patented Oct. 12, 1915.

Application filed August 4, 1913. Serial No. 782,867.

To all whom it may concern:

Be it known that I, HARRY G. DAVIS, citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Pin-Ticket Machines, of which the following is a specification.

My invention relates to machines for attaching pin tickets to garments or fabrics, and more particularly to a power driven machine adapted to automatically perform the various functions of preparing the ticket, forming the staple and attaching the ticket by means of the automatically formed staple.

The object of the invention is to simplify the structure as well as the means and mode of operation of such machines, whereby they will not only be cheapened in construction, but will be more efficient in use, substantially automatic in operation, easily operated and controlled, and unlikely to get out of repair.

A further object of the invention is to provide improved means for actuating the ticket feeding mechanism and the printing devices, and to provide removable printing type and a chase in which they may readily be arranged in printing position by operators unskilled in type setting and further to provide improved means for inking such marking type.

Further objects of the invention are to provide improved means for actuating the goods supporting arm and clenching mechanism and to provide means whereby such goods supporting member and clenching mechanism will automatically compensate for articles of different thicknesses to which the tickets are to be applied.

A further object is to provide an improved clencher head which will be unlikely to become clogged by accumulation of lint or dust and to provide means for rendering the clencher head inoperative, whereby separate tickets may be suitably marked, stapled and discharged from the machine without such staples being clenched, to be later applied to the goods by hand and further to provide a guard for the ticket attaching mechanism, whereby the ticket may be applied to only selected thicknesses of goods and other thicknesses of goods guided away from the mechanism.

With the above primary and other incidental objects in view as will more fully appear in the specification, the invention consists of the features of construction, the parts and combinations thereof and the mode of operation or their equivalent, as hereinafter described and set forth in the claims.

Referring to the drawing, Figure 1 is a side elevation of the assembled machine. Fig. 2 is an end elevation of the operative end of the machine. Fig. 3 is an elevation of the opposite end of the machine and the driving mechanism. Fig. 4 is a transverse sectional view on line $x\ x$ of Fig. 1. Fig. 5 is a transverse sectional view on line $y\ y$ of Fig. 1. Fig. 6 is a detail plan view of the ticket feeding mechanism. Fig. 7 is a similar view of the inking pad and means for actuating same. Fig. 8 is a detail side view. Figs. 9, 10 and 11 are a perspective view, a plan view and a transverse sectional view of the type chase of the printing devices. Fig. 12 is a perspective of one of the printing type. Fig. 13 is a detail side view of the goods supporting arm and the actuating and compensating devices therefor. Fig. 14 is a detail side elevation of the goods supporting arm and the clenching devices viewed from the side opposite that shown in Fig. 13. Fig. 15 is a detail side view of the goods supporting arm showing a ticket stripping device adapted to insure the separation of the ticket and goods from the supporting arm and clenching devices. Fig. 16 is a detail perspective view of the eccentric fulcrum pin for the goods supporting arm. Fig. 17 is a detail sectional plan view of the eccentric fulcrum pin and supporting arm. Fig. 18 is a detail view of the clenching head with the front plate removed. Fig. 19 is the front plate of the clencher head. Fig. 20 is a detail perspective view of a gage plate adapted to locate the tickets in predetermined position upon the goods. Fig. 21 is a detail perspective view of a guard

applied to the gage plate for protecting certain portions of the article, while the ticket is being applied to other portions thereof. Fig. 22 is a detail view of the wire feeding rolls. Fig. 23 is a detail view of the non-repeat clutch.

Like parts are indicated by similar characters of reference throughout the several views.

The machine forming the subject matter hereof, is adapted to automatically feed from a continuous strip of ticket material, a length of such material sufficient to form a ticket, to imprint thereon the stock number, the price, cost and such other data as may be desired, and to sever the prepared ticket of proper length from the strip. While these operations are being performed, there is also being fed from a supply of staple wire, a length thereof sufficient to form a staple, which is severed by an oblique cut, whereby the ends are sharpened, the severed length of wire being formed into a staple which is forced through the ticket and the fabric placed in position to receive it and the protruding ends of the staple are clenched by being bent outward. It is to be understood that several of these operations may be in progress at the same time and that they are automatically performed in proper relation one with the other. The several operations are performed by power applied to the machine by a motor attached thereto, as shown in the drawings, or by other suitable power driving connections. While the parts are power actuated, the driving connections are manually tripped, causing the machine to perform one cycle of operation, after which the driving connections are automatically disconnected and the operating parts come to rest.

In constructing the machine, there is employed a main frame comprising a base or bed plate 1, from which projects a vertical portion 2, perpendicular to the base 1, carrying at each end a circular housing or head 3 and 4. This frame is supported upon a suitable pedestal or cabinet 5, having therein a drawer 6 to contain the font of marking type and the necessary tools, etc. The particular wire feeding and staple forming mechanism and ticket feeding mechanism shown in the drawing, are similar to those parts disclosed by former Patents 864,157, and 1,048,136. Such parts will be herein described in only a general way and reference is made to said patents for a more complete disclosure.

Journaled in suitable bearings in the head 3 and 4 is the main drive shaft 7. Loosely mounted on the shaft 7, within the head 4 is a worm wheel 8 rotated by a worm not shown in the drawings. The worm is in turn actuated by the driving motor 9. The worm wheel 8 is adapted to be connected with the drive shaft 7 to intermittently rotate the latter by means of a non-repeat clutch. This clutch comprises a disk 10 secured upon the extremity of the shaft 7 and rotating therewith. Pivoted to the inner face of the disk 10 is a pawl 11, spring pressed into engagement with a ratchet wheel 12 connected to and rotating in unison with the worm wheel 8. During the time the pawl 11 is engaged with the ratchet wheel 12, the drive shaft 7 and the worm wheel 8 will be positively connected one with the other and will rotate in unison. To disconnect the shaft and worm wheel at the end of each cycle of operation, there is provided a cam plate 13, pivotally supported in suitable brackets, projecting from the lower portion of the head 4 and normally extending into the path of the tail of the pawl 11. As the several connected parts continue to rotate, the tail of the pawl 11 engages the cam plate, which oscillates the pawl about its pivotal connection with the disk 10 to disengage the head of the pawl from the ratchet wheel 12. The pawl is permitted to engage the ratchet wheel to again rotate the shaft by oscillating the cam plate 13 out of the path of the pawl.

This is accomplished by means of a reciprocatory trip bar 14, located adjacent to the forward edge of the base 1 and carrying a head, adapted to be engaged by the operator's fingers, when holding the article in place to be operated upon. The rear end of the reciprocatory trip bar 14 is connected with a bell lever 15, which carries at its forward end a stud 16 adapted to engage the shoulder 17, upon a vertical reciprocatory bar 18. The bar 18 is connected at its upper end to an arm 19, carried by the pivoted cam plate 13. At each rearward movement of the trip bar 14, the cam plate 13 will be oscillated out of the path of the pawl 11, thereby permitting the pawl to engage the ratchet wheel to operatively connect the shaft and worm wheel. The cam plate is returned to engaging position by a retracting spring 20, connected with the bar 18.

At its forward end the shaft carries a cam 21, adapted by its rotation to reciprocate a bifurcated forming plunger 22 and thereafter a driving plunger 23. The bifurcated forming plunger 22 coöperates with the anvil 24, carried upon a swinging head or plate 25, pivotally connected at 26 to the base of the machine.

Carried upon the inner face of the swinging plate 25, are two wire feed rolls 27 and 28. The feed roll 27 is advanced through a step by step movement, to feed at each operation a length of wire sufficient to form one staple by means of a pawl, not shown in the drawings, carried upon the oscillatory arm

29 and engaging the ratchet wheel 30, which is connected with the feed roll 27. The corresponding feed roll 28 is carried upon an adjustable slide 31, capable of vertical movement in suitable ways upon the swinging plate 25 and normally pressed upward into engagement with the feed roll 27 by a spring 32. This permits the rolls to automatically compensate for variation in the thickness of the wire. Pivotally carried upon the outer face of the swinging plate 25, is a lever 33, one end of which is adapted to engage a lip or ledge projecting from the slide 31, whereby the oscillation of the lever 33 will serve to reciprocate the slide 31 and therewith the roll 28 in a direction away from the corresponding roll 27 against the tension of the spring 32. This adjustment of the roll 28 away from the roll 27 permits the wire to be easily inserted when preparing the machine for operation.

The supply of wire is drawn from a spool or reel 34 carried upon the main frame and passes through a guide 35, thence between the feed rolls 27 and 28, by which the wire is advanced at proper intervals of time across the anvil 24 and beneath the bifurcated end of the forming plunger 22. The feeding lever 29 of the feed roll 27 is oscillated by means of a link 36, connecting said lever with an oscillatory lever 37, pivoted at 38 within the head 3 and oscillated by a suitable cam carried upon the extremity of the shaft 7. The same oscillatory lever 37 serves to operate the ticket cutoff knife as hereinafter mentioned.

Pivoted to the outer face of the swinging plate 25, is a cutoff lever 39, carrying a movable wire cutting jaw not shown in the drawings coöperating with the second stationary jaw upon the inner side of the swinging plate 25, to sever the length of wire by an oblique cut, whereby the ends of the wire will be sharpened. To oscillate the cutoff lever 39, at the proper moment there is provided a bell lever 40, pivoted to the lower portion of the head 3, one end of which bears upon the extremity of the cutoff lever 39, the opposite arm of which is provided with a suitable roller engaged by the cam 41, carried upon the shaft 7. As the shaft 7 rotates, the cam 41 oscillates the bell lever 40, which in turn presses the cutoff lever 39 downward against the tension of its retracting spring 42, thereby causing the wire to be severed.

After the wire has been severed, the forming plunger 22 is reciprocated downward by means of the cam 21 carried upon the shaft 7, as before mentioned, and its projecting fingers pass on opposite sides of the anvil 24, causing the severed length of wire to be bent into a substantially inverted U shape about the anvil to form the staple.

The cam 41 upon the shaft 7 is provided with two operating faces, one of which operates the bell lever 40 as before mentioned, the other face serving to oscillate a lever 43 upon the vertical portion of the frame and having its lower extremities connected by a link 44 with the swinging frame 25. The timing of the several cams is such that after the wire has been formed into a staple, the lever 43 is oscillated to swing the plate 25 outward, thereby withdrawing the anvil 24 from within the formed staple and from beneath the driving plunger 23. This driving plunger 23 is then forced downward by a corresponding cam upon the shaft 7 to force the staple from beneath the fingers of the forming plunger and through the ticket, which has been advanced to a position to receive it.

The construction thus far described is substantially the same as that set forth in my former patents, except so far as the construction relates to the reciprocatory tripping mechanism for the non repeat clutch, the means for actuating the step by step wire feeding mechanism, the means for swinging the plate 25 outward at the proper time in the cycle of operation and the bell lever for operating the wire cutoff. For a more complete understanding of the staple forming and driving operation, reference should be made to my former patents.

The strip of ticket material is provided in roll form and is located in a suitable cage 45, from which it is passed over the bed or base plate 1 beneath the printing or marking devices hereinafter described, to a position beneath the staple forming devices before mentioned. The forward upper extremity of the peripheral rim of the cage 45 is preferably of spring material and bears with appreciable pressure upon the strip of ticket material as it emerges from the cage 45. This extension 46 of the cage rim acts as a brake upon the strip of ticket material, controlling its movement and preventing the retrograde movement of the strip as the ticket feeding devices are reciprocated rearward.

The strip of ticket material is provided with marginal notches or recesses at regular intervals. Such notches are preferably located coincident with the points at which the strip is to be severed into separate tickets. Slidingly mounted upon suitable guides or ways upon the base 1, is a reciprocatory head 47, carrying at its forward end two spring pressed pawls 47′ adapted to engage the notches of the strip of ticket material. This ticket feeding head is reciprocated throughout a forward movement during each cycle of operation by means of a bell lever 48, pivoted to the vertical portion 2 of the main frame. On one arm of the

bell lever 48 are carried two rollers 49 adapted to be engaged by a cam 50 upon the shaft 7, whereby the bell lever 48 will be oscillated to and fro at each rotation of the cam. The downward projecting arm of the bell lever 48 is provided with a stud 51, which is engaged by a screw threaded adjusting link 52, the opposite end of which is pivotally connected with a lug 53 upon the ticket feeding head 47. By adjusting the screw threaded link 52, the ticket feeding head 47 may be advanced or adjusted rearward in relation with the lever 48, thereby varying the relative path of travel of the head.

It has been found in practice that the most desirable tickets are approximately one inch length. For convenience of operation, the ticket feeding devices are preferably adjusted that the limit of their stroke will be a position substantially three inches, or the length of three tickets, from the cutoff knife herein mentioned. The several parts are so adjusted that the feed devices are given an operating stroke equal to or slightly greater than the longest ticket to be used. With the machine so adjusted it is possible to feed tickets of a smaller size without changing the adjustment. The ticket strip is unaffected by the rearward movement of the head. It is immaterial how far the stroke rearward exceeds the length of the ticket so long as it does not double the length of the ticket. On its forward stroke it will advance idly through the distance it exceeds the length of the ticket. Thus tickets equal in size to equal divisions of the space between the forward limit of the stroke of the head and the cutoff knife may be used without further adjustment. By adjusting the link 52 this distance may be varied. It is to be understood that the dimensions here given are not arbitrary, but may be varied to suit different conditions of use. These figures and dimensions are merely used as examples to illustrate the ticket feeding operation.

Slidingly mounted in vertical guides in the frame portion 2, is a slide 56 carrying a presser head 57 with which is detachably engaged a type chase 58. The slide 56 is provided with a forward projecting arm carrying a roller 59 adapted to be engaged by a cam 60 upon the shaft 7 to depress the slide 56 and presser head 57. This movement is against the tension of a retracting spring 61, attached to a stud 62 projecting from the rear face of the slide 56 through a slotted opening in the frame. The cam 60 is a double one adapted to transmit to the slide 56 and presser head 57 a double reciprocatory movement for each rotation of the shaft 7.

The initial movement of the slide 56 and head 57 will be a partial depression to press the type upon the inking pad or other device carried by the ticket feeding head 47, the slide 56 and the presser head 57 will then be elevated. After the ticket feeding devices have been retracted, the slide and head will be again depressed throughout the limit of their movement into contact with the strip of ticket material. A cam 63 upon the shaft 7 engaging a roller 64, carried by an arm 65 upon the slide 56 insures the return of the printing devices at the completion of the operation.

Inasmuch as the printing device is to be employed for marking different data upon the ticket, by persons unskilled in the usual methods of type setting, the type and chase are of a peculiar formation in order that the proper relation of the type may be insured. The type chase comprises a rectangular block or body, shaped to slide in suitable ways in the presser head 57, where it is detachably engaged by a spring arm 67, carried by the chase. This arm 67 engages a suitable stop upon the presser head 57. The chase is provided with a plurality of vertically disposed longitudinal slots 68, each provided adjacent to the upper face of the chase with an offset rabbet 69. As will be seen from Figs. 10 and 11 this offset or rabbet is formed on but one side of each of the slots 68. Projecting inward from the opposite face of each slot, is a series of thin partitions or walls 70, extending throughout substantially one half the width of the slot and spaced one from the other a distance equal to the thickness of the type to be employed. These partitions or walls 70 which are integral with the division wall between successive slots of the chase, take the place of the usual quads or spaces between adjacent type.

Referring to Fig. 12, it is seen that each type member is provided with an offset or shoulder 72, corresponding with the aforementioned rabbet of each of the slots 68. This shoulder 72 upon the type member, while engaging with the rabbet 69 of the chase slot, prevents the type from falling through the chase when in use. It further prevents the type from being inserted in the chase either wrong end first or in a reverse position, whereby the type would make an inverted impression. The division wall 70 provides a separate recess or cell for each type, so that there will be no need for justifying the form after type have been set in place.

In machines of this character it is essential that the inking devices be not only efficient in order that the tickets may be clearly marked, but also durable. The operation must be rapid and the impressions are frequent, thereby subjecting both the type and the inking pad or other devices to considerable wear. To overcome this difficulty and

to provide efficient means for inking the printed characters, there is provided a construction, whereby the face of the type is brought alternately into contact with the inking pad and with the tickets, without any friction or dragging movement upon the face of the type or the inking member.

In the present construction, the inking member is carried upon a flexible spring plate 73 projecting upward and forward from the ticket feeding head 47. This plate 73 is depressible to a limited extent when the type within the chase are brought into engagement therewith by the depression of the slide 56 and presser head 57 to insure proper pressure of the pad upon the type.

The inking member which is carried upon the depressible spring plate 73 may be of any desired form. It may be a simple pad of fabric or felt saturated with ink or supplied from a suitable reservoir carried upon the flexible plate. There is preferably however, provided upon the plate 73 an inking pad 74 mounted in a rotatable carrier or frame 75, the periphery of which is provided with a series of ratchet teeth 76. Mounted upon a suitable bracket projecting from the vertical portion 2 of the main frame is a spring actuated pawl 77 adapted to engage one of the ratchet teeth 76 at each advance movement of the ticket feeding head 47 and as the head 47 continues to advance, the pawl 77 will cause a partial rotation of the pad 74, whereby each successive impression of the type upon the pad will be in a different relative position. In lieu of this construction, an ink reservoir 78 may be provided upon the ticket feeding head 47, as shown in Fig. 8 and a compressible pad 78′ may be employed in such reservoir.

The cam 60 is so timed upon the shaft 7, that as the ticket feeding head 47 reaches the forward limit of its stroke, the printing slide will be depressed throughout a limited movement to engagement with the inking pad 74, after which the freshly inked type will be elevated to permit the ticket feeding head 47 and inking device to be retracted out of the path of the type. After the feeding head 47 and inking device have been returned to their normal or retracted position, the slide 56 and the pressure head 57 are forced downward throughout the full limit of their stroke into engagement with a strip of the ticket feeding material, which is imprinted with the freshly inked type. The slide and type are then retracted preparatory to the next operation.

It is to be understood that the ticket feeding head 47 and the inking device carried thereby, come to rest momentarily at the forward limit of their stroke, while the type are being impressed thereon to receive their charge of ink. The freshly inked type are withdrawn from the pad before the feeding head 47 and begins its return movement. Thus obviating friction between the pad and type and reducing the wear of such parts to minimum.

As the ticket strip is advanced at each operation, the terminal ticket thereon is passed beneath the cutoff head 79 located at the extremity of the base plate 1. Pivotally supported upon the head 79 is a cutoff knife 80. The rear extremity of which is connected by a link 81 with the oscillatory lever 37. The link 81 is provided with a slotted connection with the lever 37, whereby the upward oscillation of the lever 37 necessary to rotate the feed roll 27 to advance the staple wire will be independent of the cutoff knife 80. As the lever 37 approaches the limit of its stroke, it engages the end of the slot in link 81 and by a slight further movement operates the cutoff knife 80 to sever from the strip of ticket material, the terminal ticket which has been projected beyond the head 79. It is to be understood that the staple will have been formed and driven through the ticket before the ticket has been severed from the strip.

Pivotally supported upon suitable lugs beneath the base plate 1 is an oscillatory goods supporting arm 82, carrying at its extremity a clencher head 83, which is raised to meet the staple forming and driving devices at each operation and which is thereafter permited to recede in order that the article to be operated upon may be more easily placed in position for the next operation. The goods supporting arm 82 is oscillated about its pivotal connection by the reciprocatory movement of the cam plate 84, which upon its rearward movement engages a roller 85, carried by the rear extremity of the arm 82. The cam plate 84 is reciprocated at the proper moment in the cycle of operation, by means of a bell lever 86 pivotally supported upon the vertical portion of the main frame and connected at its lower end by a link 87 with a stud 88 projecting through a slot 89 in the support 90 in which the sliding cam 84 is mounted. This construction is best shown in Figs. 13 and 14. The opposite arm of the bell lever 86 is connected by a link 91 with an oscillatory lever 92, pivoted to the housing 4 and operated at proper intervals by a cam 92^{x} carried by the shaft 7. In order that tickets may be attached to goods of different thicknesses, with equal facility and efficiency, means are provided for compensating for the thickness of the goods or article by varying the stroke of the goods supporting arm 82. To this end the guide or support 90 on which the sliding cam 84 is mounted, is fulcrumed at 90^{a} and is capable of an oscillatory movement about such fulcrum against the tension of the spring 90^{x} supported upon a stud pro-

jecting from the base of the plate 1 and bearing against the support 90. When goods of unusual thickness is operated upon, the goods supporting arm 82 will be elevated into firm contact with the goods and upon further movement of the sliding cam 84, the support 90 will yield by turning about its fulcrum 91 against the tension of the spring 90ˣ, as indicated by dotted lines in Fig. 13.

The clenching head 83 comprises two separable plates between which is mounted a Y shaped reciprocatory clenching member 93. The clenching member 93 is provided with suitable guides 94—94 and 95. It has been found almost impossible in practical operation to prevent lint or dust from the article operated upon, collecting within the clencher head. Unless means is provided for the escape of such lint or dust, the head becomes clogged and the clenching member is not permitted to travel its full stroke. To obviate this, there is provided in the face plate of the clencher head an opening 96, the edges of which are beveled outward and downward. This opening registers with the lower portion of the recess or the space between the clenching member 93 and the guide 95 as shown by dotted lines in Fig. 18. This permits the escape of any lint which may lodge within such recess. To further provide against the lodgment of lint particles, the upper ends of the guides 94 are beveled downward and outward to guide the lint particles out of the clencher head. Thus lint particles which may enter the clencher head will not find lodgment therein. Where they might prevent the clencher head 93 from operating throughout its full stroke in either direction.

The clencher member 93 is reciprocated within the head 83, by means of a clencher arm 97 pivoted at 98 upon the goods supporting arm 82 and moving in unison therewith, but capable of a further movement independent of the goods supporting arm to actuate the clenching member. To actuate the clenching arm 97 through such additional movement after the goods supporting arm 82 has reached the limit of its stroke, there is provided upon the stud 88 of the sliding cam 84, a roller 99, which as the sliding cam 84 approaches the limit of the rearward stroke, engages the rear extremity of the clenching arm 97 to oscillate said arm and thereby elevate the clenching member 93.

In its normal position of operation the clenching head 83 registers with the forming and driving plungers 22 and 23. As the staple is driven through the ticket and the goods by the action of the driving plunger 23, the ends of the staple enter the grooved guides 100 in the opposing plates, forming the clencher head. The arm 97 is then operated to elevate the clenching member 93 which presses the protruding ends of the staple upward and outward.

To meet certain conditions of use, it is sometimes desirable to print and cut off the successive tickets and to form the staple, driving the same through the ticket but not clenching the tines thereof, thus providing a marked ticket which may be later applied to the goods by hand. To accomplish this result, the goods supporting arm 82 is pivoted upon an eccentric fulcrum pin 101, as shown in Figs. 16 and 17. This pin is provided with concentric extremities 102 and 103 adapted to engage in the supporting lugs on opposite sides of the goods supporting arm 82 and an intermediate eccentric portion 104. The extremity 103 is projected beyond the supporting lug and is provided with a spring 105 against the tension of which the pin may be shifted longitudinally to disengage a locking stud or projection 106 carried by the head of the pin from a corresponding recess in the lug. The pin may then be rotated throughout a partial revolution, thereby shifting the clencher head 83 out of registry with the staple forming and driving devices. In forming such unattached tickets and also in testing the machine by forming and clenching tickets without the insertion of goods to receive such tickets, means are necessary for stripping the ticket from the clencher head so that the tickets will not accumulate thereon. This stripping device may comprise a flat spring 107 secured to the under side of the base plate 1 and projecting slightly beyond the cutoff knife 80 to a point adjacent to the clencher head, as shown in Fig. 13. In lieu of the spring 107, there may be employed a pivoted arm 108, as shown in Fig. 15. This arm 108 is pivoted concentric with the goods supporting arm 82 and is moved in unison therewith by a stud 109, carried by the goods supporting arm. Upon its downward movement, the rear end of the stripping arm 108 engages the under side of the base plate 1 to limit the downward movement of the arm 108 before the goods supporting arm and clencher head have reached the limit of their movement. Thus as the supporting arm 82 falls below the end of the arm 108, a ticket which may be carried upon the clencher head will be detached therefrom by the stripper arm 108.

In order that the tickets may be applied in positions a uniform distance from the edge of the goods, there is provided an adjustable guide or gage 110, slidingly mounted upon the forward end of the base plate 1 and having an offset 111 thereon, against which the edge of the goods may be adjusted, and an opening 112 through which the clencher head may operate. At each operation of the machine the clencher head carried by the goods supporting arm will be

raised through the opening 112 in the plate 110 to meet the driving devices descending from above.

When applying the tickets to goods of several thicknesses, particularly hose or gloves, it is desirable to apply the ticket through one or more thicknesses, leaving the other thicknesses free for the inspection of the customer. To protect such free thicknesses and insure the application of the ticket to the desired layers of goods, there is provided on the under side of the gage 110, a guard 113, which extends below the top of the clencher head and serves to guide the free thicknesses of the goods beneath the clencher head, where it will be in no danger of coming in contact with the ticket attaching parts.

Inasmuch as the spring pressed ticket feeding pawls 47′ normally tend to engage the strip at all times, means is provided for holding these pawls out of engagement during the time that the ticket strip is being replaced. Referring to Fig. 6, there is shown upon the upper face of the head 47 and beneath the plate 73, a sliding plate 114 having forward projecting inclined fingers 115. The pawls 47′ are provided with studs 116, extending into the path of the inclined fingers 115 when the pawls are in engagement with the ticket strip. By forward reciprocation of the plate 114, the inclined fingers 115 are caused to engage the studs 116 and to oscillate the pawls 48 outward as shown by dotted lines in Fig. 6. The plate 114 is provided with a projecting arm or lug 117, by which the plate may be shifted.

From the above description it will be apparent that there is thus provided a device of the character described, possessing the particular features of advantage before enumerated as desirable but which obviously is susceptible of modification in its form, proportion, detail construction or arrangement of parts, without departing from the principle involved or sacrificing any of its advantages.

While in order to comply with the statute, the invention has been described in language more or less specific as to certain structural features, it is to be understood that the invention is not limited to any specific details, but that the means and construction herein described comprise but one mode of putting the invention into effect, and the invention is therefore claimed broadly in any of its possible forms or modifications within the scope of the appended claims.

Having thus described my invention, I claim,

1. In a machine of the character described employing ticket material arranged in a strip, means for intermittently advancing the strip a predetermined step of variable length, the combination with ticket attaching and ticket severing means, of a reciprocatory strip feeding head adapted to engage the ticket strip at a predetermined point, and means for causing the feeding head to overrun the point of engagement with the feeding strip to compensate for variations in the length of the advance steps through which the strip is fed, substantially as specified.

2. In a machine of the character described employing ticket material arranged in a strip, means for intermittently advancing the strip a predetermined step of variable length, the combination with ticket attaching and ticket severing means, of a reciprocatory strip feeding head having a uniform degree of movement and adapted to engage the strip of ticket material at a particular point in its path of travel, and means for varying the path of travel of the feeding head in relation with the point of engagement of the head with the strip whereby the head will be caused to engage the strip correspondingly earlier or later in its path of movement to advance the strip a greater or less distance.

3. In a machine of the character described employing ticket material arranged in a strip, means for intermittently advancing the strip a predetermined step of variable length, the combination with ticket attaching and ticket severing means, of a reciprocatory strip feeding head adapted to engage the strip at a particular point in its path of travel and means for relatively varying the point of engagement of the strip and head and the path of travel of the head to cause the head to engage the strip earlier or later in its path of travel and thereby vary the degree of advance movement of the strip.

4. In a ticket attaching machine, ticket feeding mechanism, ticket attaching members relatively movable to and from each other to secure the ticket to the goods, an oscillatory support for one of said members, and means for shifting the axis of the oscillatory support to move the ticket attaching member carried thereby into and out of operative position.

5. In a ticket attaching machine, opposing ticket attaching members coöperating one with the other to secure the ticket to the goods, a movable support for one of said members, a revoluble eccentrically mounted member controlling the movable support, and adapted by its rotary movement to cause the ticket attaching member carried thereby to be moved into and out of operative position.

6. In a ticket attaching machine, opposing ticket attaching members coöperating one with the other to secure the ticket to the goods, a pivoted support for one of the ticket attaching members, and a revoluble eccentrically mounted pivotal trunnion for

said pivoted support, adapted by its revoluble movement to shift the axis of the pivoted support to move the ticket attaching member carried thereby into and out of operative position.

7. In a ticket attaching machine, ticket feeding devices, staple driving mechanism, and staple clenching mechanism coöperating with the driving mechanism, a pivoted support for the clenching mechanism, and a rotatable eccentric pivot therefor adapted by its rotation to vary the alinement of the clenching mechanism with the driving mechanism.

8. In a ticket attaching machine, ticket feeding devices, staple driving mechanism, and staple clenching mechanism coöperating with the driving mechanism, a pivoted support upon which the clenching mechanism is carried, said support being capable of lateral adjustment in addition to its oscillatory movement, and means for adjusting the pivoted support laterally into and out of alinement with the driving mechanism.

9. In a ticket attaching machine, ticket feeding devices, staple driving mechanism, and staple clenching mechanism, a variable support for the clenching mechanism, and an eccentric member for said variable support by which the clenching mechanism may be adjusted to an inoperative position.

10. In a ticket attaching machine, ticket feeding devices, staple driving mechanism and staple clenching mechanism, a pivoted support for the clenching mechanism, and means for shifting the fulcrum point of the pivoted support to render the clenching mechanism inoperative.

11. In a ticket attaching machine, ticket feeding devices, staple driving mechanism, and staple clenching mechanism, a variable support for the clenching mechanism, a revoluble adjusting member for the support, said adjusting member being longitudinally movable in addition to its revoluble movement, and locking means engaged and disengaged by its longitudinal movement to secure it in its adjusted position.

12. In a ticket attaching machine, ticket feeding devices, ticket attaching mechanism, a pivoted goods supporting arm, an actuating cam for oscillating the goods supporting arm, and a yielding support for the actuating cam, whereby variation in the movement of the arm may be compensated for.

13. In a ticket attaching machine, ticket feeding devices, ticket attaching mechanism, a reciprocatory cam for the ticket attaching mechanism, and a pivoted support for the cam permitting a variation in the movement of the ticket attaching mechanism to compensate for varying thickness of goods operated upon.

14. In a ticket attaching machine, ticket feeding devices, ticket attaching mechanism, a pivoted goods supporting arm, a pivoted lever forming an abutment for the pivoted goods supporting arm, and a spring resisting the oscillation of the pivoted lever under the influence of the goods supporting arm.

15. In a ticket attaching machine, ticket feeding devices, ticket attaching mechanism, a pivoted goods supporting arm adapted to engage the goods at one side of its pivotal connection, a yielding abutment engaged by the arm at the opposite side of its pivotal connection and means to oscillate the arm while maintaining its engagement with the yielding abutment.

16. In a ticket attaching machine, ticket feeding devices, ticket attaching mechanism, a movable goods supporting arm, a reciprocatory actuating cam therefor, and a yielding support upon which the cam is slidingly mounted said cam support being adapted to yield when the resistance to the movement of the arm exceeds that of the yielding abutment.

17. In a ticket attaching machine, ticket feeding devices, ticket attaching mechanism, a pivoted lever, a spring against the tension of which the lever may oscillate about its pivotal connection, an actuating cam supported upon the lever, a movable goods supporting arm actuated by the cam, and means to actuate the cam.

18. In a ticket attaching machine, ticket feeding devices, ticket attaching mechanism, a goods supporting arm having clenching devices carried thereon, said arm being pivotally supported intermediate its ends, a second lever likewise pivotally supported intermediate its ends, a spring engaging one end of the second lever against the tension of which the lever may be oscillated, a reciprocatory cam carried by the second lever and engaging the extremity of the goods supporting arm opposite the clenching devices said cam being adapted to initially oscillate the goods supporting arm to the limit of its stroke and thereafter by further movement to oscillate the second lever against the tension of the spring.

19. In a ticket attaching machine, ticket feeding devices, ticket attaching mechanism, a variable goods support, a fulcrumed lever, a spring engaging one arm of the lever, against the tension of which the lever may oscillate about its fulcrum, the opposite end of the lever being engaged by the variable goods support.

20. In a ticket attaching machine, ticket feeding devices, ticket attaching mechanism, a pivoted supporting member, a reciprocatory cam mounted on the supporting member and adapted by its reciprocatory movement to actuate the ticket attaching mechanism, a spring tending to hold said support against oscillation, but adapted to yield to permit the support to compensate for re-

sistance met by the cam in actuating the ticket attaching mechanism.

21. In a ticket attaching machine, ticket feeding devices, ticket attaching mechanism, a variable goods support, a pivoted supporting member, a reciprocatory cam mounted on the supporting member and adapted by its reciprocatory movement to vary the goods support, and a spring against the tension of which the supporting member may yield to compensate for resistance met by the cam in actuating the goods support.

22. In a ticket attaching machine, ticket feeding and stapling mechanism, a movable clenching member, a sliding bar actuating the clenching member, a pivoted guide for the sliding bar, and a spring resisting pivotal movement of the guide.

23. In a ticket attaching machine, ticket feeding and stapling mechanism, clenching mechanism comprising a housing, and a movable clenching member within said housing, said housing having a downwardly and outwardly beveled opening in the face thereof for the escape of accumulated lint.

24. In a ticket attaching machine, ticket feeding and stapling mechanism, clenching mechanism comprising a housing having exit openings, and a movable clenching member within said housing, and guides for said clenching member having shoulders inclined downward and outward to the exit openings in said housing.

25. In a ticket attaching machine, ticket feeding mechanism, and ticket attaching mechanism, a depressible goods supporting member, and a movable stripper member acting in unison with the goods support but moving through a path of less extent.

26. In a ticket attaching machine, ticket feeding mechanism, and ticket attaching mechanism, including a movable clenching head, a stripper member adapted to engage the side of the ticket engaged by the clencher head beyond which the clencher head moves in its retrograde movement.

27. In a ticket attaching machine, ticket feeding mechanism, ticket attaching devices including a movable goods supporting member, a stripper member moving to and from the point of operation in unison with the supporting member, and means for limiting the return of the stripper member to a less degree of return movement than that of the supporting member.

28. In a ticket attaching machine, ticket feeding mechanism, movable opposing ticket attaching members, an adjustable plate normally occupying a position in a plane intermediate the ticket attaching members, and having an opening therein through which the ticket attaching members meet.

29. In a ticket attaching machine, ticket feeding mechanism, ticket attaching mechanism, and a recessed plate adjustably located in a plane substantially coincident with the plane of operation of the ticket attaching mechanism, through the recess of which the said mechanism is adapted to operate.

30. In a ticket attaching machine, ticket feeding mechanism, ticket attaching mechanism, and a recessed plate located slightly beneath the plane in which the tickets are fed, and having means thereon for definitely locating the goods in relation with the point of operation in the ticket attaching mechanism.

31. In a ticket attaching machine, ticket feeding mechanism, opposing ticket attaching members, a recessed plate located in a plane substantially coincident with the plane of operation of the ticket attaching members, and a pendant housing carried by said plate inclosing one of the ticket attaching members.

32. In a ticket attaching machine, ticket feeding mechanism, movable ticket attaching members, and a guard member extending from the plane of operation throughout the limit of the stroke of one of the ticket attaching members within which one of the ticket attaching members moves to and from operative position.

33. In a ticket attaching machine, ticket feeding mechanism, opposing movable ticket attaching members, a plate located substantially in the plane of operation of the ticket attaching members, and a housing within which one of the members is retracted, said housing extending substantially to the limit of travel of the lower ticket attaching member to prevent the insertion of the goods beneath the plate.

34. In a machine of the character described employing ticket material arranged in a strip, the combination with ticket attaching and ticket severing means, of a reciprocatory strip feeding head adapted to over-run its point of engagement with the strip, and means for varying the degree of over-run to correspondingly vary the degree of advance of the strip under the influence of the head.

In testimony whereof, I have hereunto set my hand this fourteenth day of July, 1913.

HARRY G. DAVIS.

Witnesses:

ALLEN M. STEARNE,

GEO. W. HENRY, Jr.