

April 6, 1954

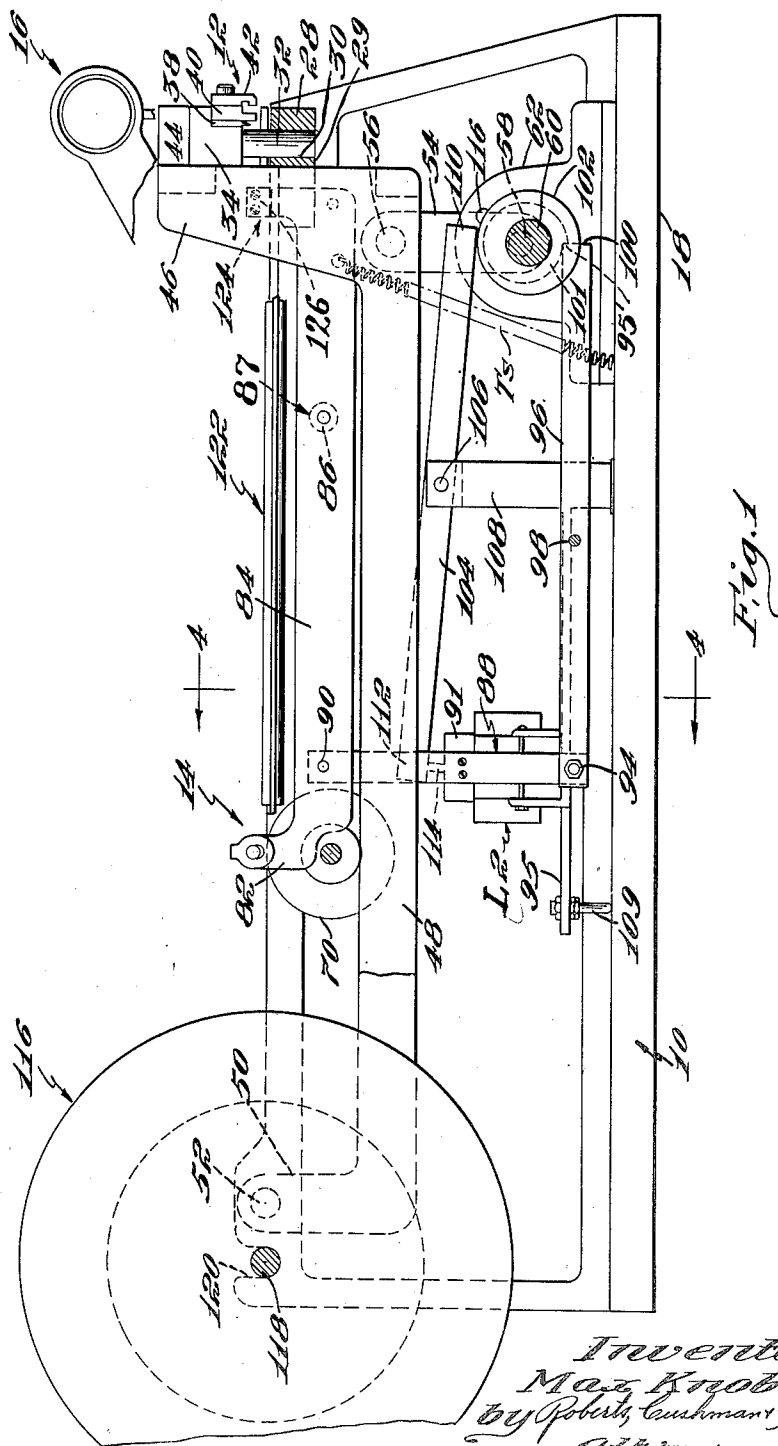
M. KNOBEL

2,674,308

MACHINE FOR CUTTING AND PERFORATING PHOTOGRAPH
PRINTS FROM A CONTINUOUS STRIP THEREOF

Filed July 12, 1949

5 Sheets-Sheet 1



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PRINTS FROM A CONTINUOUS STRIP THEREOF
1949

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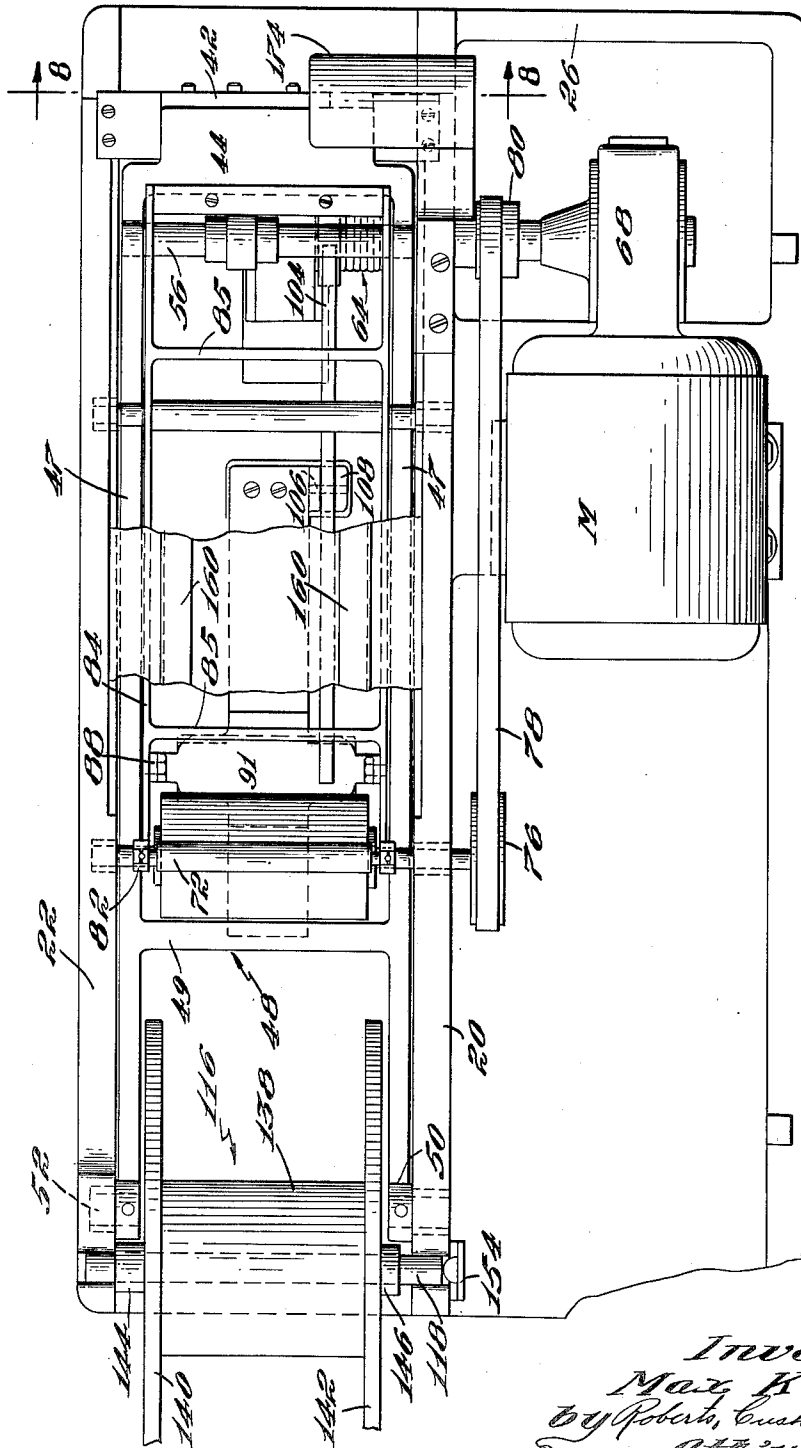


Fig. 2.

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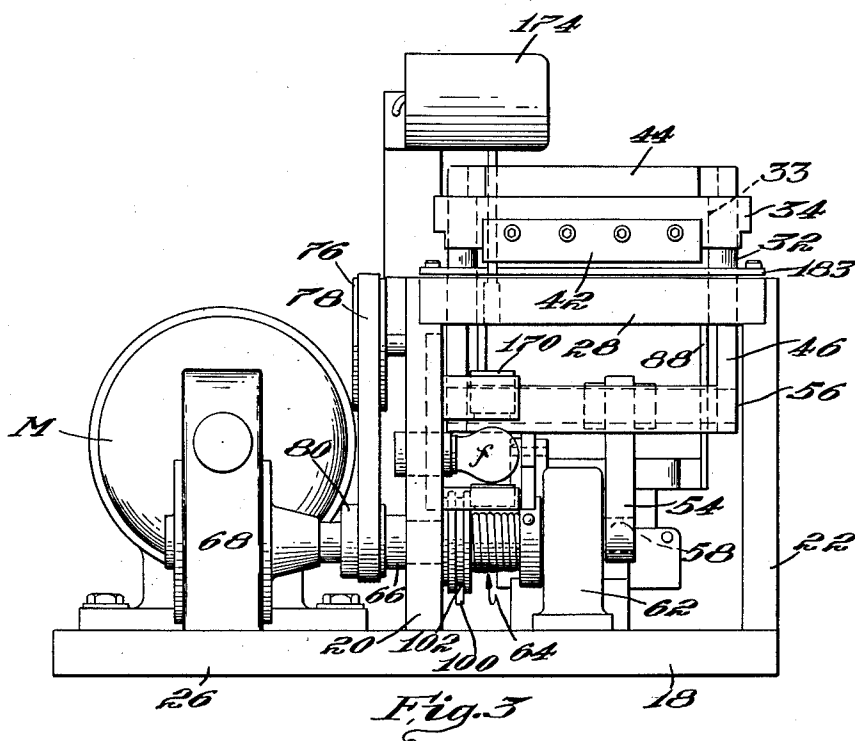
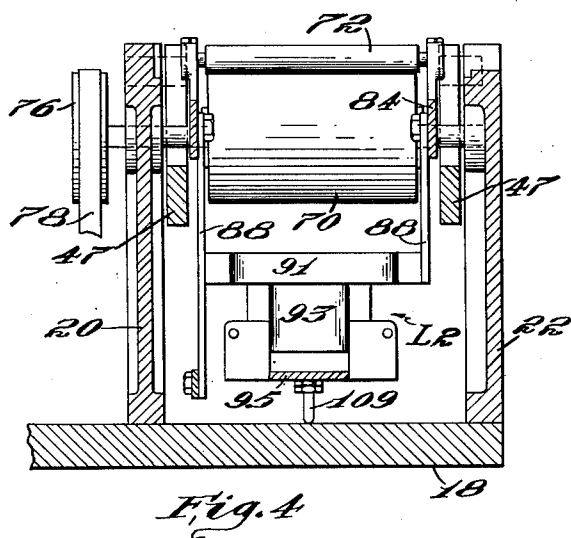
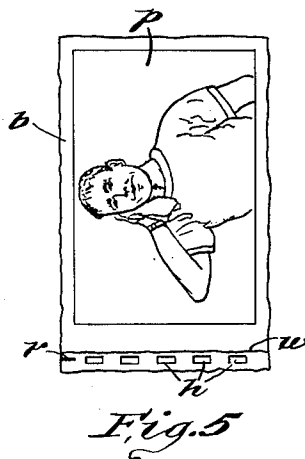
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5 Sheets-Sheet 3



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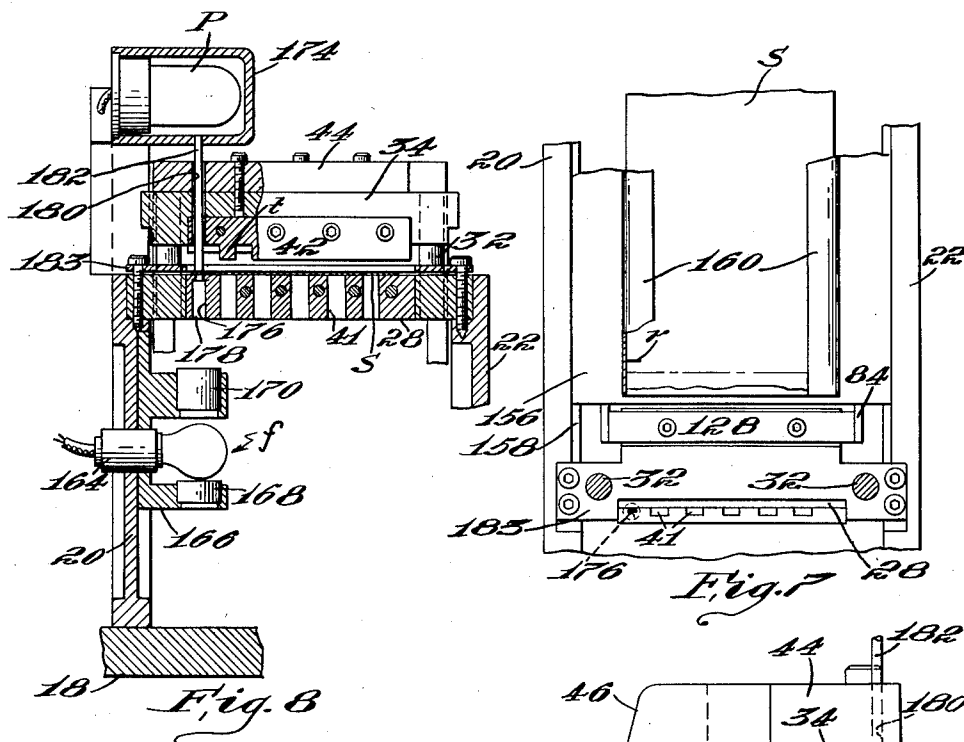
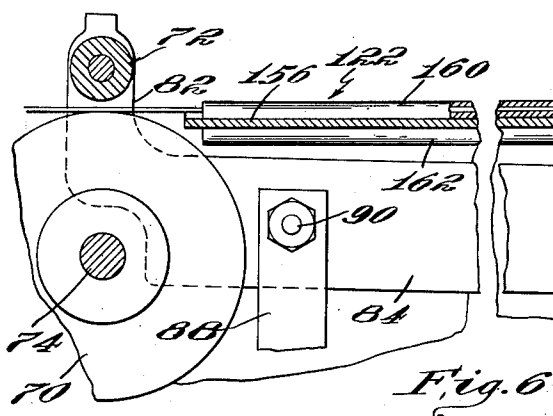
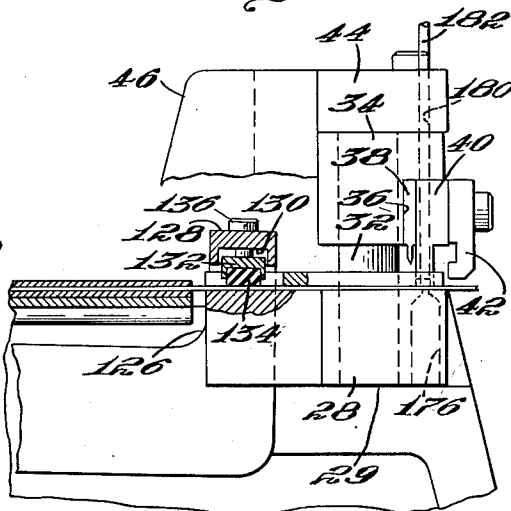
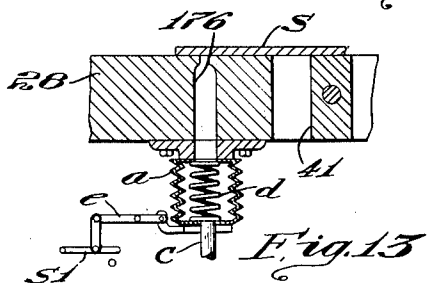
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MACHINE FOR CUTTING AND PERFORATING PHOTOGRAPH
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Filed July 12, 1949

5 Sheets-Sheet 4



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MACHINE FOR CUTTING AND PERFORATING PHOTOGRAPH
PRINTS FROM A CONTINUOUS STRIP THEREOF

Filed July 12, 1949

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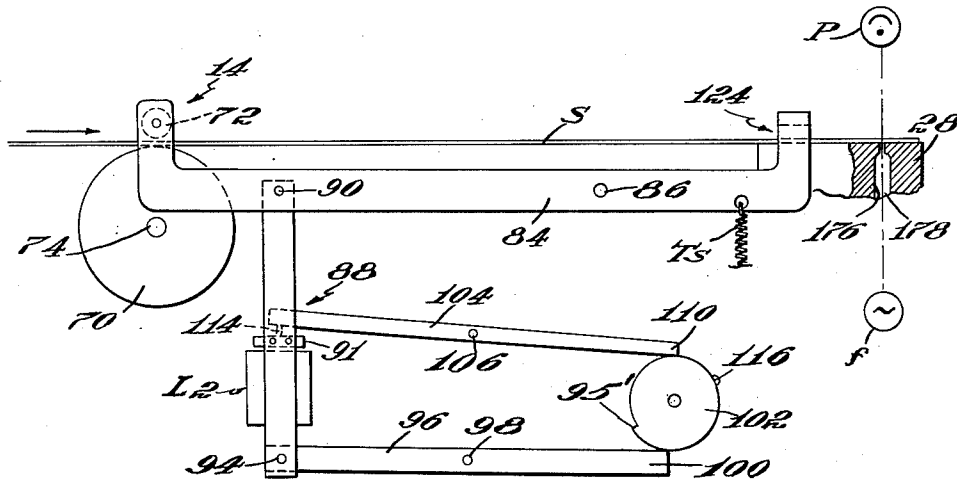


Fig. 9

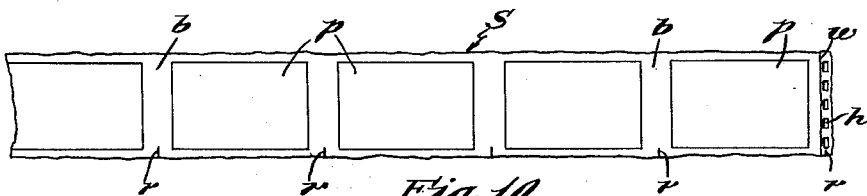


Fig. 10

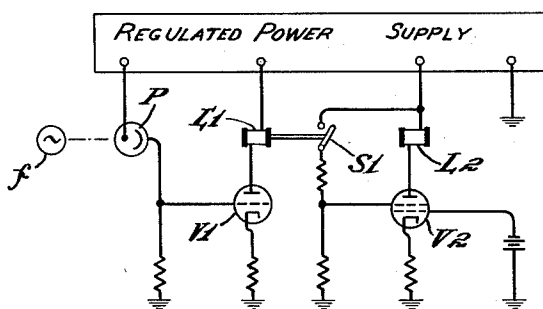


Fig. 11

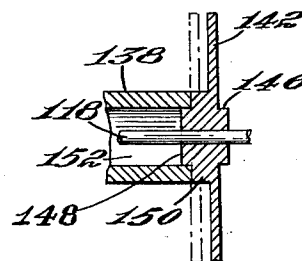


Fig. 12

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UNITED STATES PATENT OFFICE

2,674,308

MACHINE FOR CUTTING AND PERFORATING
PHOTOGRAPH PRINTS FROM A CONTINU-
OUS STRIP THEREOFMax Knobel, Arlington, Mass., assignor to Win-
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Application July 12, 1949, Serial No. 104,274

6 Claims. (Cl. 164—12)

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This invention relates to machines for operating on strips of sheet material and particularly to a machine for automatically operating on a strip placed therein in response to indicia carried by the strip.

Conventional feeding means in the form of feed rolls, reciprocating platens, etc. cannot be depended upon to present strip material to operating instrumentalities with such accuracy as to insure placing the operations exactly with respect to predetermined points, areas, etc. due to small errors in synchronization of the feeding and operating instrumentalities which accumulate in long runs to produce large displacements, to slippage, to backlash in the parts and to changing atmospheric conditions which affect the length of the strip. This becomes particularly important in operating on strip material which is to be divided into lengths containing repeating finite areas bearing indicia of like or unlike character or other intelligible matter which would be rendered valueless if the divisions occurred within the compass of such an area. Such is the case where it is desirable to cut completely processed strips of photographs so that the individual photographs will have the printed area properly centered with respect to its marginal areas and with reference to other structural features such as perforations and score lines at one marginal end as may be provided for assembling and fastening the photographs in sets between paper covers and for permitting removal of one or more of the prints from the assembly without removing the fastening means and covers.

The principal objects of the invention are to provide a machine which will receive a continuous strip and perform certain predetermined operations thereon at selected predetermined points regardless of the foregoing deficiencies in the strip feeding means and especially with reference to a processed photographic strip to sever successive prints from the strip without encroaching upon a succeeding or preceding printed area and will perform other operations thereon such as making perforations so that the prints may be assembled between paper covers, and a score line so that one or more of the assembled prints may be separated from the paper covers without removing the rest. Other objects are to provide a machine to which the strip may be introduced without preliminary adjustment or synchronizing of the strip with reference to the operating instrumentalities and hence can be operated with unskilled help, which will require a minimum of

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adjustment during operation, which will require a minimum of alteration of the strip itself, and which will accommodate strips of different widths.

In the illustrated machine and in accordance with one aspect of the invention there are instrumentalities for operating upon a strip of sheet material, means for advancing the strip to a position to be operated upon by the instrumentalities, and means arranged in the path of the traveling strip responsive to preformed reference marks or elements on the strip to effect actuation of the instrumentalities at points corresponding to the spacing of the reference marks or elements on the strip. Preferably the reference marks are in the form of finite areas or spots of different light-absorbing characteristics from the remainder of the strip and the means for effecting operation of the instrumentalities is a light-sensitive element receiving light for effecting its operation from that part of the traveling strip in which are located the aforesaid areas or spots of different light-absorbing characteristics. Alternatively the reference elements may be slots and there may be means in the form of a pneumatic motor, for example a vacuum-actuated motor, arranged to be supplied with air through the strip each time a hole or slot therein comes opposite the motor to change the flow of air through the motor or to break the vacuum and thereby to effect operation of suitable means to initiate actuation of the operating instrumentalities.

The machine is specifically designed for operating upon a printed strip of photographs so as to separate the individual photographs or prints from each other and leave a border around each, the border at one end being of somewhat greater width than that at the other end and having formed therein a series of holes for receiving fastening means so that they may be assembled in paper covers and a line of weakness so that one or more of the photographs may be torn out of the assembled booklet without damaging it. Accordingly the operating instrumentalities include a cutter for severing the strip clear across, punches for cutting the fastener openings, and a scoring tool for forming the line of weakness across the strip.

The strip feeding means is in the form of a pair of feed rolls which advance the strip and, in accordance with the invention, the means for actuating the foregoing instrumentalities concomitantly renders the feeding means ineffective and applies brake means to the strip close

to the operating instrumentalities so as to immobilize the strip during the operation. The strip is coiled on a reel and a guide is placed between it and the instrumentalities to guide the strip to the instrumentalities. In accordance with a further aspect of the invention both the reel and the guide are adjustable for receiving different widths of strip.

Other objects and advantageous features in the construction of the machine will be apparent from the following description in conjunction with the accompanying drawings wherein:

Fig. 1 is a vertical elevation of the machine as seen from the left side;

Fig. 2 is a plan view of the machine as seen from the top;

Fig. 3 is a vertical end elevation of the machine as seen from the front;

Fig. 4 is a vertical section taken on the line 4—4 of Fig. 1;

Fig. 5 is a plan view of a single print severed from a strip of prints;

Fig. 6 is a fragmentary vertical side elevation, partly in section, enlarged to show the details of the feeding guide and brake means;

Fig. 7 is a fragmentary plan view of the guiding means;

Fig. 8 is a transverse vertical elevation in section on the line 8—8 of Fig. 2 showing the means for actuating the instrumentalities at predetermined times;

Fig. 9 is a diagrammatic illustration of the strip feeding means, brake feeding means and the operating mechanism for effecting operation thereof;

Fig. 10 is a plan view of a preprinted photographic strip which is to be operated upon by the machine;

Fig. 11 is a wiring diagram of the circuit for controlling operation of the machine;

Fig. 12 is a vertical section through the strip-carrying reel showing the details of its construction; and

Fig. 13 is a diagrammatic view of an alternative means for actuating the operating instrumentalities.

Referring to Fig. 1, the device comprises in general a box frame 10, operating instrumentalities 12, feeding means 14, and means 16 for initiating actuation of the operating instrumentalities 12 at the proper times to divide the strip into suitable lengths and to perform certain other operations thereon as will appear hereinafter.

The box frame 10 consists of a base plate 18 (Figs. 3 and 4) from which rise vertical, spaced, parallel walls 20 and 22, bolted or otherwise secured to the base. A lateral extension 26 of the base extends from the wall 20 to receive part of the operating mechanism. The foregoing frame may be a single casting rather than a fabrication.

The operating instrumentalities 12 are situated at the forward part of the frame and are arranged to operate on a strip of sheet material supplied thereto which is moved across an anvil 28 (Figs. 1 and 6) rigidly supported on rearwardly extending horizontal ledges 29 formed on the inner sides of the walls and extends transversely between the side walls 20 and 22. The anvil 28 is in the form of a solid block of metal at each end of which there is formed a vertical opening 30 for receiving the lower end of a vertical post 32. A rigid bar 34 having openings 33 near its ends is mounted for vertical movement on the upper ends of the posts 32, extends transversely of the anvil,

and forms a support for the operating instrumentalities which are attached to it. To this end the forward face of the bar 34 is recessed to form in its lower front corner a right-angle rabbet 36 (Fig. 6) and in this rabbet there are bolted the operating instrumentalities which consist of a scoring tool 38, a punch 40 and a cut-off member 42. The scoring tool consists of a flat blade having a blunt edge which is arranged to be brought into engagement with the upper surface of a strip resting on the anvil and to score the upper surface sufficiently so that it forms a line of weakness therein. Preferably the operating edge of the scoring tool is not a straight edge but is somewhat wavy so as to impart what is known as a deckled edge to the strip material upon separation of the scored parts. The punch 40 comprises a flat bar having along its lower edge a plurality of spaced teeth *t* (Fig. 8), each of which is substantially rectangular in cross section, for punching through the strip of material resting on the anvil so as to form a plurality of spaced rectangular openings in the strip through which a spiral-type hinge member such as is employed in making up or assembling a plurality of the prints between paper covers may be inserted. A plurality of openings 41 corresponding to the teeth *t* are formed through the anvil below the punch bar into which the lower ends of the teeth telescope during the punching operation to provide a clean shearing cut and through which the severed waste pieces may be discharged. The cut-off member 42 is also in the form of a flat bar and has a lower cutting edge which cooperates with the forward edge of the anvil to shear the strip clear across.

The bar 34 which carries the foregoing instrumentalities is moved vertically by attachment to the under side of an overhanging, forwardly-projecting web 44, the opposite ends of which are formed integral with spaced upwardly-projecting cheeks 46 which in turn are formed integral with the forward ends of a pair of spaced rails 47 (Fig. 2) joined by cross rails 49 to form a rigid frame 43 which is of generally rectangular shape and extends rearwardly of the machine between the side walls 20 and 22. At the rear end of the frame there are upwardly-projecting cheeks 50 (Fig. 1) which are pivotally supported on studs 52 set into the side walls so that the frame 43 may be raised and lowered about the pivots 52 and hence to raise and lower the operating instrumentalities carried by the forward end of the frame with respect to the anvil 28. Since the frame 43 is pivoted at one end and is rocked on the pivot, its forward end moves in an arc and even though the radius of this arc is comparatively long as represented by the distance between the center of the openings 32 and the centers of the pivots 52, the posts would not slide freely into and out of the openings during rocking movement of the frame because the parts are perpendicular to the anvil. In order to permit free movement it is necessary to provide a small clearance to compensate for the slight arcuate movement of the holes relative to the posts and this may be accomplished either by making the holes of slightly larger diameter than the posts or by making the posts of slightly smaller diameter than the holes. Reciprocation of the frame 43 is effected by means of a link 54 (Fig. 1) pivotally fastened to a horizontal shaft 56, the ends of which are journaled in the side rails of the frame 43 and with its lower end pivotally connected to an eccentric pin 58 fixed to one end of a shaft 60 journaled for rotation about

a horizontal axis in a bearing 62 and driven through the intermediary of a one-revolution clutch 64 (Figs. 2 and 3) from a drive shaft 66 connected for continuous rotation through a gear-reduction unit 68 to a motor M fastened to the lateral extension 26 at the base. A single rotation of the eccentric pin 58 will be effected each time the clutch 64 is engaged to move the frame 48 downwardly about its pivots 52 thus to bring the operating instrumentalities into engagement with a strip resting on the anvil and then to return the instrumentalities to their inoperative position. Clutching and declutching of the one-way clutch 64 will be described hereinafter.

The strip feeding means 14 (Figs. 1, 6 and 9) is comprised of a lower constantly driven feed roll 70 and an upper feed roll 72, which rotates freely about a horizontal axis parallel to the axis of the roll 70, serving merely to hold the strip against the driven feed roll 70. The lower feed roll 70 is mounted for rotation on a horizontal shaft 74 journaled in the side walls 20 and 22 and has on one end a pulley 76 (Figs. 2 and 3) over which there is placed a belt 78, the opposite end of which is engaged with a pulley 80 fixed to the shaft 66. Accordingly the feed roll 70 is constantly rotated as long as the motor M is energized. The upper feed roll 72 is journaled between a pair of upwardly extending arms 82 which are formed integral with a pair of spaced rails 84 which extend forwardly toward the front of the machine and are pivotally supported at 86 on the side walls so that the upper feed roll 72 may be moved to and from the upper surface of the lower feed roll 70. The rails 84 are joined by cross rails 85 (Fig. 2) to form a rigid frame 87. Normally the frame 87 is drawn downwardly in a counterclockwise direction about its pivots 86 so as to hold the upper feed roll 72 in contact with the surface of the lower feed roll by a yoke (Figs. 1, 4 and 9) which includes spaced legs 88, the upper ends of which are pivotally supported on pins 90 set into the side rails 84. The lower end of one of the legs 88 extends nearly to the base plate and is pivotally fastened to one end of a lever 96. Between the legs 88 there is fastened a web 91 to the under side of which there is in turn fastened an armature, not shown, which forms part of a solenoid L2, the coil of the magnet 93 of which is fastened to an adjustable platform 95 below the armature. When the solenoid L2 is energized the magnet attracts the armature holding it thereagainst and thereby holds the rear end of the frame 87 depressed. A spring T5 fastened to the forward end of the frame 87 and to the base plate tends to pull it in a clockwise direction about its pivot and hence to separate the feed rolls. The lever 96 is pivoted on a stud 98 set into the wall 20 and its forward end 100 is arranged to lie within a cam groove 101 formed on a cam 102 fastened to the shaft 60. When the solenoid L2 is disengaged by interruption of its circuit as will appear hereinafter, the spring T5 tilts the frame 87 so as to disengage the armature 91 from the magnet 93. This in turn tilts the lever 96, the rear end of which is connected to one of the legs 88 in a direction to withdraw the forward ends of the lever from the notch 95, thereby releasing the one revolution clutch. The tilting of the frame also lifts the upper roll 72 out of engagement with the lower roll 70 thereby to discontinue a positive feed of the strip passing between the same. To restore feeding movement of the strip a lever 104 is pivotally mounted on a stud 106 at the top of a post

108 so that one end 110 rests on the cam 102 and the other end 112 rests on a nub 114 on top of the armature-carrying web 91. A nub 116 is formed on the cam surface 102 so that near the end of the revolution of the shaft 60 as the operating instrumentalities are moved to their inoperative position the nub 116 engages the end 110 of the lever 104 thereby depressing its rear end and restoring the armature to its position against the magnet which is now energized and will, when the armature is mechanically restored thereto, hold the armature thereagainst.

The platform 95 is comparatively long, being formed integral with the lower part of the post 108 so that while it is fixed at its forward end, its rear end may be elevated or depressed within limits to adjust the heightwise position of the magnet. An adjusting screw 109 is fixed in the free end of the platform for this purpose and has a lower end resting on the base plate.

The strip material is advanced by the feeding means from a reel 116 (Figs. 1 and 2) mounted on a horizontal shaft 118 journaled in open bearing slots 120 formed in the side walls and is delivered through a guide 122 (Figs. 1 and 6) to the anvil 28 where it is acted upon by the foregoing instrumentalities. While the feeding of the strip is interrupted by separation of the upper feed roll from the lower feed roll, a more positive immobilization of the strip is desirable to insure accuracy of placement. Accordingly brake means 124 (Figs. 6 and 9) is provided for clamping the strip against the anvil ahead of the operating instrumentalities. The brake means is carried at the forward ends of the frame 87 on upwardly projecting arms 126 between the upper ends of which is bolted a transversely extending bar 128 (Fig. 6) having in its under side a channel 130 for reception of a bar 132. In the lower surface of the bar 132 there is fastened a rubber or other resilient friction strip 134. The bar 132 is fastened in the channel 130 by means of bolts 136. Since the brake member is secured to the forward end of the frame 87, tilting movement of the frame to separate the upper roll 72 from the lower roll 70 concomitantly brings the brake strip 134 into engagement with the traveling strip and presses it firmly against the upper surface of the anvil.

The reel 116 (Figs. 1, 2 and 12) upon which the strip is coiled comprises a cylindrical body portion 138 and end flanges 140 and 142 which have on their outer surfaces hubs 144 and 146. The hubs are bored axially so as to receive the horizontal shaft 118 and to support the reel for rotation thereabout between the walls 20 and 22. One of the flanges, namely the flange 142 (Fig. 12), is constructed to be separably associated with the cylindrical body portion 138 and has on the side opposite the hub 146 a corresponding hub 148. There is interposed between the hub 148 and the flange 142 an intermediate hub 150 which has a diameter corresponding to the diameter of the body portion 138. The body portion has an axial passage 152 therethrough into which the hubs 146 and 148 are adapted telescopically to fit, and with the foregoing construction it is apparent that the width of the reel, that is, the distance between the flanges 140 and 142 may be changed by reversing the position of the flange 142, that is by engaging one or the other of the hubs 146, 148 within the passage 152. In one position the intermediate hub 150 forms an extension of the surface of the body portion 138 so that the reel will receive a strip of one width while in the other

position the intermediate hub 150 will be situated at the outside and the reel will be shortened by the width of the intermediate hub so as to accommodate a strip of narrower width. The foregoing construction permits use of a reel which has a constant over-all length between hubs, thereby affording no difficulties with the bearings, the distance between which is fixed by the spacing of the walls 20—22. A spring-pressed nub 154 (Fig. 2) is fastened to the wall 20 in a position to engage an end of the shaft 118 to hold it in place.

The guide 122 (Figs. 1 and 6) consists of a flat plate 156 of generally rectangular shape, the lateral edges of which are arranged to rest on inwardly projecting ledges 158 (Fig. 7) formed on the inner surface of the walls 20 and 22 at such a level that its upper surface is substantially tangent to the upper surface of the feed roll 70 and in the plane of the upper surface of the anvil 28. There is fastened to the upper surface of the plate 156 a pair of spaced angles forming with the plate guide channels 160 for engaging the marginal edges of a strip advanced by the feed rolls toward the operating instrumentalities and to hold it centered with respect thereto. On the underside of the plate there is provided a second pair of spaced side channels 162 arranged at a different spacing so that a wider or narrower strip may be guided thereby. Thus by reversing the position of the guide plate 156 and adjusting the size of the reel 116, strips of two different widths may be operated upon in the present machine.

The means 16 for bringing the operating instrumentalities into engagement with the strip at the proper time is responsive to certain reference marks carried by the traveling strip to effect the foregoing actuation in accordance with the spacing of the reference marks thereon. As illustrated (Figs. 8, 9 and 11) a source of light *f*, for example, a small electric bulb set into a socket 164 fastened in the wall 20 is arranged below the anvil 28. To concentrate the light and project it vertically upward, a bracket 166 is fastened to the wall 20 so as to support a reflector 168 below the bulb and a lens 170 above the bulb in such a manner as to direct rays from the bulb vertically upward toward a light-sensitive cell P housed within a hood 174 fastened to the frame above the operating instrumentalities. A hole 176 is drilled in the anvil 28 directly above and in axial alignment with the center line of the lens 170 into which there is set a translucent member, for example, a quartz or Lucite rod 178 or other similar material having unidirectional light-transmitting properties. Holes are drilled in the punch bar, the block 34 and the lip 44 to form a vertical passage 180. Another light-transmitting rod 182 is placed in the vertical passage so as to be in axial end-to-end alignment with the light-transmitting rod 178. The lower end of the rod 182 is above the anvil sufficiently to permit free movement of the strip below it and is flush with the under side of a guide plate 183, the under surface of which is engaged with the upper surface of a strip resting on the anvil. Accordingly the rods 178 and 182 provide a continuous conduit for the passage of light from the bulb through the anvil, paper and operating instrumentalities. The upper end of the rod 182 enters an aperture in the hood 174 and is fixed thereto so that light transmitted by means of the foregoing rods from the light bulb will be carried to the light-sensitive cell P. The

passage 180 is sufficiently large so that the operating instrumentalities may reciprocate vertically relative to the rod. The central portion of the plate 183 is cut away to permit operation of the punches on the strip. The sensitive cell P is normally adjusted so that as the strip travels over the anvil there is sufficient light conducted thereto and through the strip to activate it and activation of the sensitive cell is arranged through a suitable circuit which will be described hereinafter to energize the coil of the magnet 93 and hence hold the one-revolution clutch inoperative. The strip S which is being operated upon (Fig. 10) has on it a series of spaced indicia in the form of narrow reference marks *r* situated between printed areas *p* in the blank bordering areas *b* between the printed areas. The reference marks *r* are made by overexposing the sensitized film thereby to produce black marks, although other means could be used to make appropriate marks, which will pass less light than the portions of the strip between them; accordingly when one of the reference marks passes between the ends of the light-transmitting rods, the light intensity is reduced so that the light-sensitive cell P responds and actuates the aforesaid circuit momentarily to deenergize the coil which in turn permits the spring Ts to effect operation of the one-revolution clutch and this in turn brings about operation of the operating instrumentalities to cut off a section of the strip, punch it so as to form a series of apertures or holes *h* therein and to form a score line *w* thereacross.

The aforementioned circuit for operating the instrumentalities in conjunction with and in response to the light-sensitive cell P, as shown in Fig. 11, includes a tube V1 operable by response of the cell to effect actuation of a solenoid L1. This in turn closes a switch S1 which, by way of a tube V2, energizes the solenoid L2 which, as heretofore explained, is constituted by the magnet and armature 93 and 91, respectively.

An alternative means (Fig. 13) may be employed to bring about actuation of the operating instrumentalities in which air is the controlling medium. As illustrated, in lieu of filling the drilled hole 176 with a light-transmitting rod, the light source *f* and the light-sensitive cell P, an air motor *a* in the form of a bellows is clamped to the under side of the anvil over the drilled hole. The lower end of the bellows is connected by a flexible conduit *c* to an exhaust engine or place of low pressure and removal of air from the bellows normally tends to collapse it in opposition to a coil spring *d* situated within it which tends to hold it extended. A lever *e* pivotally fastened to the lower end of the bellows will be operated by movement of the latter to actuate the switch S' shown in Fig. 11. The reference elements *r* on the strip will now be small slots or holes and each time a hole in the strip comes opposite the drilled hole in the anvil the vacuum will be broken, the spring *d* will extend the bellows and the lever *e* will close the switch S', hence actuating the solenoid L2 as heretofore described. In this arrangement the tube V1 and the solenoid L1 will be omitted.

In operation when a light beam directed toward the light-sensitive cell P is momentarily interrupted by the passage of a reference mark *r* on the strip, current flow from the power supply will be interrupted so that the grid in the tube V1 will become negative. This in turn interrupts the current flow through the tube V1 with the result that the solenoid L1 will be de-

energized thereby opening the switch S1. As soon as the switch S1 opens, the grid of the tube V2 will become negatively biased and the solenoid L2 will be deenergized. Immediately upon deenergization of the solenoid L2, the spring Ts tilts the frame 84 which separates the armature 91 from the magnet 93. This in turn tilts the lever 96, the rear end of which is connected to one of the arms 83 in a direction to withdraw the forward end of the lever from the notch 95' so that the one-revolution clutch is released. The shaft 60 is then rotated through one revolution to actuate the operating instrumentalities. In the interim between the time that the index mark on the strip cuts off the light to the light-sensitive cell and the actual discontinuance of feeding movement and clamping of the strip, the index mark will have moved beyond the light-sensitive cell so that the light beam is re-established. As soon as the light again passes to the cell P the grid in the tube V1 becomes positively biased, current flows through solenoid L1, and the switch S1 is closed. Closing of the switch S1 makes the grid of the tube V2 positive, thus reenergizing the solenoid L2. The magnet of the solenoid L2, however, is not strong enough to draw the armature back to it but this is taken care of so that the armature is positively restored to its original position against the magnet by tilting of the lever 104, the forward end of which is raised by the nub 116 on the cam as the latter completes a full revolution. Simultaneously the lever 98 is tilted in a direction to raise its forward end into a position to reengage the notch 95 and hence render the one-revolution clutch inoperative.

If the alternative means for actuating the operating instrumentalities is employed, the switch S will be actuated by means of the bellows a instead of the light-sensitive cell and associated tube V1 and solenoid L1.

It should be understood that the present disclosure is for the purpose of illustration only and that this invention includes all modifications and equivalents which fall within the scope of the appended claims.

I claim:

1. A strip cutting and punching machine comprising a frame, an anvil on said frame, a rocker mounted on the frame, said rocker being pivoted at its rear end to the frame and having its forward end located adjacent to the anvil, said rocker being movable on its pivot to raise and lower its forward end with respect to the anvil, cutting and punching instrumentalities fast to the forward end of the rocker for movement therewith to and from the anvil, the length of the rocker being such that the movement of the cutting and punching instrumentalities is substantially vertical with respect to the anvil, power operated means operable intermittently to depress the forward end of the rocker to effect cutting and punching and then to elevate it, said power operated means being responsive to a signal, a second rocker on the frame pivoted intermediate its end for rocking movement, the forward end of said second rocker being close to the cutting and punching instrumentalities, a brake block carried by the forward end of said second rocker movable by said second rocker into engagement with the anvil just behind the cutting and punching instrumentalities, a driven feed roll on the frame near the rear end of the second rocker, an idle feed roll journaled on said second rocker for movement into and out of en-

gagement with the driven feed roll, power operated means for rocking the second rocker from a position in which the feed rolls are engaged for feeding a strip of material between them toward the anvil to a position in which they are disengaged and the brake block is pressed against the strip overlying the anvil to hold the strip immobile, said signal for effecting operation of the power operated means for depressing the first rocker, simultaneously effecting operation of the power operated means for rocking the second rocker in a direction to disengage the feed and apply the brake.

2. A strip cutting and punching machine according to claim 1 wherein the anvil and forward end of the first rocker have cooperating guide members for constraining the cutting and punching instrumentalities to movement in a predetermined path.

3. A strip cutting and punching machine according to claim 1 wherein the signal is carried by the strip and there is means responsive to the movement of the signal to a predetermined position on the anvil to effect actuation of said power operated means.

4. A strip cutting and punching machine according to claim 1 wherein the signal is carried by the strip, the strip supporting surface of the anvil has an aperture therein adjacent to the cutting and punching instrumentalities, there is a light source and light sensitive element arranged opposite the ends of the aperture and in vertical alignment therewith and the light sensitive element is responsive to a change in the amount of light transmitted to it from the light source through the aperture and the strip to effect actuation of the power operative means.

5. A strip cutting and punching machine according to claim 1 wherein the signal is carried by the strip, the anvil and support for the cutting and punching instrumentalities have vertically aligned apertures therein adjacent the cutting and punching instrumentalities, located at opposite faces of the strip, there is a light source and light sensitive element located above and below the apertures and in vertical alignment therewith, the light sensitive element is responsive to a change of the amount of light transmitted from the light source through the apertures and the strip to effect actuation of the power operated means and there is a light collocating means located between the light sensitive element and the light source for enhancing the transmission of said light through said apertures.

6. A strip cutting and punching machine according to claim 1 wherein the signal is carried by the strip, the anvil and support for the cutting and punching means have vertically aligned apertures therein adjacent to the cutting and punching means at opposite faces of the strip, there is a light source and light sensitive element located below and above the apertures and vertically aligned therewith, the light sensitive element being located out of the range of movement of said support, the light sensitive element is responsive to a change in the light transmitted from the light source through the apertures and the strip to effect actuation of the power operated means, there is a collocating element located between the light source and the lower end of the aperture in the anvil for directing light thereto, and a light conducting element extending through the aperture in the support from the anvil upwardly to the light

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sensitive element, said conducting element being fixed and said support being slidable on it.

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