July 2, 1968 J. J. QUINN 3,391,046

APPARATUS FOR AFFIXING STENCIL LABELS TO SHEET MATERIAL OF INDETERMINATE LENGTH

Filed March 22, 1966 4 Sheets-Sheet 1

FIG. 3

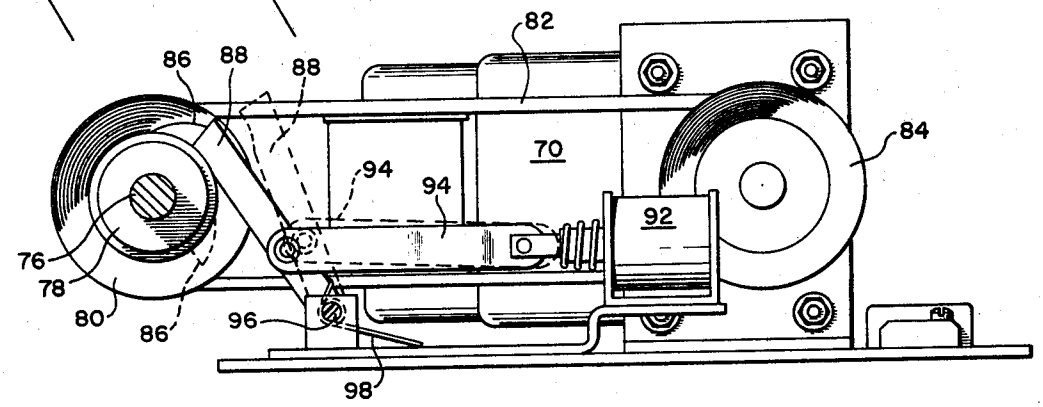
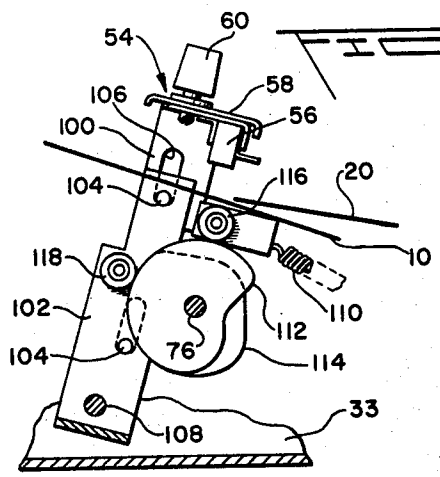


FIG. 4



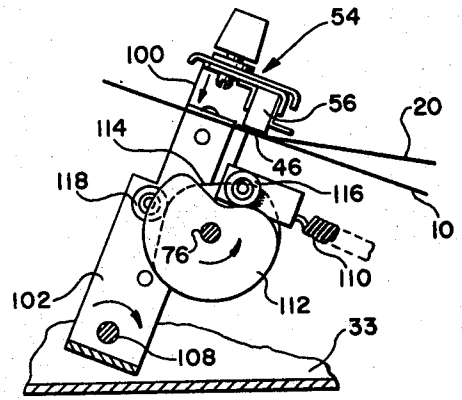


FIG. 5

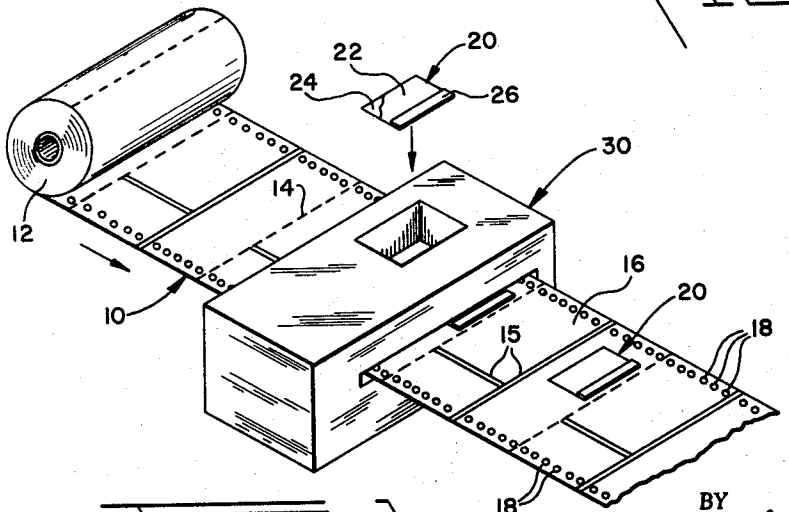


FIG. 1

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APPARATUS FOR AFFIXING STENCIL LABELS TO SHEET MATERIAL OF INDETERMINATE LENGTH

Filed March 22, 1966 4 Sheets-Sheet 2

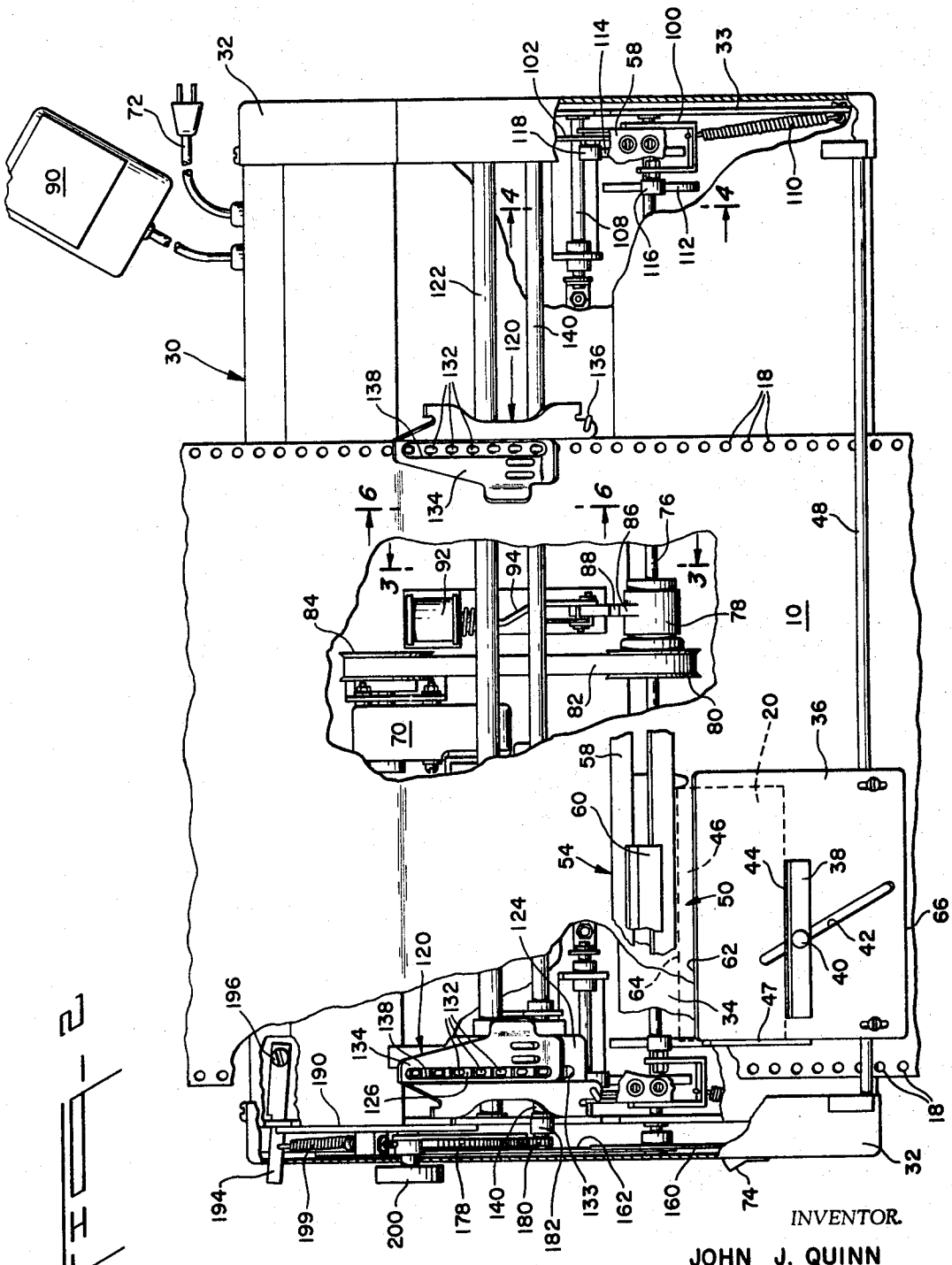


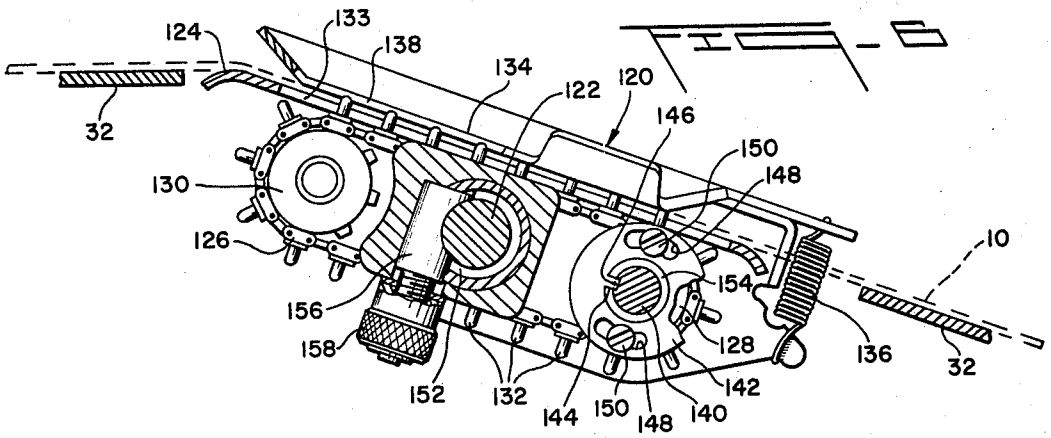
FIG. 2

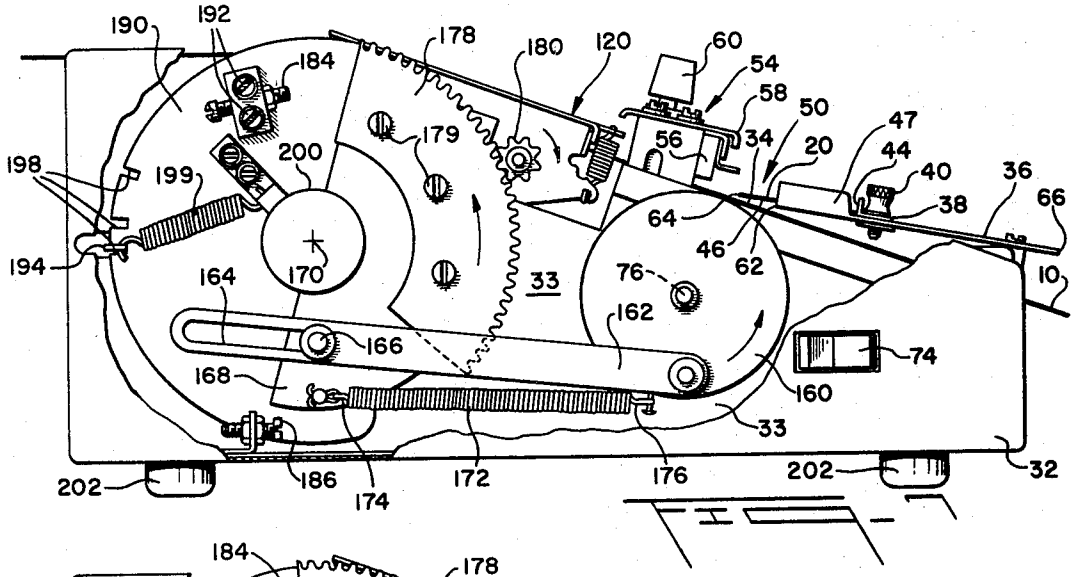
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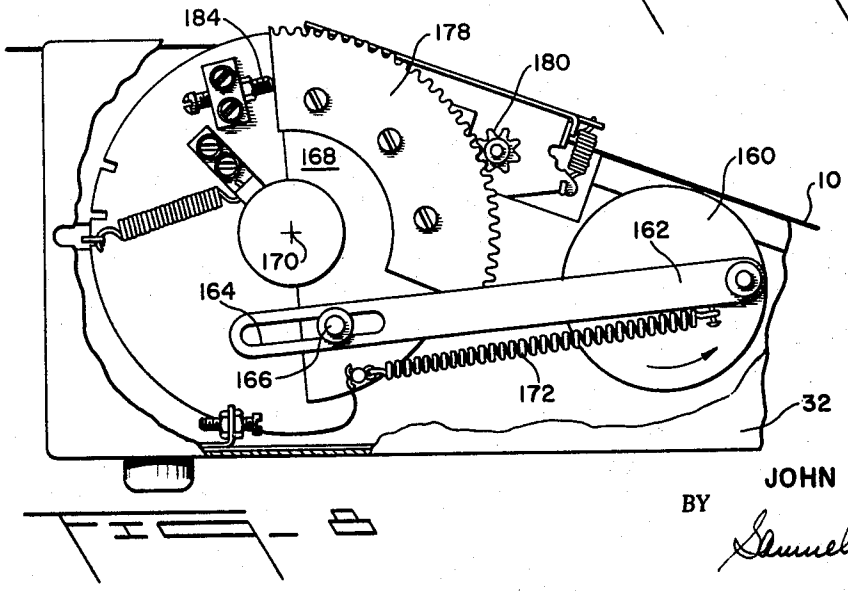
July 2, 1968 J. J. QUINN 3,391,046

APPARATUS FOR AFFIXING STENCIL LABELS TO SHEET MATERIAL OF INDETERMINATE LENGTH

Filed March 22, 1966 4 Sheets-Sheet 3







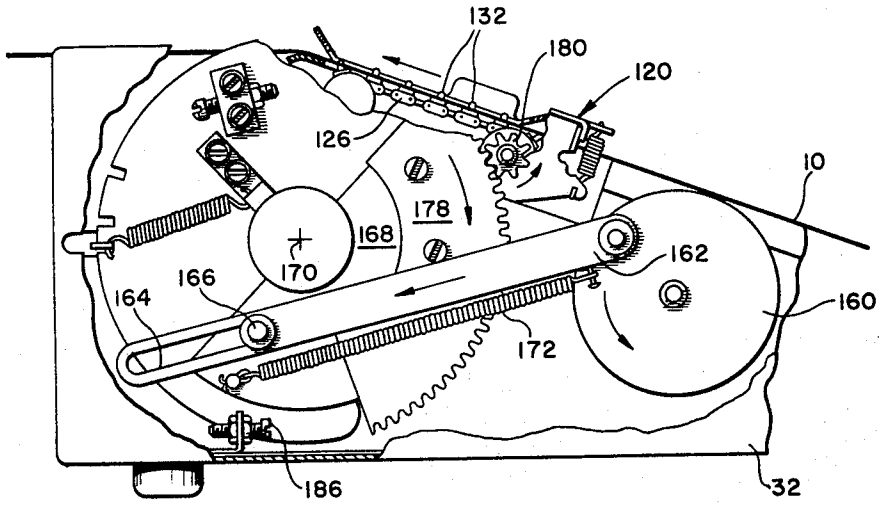
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July 2, 1968 J. J. QUINN 3,391,046

APPARATUS FOR AFFIXING STENCIL LABELS TO SHEET MATERIAL OF INDETERMINATE LENGTH

Filed March 22, 1966 4 Sheets-Sheet 4

FIG. 9



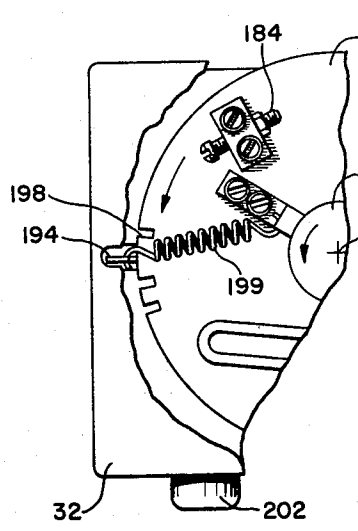


FIG. 10

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United States Patent Office 3,391,046 Patented July 2, 1968

3,391,046

APPARATUS FOR AFFIXING STENCIL LABELS TO SHEET MATERIAL OF INDETERMINATE LENGTH

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Filed Mar. 22, 1966, Ser. No. 536,408
17 Claims. (Cl. 156—362)

The present invention relates generally to apparatus for affixing stencil labels upon sheet material of indeterminate length and pertains, more specifically, to apparatus wherein such stencil labels may be affixed in selected longitudinal spaced relationship upon sheet material of indeterminate longitudinal length when the stencil labels are of the type which are secured to the sheet material by pressing at least a portion of the label against the surface of the sheet material.

Stencil assemblies in the form of relatively small labels are assuming increased importance in business operations where it is desirable to prepare several documents, each having identical information thereon. For example, the same name and address may be placed upon a shipping label or directly upon a shipping carton and upon an invoice or packing slip by preparing a master stencil simultaneous with the preparation of the invoice or packing slip and then employing the stencil for marking the shipping label or carton. In many instances these invoices, packing slips or other documents are prepared from sheet material of indeterminate length which is printed with the desired business forms so that a continuous length of sheet material containing a series of forms of predetermined length may be fed through a typewriter or other character-forming business machine which will imprint the necessary data on successive forms. The sheet material is usually perforated between contiguous forms to allow subsequent separation of the sheet into individual documents. Generally, the continuous length of sheet material is provided with a series of equidistantly spaced apertures aligned longitudinally adjacent each lateral boundary of the sheet so that the sheet can be advanced through the various business machines which operate upon the sheet by the engagement of an advancing mechanism having pins which will enter the apertures and move forward to positively feed the sheet material without a cumulative gain or loss over long lengths.

Since the above business forms are handled in continuous length, it becomes desirable to affix the stencil labels to the sheet material while it is still in continuous length so that the business forms are complete with an attached stencil label when the forms arrive at a character-forming station. The stencil assemblies themselves are usually provided with some means for securing the relatively small stencil label to the surface of the sheet material, the means ordinarily being in the form of a pressure sensitive adhesive. While these stencil labels could be affixed manually by positioning and pressing each label against the sheet material at a desired location, it would be advantageous to have available an apparatus which could relieve at least some of the manual labor to simplify and accelerate the label affixing operation, as well as increase the accuracy of placement.

It is therefore an important object of the invention to provide apparatus for accurately locating and affixing stencil labels to sheet material of indeterminate length in a simple yet rapid and effective manner.

Another object of the invention is to provide apparatus of the character described above wherein a stencil label may be placed in juxtaposed relationship with the sheet material with ease and the apparatus may then be actuated to affix the label and advance the sheet material over a

predetermined increment to ready the sheet material for the application of another label.

Still another object of the invention is to provide apparatus of the type described above wherein label affixing means are located in such relationship to a labeling station in the apparatus that free access is maintained for placement of a label in position to be affixed to the sheet material.

A further object of the invention is to provide apparatus of the character described above wherein the increment of advancement of the sheet material may be varied at will to select differences in the longitudinal spacing of the stencil labels along the continuous sheet material and thus allow the apparatus to accommodate a variety of business forms of different longitudinal lengths.

A still further object of the invention is to provide apparatus of the type described employing transport means which attain accurate control of the increment of advancement of the sheet material so as to preclude cumulative error in the location of the stencil labels placed thereon which might otherwise result from gain or loss in the length of sheet material advanced during each cycle of operation.

Another object of the invention is to provide apparatus of the character described wherein simplified means are provided for operating the affixing means and transport means through a predetermined cycle from a common drive means which is selectively actuated through a given cycle of operation.

The above objects are attained in the apparatus of the invention which may be described briefly as apparatus for affixing stencil labels in selected longitudinal spaced relationship upon sheet material of indeterminate longitudinal length, the labels being of the type which are secured to the sheet material by pressing at least a portion of the label against the surface of the sheet material, the apparatus comprising a housing, a labeling station associated with the housing, first means for locating at least a portion of the sheet material at the labeling station, second means for supporting and locating a label in position relative to the sheet material and the labeling station such that at least a portion of the label may be pressed against the surface of the sheet material at a desired location thereon at the labeling station, drive means capable of being selectively actuated through at least one complete cycle, affixing means for striking at least a portion of the label in position in the second means and pressing that portion against the surface of the sheet material thereby affixing the label to the sheet material in response to the actuation of the drive means through a complete cycle, the affixing means being movable at least once during the cycle between a first position lying away from the label in the second means and a second position lying against at least the above portion of the label and pressing that portion against the surface of the sheet material at the labeling station, and transport means for longitudinally advancing the sheet material with the affixed label relative to the labeling station through at least one selected increment equal to the length of the longitudinal spacing desired between affixed labels in response to the actuation of the drive means through a complete cycle.

The invention will be more fully understood and further objects and advantages will become apparent in the following detailed description of an embodiment of the invention illustrated in the accompanying drawing, in which:

FIGURE 1 is a perspective view illustrating schematically the operation performed by an apparatus of the invention;

FIGURE 2 is a plan view of an apparatus constructed in accordance with the invention with portions removed to show various component parts;

FIGURE 3 is an enlarged cross-sectional view taken along line 3—3 of FIGURE 2 showing the motor and drive means of the apparatus;

FIGURE 4 is an enlarged cross-sectional view taken along line 4—4 of FIGURE 2 showing component parts of an affixing means;

FIGURE 5 is an enlarged cross-sectional view similar to FIGURE 4 with the component parts in another operating position;

FIGURE 6 is an enlarged cross-sectional view taken along line 6—6 of FIGURE 2;

FIGURE 7 is an enlarged end elevational view of the apparatus with portions removed to expose operating components;

FIGURE 8 is a fragmentary end elevational view similar to FIGURE 7 with the component parts advanced to another position;

FIGURE 9 is a fragmentary end elevational view similar to FIGURE 8 with the component parts advanced to still another position; and

FIGURE 10 is a fragmentary end elevational view of a portion of FIGURE 9 with further component parts in another position to illustrate the selection of the increment of advancement of the sheet material passing through the apparatus.

Referring now to the drawings, FIGURE 1 illustrates an indeterminate length of sheet material in the form of paper sheet **10** which is handled and stored in the form of a roll **12** from which the sheet is dispensed as needed. Sheet **10** is divided into discrete lengths by lateral lines of perforations **14**, each of the lengths having printed lines **15** thereon to establish a business form such as an invoice **16** for the purchase of goods between pairs of preforated lines. In order to enable accurate feeding of sheet **10** from roll **12** and through business machines which will imprint the necessary data on each invoice **16**, the sheet is provided with a series of equidistantly spaced apertures **18** aligned longitudinally adjacent each of the lateral edges of the sheet. As seen diagrammatically, a stencil assembly in the form of a relatively small stencil label **20** is to be affixed at a predetermined location on each invoice **16**; in this instance at the position where the name and address of the purchaser of the goods is to be placed. Stencil label **20** is an assembly made up of a stencil sheet **22** associated with some form of duplicating means such as a carbon layer **24** and an adhesive means such as a length of pressure sensitive adhesive tape **26**. The pressure sensitive adhesive tape secures the stencil label to the surface of sheet **10** at a predetermined location on each invoice so that when sheet **10** is carried into a character-forming business machine (not shown), the imprinting operation of that machine will cut a master stencil in stencil sheet **22** and simultaneously print the same information upon the invoice by virtue of the carbon layer **24**. Stencil sheet **22** can then be removed from the invoice and employed to mark the carton in which the purchased goods are shipped while invoice **16** has already been imprinted with the necessary information. The apparatus of the invention is shown diagrammatically at **30** and serves to position and secure stencil labels **20** upon sheet **10** in longitudinally spaced relationship to assure that each invoice **16** is provided with a properly located, attached stencil label **20**, as will be explained below.

Turning now to FIGURE 2, apparatus **30** is seen to have a housing **32** which is assembled of several component parts placed about the frame **33** of the apparatus, at least one of which parts provides first means in the form of a platen **34** over which paper sheet **10** is passed and upon which the sheet **10** is supported. Located vertically above the platten **34** is a second means shown in the form of tray **36** providing a platform upon which a stencil label **20** may be placed as illustrated in phantom. Tray **36** is spaced vertically from platen **34** so that sheet **10** can pass freely between the tray and the platen (also see FIGURE 7). A first locator **38** is fixed upon the tray by means of thumb screw **40** which passes through slot **42** in the tray and may be moved by loosening the thumb screw so that a locating edge **44** is provided for positioning a stencil label upon the tray with a portion **46** of the stencil label, which portion carries a pressure sensitive adhesive on the underside thereof, extending beyond the tray and overlapping the sheet lying upon the platen. A second locator **47** is integral with the left marginal edge of the tray (also see FIGURE 7) to provide a locating edge for the left marginal boundary of the stencil label **20**. Tray **36** is mounted for sliding movement along bar **48** so that by moving tray **36** laterally and moving locator **38** within slot **42** stencil labels of a variety of sizes may be placed in juxtaposed relationship with sheet **10** and positioned at any number of locations across the sheet. Thus, a labeling station **50** is established at the place where the extending portion **46** of the stencil label **20** overlaps the sheet **10**, at which station the adhesive means of the label is in position to be pressed against the surface of the sheet.

Positioned vertically above the tray **36**, and above the stencil label therein, is an affixing means shown in the form of a pressure pad assembly **54** which includes a pressure pad **56** (also see FIGURE 7) which is mounted for sliding movement with respect to a pressure bar **58** and which may be positioned at any desired lateral location along the pressure bar **58** by moving handle **60** which is fixed to the pressure pad so that the handle and the pad move as a unit and may be placed in longitudinal alignment with the stencil label as illustrated. Pressure pad assembly **54** is movable from a first position shown in FIGURES 2, 4 and 7 to a second position shown in FIGURE 5 where the pressure pad **56** strikes the overlapping portion **46** of the stencil label and presses portion **46** against the surface of sheet **10** to secure the stencil label upon the sheet in a manner which will be explained shortly. It is noted that the first position described above places the pressure pad assembly beyond the forward marginal edge **62** of the tray and the forward marginal boundary **64** of the stencil label therein so that free access to the tray is maintained and a stencil label may be dropped vertically into the tray in position above the labeling station without interference from the pressure pad assembly. In adidtion, while both the platten **34** and tray **36** extend in generally horizontal planes, the plane of the tray is actually placed at an angle to that of the platen so that the overlapping portion **46** of the stencil label in the tray will be in close proximity with the surface of the sheet **10** (see FIGURES 4, 5 and 7) while enough vertical spacing is provided between the rearward marginal edge **66** of the tray and the platen to allow sheet **10** to be threaded between the tray and the platen without difficulty.

Apparatus **30** is provided with an electric motor **70** arranged to operate continuously as long as electric current is supplied through line cord **72** and electric switch **74** to the motor, the electric switch **74** serving as a convenient means for turning the apparatus on and off. As best seen in FIGURES 2 and 3, the apparatus includes drive means shown in the form of a drive shaft **76** rotatably mounted in the apparatus and carrying a clutch **78** which couples the drive shaft to a pulley **80** which in turn is coupled to the motor **70** through the drive belt **82** and drive pulley **84**. Ordinarily, the drive shaft is at rest, even though switch **74** may be turned on and motor **70** may be running, by virtue of tooth **86** of the clutch engaging a latch **88** to force the clutch to disengage pulley **80** from drive shaft **76** and allow the motor, pulleys and drive belt to run free.

When sheet **10** is in place upon the platen and a stencil label is in position on the tray, the pressure pad assembly is actuated by depressing pedal switch **90** (FIGURE 2) to energize a solenoid **92** which will disengage the latch **88** from the tooth **86**, as seen in phantom in FIGURE 3, by drawing link **94** toward the solenoid and pivoting the latch in a clockwise direction about pivot

point 96 against the bias force of spring 98. In this manner, tooth 86 is rendered free to rotate clockwise, as shown in phantom, and clutch 78 will engage pulley 80 with the drive shaft 76 to allow motor 70 to rotate the drive shaft. Upon de-energization of the solenoid, the latch 88 is returned to the initial position in the path of tooth 86 by spring 98 and upon completion of a full revolution the drive shaft will again be disengaged from the pulley 80 by the clutch. During one revolution of the drive shaft, however, the pressure pad assembly 54 will complete one full cycle of operation, as is best described in connection with FIGURES 2, 4 and 5.

Pressure bar 58 is mounted at each end thereof to a bracket 100 which, in turn, is supported by an arm 102 by means of a pair of pins 104 fixed to arm 102 and each passing through a slot 106 in bracket 100 such that bracket 100 is slidable in a vertical direction with respect to arm 102. Each arm 102 is pivotally mounted to the frame 33 of the apparatus by rods 108 so that the pressure pad 56 becomes movable in both forward and rearward directions by virtue of the pivotal movement of arms 102 and independently movable vertically upward and downward by virtue of the pin and slot connections between arms 102 and brackets 100. Brackets 100, and the pressure pad assembly carried thereby, are normally biased rearwardly and downwardly by springs 110 which are each fixed at one end to a bracket and at the other end to the frame of the apparatus. In order to actuate the pressure pad assembly, a pair of cams 112 and 114, are fixed to the drive shaft 76 adjacent each end of the pressure pad assembly such that each pair of cams will cooperatively engage a corresponding pair of followers 116 and 118 carried by the bracket 100 and arm 102, respectively. As best seen in FIGURE 4, pressure pad assembly 54 is normally maintained in the first position, wherein pressure pad 56 lies vertically above sheet 10 and stencil label 20 and beyond the overlapping portion 46 and the forward marginal boundary 64 of the stencil label as explained above, against the bias of each spring 110 by virtue of each cam 112 urging corresponding follower 116 and bracket 100 upwardly and each cam 114 urging corresponding follower 118 and arm 102 forward. As drive shaft 76 rotates, cams 112 and 114 rotate to allow follower 116 and bracket 100 to drop downward and follower 118 and arm 102 to pivot rearwardly to bring pressure pad assembly 54 into the second position illustrated in FIGURE 5, wherein pressure pad 56 strikes the overlapping portion 46 of the stencil label 20 and presses portion 46 against the surface of sheet 10 to secure the stencil label to the sheet by virtue of the pressure sensitive adhesive on the underside of that portion of the stencil label. Upon continued revolution of the drive shaft, the pressure pad assembly is returned to the first position so that one complete revolution of the drive shaft will actuate the pressure pad assembly through one complete cycle of operation from the first position to the second position and return. Note that the contours of cams 112 and 114 assure that the pressure pad is brought against the stencil label and sheet for only a relatively small portion of the full revolution of the drive shaft and during the major portion of the cycle the pressure pad assembly is either dwelling at the first position or traveling between the first and second positions.

After the stencil label 20 is affixed to the surface of sheet 10 it is necessary to advance the sheet, with the attached stencil label, a predetermined length so that another stencil label may be similarly affixed at a desired location spaced longitudinally from the first affixed stencil label. As explained above, it is essential that the longitudinal spacing be accurate so that each stencil label is accurately located on each business form printed on sheet 10. Apparatus 30 provides transport means for longitudinally advancing the sheet with the affixed stencil label through a selected increment equal to the length of the longitudinal spacing desired between affixed labels in response to the rotation of the drive shaft through one complete revolution as will now be described.

Turning to FIGURES 2 and 6, apparatus 30 is provided with a pair of tractor mechanisms 120, each mounted upon a support rod 122 which extends laterally across the apparatus and is fixed to frame 33. Each tractor mechanism has a slide plate 124 upon which sheet 10 is made to rest. An endless chain 126 passes around a drive sprocket 128 and an idler sprocket 130 and carries a series of pins 132 which pass through a slot 133 in the slide plate 124 and are longitudinally spaced to match the spacing of the apertures 18. A pressure plate 134 is biased toward the slide plate 124 by means of a spring 136 and also has a slot 138 into which the pins 132 may pass. Sheet 10 is made to pass between the slide plate and the pressure plate with the pins 132 passing through apertures 18 and the pressure plate assuring that the sheet 10 will not become disengaged from the pins. Sheet 10 is thus positively engaged and may be advanced by movement of endless chain 126. Such movement is imparted by rotation of drive sprocket 128 which is operatively engaged with a drive rod 140 through a drive plate 142 having a key 144 engaging key slot 146 in the drive rod. The drive plate is radially adjustable with respect to the drive sprocket by virtue of slots 148 through which screws 150 pass, the screws connecting the drive plate 142 with the drive sprocket 128 so that upon loosening of the screws minor adjustments in the longitudinal location of pins 132 relative to the angular position of drive rod 140 may be made to assure accurate registration of sheet 10 with the labeling station 50. Drive rod 140, like support rod 122 extends laterally across the apparatus, but is supported adjacent each end by the frame for rotation therein as will be explained shortly.

At least one of the tractor mechanisms 120 is slidable along the support rod and the drive rod so that the lateral spacing between the mechanisms may be varied to accommodate a variety of widths in sheet 10. Thus, the right-hand tractor mechanism illustrated in FIGURE 6 is provided with bushings 152 and 154 slidably mounting the mechanism upon rods 122 and 140. In order to fix the mechanism in place along the rods 122 and 140, a lock member 156 may be frictionally engaged with support rod 122 by merely tightening thumb screw 158 which will draw lock member 156 against the support rod. Conversely, loosening of the thumb screw will render the mechanism slidable along the rods. Key slot 146 extends essentially along the entire length of drive rod 140 to enable the tractor mechanism to be driven at any chosen lateral location.

Drive rod 140 is coupled with drive shaft 76 so that upon rotation of drive shaft 76 through one revolution as described above, the tractor mechanisms are actuated to advance the sheet 10 through one predetermined increment of length after a stencil label is attached by the pressure pad assembly which is also actuated in response to rotation of the drive shaft 76. Looking now at FIGURES 2 and 7 through 10, a crank 160 is fixed for rotation with drive shaft 76 at one end thereof and carries a connecting link 162 having a slot 164 engaged by a drive pin 166 anchored in a sector 168 mounted upon the frame 33 for rotation about point 170. A spring 172 is fixed at one end 174 to sector 168 and at the other end 176 to connecting link 162 and biases the sector to the right, as seen in FIGURE 7, so that the drive pin 166 bottoms in the slot 164 as shown, the bias force being great enough so that upon rotation of the drive shaft 76 and crank 160 in the counterclockwise direction, as indicated in FIGURE 7, sector 168 is rotated in the same direction to rotate a drive segment shown in the form of gear segment 178, fixed to the sector 168 by screws 179, which segment is engaged with a pinion 180. Pinion 180 is coupled to drive rod 140 by means of a clutch 182 (FIGURE 2) which engages the pinion with the drive rod only upon rotation of the pinion in a coun-

terclockwise direction. Thus, drive rod **140** remains stationary during rotation of the pinion as seen in FIGURE 7 so that the tractor mechanisms will not be actuated during such rotation. Continued rotation of crank **160** will bring gear segment **178** into contact with stop means shown in the form of a stationary stop-screw **184**, as seen in FIGURE 8, whereupon the gear segment will be stopped; however, further rotation of crank **160** is permitted by virtue of slot **164** in connecting link **162** which provides a lost motion means in connection with spring **172**, the bias force of the spring being overcome to allow the spring to elongate and permit sliding motion between slot **164** and drive pin **166** so that the crank and drive shaft **76** may continue to rotate without interruption. Upon further rotation of crank **160**, the connecting link will again engage the drive pin **166**, as seen in FIGURE 9, and the gear segment **178** will be driven in a clockwise direction thereby rotating the pinion **180** in a counterclockwise direction, allowing clutch **182** to engage the pinion with the drive rod **140** so that such clockwise rotation of the gear segment **178** will actuate the tractor mechanisms **120** causing the pins **132** to be moved forward and the sheet **10** to be advanced. Clockwise rotation of gear segment **178** and the concomitant advancement of sheet **10** will continue until the motion of the connecting link is reversed by continued rotation of the crank, at which point the gear segment will abut a second stationary stop-screw **186** which is fixed to the frame of the apparatus to positively confine the motion of the gear segment so that the segment will remain engaged with the pinion. Thus, it will be apparent that the increment of advancement of the sheet is directly proportional to the arcuate distance traveled by the gear segment between first stop-screw **184** and second stop-screw **186** which establish positions defining the limits of rotation of the gear segment. By careful setting of the arcuate travel of the gear segment, the increment of advancement may be accurately controlled, the tractor mechanisms achieving accurate feed by virtue of the positive engagement of the pins **132** with apertures **18**.

The timing between actuation of the affixing means and actuation of the transport means is determined by the relationship between the cams **112** and **114** and the crank **160**, all of which are fixed for rotation with drive shaft **76**. Thus, proper angular orientation of the cams with respect to the crank will assure that stencil label **20**, which lies in tray **36**, is affixed to the surface of sheet **10** prior to the advancement of the sheet through a selected increment. Hence, rotation of drive shaft **76** through one revolution will accomplish actuation of the pressure pad assembly while the tractor mechanisms are stationary during counterclockwise rotation of the gear segment and movement of the lost motion means, and continued rotation of the drive shaft will actuate the tractor mechanisms and advance the sheet during clockwise rotation of the gear segment while the pressure pad assembly is out of contact with the platen.

The increment of advancement of sheet **10** attained by actuation of the tractor mechanisms may be changed at will so that apparatus **30** can accommodate sheets having business forms of various lengths, as well as various widths. Since the length of the increment of advancement is directely proportional to the arcuate distance traveled by the gear segment **178**, apparatus **30** provides means for selectively varying this distance. Thus, stop-screw **184** is fixed upon a disk **190**, by screws **192**, and the disk **190** is mounted for rotation about point **170**. A latch **194** is pivotally mounted upon the frame of the apparatus at **196** (see FIGURE 2) and is resiliently biased into any one of a number of notches **198** along the perimeter of disk **190** by a spring **199**. A knob **200** is fixed to the disk **190** for rotation therewith so that when it is desired to change the increment over which the sheet will be advanced, the latch may be manually disengaged from a notch, as seen in FIGURE 10, and knob **200** may be rotated to rotate disk **190** and bring another notch into position to be engaged by the latch. Such rotation of disk **190** will relocate stop-screw **184** and thus change the arcuate travel of gear segment **178** and the concomitant increment of advancement of sheet **10**. By proper location of the notches **198**, apparatus **30** can be set to accommodate any of a variety of standard size business forms having standard lengths.

It will be apparent that the invention provides a compact and effective apparatus for facilitating the attachment of stencil labels to an indeterminate length of sheet material at predetermined intervals thereon. The apparatus **30** is designed to be placed upon a table top and has feet **202** for such an installation. An operator sits facing forward and places a stencil label upon tray **36**. Then pedal switch **90** is depressed actuating the drive means through one cycle to actuate the affixing means and the transport means through one cycle. Adjustments for width and length of the business forms as well as for the size and location of stencil labels handled by the apparatus are accomplished readily without requiring dismantling of any portion of the apparatus.

It is to be understood that the above detailed description of an embodiment of the invention is provided by way of example only and is not intended to restrict the invention. Various details of design and construction may be modified without departing from the true spirit and scope of the invention as set forth in the appended claims.

What is claimed is:

1. Apparatus for affixing stencil labels in selected longitudinal spaced relationship upon sheet material of indeterminate longitudinal length, the labels being of the type which are secured to the sheet material by pressing at least a portion of the label against the surface of the sheet material, said apparatus comprising:

a housing;

a labeling station associated with the housing;

first means for locating at least a portion of the sheet material at the labeling station;

second means for supporting and locating a label in position relative to the sheet material and the labeling station such that at least a portion of the label may be pressed against the surface of the sheet material at a desired location thereon at said station;

drive means capable of being selectively actuated through at least one complete cycle;

affixing means for striking at least a portion of the label in position in the second means and pressing said portion against the surface of the sheet material thereby affixing the label to the sheet material in response to the actuation of the drive means through a complete cycle, said affixing means being movable at least once during said cycle between a first position lying away from the label in the second means and a second position lying against at least said portion of the label and pressing that portion against the surface of the sheet material at the labeling station; and

transport means for longitudinally advancing the sheet material with the affixed label relative to the labeling station through at least one selected increment equal to the length of the longitudinal spacing desired between affixed labels in response to the actuation of the drive means through a complete cycle.

2. The apparatus of claim **1** wherein said affixing means is movable at least once during said cycle, in response to actuation of the drive means, between a first position lying beyond the marginal boundaries of the label received in the second means in a direction essentially parallel to the plane of the label and the second position.

3. The apparatus of claim **2** wherein

the first means includes a generally horizontally extending platen associated with the housing upon which platen the labeling station is located,

the second means includes a platform elevated ver-

tically above the platen and extending generally horizontally between marginal edges such that the sheet material may pass between the platen and the platform and the label may be placed upon the platform with at least a portion of the label extending beyond at least one marginal edge of the platform and overlapping the sheet material at the labeling station, and

the affixing means includes a pressure pad movable both horizontally and vertically, in response to the actuation of the drive means, between the first position wherein the pressure pad lies horizontally beyond and vertically above said one marginal edge of the platform and the overlapping portion of the label thereon and the second position wherein the pressure pad lies against the platen adjacent the one marginal edge of the platform.

4. The apparatus of claim **3** wherein the platform extends at an angle with respect to the platten so as to bring the overlapping portion of the label on the platform into close proximity with the sheet material at the labeling station while allowing sufficient spacing between the platform and the platten to permit free passage of the sheet material during advancement thereof.

5. The apparatus of claim **3** wherein the sheet material is provided with uniformly spaced apertures aligned longitudinally adjacent at least one longitudinal margin thereof, and the transport means includes at least one tractor mechanism having a series of pins, each of which pins is capable of engagement with a corresponding aperture in the sheet material and movement along a straight line in the longitudinal direction for effecting advancement of the sheet material.

6. The apparatus of claim **1** including means for selecting the length of the increment of advancement of the sheet material to accommodate a desired longitudinal spacing between affixed labels.

7. The apparatus of claim **6** wherein the means for selecting the length of the increment of advancement of the sheet material includes a drive segment movable from a first position to a second position and from the second position to the first position in response to actuation of the drive means through a complete cycle,

driven means coupling the drive segment with the transport means such that the transport means will advance the sheet material in response to movement of the drive segment from one of the first and second positions to the other of said positions, the length of the increment of advancement being proportional to the displacement of the segment between said positions,

stop means for limiting movement of the segment to displacement between the first and second positions,

selection means for changing the position of the stop means to increase or decrease the displacement of the segment and effect a corresponding increase or decrease in the length of the increment of advancement, and

lost-motion means coupling the drive means with the drive segment for allowing the drive means to be actuated through a complete cycle while displacement of the drive segment is limited by the stop means.

8. The apparatus of claim **7** wherein the drive segment is mounted for rotation in opposite directions between the first and second positions,

the driven means includes clutch means for effecting actuation of the transport means in response to rotation of the drive segment in one of the opposite directions only, and

the selection means includes means mounting the stop means for movement to any one of at least two positions in the path of the drive segment and latch means for selectively maintaining the stop member in one selected position.

9. The apparatus of claim **7** wherein the sheet material is provided with uniformly spaced apertures aligned longitudinally adjacent at least one longitudinal margin thereof, and the transport means includes at least one tractor mechanism having a series of pins, each of which pins is capable of engagement with a corresponding aperture in the sheet material and movement along a straight line in the longitudinal direction for effecting advancement of the sheet material.

10. The apparatus of claim **1** wherein said affixing means is movable at least once during said cycle, in response to actuation of the drive means, between a first position lying beyond the marginal boundaries of the label received in the second means in a direction essentially parallel to the plane of the label and the second position, and including means for selecting the length of the increment of advancement of the sheet material to accommodate a desired longitudinal spacing between affixed labels.

11. The apparatus of claim **10** wherein

the first means includes a generally horizontally extending platten associated with the housing upon which platten the labeling station is located,

the second means includes a platform elevated vertically above the platten and extending generally horizontally between marginal edges such that the sheet material may pass between the platten and the platform and the label may be placed upon the platform with at least a portion of the label extending beyond at least one marginal edge of the platform and overlapping the sheet material at the labeling station,

the affixing means includes a pressure pad movable both horizontally and vertically, in response to the actuation of the drive means, between the first position wherein the pressure pad lies horizontally beyond and vertically above said one marginal edge of the platform and the overlapping portion of the label thereon and the second position wherein the pressure pad lies against the platten adjacent the one marginal edge of the platform, and

the means for selecting the length of the increment of advancement of the sheet material includes

a drive segment movable from a first position to a second position and from the second position to the first position in response to actuation of the drive means through a complete cycle,

driven means coupling the drive segment with the transport means such that the transport means will advance the sheet material in response to movement of the drive segment from one of the first and second positions to the other of said positions, the length of the increment of advancement being proportional to the displacement of the segment between said positions,

stop means for limiting movement of the segment to displacement between the first and second positions,

selection means for changing the position of the stop means to increase or decrease the displacement of the segment and effect a corresponding increase or decrease in the length of the increment of advancement, and

lost-motion means coupling the drive means with the drive segment for allowing the drive means to be actuated through a complete cycle while displacement of the drive segment is limited by the stop means.

12. The apparatus of claim **11** wherein the sheet material is provided with uniformly spaced apertures aligned longitudinally adjacent at least one longitudinal margin thereof, and the transport means includes at least one tractor mechanism having a series of pins, each of which pins is capable of engagement with a corresponding aperture in the sheet material and movement along a straight

line in the longitudinal direction for effecting advancement of the sheet material.

13. The apparatus of claim 11 wherein the platform extends at an angle with respect to the platten so as to bring the overlapping portion of the label on the platform into close proximity with the sheet material at the labeling station while allowing sufficient spacing between the platform and the platten to permit free passage of the sheet material during advancement thereof.

14. The apparatus of claim 11 wherein

said drive means includes a drive shaft, the drive shaft being rotatable through at least one rotation during said cycle,

cam means carried by the drive shaft,

follower means associated with the affixing means and cooperatively engaging the cam means to effect movement of the pressure pad between the first position and second position thereof in response to rotation of the drive shaft, and

crank means carried by the drive shaft and cooperatively engaging the lost-motion means to effect movement of the drive segment between the first position and second position thereof in response to rotation of the drive shaft.

15. The apparatus of claim 11 wherein the drive segment is mounted for rotation in opposite directions between the first and second positions,

the driven means includes clutch means for effecting actuation of the transport means in response to rotation of the drive segment in one of the opposite directions only, and

the selection means includes means mounting the stop means for movement to any one of at least two positions in the path of the drive segment and latch means for selectively maintaining the stop member in one selected position.

16. The apparatus of claim 15 wherein

said drive means includes a drive shaft, the drive shaft being rotatable through at least one rotation during said cycle,

cam means carried by the drive shaft,

follower means associated with the affixing means and cooperatively engaging the cam means to effect movement of the pressure pad between the first position and second position thereof in response to rotation of the drive shaft, and

crank means carried by the drive shaft and cooperatively engaging the lost-motion means to effect movement of the drive segment between the first position and second position thereof in response to rotation of the drive shaft.

17. The apparatus of claim 16 wherein the cam means and the crank means are so related as to effect movement of the pressure pad against the platten during movement of the drive segment in the other of the opposite directions, during which movement said clutch means will not engage the drive segment with the transport means, and to effect movement of the drive segment in said one of the opposite directions after movement of the pressure pad against the platten, during which movement the clutch means will engage the drive segment with the transport means to effect advancement of the sheet material after a label is affixed thereto.

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