March 10, 1942. J. Q. SHERMAN 2,275,475

SEPARATING MACHINE

Filed April 5, 1935 3 Sheets-Sheet 1

Fig. 1

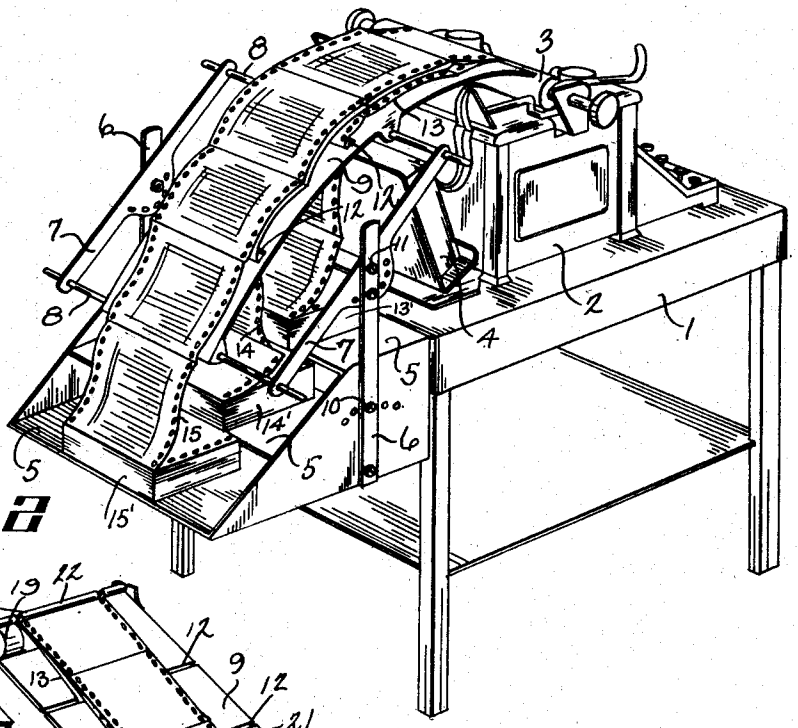
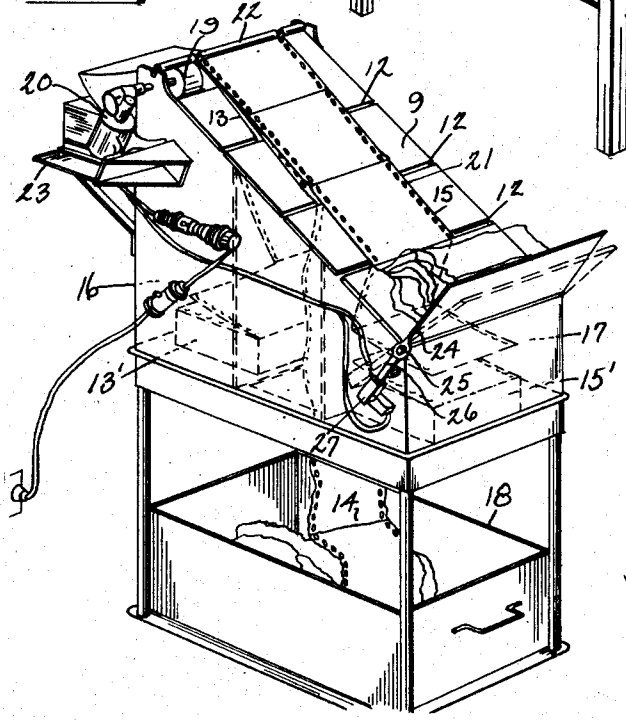



Fig. 2

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March 10, 1942. J. Q. SHERMAN 2,275,475

SEPARATING MACHINE

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Fig. 3

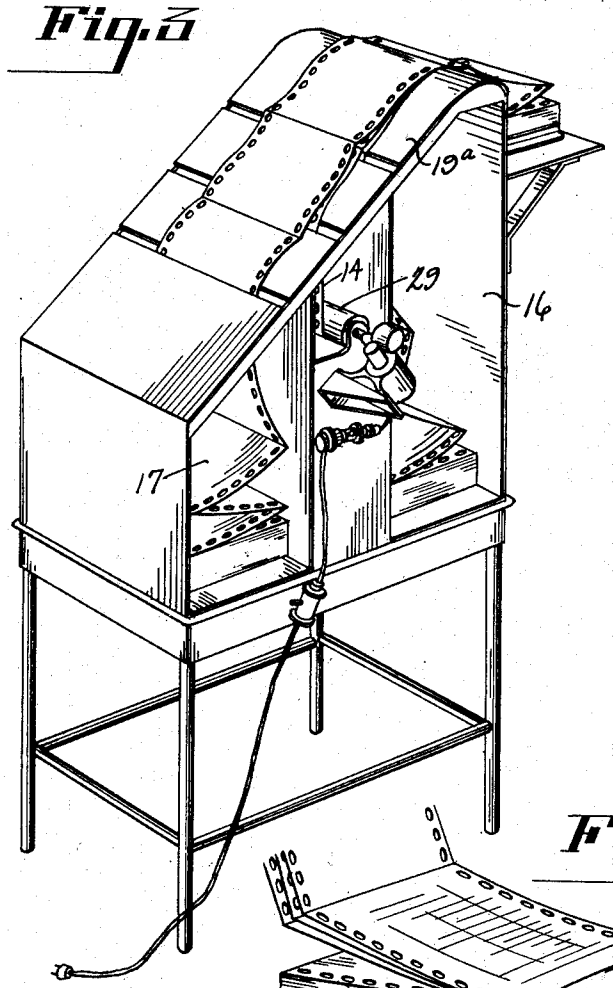
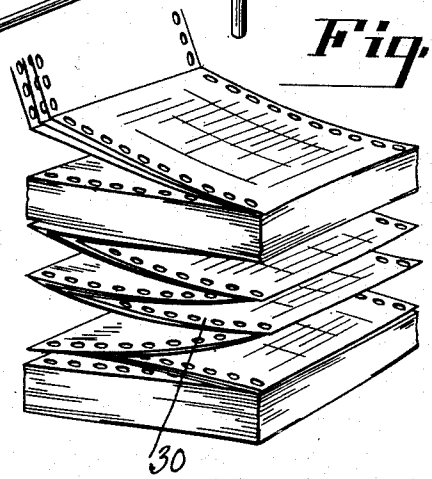



Fig. 4

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SEPARATING MACHINE

Filed April 5, 1935 3 Sheets-Sheet 3

Fig. 6

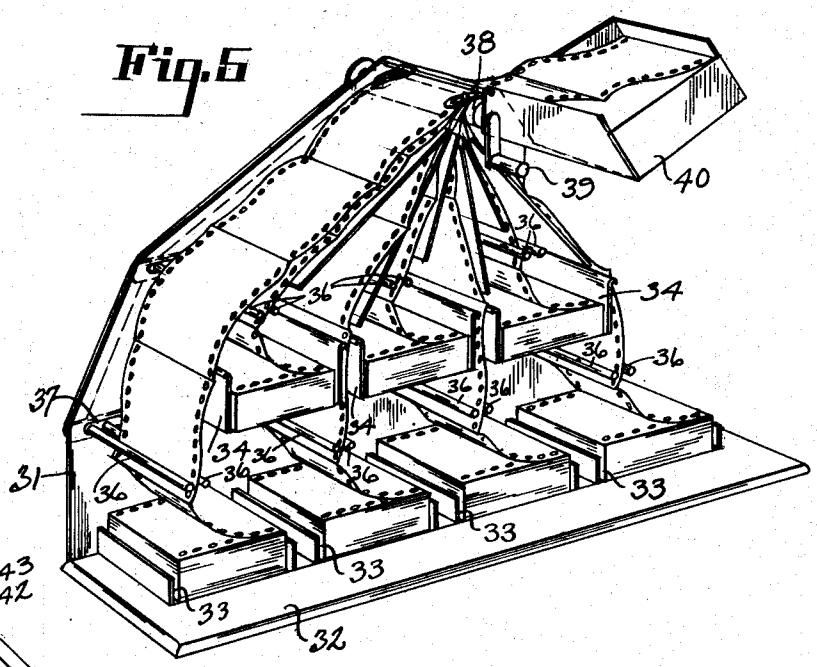



Fig. 6

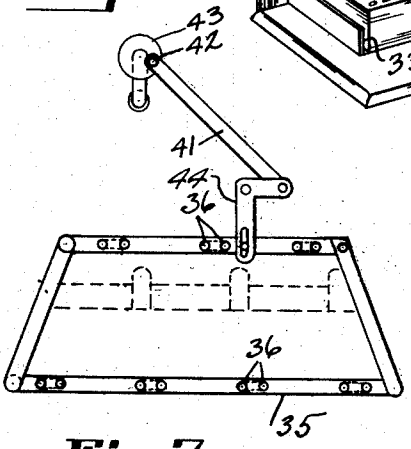
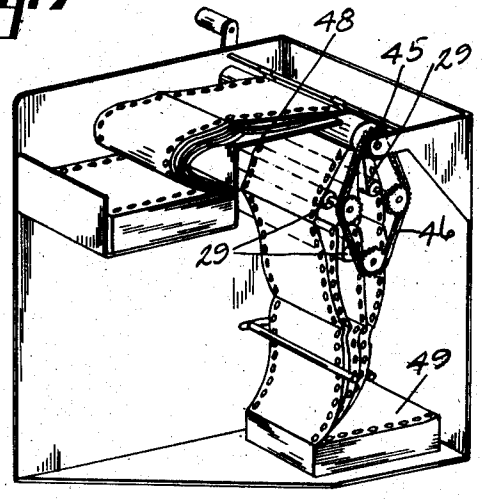



Fig. 7

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Patented Mar. 10, 1942

2,275,475

# UNITED STATES PATENT OFFICE

2,275,475

## SEPARATING MACHINE

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Application April 5, 1935, Serial No. 14,854

50 Claims. (Cl. 271—2.1)

The invention relates to assorting apparatus for manifolding material, and more particularly to a method of operation and mechanism for progressively separating alternating continuous interfolded strips of record and transfer material, and rearranging the separated strips into individual packets.

The use of continuous superposed strips of series connected forms interleaved with continuous strips of "one time" carbon material for production of manifold copies of written material has become quite extensive and common as a time saving expedient. Heretofore it has been the usual practice to collectively divide the strips transversely into successive sets of forms and interleaved sheets of transfer material which must be subsequently manually separated and assorted according to destination or use of the several copies. Much time of assembling and inserting the material in the writing machine is saved by the use of such continuous series connected forms but, subsequently, considerable time is consumed in the manual separation of detached sets of forms and transfer material.

The present invention provides for high speed mechanical separation of the inscribed strips of connected forms and the interleaved transfer material, thus achieving a great saving in time and affording increased efficiency. Instead of distributing the separated copies of successive sets of forms as heretofore, the present method and apparatus enables consecutive copies of different sets of forms to be kept together by refolding the separated strips without dividing them into independent sheets or form portions. Thus in a typical system wherein duplicate copies of each order are to be forwarded respectively to the warehouse, the packing department, the delivery department, sales department, accounting department, and a customer's copy enclosed with each shipment, by the present apparatus and method of separating the superposed inscribed record strips into separate packets copies for each department or purpose are kept in consecutive order whereby they are more easily handled, assured against loss or misplacement, and much time of the typist is saved.

The apparatus for performing the method may be embodied in various forms of mechanism, several of which are illustrated, wherein the superposed strips are withdrawn in unison from their supply packet in which they are collectively interfolded and are passed relative to guiding means by which the strips are diverted through individual paths of travel into separate receiving compartments where they are automatically refolded into independent packets.

The separating apparatus may be associated directly with a writing machine whereby the strips are immediately separated as they pass from such writing machine. Such apparatus preferably comprises a separate motor driven unit to which the inscribed manifolding material is transferred from the writing machine. In the event the material is marginally punched for pin wheel feeding devices, the separating apparatus may be provided with a pin type roller, the feeding pins of which engage in the marginally punched feed holes. It is found, however, that due to the interfolding of the several strips, by applying traction to a single interleaved transfer strip or to only one of the record strips all of the associated interfolded strips may be drawn in unison from the supply packet without other feeding means.

The pin wheel feeding device may also be used to reassemble any selected number of copies into a single pack for distribution to a department, and also thus provide for the detaching of such selective copies into collated sets. A reversible motor may be used to feed back the forms directly from the single packs to the position originally held by the master pack assembly.

The object of the invention is to provide an assorting or separating apparatus for disassembling superposed interfolded strips of manifolding material which may be economically constructed and operated and which will be efficient and rapid in use, substantially automatic in action, and unlikely to get out of repair.

A further object of the invention is to provide an improved system for distribution of multiple copy inscribed forms, whereby corresponding copies of successive sets of forms will be maintained in sequence.

A further object of the invention is to provide an apparatus and method of operation whereby collectively interfolded strips of record and transfer material may be progressively separated and refolded and/or rolled into independent units.

A further object of the invention is to economize time and to facilitate distribution of multiple copies of inscribed forms.

A further object is to provide means for reassembling the forms.

A further object is to provide an automatic feeding means that is accurate and continuous in operation without adjustment or attention. A further object of the invention is to provide means for transmitting vibratory motion to the

strips during their advancement intermediate the supply packet thereof and the individual packets into which they are reformed.

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

Referring to the accompanying drawings, wherein is shown several forms of embodiment of the invention, Fig. 1 is a perspective view of the assembled apparatus associated with a writing machine wherein the platen roll of the writing machine serves also as the feeding device for the assorting apparatus. Fig. 2 is a perspective view of a motor driven assorting unit disassociated from the writing machine. Fig. 3 illustrates a different form of feeding means. Fig. 4 is a perspective view of the supply packet. Fig. 5 is a perspective view illustrating a modified form of apparatus having a vibrating guide means for the several strips. Fig. 6 is a detail view of a portion of the construction shown in Fig. 5. Fig. 7 is a perspective view of a further modification.

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

Referring to Fig. 1 of the drawings, 1 indicates a table or desk upon which is located a typewriter 2 or other writing machine having therein a platen roll 3 about which superposed alternating strips of record and transfer material are fed from a supply packet 4 located in the rear of the writing machine. Supported at the rear of the table 1 is a series of shelves 5. From the opposite sides of the shelves extend upright standards 6 to which are connected for pivotal adjustment frame bars 7. The bars 7 carry at their ends transverse rods 8 upon which is supported an elongated bridge or guide plate 9. The construction is such that by removing screws 10 from the supporting standard 6 the structure including the frame bars 7, the transverse rods 8, and the bridging guide plate 9 may be oscillated about the pivotal connections 11 of the frame bars 7 with the standard 6. By such adjustment the guiding bridge 9 may be brought to proper relation with the platen roll 3 of the writing machine. The guide bridge 9 is provided at spaced intervals with transverse slots 12 through each of which a different strip is directed as it comes from the writing machine. Thus the undermost strip 13 is directed downwardly through the first of the transverse slots 12 and the second strip 14, which will be of transfer material, is directed through the second of such slots 12 while the uppermost or top strip 15 will pass over the end of the guide bridge.

While for illustrative purposes, a manifolding assembly comprising merely two record strips and a single interposed transfer strip has been shown, it will be understood that the bridge member 9 may be extended to any suitable length and provided with a greater number of transverse slots 12 to provide for the separation of a larger number of strips. The strips 13 and 14, passing from the bridging member 9 through the slots 12, and the original record strip 15 passing over the end of the bridging member, are received upon the respective shelves 5. Due to the initial reverse folds of the several strips, these strips will assume their original reversely folded or zigzag relation in independent packets 13', 14', and 15' upon the respective receiving shelves 5. The original and duplicate record forms are thus assorted into separate or independent packets as is also the interleaved strip of transfer material. In such separated packets the inscribed forms comprising the respective record strips will retain their consecutive order and remain interconnected.

Although the assorting apparatus may be directly associated with the writing machine as shown in Fig. 1, it preferably comprises a separate unit such as is illustrated in Fig. 2. In such preferred construction, the inclined guide bridge 9 is supported in elevated position upon a suitable frame having therein separate compartments 16 and 17 for the respective refolded strips 13 and 15, and a receptacle or box 18 to receive the interleaved transfer material 14 which may be treated as waste. At the upper end of the inclined slotted guide bridge 9, there is provided a feeding roller 19 motor actuated by a suitable electric motor 20.

The feeding roller 19 may be provided with feeding pins or studs engageable in marginally punched holes 21 in the manifolding material. However, if the manifolding material has been inscribed in a writing machine having frictional feeding devices and hence is without marginal feeding holes 21, the roller 19 may be such as to frictionally feed such material in cooperation with an auxiliary roller 22.

The supply packet of interfolded record and transfer strips is placed upon a supporting shelf 23 at one side of and somewhat below the level of the feeding roll 19 and the strips withdrawn in unison from such packet are passed over the feeding roll onto the assorting bridge or guide 9. This assorting bridge 9 as before mentioned is provided with transverse slots 12, through the first of which the underlying record strip 13 is directed downwardly into the receptacle 16, where it automatically falls into its original zigzag folded relation forming a separate independent packet 13'. The interleaved strip of transfer material passes downwardly through the second of the transverse slots 12 and falls into the receiving box or drawer 18 where it may also reassume its original zigzag folded relation. This, however, is not important since the usual practice is to discard such separated used transfer strip as waste material.

In the construction illustrated in Fig. 2, the uppermost or original record strip, passing through a third transverse slot 12, automatically reassumes its original zigzag folded relation within the receiving compartment 17 where it forms a separate independent packet 15'.

As a safety device, there is provided at the lower end of the assorting bridge 9 an oscillatory member 24 pivoted at 25 and provided with a dependent weighted arm 26 which normally tends to hold the oscillatory member 24 in a substantially upright position perpendicular to the assorting bridge 9 and to return it thereto when oscillated from such relation. In the event that through mishap one or another of the several strips of the manifolding assembly should become disarranged or by being slightly torn catch upon the margin of one of the slots 12 so that the strip does not feed smoothly through such slot, the material of the strip will accumulate on top of the assorting bridge 9 as shown by dotted lines. This accumulation of the strip material pressing against the safety member 24 will oscillate such member slightly and thereby break an electrical connection 27 controlled by

the weighted arm 26 of such safety member and arrest the driving motor of the feeding roller 19. Thus if the strips are not fed uniformly and smoothly to the several receiving compartments, the advancement of the strip assembly will be automatically arrested. Again it will be understood that while, for illustrative purposes, only two record strips and an interleaved strip of transfer material have been shown, the unit illustrated in Fig. 2 may be enlarged to accommodate any desired number of manifolding strips by extending the assorting bridge 9 or by providing additional transverse slots 12 in such assorting bridge and additional receiving compartments for the separated strips.

In lieu of locating the feeding roller 19 at the top of the assorting bridge for feeding engagement common to all of the strips of the assembly, such feeding roller may be associated with either one of the several strips.

In Fig. 3 there is illustrated a unit similar to that shown in Fig. 2 but having a motor driven winding roller 29 located intermediate the receiving compartments 16 and 17 upon which the interleaved strip of transfer material 14 is wound. Due to the interlocking relation of the folds, the pulling effort upon the transfer strip 14 causes successive folds of the manifolding assembly to be withdrawn from the supply packet, and the record strips are advanced over a fixed guide 19a over the assorting bridge in unison. Obviously the roller 29 may be a pin type feeding roller as shown at 38 in Fig. 5, or it may be associated with a frictional pressure roller such as is shown at 22 in Fig. 2. To facilitate rapid assorting of successive packets of inscribed manifolding material the initial ends of the strips of one packet may be attached to the final ends of the strips of a preceding packet as shown at 30 in Fig. 4 and the assorting operation of the apparatus may thus be made continuous.

A further embodiment of the invention is illustrated in Fig. 5, wherein the main frame of the apparatus consists of an upright wall 31 extending from a base 32 having thereon compartments 33 to receive the refolded strips. Above the base 32 are a plurality of shelf-like receptacles 34 to receive the refolded interleaved transfer strips. Mounted at the outer side of the upright wall 31 is a vibratory frame 35 having a plurality of pairs of spaced pins or studs 36 carried thereby and projecting through slots 37 in the upright frame wall 31. These parallel spaced pins or rods 36 form guides for the several strips of the manifolding assembly as they are being separated and directed to the respective receiving compartments 33 and 34. At the top of the structure, there is mounted a feeding roller 38 which may be manually operated by a crank 39, but is preferably motor actuated by an electric motor. The packets of interfolded strips to be separated are disposed in a box or receptacle 40 and are fed in unison therefrom over the feeding roller 38 which, as it rotates withdraws the strip assembly from the supply packet and advances the individual strips between the respective guiding pins or rods 36 to the corresponding receiving compartments 33 and 34. To insure automatic refolding of the separated strips upon the original fold lines, the frame 35 and the spaced guiding pins or rods 36 carried thereby, is given a vibratory motion by means of a link 41 connected with a wrist pin 42 upon a disc 43 mounted upon the roller shaft and rotating in unison with the feed roller 38. This link 41 is suitably connected with the frame 35 by a bell crank lever 44, to transfer to the reciprocatory frame 35 the vibrations transmitted by the wrist pin 42 through said link. Thus as the feeding roller 38 is rotated to advance the several strips from the supply packet within the compartment 40 to the individual receiving compartments 33 and 34, the frame 35 is reciprocated to impart to the strips alternating impulses in opposite directions to facilitate the refolding of the separated strips upon their original fold lines.

While the feeding roller 38 has been shown in the drawings as provided with radial feeding pins or studs engageable in marginally punched holes in the manifolding strips for positively feeding the assembly of strips from the supply compartment 40 to the receiving compartments 33 and 34, it is to be understood that a frictional feeding roller 22 of Fig. 2 may be used therewith in the event that the strips are not marginally punched for use with pin type feeding devices, although the pin feed device provides a positive feed that will uniformly and continuously feed without manual periodical adjustment of forms.

Fig. 7 illustrates a further modification wherein multiple winding rollers 29 are employed. These rollers are driven in unison from a rotary drive shaft 45 by means of a chain 46 engaging sprockets upon the drive and winding shafts. The strip assembly is withdrawn from a supply packet over a stationary guide 48 similar to the guide 19a of Fig. 3. The interleaved transfer strips are wound upon the several rollers 29 while the record strips are refolded into packet form. The separated record strips may be guided together and interfolded into a single packet 49, or may be separated into individual packets as shown in Fig. 5.

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

While in order to comply with the statute, the invention has been described in language more or less specific as to structural features, it is to be understood that the invention is not limited to the specific features shown, but that the means and construction herein disclosed comprise the preferred form of several modes of putting the invention into effect, and the invention is therefore claimed in any of its forms or modifications within the legitimate and valid scope of the appended claims.

Having thus described my invention, I claim:

1. An apparatus for separating the superposed strips of a manifolding assembly, including means for collectively withdrawing the strips from a source of supply, an inclined bridge over which the strips are advanced in unison, the bridge having slots therein at spaced intervals through which successive strips pass downwardly, and a plurality of receiving compartments one for each of the strips located beneath the slotted bridge.

2. A separating apparatus for a packet of collectively interfolded strips including a strip feeding means having feeding engagement with at least one of a plurality of strips for pulling the strips collectively from a single source of supply, a plurality of receivers, one for each of the strips into which the strips are separately received, and individual guide means for the sev-

eral strips interposed between the receivers and feeding means and so disposed relative to the receivers as to direct the individual strips into corresponding receivers.

3. A separating apparatus for a packet of collectively interfolded strips including strip feeding means operative to advance a plurality of strips in unison from a single source of supply and distributing means for the advanced strips, including a plurality of individual guide ways through which separate strips are individually advanced, and a plurality of receivers located below the level of the feeding means so disposed in relation with the guide ways that the strips will flow relative to the guide ways into corresponding receivers by gravity.

4. A separator for multiple superposed strips including an inclined guide bridge over which the strips advance different distances in unison from a source of supply, said guide having spaced slots therein through which the strips are separately directed, separate receivers for the strips to which they pass through said slots, and feeding means engaging with at least one of the strips for effecting unison travel movement thereof from the common source of supply to their individual receivers.

5. In an apparatus of the character described, a main frame having an inclined top, a support for a supply of superposed strips contiguous to the higher end of the inclined top, a plurality of compartments beneath the inclined top, said compartments having entrance slots thereto through the inclined top, and actuating means for progressively advancing multiple strips from the source of supply on said support over said inclined top and thence advancing each strip through a different slot into a corresponding receiver.

6. In a separator for multiple superposed strips, feeding means for advancing a plurality of strips in unison from a source of supply, a guide beyond the feeding means defining a common path of travel for the strips, means for defining branch paths for individual strips leading therefrom, a plurality of receivers into which different strips are deflected from the common path of travel through the branch paths, and a movable intercepter also beyond the feeding means and located out of the normal paths of said strips but positioned to be engaged by a strip when deflected from its normal course, and means controlled thereby for arresting the feeding means upon movement of the intercepter by abnormal movement of a strip.

7. In a separator for multiple strip assembly, a pin type, feeding means engageable in registering marginally punched holes in the strips for advancing a plurality of strips in unison from a supply packet, guide means beyond the feeding means defining a path of travel common to the strips and means defining multiple branch paths of travel for individual strips, an intercepter located beyond the feeding means and out of the normal course of the strips but engageable by a strip when advanced out of its normal course, and strip arresting means controlled thereby.

8. In a separator for multiple superposed strips, feeding means for progressively advancing a pluarlity of strips from a source of supply through a common path of travel and continuing the advancement of the individual strips through branch paths of travel leading from such common path beyond the feeding means, guide means defining the common and branch paths of travel, a plurality of receivers to which the strips are directed through such paths of travel, and control means beyond the feeding means for automatically arresting the travel movement of the strips by the movement of one of said strips through an abnormal course of travel.

9. A paper web separating device for a pack of interfolded strips having feed holes including a pin wheel feeding mechanism therefor for positively engaging the said holes to withdraw the strips from the pack and past which the strips are positively pushed and means beyond the pin wheel for diverting the assembled webs into separate channels for the purpose described, said means consisting of guides arranged at spaced intervals and in such manner that the strips may freely resolve themselves into folded packed formation.

10. A paper web supporting device consisting of a storage space for a zig-zag pack of interfolded webs assembled in a packet, a continuous operable feeding means and a series of guides for diverting the various webs of the assembly into separate channels, said storage space being mounted on a higher plane than the said guides so that the movement of the forms is downwardly from the storage space.

11. In a paper web separating device, a feeding mechanism for drawing manifold webs from a packet of zigzag collectively interfolded superposed strips, multiple diversion means for diverting multiple strips into separate channels spaced in such manner that the several strips may freely resolve themselves into separate single strip zig-zag formations, and driving means to actuate the feeding mechanism for withdrawing the forms from the source of supply for the purpose described, said diversion means and said feeding means being arranged to respectively direct and feed the forms backward from their separate single strip zig-zag formation into reassembled multiple sets.

12. In a paper web separating device, a feeding mechanism for drawing manifold webs from a zigzag packet of superposed webs, multiple diversion means for diverting multiple webs into separate channels, electrical driving means to actuate the feeding mechanism for withdrawing the forms from the source of supply for the purpose described, and means for rendering the driving means ineffective when improper feeding of the forms occurs.

13. In a device for separating the superposed strips of a manifolding assembly, a means for withdrawing the strips from a source of supply with a continuous movement, and guide means over which the continuously withdrawn superposed strips are passed, means associated with said guide means for separating successive strips from the assembly as the assembly passes over said guide means, and means controlled by abnormal movement of a strip for rendering said withdrawing means ineffective.

14. In a paper web separating device wherein continuous zig-zag folded superposed strips of manifolding material are separated into individual strips, a feeding device for advancing the superposed strips in unison along a common path, a plurality of receivers for individual strips, and guide means arranged above the receivers for diverting the strips individually from the common path and directing them singly to the receivers in a manner whereby the individual strips may each freely assume a zig-zag pack formation.

15. In a separator for multiple superposed strips, feeding means for progressively advancing a plurality of strips from a source of supply through a common path of travel and continuing the advancement of the individual strips through branch paths of travel leading from such common path beyond the feeding means, guide means defining the common and branch paths of travel, a plurality of receivers to which the strips are directed through such paths of travel, said guide means being arranged to divert the strips individually from the common path and for directing them singly to the receivers in a manner whereby the individual strips may each freely assume a zig-zag pack formation.

16. In a device for separating the superposed strips of a manifolding assembly wherein at least one of the strips is provided with spaced feed holes, distributing means relative to which the assembly of superposed strips is advanced, including a plurality of individual strip selective guide means separating individual strips from the assembly and diverting each separated strip into a different path in such manner that the strips may resolve themselves into separate packets, and a pin type feeding device engageable in the feed holes of at least one of the strips to positively advance the strips relative to the distributing means.

17. In a device for separating the superposed strips of a manifolding assembly wherein the strips are provided with feed holes, a guide means over which the superposed strips are passed, means associated with the guide means for separating successive strips from the assembly as the assembly passes thereover, and a pin type feeding mechanism engaging with the feed holes in the strips to positively feed the strips over the guide means with a continuous movement, and means controlled by abnormal movement of a strip for rendering the feeding mechanism ineffective as a feeding means.

18. A separating device for an assembly of superposed strips of material wherein a single supply packet of collectively zigzag interfolded strips is rearranged into a group of separate zig-zag folded packets, comprising a plurality of separate strip channels, guide means for diverting selected strips of the assembly of strips into separate channels, and a pin type feeding mechanism adapted to engage feed holes in at least one of the strips to positively feed the strips to said guide means.

19. In a separating device for superposed strips of material, wherein a single supply packet of collectively zig-zag interfolded separate strips are separated from each other and rearranged into a plurality of separate zig-zag folded packets, comprising a plurality of strip receptacles, guide means disposed relative to the receptacles for selectively diverting different strips of the plurality into particular receptacles, and a pin type feeding mechanism disposed in advance of the guide means and engaging feed holes in at least one of the strips to collectively advance a plurality of said strips to said guide means and thence into the respective receptacles.

20. A separating apparatus including means for advancing an assembly of normally zig-zag folded superposed continuous strips from a source of supply through a predetermined path, and multiple guide means, one for each continuous strip, disposed coincident with the path of movement of the assembly of strips to separately guide each strip of the assembly away from the common path of travel, the guide means being arranged relatively to each other to direct the respective strips to separate areas in such manner that each strip may freely resolve itself into an individual zig-zag folded packet.

21. A separating apparatus including means for advancing an assembly of normally zig-zag folded superposed strips from a source of supply through a predetermined path, and multiple guide means, one for each continuous strip, disposed coincident with the path of movement of the assembly of strips to separately guide each strip of the assembly away from the common path of travel, a plurality of receivers into which the separate strips are deflected by the guide means, the guide means being arranged relative to the receivers in such manner that each strip may freely resolve itself into a zig-zag folded packet therein.

22. A separating apparatus including means for advancing an assembly of normally zig-zag folded superposed continuous strips from a source of supply through a predetermined path, and multiple guide means coincident with the path of movement of the assembly of strips to separately guide selected strips of the assembly away from the common path of travel, the guide means being arranged relatively to each other to direct the selected strips to separate areas in such manner that the strips may freely resolve themselves into individual zig-zag folded packets.

23. A separating apparatus including a pin type feeding device for advancing an assembly of normally zig-zag folded superposed continuous strips having longitudinally spaced perforations therein from a source of supply through a predetermined path, and multiple guide means coincident with the path of movement of the assembly of strips to separately guide selected strips of the assembly away from the common path of travel, the guide means being arranged relatively to each other to direct the selected strips to separate areas in a manner such that the strips may freely resolve themselves into individual zig-zag folded packets.

24. A separating apparatus including a pin type feeding device for advancing an assembly of normally zig-zag folded superposed continuous strips having longitudinally spaced perforations therein from a source of supply through a predetermined path, the feeding device having positive interlocking engagement with each and all of the assembly of superposed strips, and multiple guide means coincident with the path of movement of the assembly of strips to separately guide selected strips of the assembly away from the common path of travel, the guide means being arranged relatively to each other to direct the selected strips to separate areas in a manner such that the strips may freely resolve themselves into individual zig-zag folded packets.

25. A separating apparatus including means for advancing an assembly of superposed continuous strips of series connected form stationery provided with weakened tear lines between form lengths through a predetermined path, and multiple guide means coincident with the path of movement of the assembly of strips to separately guide selected strips of the assembly away from the common path of travel, the guide means being arranged relatively to each other to direct the selected strips to separate areas in a manner such that the strips may freely resolve themselves into individual packets wherein the

strips are folded along the weakened tear lines into zig-zag formation.

26. A separating apparatus including pin type feeding means for advancing an assembly of superposed continuous strips of series connected form stationery provided with weakened tear lines between form lengths and having longitudinally spaced perforations therein through a predetermined path, and multiple guide means coincident with the path of movement of the assembly of strips to separately guide selected strips of the assembly away from the common path of travel, the guide means being arranged relatively to each other to direct the selected strips to separate areas in a manner such that the strips may freely resolve themselves into individual packets wherein the strips are folded along the weakened tear lines into zig-zag formation.

27. In a strip separating apparatus, in combination, a table having a downwardly inclined strip supporting surface with elongated strip passageways arranged one after another therealong in longitudinally spaced relation and each being disposed with its length extending transversely of the table and extending through the latter, superposed strips moved along the table being received respectively in said passageways and thus separated from each other, and separate strip receiving compartments communicating respectively with said passageways in which the separated strips are individually received, said passageways leading to the respective compartments intermediate the forward and rearward extremities thereof so as to promote folding of the separate strips.

28. In a strip separating apparatus, in combination, a table having a downwardly inclined strip supporting surface with strip passageways arranged one after another therealong in which superposed strips moved along the table are respectively received and separated from each other, and means positioned at a high part of the inclined table for feeding the strips in a group in a downward direction over and into the respective passageways so as to cause the strips to be separated from the group.

29. In a strip separating apparatus, in combination, a table having a downwardly inclined strip supporting surface with strip passageway slots arranged one after another therealong in which superposed strips moved along the table are respectively received and separated from each other, separate strip receiving compartments communicating respectively with said passageway slots in which the separated strips are individually received, and means positioned at a high part of the inclined table for feeding the strips in a group in a downward direction over and into the respective passageways so as to cause the strips to be separated from the group.

30. In a strip separating apparatus whereby plural strips collectively arranged in a single supply packet are separated into individual packets, in combination, a strip supporting table, means for withdrawing from a single collective supply packet and moving a group of superposed strips over said table, and a plurality of strip removing means arranged in series one after another along the apparatus for removing the strips singly from said group and from said table, and a plurality of individual strip receiving means for the separated strips.

31. In a strip separating apparatus, in combination, a table having a surface with strip passageway slots arranged one after another therealong in which superposed strips moved along the table are received and separated from each other, and separate upper and lower strip receiving compartments communicating respectively with said passageway slots in which the separated strips are individually received.

32. In a strip separating apparatus, in combination, a table having a surface with strip passageway slots arranged one after another therealong in longitudinally spaced relation and each extending entirely through the table, superposed strips moved along the table being received respectively in said slots and thus separated from each other, and separate strip receiving compartments arranged one above another and communicating respectively with said passageway slots in which the separated strips are individually received.

33. In a strip separating apparatus, in combination, a table having a surface with elongated strip passageways arranged one after another therealong in longitudinally spaced relation and each extending entirely through the table, superposed strips moved along the table being received respectively in said slots and thus separated from each other, separate strip receiving compartments arranged one above another and communicating respectively with said passageways in which the separated strips are individually received, said passageways leading to the respective compartments intermediate the forward and rearward extremities thereof so as to promote folding of the separate strips.

34. In a strip separating apparatus, in combination, a plurality of strip-receiving compartments arranged in upper and lower tiers, the compartments of the upper tier being staggered with reference to those of the lower tier, and means for disposing the strips respectively in different compartments.

35. In a strip separating apparatus, in combination, a table having a surface with strip passageway slots arranged one after another therealong in which superposed strips moved along the table are respectively received and separated from each other, separate strip receiving compartments communicating respectively with said passageway slots in which the separated strips are individually received, and means for feeding the strips in a group over said table.

36. In a strip separating apparatus whereby plural strips collectively arranged in a single packet are separated and re-formed into a plurality of individual packets, in combination, a strip supporting table, means for withdrawing a plurality of strips from a single supply packet and moving a group of superposed strips over said table, a plurality of strip removing means arranged in series one after another along the apparatus for removing the strips singly from said group and from said table, means including passageways leading from said removing means for disposing the removed strips in separate parts, and collecting means in which the separated strips are arranged in separate packets.

37. In a strip separating apparatus, in combination, a table having a surface with strip passageway slots arranged one after another therealong in which superposed strips moved along the table are received and separated from each other, separate upper and lower strip receiving compartments, the upper and lower compartments communicating respectively with said passageway slots, and the upper and lower compart-

ments being longitudinally staggered with reference to each other.

38. In a strip separating apparatus, in combination, a downwardly inclined strip support, means for moving a group of superposed strips downwardly over said support, means for removing the strips singly from said downwardly moving group and from said support, and means for disposing the removed strips in separate parts.

39. In a strip separating apparatus, in combination, a strip support, means for moving a group of superposed strips over said support, a plurality of strip removing means positioned at intervals along the apparatus for removing the strips singly from said group and from said support, and a plurality of compartments arranged along the apparatus and communicating respectively with said removing means for receiving the removed strips.

40. In a strip separating apparatus, in combination, a table having a surface with strip passageway slots arranged one after another therealong in which superposed strips moved along the table are received and separated from each other, separate upper and lower strip receiving compartments, the upper and lower compartments communicating respectively with said passageway slots, the upper and lower compartments being longitudinally staggered with reference to each other, and at least one passageway positioned between adjacent upper compartments and leading from one of the passageway slots to a lower compartment.

41. In a strip separating apparatus, in combination, a table having a downwardly inclined strip supporting surface with strip passageway slots arranged one after another therealong in which superposed strips moved along the table are received and separated from each other, separate upper and lower strip receiving compartments, a strip passageway positioned between adjacent upper compartments and communicating with a certain of the said passageway slots and with a lower compartment and said upper compartments communicating with other of said passageway slots.

42. In a strip separating apparatus, in combination, a table having a downwardly inclined strip supporting surface with strip passageway slots arranged one after another therealong in which superposed strips moved along the table are received and separated from each other, separate upper and lower strip receiving compartments, a strip passageway positioned between adjacent upper compartments and communicating with a certain of the said passageway slots and with a lower compartment and said upper compartments communicating with other of said passageway slots, said upper and lower compartments being longitudinally staggered with reference to each other, and the passageway slots and strip passageways leading to the respective compartments intermediate the forward and rearward extremities thereof.

43. In a strip separating apparatus whereby plural strips collectively arranged in a single packet are separated and re-formed into a plurality of individual packets, in combination, a strip supporting table, means for withdrawing a plurality of strips from a single supply packet and moving a group of superposed strips over said table, a plurality of strip guiding means arranged in series one after another for removing the strips singly from said group and from said table, means including passageways leading from said removing means for disposing the removed strips in separate parts, and collecting means in which the separated strips are arranged in separate packets.

44. In a strip separating apparatus whereby plural strips collectively arranged in a single supply packet are separated into individual packets, in combination, a strip supporting table, means for withdrawing from a single collective supply packet and moving a group of superposed strips over said table, a plurality of strip removing means arranged in series one after another along the apparatus for removing the strips singly from said group and from said table, and a plurality of individual strip receiving means for the separated strips.

45. In a strip separating apparatus, in combination, a table over which a plurality of strips are collectively advanced, a pin type feeding device engageable in longitudinally spaced holes in at least a part of the strips for advancing the strips over the table, a plurality of relatively spaced downwardly directed passageways in which the strips advanced over the table are individually received separately one from another, and a plurality of receivers located below the level of the table and passageways and communicating with the respective passageways in which the separated strips are individually received.

46. A separating apparatus for an assembly of superposed strips, at least a portion of which have therein longitudinally spaced feed holes, a frame, a pin type feeding device at the top of the frame for engagement in the said feed holes for collectively advancing the strips in unison from a source of supply, a support over which the strips are progressively advanced, downwardly directed relatively spaced guides, one for each strip relative to which the strips are separately delivered from said support, relatively spaced receivers located below the level of the common support into which individual strips are delivered, at least one receiver being located below the level of the other receivers to which a medially positioned one of said guides will deliver a strip intermediate other guides and receivers.

47. In a strip separating apparatus, a supporting frame, a strip feeding device thereon common to a plurality of strips to be separated, a plurality of strip guides arranged in relatively spaced pairs between the members of the respective pairs of which individual strips are progressively advanced by the common feeding device, and a plurality of receivers one for each strip into which the strips are delivered from the guides.

48. A strip separating apparatus for use with a writing machine of the type wherein an assembly of superposed record strips are collectively advanced past a writing position and delivered from the writing machine in unison with the rotation of a platen roll, of a strip separating apparatus to which the assembly of strips are directly delivered from the writing machine and wherein the initial collective assembly of strips are separated from each other and disposed in individual packets including a plurality of strip receivers disposed below the level of the point of discharge of the strips from the writing machine and strip guide means for directing individual strips into different compartments rela-

tive to which the strips advance by gravity under control of the writing machine.

49. A strip separating apparatus for use with a writing machine of the type wherein an assembly of superposed record strips are collectively advanced past a writing position and delivered from the writing machine in unison with the rotation of a platen roll, of a gravity operated strip separating apparatus including a series of receivers for individual strips, and distributing means interposed between the receivers and the delivery point of the writing machine relative to which the strips pass by gravity directly from the writing machine into corresponding receivers.

50. In a strip separating apparatus of the type wherein a packet of collectively interfolded strips is separated therefrom and refolded into a plurality of separate packets, a plurality of strip receiving compartments arranged at different levels, strip guide means for directing individual strips into different compartments, and feeding means common to an assembly of plural superposed strips for simultaneously advancing individual strips of the assembly relative to the guide means into different compartments.

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