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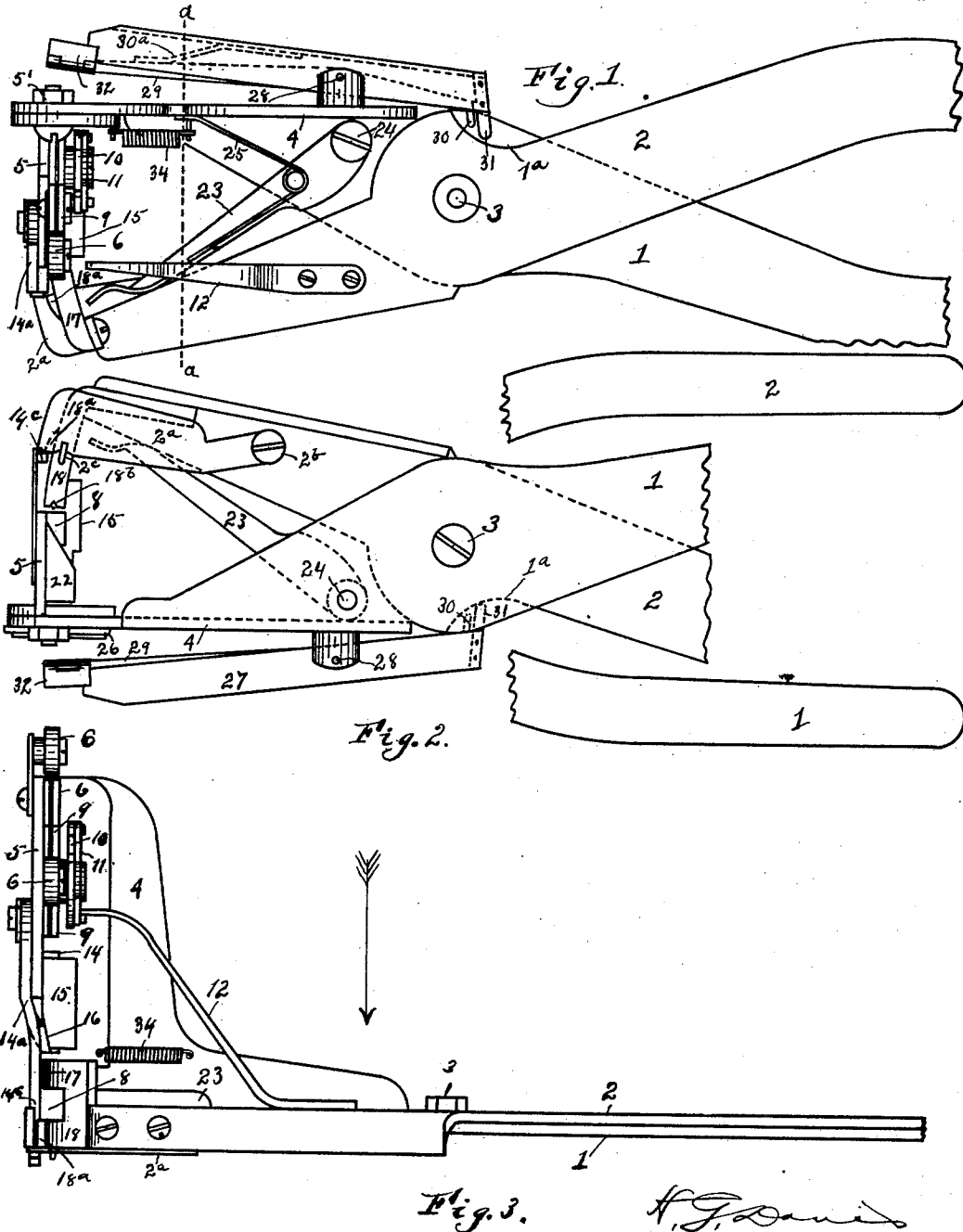
H. G. DAVIS.

HAND MACHINE FOR ATTACHING TICKETS TO GOODS.

(Application filed Apr. 14, 1902.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES

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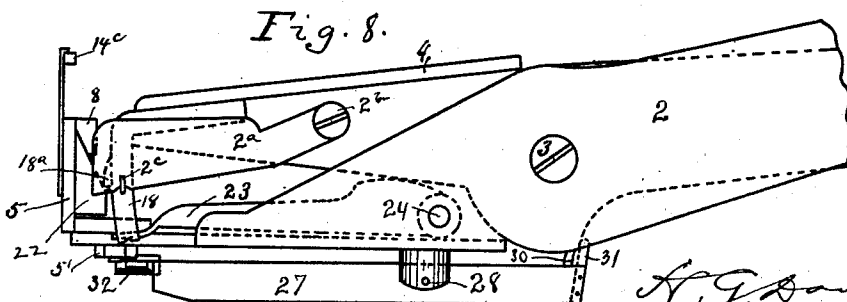
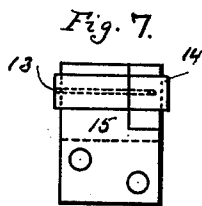
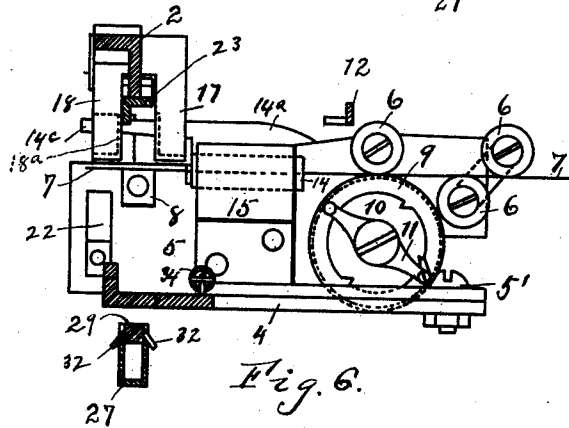
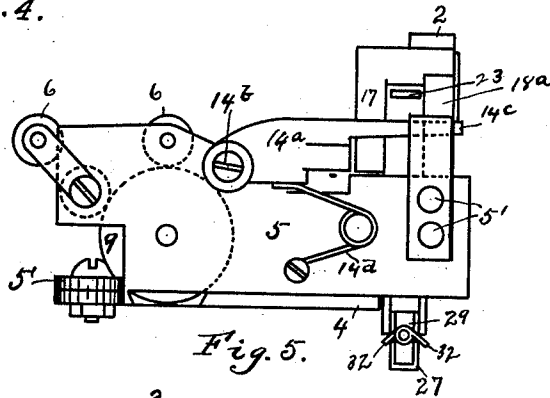
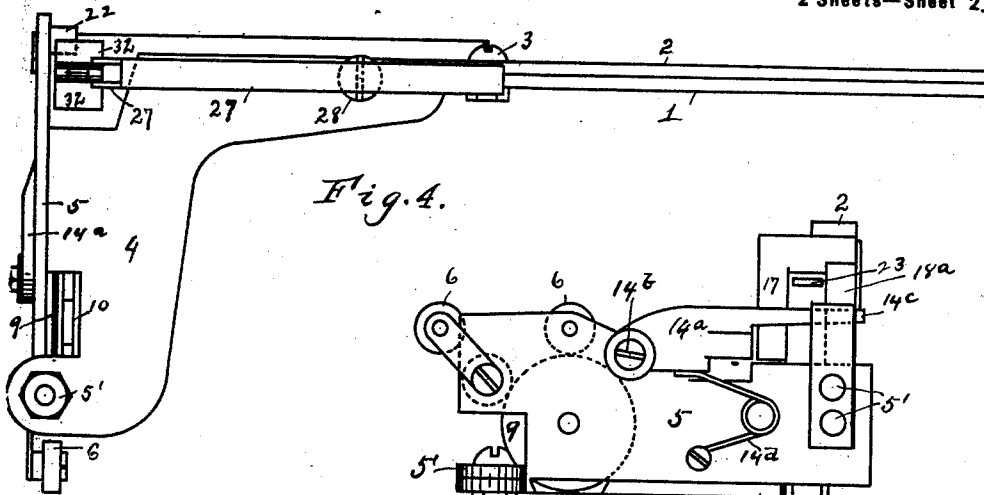
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UNITED STATES PATENT OFFICE.

HARRY G. DAVIS, OF DAYTON, OHIO.

HAND-MACHINE FOR ATTACHING TICKETS TO GOODS.

SPECIFICATION forming part of Letters Patent No. 715,032, dated December 2, 1902.

Application filed April 14, 1902. Serial No. 102,705. (No model.)

To all whom it may concern:

Be it known that I, HARRY G. DAVIS, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Hand-Machines for Attaching Tickets to Goods; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to a hand-operative machine for attaching tickets to goods.

The tickets referred to are such as are usually employed for denoting the price and quality of the goods as well as other information.

The machine which is the subject-matter of the present application simultaneously makes the pin and attaches the ticket to the goods.

The essential features of the present invention consist in two pivoted jaws or members, one of which has a resilient plate upon which the major portion of the wire feeding and cutting devices and the pin-forming devices are mounted. The plate referred to is essentially required to have a certain springy nature which is necessary to an operation of the machine.

In a detail description of the invention, reference is made to the accompanying drawings, of which—

Figure 1 is an elevation, full size, of my improved machine looking in the direction of the arrow in Fig. 3, parts of the members being broken away. Fig. 2 is an elevation looking on the opposite side of the machine as shown in Fig. 1. Fig. 3 is a top plan view. Fig. 4 is a bottom view. Fig. 5 is an end view. Fig. 6 is a sectional view on the line *a a* of Fig. 1. Fig. 7 is a detail view of the cutters. Fig. 8 is an elevation of the machine in a closed position.

In a detail description of the invention similar reference characters indicate corresponding parts.

1 and 2 designate, respectively, two jaws or members which support the various mechanism necessary to forming the pin and uniting

the tickets. These jaws or members are hinged at 3. The lower member 1 terminates in a right-angled portion or extension 4, which forms the base for an upright plate 5, which may be an integral part of said extension 4, or it may be a separate part united to said extension. This part is on the lower jaw and is the main support for the cutting and forming devices. Upon this upright plate 5 a series of guide-rollers 6 are mounted, through which the wire 7 is fed from a reel (not shown) through the stationary cutter 14 and onto the anvil 8. (See Fig. 6.) The wire passes through said rollers and is fed into the machine by a larger feed-roller 9, which is pivoted to the upright plate 5 and is operated through a ratchet-wheel 10 and a pawl 11. The pawl 11 is actuated by an arm 12, which projects from the upper member or jaw 2. The ratchet-wheel 10 and the larger feed-roller 9 are mounted on the plate 5. The wire enters the opening 13 in the stationary member 14 of the wire-cutter, the said stationary member being supported in a housing 15, which is secured to the upright plate 5. 14^a is the movable cutter, which is pivoted at 14^b to the outer side of the supporting-plate 5 and is held up by a spring 14^d. One side—namely, the cutting side—of the stationary cutter 14 is tapered, as at 16, and the wire projects through said tapered side.

17 and 18 are two movable members constituting the pin-former, which is mounted on the upper jaw 2. Member 18 has a lug or projection 18^a on its outer side which comes in contact with the movable cutter 14^a when the jaws are initially closed, and thereby cuts a sufficient length of wire for a pin. The former, consisting of two members 17 and 18, after the wire is cut moves downwardly over the square anvil 8, across the top of which the wire is fed, as shown in Fig. 6. The upright plate 5 is secured only at one end at 5'. (See Fig. 5.) It will therefore be understood that the said plate 5 has some spring or resiliency which is due to such a connection and which is essential to an operation of the machine. For example, when the pin is cut and formed this plate must move outwardly in order to allow said pin to be moved from the upper side of the anvil 8. The plate 5, which is thus moved outwardly to permit of the pin being

moved from the anvil, is held in such outward position by a plate 2^a, which is pivoted at 2^b to the upper jaw 2. This plate is supported at its outer end by a stop 2^c, projecting from the former-member 18. It will therefore be seen that the plate 2^a will follow the jaw 2 in its closing movement to a position in the rear of the plate 5 and will hold said plate 5 outwardly during the return of the former to its upper or normal position. After the jaw 2 has moved the former to such position the holding-plate 2^a will release the plate 5 and permit the anvil to assume its operative position with the wire in position above it. The lower end of the former-members 17 and 18 have V-shaped notches 18^b, which engage the wire. In the downward movement of the former-members 17 and 18 the cam 22 on plate 5 is engaged by member 18, and plate 5 is thereby moved outwardly, dislodging the pin from the anvil. It will be borne in mind that the movement of said former-members 17 and 18 is in an arc of a circle by reason of the said members being pivoted at 3.

23 is a driver or pressure arm which is pivoted at 24 to the lower jaw 1 of the machine and is pressed normally upward by a spring 25. This driver has its free end projected between the former-members 17 and 18, and as the operation of closing the members or jaws 1 and 2 is completed the said driver makes contact with the upper cross portion of the staple or pin and presses said staple or pin through the ticket 26 and the goods upon the holder 27. The ticket and goods are placed upon a bar or holder 27, which is pivoted to the lower jaw or member 1 at 28. The said bar or holder 27 also incloses an inner bar 29, which coöperates therewith in supporting the goods and ticket and which is also pivoted at 28. The rear end of this bar 29 has a projection 30, which is operated to close or open the same simultaneously with closing or opening the jaws 1 and 2. The bar or holder 27 also has a projection 31. The projections 30 and 31 are operated through a cam-surface 1^a on jaw 2. The bar 29 is normally pressed up by a plate-spring 30^a. (Shown in dotted lines in Fig. 1.) The free end of said bar 29 has two hinged plates 32 32 mounted thereon. The plates 32 are elevated to a horizontal position when the jaws 1 and 2 are closed, as shown in Fig. 8. The outer bar 27 causes this elevation of said plates. This position of said plates causes a clenching of the ends of the pin against the goods, and thus unites the ticket and goods. When the bar 27 is permitted to drop on its pivot 28, as in Fig. 2, the said bar moves away from the inner bar 29 and the plates 32 and permits said plates to drop, as in Fig. 2. The bars 27 and 29, together with the plates 32, constitute the ticket and goods holder and pin-clenching devices. The operation of forming a pin and uniting a ticket takes place during the closing of jaws 1 and 2. The plate 5 is held inwardly by a coil-spring 34, which is attached

thereto and to the part 4, projecting from the lower jaw 1. When the machine is opened to its widest position, as shown in Fig. 2, the plate 5 is drawn to its inner position by this spring. From this open position of the jaws the operation of the machine is as follows: In closing said jaws the first operation is to cut off the length of wire which has previously been fed in by the ratchet devices 10 11 12. This, as before stated, projects said wire through the stationary cutter 14 and across the top of the anvil 8. The continued closing movement of the jaws 1 and 2 lowers the former-members 17 and 18 on said wire and over the anvil 8. The continued movement of former-members 17 and 18 bends said wire around the anvil, and thus forms the pin. The further movement of jaws 1 and 2 moves the plate 5 outwardly and permits the pin to be moved from anvil 8, and the driver 23 is next lowered against the pin to force it through the ticket and the goods. At the same time the ratchets feed another length of wire across the anvil. The driver 23 in a complete closing movement of the jaws 1 and 2 presses the pin through the ticket and into the goods and clenches said pin against the plates 32. The jaws are then spread apart by the spring tension on the pressure-arm 23.

Having described my invention, I claim—

1. In a machine for attaching tickets to goods, two pivotally-connected jaws, a resilient face-plate mounted on one of said jaws, wire feeding and cutting mechanism mounted on said face-plate, an anvil across which said wire is fed, said anvil being supported on said face-plate, a pin-former mounted on the other of said jaws, means for moving said face-plate outwardly after the formation of each pin to remove the anvil from said pin, and a driver for attaching the ticket by means of said pin.

2. In a machine for attaching tickets to goods, the combination with two pivotally-connected jaws, of a resilient face-plate mounted on one of said jaws, wire feeding and cutting mechanism mounted on said face-plate, an anvil mounted on said plate, former-members coöperating with said anvil to form a pin, means for actuating said face-plate to remove the anvil from the pin after the formation of said pin, means for holding said face-plate outwardly during the return movement of the former-members, and a driver by means of which the pin is forced through the ticket and the ticket thereby attached.

3. In a machine for attaching tickets to goods, two jaws having a pivotal connection, wire feeding and cutting mechanism, a resilient face-plate supported on one of said jaws and upon which the said wire feeding and cutting mechanism are mounted, an anvil mounted upon said face-plate in a position below the line of feed of the wire, a pin-former mounted on the other of said jaws, cams interposed between said pin-former and the resilient face-plate whereby the said plate is

moved outwardly after the formation of a pin to remove said anvil from the pin, means for holding said resilient face-plate in said outward position during the return movement
 5 of the pin-former, a driver mounted on one of said jaws and whereby the pin is driven through the ticket after its removal from the anvil, a support for said ticket, and pivotal plates upon said support and against which
 10 the ends of the pin are clenched after their passage through the ticket.

4. In a machine for attaching tickets to goods, the combination with two movable jaws having a pivotal connection, of a resilient
 15 face-plate mounted upon one of said jaws, wire feeding and cutting mechanism mounted upon said resilient face-plate, an anvil mounted upon said resilient face-plate and across which the wire is fed in suitable lengths for
 20 pins, a pin-former mounted upon the other of said jaws, a projection on said pin-former coöperating with the cutting mechanism to sever the wire, a cam mounted on said resilient face-plate, a projection on said pin-
 25 former coöperating with said cam to move the resilient face-plate outwardly after the formation of each pin and to thereby cause a removal of the anvil from the pin, a driver movable above the pin after its dislodgement from
 30 said anvil, said driver being mounted on the lower member of said jaws, means for holding the resilient face-plate outward during the return movement of the pin-former after the operation of removing the pin from the

anvil and driving it through said ticket, and
 35 a support upon which the ticket is held to receive said pin.

5. In a machine for attaching tickets to goods, two pivotally-connected jaws, a resilient face-plate mounted on one of said jaws,
 40 wire-feeding mechanism mounted on said plate, means on the other of said jaws for actuating said wire-feeding mechanism, wire-cutters mounted on said plate, an anvil mounted on said plate over which the pins
 45 are formed, a pin-former coöperating with said anvil, said pin-former being mounted on the other of said jaws, means on said pin-former for operating the cutters to sever the wire after a suitable length is fed to said an-
 50 vil, means for moving the resilient face-plate outwardly after the formation of a pin to remove said anvil from the pin, means for maintaining said resilient face-plate outward during the return movement of the pin-former,
 55 and after the operation of removing said pin from the anvil and attaching the ticket, means for driving said pin after its removal from the anvil, and a yielding support upon which the ticket is held to receive the pin, and by means
 60 of which said pin is clenched.

In testimony whereof I affix my signature in presence of two witnesses.

HARRY G. DAVIS.

Witnesses:

R. J. HAWLEY,
 R. J. McCARTY.