

Feb. 25, 1969

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3,429,239

STACKER FOR NEWSPAPERS AND THE LIKE

Filed Feb. 15, 1966

FIG. 1.

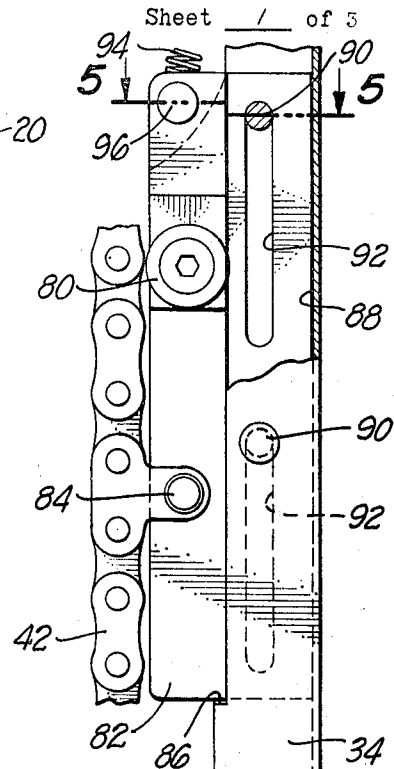
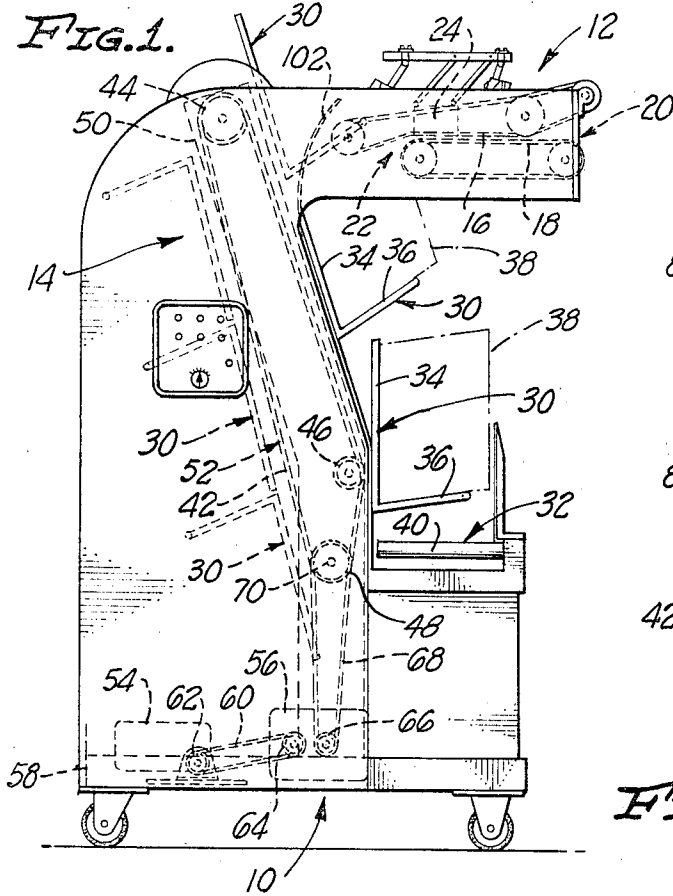
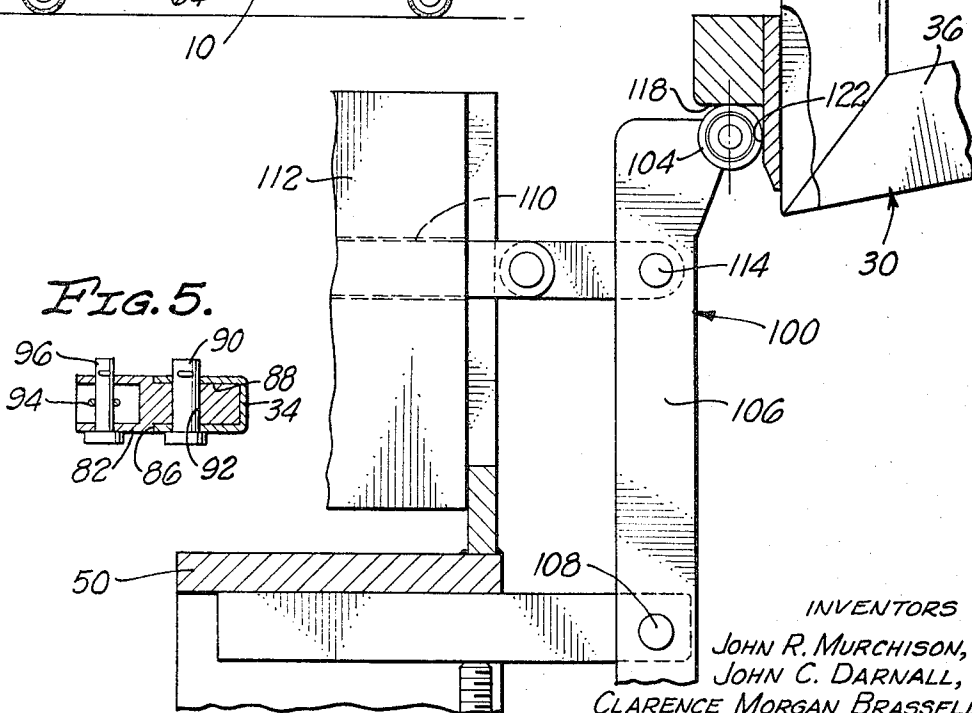


FIG. 4.

FIG. 5.



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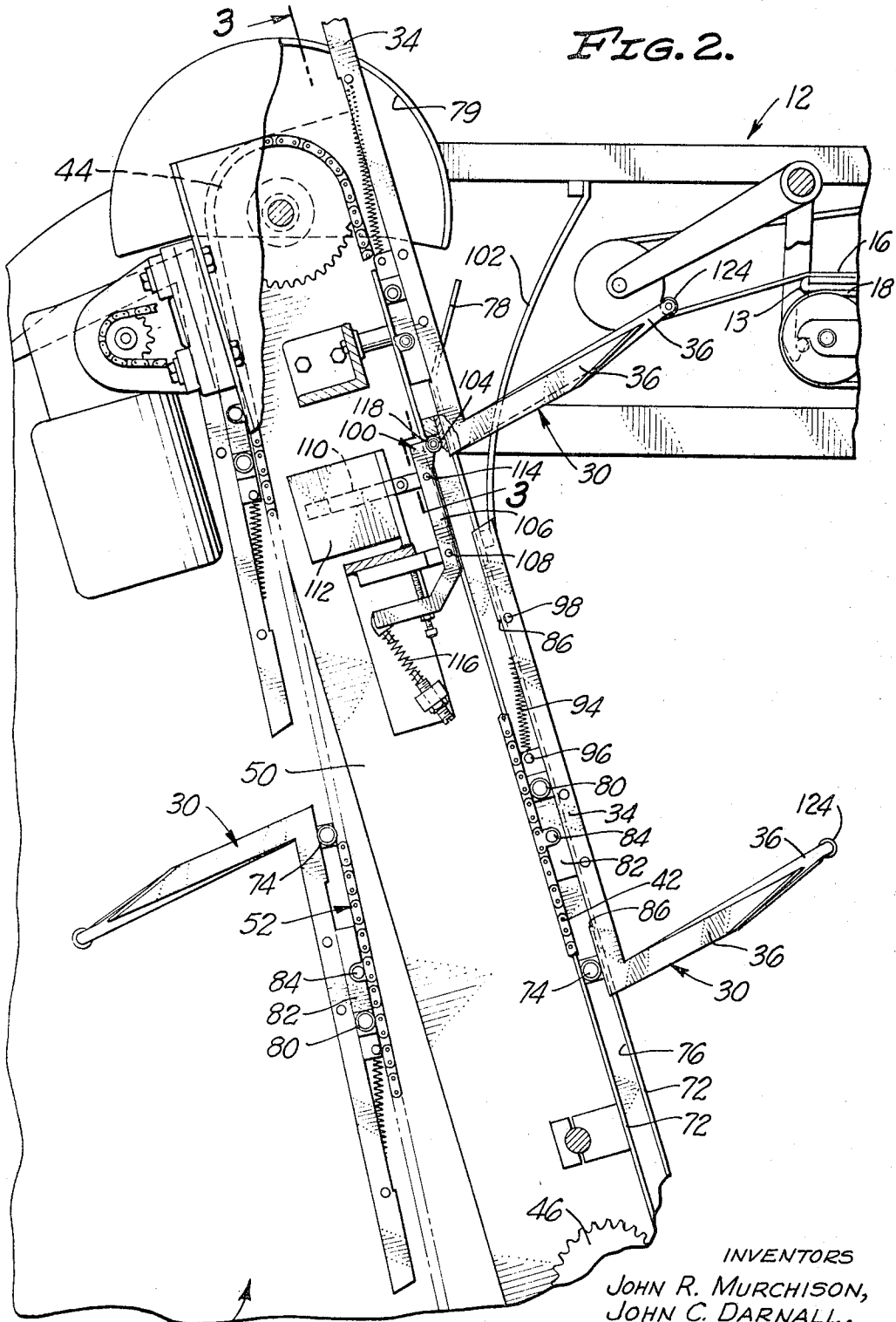


FIG. 2.

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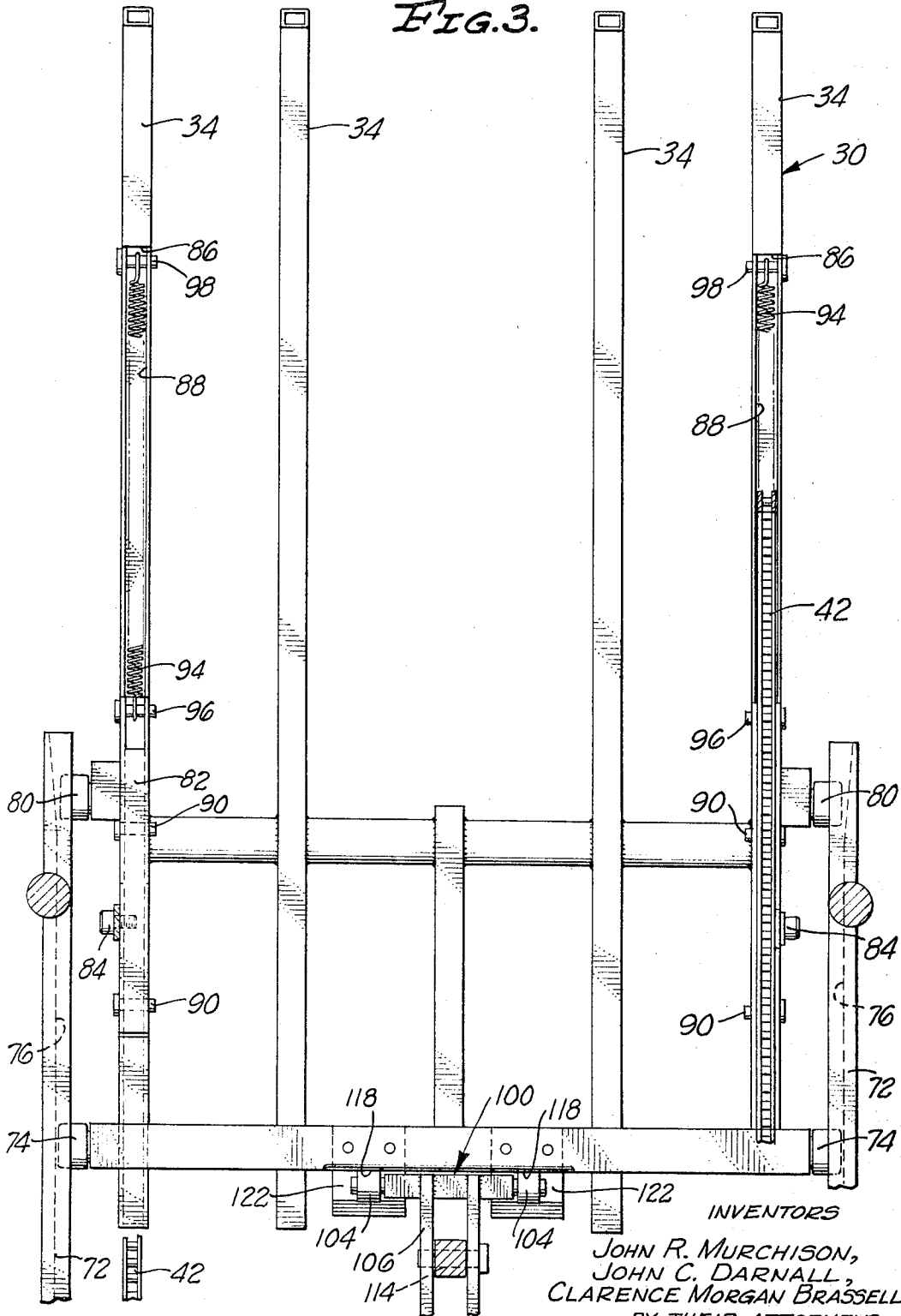
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FIG. 3.



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3,429,239

**STACKER FOR NEWSPAPERS AND THE LIKE**  
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 Filed Feb. 15, 1966, Ser. No. 527,436  
 U.S. Cl. 93—93  
 Int. Cl. B65h 33/00; B65g 57/00, 47/74

26 Claims

### ABSTRACT OF THE DISCLOSURE

A device for stacking newspapers and the like having receptacles mounted along spaced intervals of a conveyor chain for intercepting a stream of newspapers discharged toward the stacking region in a substantially continuous stream. The receptacles are first moved to a position just above the continuous stream, are restrained in this position by suitable latch means and are then rapidly accelerated by a lost motion device including a spring biasing member so as to cleanly intercept the stream of newspapers as soon as a predetermined number of newspapers is stacked on the receptacle which has previously been moved through the stacking region. The lost motion device acts to provide for uniform charging of the biasing spring members to insure rapid acceleration of the temporarily restrained receptacle so as to quickly and cleanly intercept the stream to provide an accurate count of the newspapers stacked upon each receptacle.

The present invention relates in general to arranging articles in groups and, more particularly, to an apparatus for dividing a stream of articles into groups.

The invention is especially applicable to stacking newspapers and, more particularly, to dividing a stream of newspapers into stacks for distribution. Consequently, such an application of the invention will be considered herein for purposes of illustration.

A primary object of the invention is to provide an apparatus for dividing a continuous stream of overlapping newspapers into a series of stacks, having means for splitting the stream cleanly as one stack is completed and the next one started.

More specifically, a primary object of the invention is to provide a newspaper stacker having stack-forming receptacles successively movable into a position to intercept the continuous stream of overlapping newspapers, and having means for causing the next receptacle to jump or snap into the newspaper-intercepting position upon completion of the stack on the preceding receptacle. With this construction, a clean division of the continuous newspaper stream is achieved, which is the essential feature of the invention.

Further objects of the invention are involved in providing an apparatus for stacking newspapers which includes: receptacles movable in single file along a downwardly extending path and each adapted to receive a stack of newspapers; means for guiding the receptacles downwardly along the path; restrainable conveyor means for moving the receptacles downwardly along the path; limited-lost-motion connections between the receptacles and the conveyor means and providing for limited downward movement of the conveyor means relative to the receptacles along the path; spring means respectively interconnecting the receptacles and the conveyor means for biasing the receptacles downwardly along the path; stop means engageable with each of the receptacles at a predetermined point on the path for restraining it against downward movement along the path to tension the corresponding spring means and for then restraining the conveyor means against downward movement along the path; means

for delivering a stream of newspapers to the receptacle below the one being restrained; and means for disengaging the stop means from the receptacle being restrained after a predetermined number of newspapers has been delivered to the receptacle below the one being restrained.

With the foregoing construction, the spring means connecting the receptacle being restrained to the conveyor means accelerates such receptacle downwardly along the path to cleanly intercept the stream of newspapers, which is the essential feature of the invention.

Another object of the invention is to provide a newspaper stacking apparatus of the foregoing nature wherein each limited-lost-motion connection includes a conveyor element slidable downwardly along the path relative to the corresponding receptacle, and includes means limiting relative sliding movement of the conveyor element and the corresponding receptacle along such path. A related object is to provide a construction wherein the limiting means includes at least one slot in the conveyor element and a pin on the corresponding receptacle and disposed in the slot.

An additional object is to provide a conveyor means which includes an endless conveyor member movable downwardly along the prescribed path, means for driving the conveyor member downwardly along such path, and slippable connecting means, such as a slip clutch, interconnecting the driving means and the conveyor member.

A further object is to provide a construction wherein each receptacle is provided with a stop thereon, wherein the aforementioned stop means includes a rotatable stop engageable with the stops on the receptacles in sequence, and wherein the stop means includes means for pivoting the rotatable stop into and out of engagement with the stops on the receptacles seriatim.

The foregoing objects, advantages, features and results of the present invention, together with various other objects, advantages, features and results thereof which will be evident to those skilled in the art to which the invention relates in the light of this disclosure, may be achieved with the exemplary embodiment of the invention described in detail hereinafter and illustrated in the accompanying drawings, in which:

FIG. 1 is a side elevation of a newspaper stacker which embodies the invention;

FIG. 2 is a fragmentary side elevation duplicating the upper portion of FIG. 1, but on an enlarged scale and with a housing of the stacker removed to reveal internal parts thereof;

FIG. 3 is an enlarged, fragmentary sectional view taken as indicated by the arrowed line 3—3 of FIG. 2;

FIG. 4 is a fragmentary view duplicating a portion of FIG. 2 on an enlarged scale; and

FIG. 5 is a sectional view taken as indicated by the arrowed line 5—5 of FIG. 4.

Referring initially to FIG. 1 of the drawings, the newspaper stacker of the invention is designated generally therein by the numeral 10 and includes an infeed conveyor section 12 for delivering a stream of newspapers 13, FIG. 2, in conventional overlapping relation to a stacking section 14. The infeed conveyor section 12 is more fully described and claimed in our co-pending patent application Ser. No. 527,657, filed Feb. 15, 1966, now Patent No. 3,326,353 the disclosure of this co-pending application being incorporated herein by reference the same as if it were fully set forth herein. Consequently the infeed conveyor section 12 may be described only briefly herein as comprising upper and lower conveyors 16 and 18 which receive a stream of overlapping newspapers 13 therebetween at the upstream end 20 of the infeed conveyor section, and which discharge the newspaper stream at the downstream end 22 thereof. In addition to these basic components, the infeed conveyor section 12 also

includes means 24 for counting the newspapers passing between the upper and lower conveyors 16 and 18.

Considering the stacking section 14 of the newspaper stacker 10 in a general way, still with reference to FIG. 1 of the drawings, it includes a series of receptacles 30 movable in single file along a path which extends downwardly from the downstream or discharge end 22 of the infeed conveyor section 12 to an outfeed or takeaway conveyor section 32. The receptacles 30 are preferably L-shaped racks having spaced, parallel, back rails 34 terminating in spaced, parallel fingers 36 capable of supporting stacks 38 of newspapers. The takeaway conveyor section 32 comprises spaced, parallel rollers 40 (only one of which is visible in FIG. 1) between which the fingers 36 of the racks 30 pass so as to deposit the newspaper stacks 38 on the rollers 40 in sequence as the racks move downwardly past the takeaway section 32.

As will be described in more detail hereinafter, the racks 30 are moved downwardly from the infeed conveyor section 12 to the outfeed conveyor section 32 by two parallel, endless chains 42 trained over upper, intermediate and lower sprockets 44, 46 and 48 suitably mounted on an upright frame 50 of the stacker 10. Thus, the racks 30 move downwardly from the upper sprocket 44 to the lower sprocket 48 along the downwardly-extending path hereinafter discussed. Subsequently, the racks 30 move upwardly from the lower sprocket 48 to the upper sprocket 44 along an upwardly-extending path.

It will be noted that the upper and intermediate sprockets 44 and 46 are horizontally spaced (in addition to being vertically spaced) in such a manner as to tilt the racks 30 rearwardly as they pass the discharge end 22 of the infeed conveyor section 12. As will become apparent, this rearward inclination of the racks 30 results in the formation of neat, well defined stacks 38 on the supporting fingers 36 as the newspapers discharged by the infeed conveyor section 12 impinge against the back rails 34 of the racks and come to rest on the supporting fingers 36, or on other newspapers supported by such fingers. The intermediate and lower sprockets 46 and 48 are so located horizontally relative to each other that the stack-supporting fingers 36 are horizontal as they pass between the rollers 40 of the takeaway conveyor section 32. Consequently, the stacks 38 are deposited neatly on the rollers 40 of the takeaway conveyor section. It will be noted that the supporting fingers 36 of the racks 30 make acute angles with the back rails 34 thereof. Consequently, in order for the supporting fingers 36 to assume horizontal positions as they pass between the rollers 40 of the outfeed conveyor section 32, it is necessary to offset the lower sprocket 48 horizontally from the intermediate sprocket 46 slightly.

The chains 42 constitute part of a restrainable conveyor means 52 for propelling the racks 30 along their desired path. More particularly, the chains 42 are capable of having their movement arrested or restrained for a purpose which will be described hereinafter. To achieve this, the chains 42, which are sometimes referred to herein as conveyor members, are driven by an electric motor 54 through a slip clutch 56, or other slippable means. The motor 54 and the slip clutch 56 are mounted on a suitable base 58 which carries the upright frame 50 of the stacker 10, and are interconnected by a chain 60. More specifically, the motor 54 and the slip clutch 56 are respectively provided with output and input sprockets 62 and 64 around which the chain 60 is trained. The slip clutch 56 is provided with an output sprocket 66 connected by a chain 68 to a sprocket fixed on a shaft 70 on which the lower sprockets 48 for the chains 42 are fixed. Thus, the motor 54 drives the chains 42 through the slip clutch 56, which permits arresting the downward movement of the racks 30 from the infeed conveyor section 12 to the takeaway conveyor section 32, as will be described in more detail hereinafter.

The racks 30 are guided along their downwardly ex-

tending path from the infeed conveyor section 12 to the outfeed conveyor section 32 by a guide means which includes two sets of parallel tracks 72, FIGS. 2 and 3, respectively disposed on opposite sides of the racks. Each rack 30 is provided on opposite sides thereof with guide rollers 74 respectively disposed in guideways 76 formed by the two sets of guide tracks 72, the guide rollers 74 of each rack being mounted thereon adjacent the apex of the angle formed by the back rails 34 and the fingers 36. It will be noted that the guideways 76 are provided with downwardly convergent portions 78, FIG. 2, at their upper ends to facilitate entry of the guide rollers 74 into the guideways. The guide rollers 74 also engage arcuate tracks 79 above and concentric with the upper sprockets 44, such tracks guiding the racks 30 as they make a 180° turn at the upper end of the frame 50.

Each rack 30 is also guided, during its downward movement past the infeed and outfeed conveyor sections 12 and 32, by two additional guide rollers 80 receivable in the guideways 76. The guide rollers 80 of each rack 30 are mounted on conveyor elements 82 respectively pivotally connected to the chains 42 by pivots 84, as best shown in FIGS. 3 and 4 of the drawings.

Referring to FIGS. 3, 4 and 5, the back rails 34 of each rack 30 are shown as rectangular tubes and the two back rails on opposite sides of each rack have elongated cut-outs 86 in their rear walls to provide channels 88 coextensive with such cutouts. The conveyor elements 82 comprise blocks seated against the rear edges of the channels 88 and having tongues projecting forwardly into and slidable in the channels 88, as perhaps best shown in FIG. 5 of the drawings. The guide rollers 80 are carried by the conveyor blocks 82 externally of the channels 88, and the conveyor chains 42 are connected to the conveyor blocks 82, by the pivots 84, externally of the channels 88.

There are limited-lost-motion connections between each rack 30 and the corresponding conveyor blocks 82 which permit limited downward movement of the conveyor blocks relative to the rack when the downward movement of the rack is arrested or restrained in a manner to be described. As best shown in FIGS. 4 and 5, the limited-lost-motion connection between each conveyor block 82 and the corresponding rack 30 comprises two pins 90 carried by the corresponding back rail 34 and spanning the corresponding channel 88. Each conveyor block 82 is provided with two elongated slots 92 therein receiving the corresponding pins 90, the slots 92 extending lengthwise of the corresponding back rail 34 and thus extending in the direction of downward movement of the corresponding rack 30.

Tension springs 94 connect the conveyor blocks 82 associated with each rack 30 to the corresponding back rails 34 at points above the conveyor blocks, considering the downward direction of movement of the rack in question. More particularly, each tension spring 94 is secured to the corresponding conveyor block 82 by a pin 96 and is secured to the corresponding back rail 34 by a pin 98. With this construction, the springs 94 constantly bias the racks 30 downwardly relative to the conveyor chains 42, considering the downward direction of movement of the racks. In other words, referring to FIG. 4, the springs 94 constantly bias each rack 30 into a position such that the stop pins 90 are at the lower ends of the elongated slots 92. (As will be explained hereinafter, FIG. 4 of the drawings shows the rack 30 illustrated therein in its arrested or restrained position so that the stop pins 90 are at the outer ends of the slots 92, the springs 94 being stretched under such conditions.)

The newspaper stacker 10 includes stop means 100, FIGS. 2 to 4, engageable with each of the racks 30 to restrain it against further downward movement when it reaches a position such that its fingers 36 are just above the stream of overlapping newspapers being discharged by the infeed conveyor section 12. In other words, the stop means 100 arrests each rack 30 when it arrives at the position shown for the uppermost rack in FIG. 2 of the draw-

ings. The restrained rack 30 remains in its arrested position until the required number of newspapers has been deposited on the stack 38 on the rack 30 beneath the arrested rack, this number being determined by the counting means 24.

It will be apparent that as the downward movement of each rack 30 is arrested by the stop means 100, the conveyor chains 42 continue to move the corresponding conveyor blocks 82 downwardly until the stop pins 90 engage the upper ends of the slots 92, which condition is shown in FIG. 4 of the drawings. Thereafter, the stop means 100 restrains the conveyor chains 42, as well as the arrested rack 30, such restraint of the conveyor chains being permitted by the slip clutch 56. It will also be noted that the downward movement of the conveyor blocks 82 relative to the arrested rack 30 tensions the corresponding springs 94. Consequently, when the stop means 100 subsequently disengages the arrested rack, the springs 94 cause such rack to jump or snap downwardly into a position such that its fingers 36 are below the stream of overlapping newspapers being discharged by the infeed conveyor section 12. (It will be understood that the stop means 100 is disengaged from the arrested rack 30 when the stack 38 on the preceding rack has been completed, as determined by the counting means 24.) This sudden downward movement of the arrested rack 30 assures a clean cut off of the stream of newspapers being delivered to the preceding rack, which is an important feature of the invention. After the arrested rack 30 has been snapped downwardly by the springs 94 upon disengagement of the stop means 100, the conveyor chains 42 resume their downward movement to move the previously-arrested rack downwardly at a speed conforming to the rate at which newspapers are discharged from the infeed conveyor section 12. (It will be noted from FIG. 2 of the drawings that the stacker 10 includes curved guides 102 at the intersection of the infeed conveyor and stacking sections 12 and 14 which guide the newspapers downwardly onto the fingers 36 of each rack 30 as it moves downwardly below its arrested position.)

Considering the stop means 100 in more detail, and referring to FIGS. 3 and 4, it includes two roller stops 104 mounted at one end of a lever 106 which is pivotally connected to the frame 50 intermediate its ends, at 108. An armature 110 of a solenoid 112 mounted on the frame 50 is pivotally connected to the lever 106 at 114. A compression spring 116 seated against the lever 106 constantly biases the roller stops 104 into extended positions wherein they are engageable with downwardly-facing stops 118 on the racks 30. Upon energization of the solenoid 112, the roller stops 104 are retracted out of engagement with the stops 118 on the rack 30 arrested by the stop means 100, energization of the solenoid 112 being effected by the counting means 24 upon delivery of a predetermined number of newspapers to the preceding rack 30.

As shown in FIG. 4 of the drawings, the axis of the roller stops 104, when the stops are in their extended positions, is shifted slightly to the right of the axis of the pivot 108 so that, in effect, the roller stops move over center in moving into their extended positions. This over center movement of the stops 104 positively locks the arrested rack 30 in its arrested position. Movement of the roller stops 104 beyond the desired over center positions is prevented by engagement thereof with stop members 122 on each rack 30.

Considering the over-all operation of the newspaper stacker 10, and referring particularly to FIG. 2 of the drawings, it will be assumed that the infeed conveyor section 12 has nearly completed a stack of newspapers on the lowermost downwardly-moving rack. Under such conditions, the uppermost downwardly-moving rack 30 visible in FIG. 2 has been arrested by the stop means 100. This has resulted in tensioning of the springs 94 and in arresting the conveyor chains 42, the slip clutch 56 permitting such restraint of the conveyor chains.

Under the foregoing conditions, when the last newspaper to be delivered to the rack 30 below the arrested rack passes the counting means 24, the counting means energizes the solenoid 112 to cause the latter to retract the stop means 100. The springs 94 associated with the arrested rack then cause this rack to jump downwardly to intercept the stream of newspapers from the infeed conveyor section 12 cleanly. The distance that the arrested rack 30 jumps to achieve this may be of the order of two inches, and is determined by the length of the slots 92 in which the stop pins 90 are disposed.

As soon as the arrested rack 30 has been released, the conveyor chains 42 resume their movement to cause the previously-arrested rack to continue to move downwardly, but at a considerably reduced speed conforming to the rate at which newspapers are discharged from the infeed conveyor section 12.

Once the previously-arrested rack 30 has been nearly filled with newspapers, the preceding sequence of events is repeated with the next rack in the series.

It will be noted that certain of the fingers 36 on the racks 30 are provided at their outer or upstream ends with rollers 124. Such rollers further assist in cleanly splitting the stream of newspapers discharged by the infeed conveyor section 12, the fold of any newspaper impinging directly on such rollers being deflected either downwardly onto the preceding stack, or upwardly to form the bottom newspaper in the next stack.

Although an exemplary embodiment of the invention has been disclosed herein for purposes of illustration, it will be understood that various changes, modifications and substitutions may be incorporated in such embodiment without departing from the spirit of the invention as defined by the claims which follows.

We claim:

1. In an apparatus for grouping articles, the combination of:

- (a) receptacles movable in single file along a predetermined linear path and each adapted to receive a group of the articles;
- (b) means for guiding said receptacles along said path and restraining said receptacles from moving transverse to said path;
- (c) restrainable conveyor means for moving said receptacles along said path;
- (d) limited-lost-motion connections between said receptacles and said conveyor means and providing for limited movement of said conveyor means relative to said receptacles along said path;
- (e) spring means respectively interconnecting said receptacles and said conveyor means for biasing said receptacles along said path in the direction of movement of said conveyor means therealong;
- (f) stop means positioned adjacent the portion of said receptacles connected to said conveyor means engageable with each of said receptacles at a predetermined point on said path for restraining it against movement along said path to tension the corresponding spring means and for then restraining said conveyor means against movement along said path;
- (g) means for delivering a stream of the articles to the receptacle ahead of the one being restrained;
- (h) means for disengaging said stop means from the receptacle being restrained after a predetermined quantity of the articles has been delivered to the receptacle ahead of the one being restrained; and
- (i) whereby the spring means interconnecting the receptacle being restrained and said conveyor means accelerates such receptacle along said path to cleanly intercept the stream of articles.

2. A newspaper stacking apparatus according to claim 1 wherein each of said limited-lost-motion connections includes a conveyor element slidable downwardly along said path relative to the corresponding one of said receptacles, and includes means limiting relative sliding

movement of said conveyor element and said corresponding receptacle along said path.

3. A newspaper stacking apparatus according to claim 2 wherein said limiting means includes a slot in said conveyor element and a pin on said corresponding receptacle and disposed in said slot.

4. A newspaper stacking apparatus according to claim 1, wherein said restrainable conveyor means includes a conveyor member movable downwardly along said path, means for driving said conveyor member downwardly along said path, and slippable connecting means interconnecting said driving means and said conveyor member.

5. A newspaper stacking apparatus according to claim 1 wherein each of said receptacles is provided with a stop thereon, wherein said stop means includes a roller stop engageable with said stops on said receptacles seriatim, and wherein said stop means includes means for pivoting said rotatable stop into and out of engagement with said stops on said receptacles seriatim.

6. In combination:

(a) receptacles movable in single file along a predetermined path;

(b) means for limiting said receptacles to linear movement along said path;

(c) restrainable conveyor means for moving said receptacles along said path;

(d) limited-lost-motion connections between said receptacles and said conveyor means and providing for limited movement of said conveyor means relative to said receptacles along said path;

(e) spring means respectively interconnecting said receptacles and said conveyor means for biasing said receptacles along said path in the direction of movement of said conveyor means therealong;

(f) stop means engageable with each of said receptacles at a predetermined point on said path for restraining it against movement along said path to tension the corresponding spring means and for then restraining said conveyor means against movement along said path;

(g) means for disengaging said stop means from the receptacle being restrained; and

(h) whereby the spring means interconnecting the receptacle being restrained and said conveyor means accelerates such receptacle along said path.

7. The combination set forth in claim 6 wherein each of said limited-lost-motion connections includes a conveyor element slidable downwardly along said path relative to the corresponding one of said receptacles, and includes means limiting relative sliding movement of said conveyor element and said corresponding receptacle along said path.

8. The combination set forth in claim 6 wherein said restrainable conveyor means includes a conveyor member movable along said path, means for driving said conveyor member along said path, and slippable connecting means interconnecting said driving means and said conveyor member.

9. The combination set forth in claim 6 wherein each of said receptacles is provided with a stop thereon, wherein said stop means includes a rotatable stop engageable with said stops on said receptacles seriatim, and wherein said stop means includes means for pivoting said rotatable stop into and out of engagement with said stops on said receptacles seriatim.

10. Means for moving a stream of newspapers toward a stacking region;

a plurality of supports for receiving and supporting a plurality of newspapers to form a stack thereon;

means for moving said supports arranged at spaced intervals in a first direction through said newspaper stacking region;

said moving means including guiding means for limiting said supports to experience only linear movement as each support enters into the stacking region;

latch means including a movably mounted member and bias means for normally urging a portion of said movably mounted member into the path of movement of the support which has entered the guide means behind the support receiving newspapers in the stacking region to temporarily restrain the movement of said blocked support and ultimately restrain the movement of said support moving means;

latch release means positioned downstream relative to said guiding means for urging said movably mounted member away from the path of movement of said supports and against the force of said bias means to cause the blocked support means to intercept the stream of newspapers and cause the newspapers in said stream to be stacked upon the unblocked support.

11. The device of claim 10 where a plurality of second spring means couples each of said supports to said support moving means;

said latch means causing the second spring means associated with the blocked support to become charged;

said charged second spring means causing the blocked support to be rapidly accelerated in said linear direction when said support is unblocked.

12. The device of claim 11 further comprising a plurality of lost-motion means each being coupled between its associated support and said support moving means to limit the amount of charging which its associated second spring means undergoes.

13. The device of claim 10 wherein each of said supports is comprised of a back portion having a plurality of tines secured to one end thereof; each of said tines projecting in a first direction transverse to the movement of said supports through said stacking region and being tapered at their free ends to facilitate the interception of said newspaper stream by the next support to be unblocked;

said latch means engaging the lower end of said back portion as the support enters the stacking region.

14. The device of claim 13 wherein at least one of said tines is provided with a pivotally mounted member at its free end to still further facilitate interception of the newspaper stream.

15. The device of claim 13 wherein said guide means is further comprised of a pair of spaced parallel guides arranged in and extending the length of said stacking region;

plural cam means being provided on opposite sides of each support being guided by said guides upon entering said stacking region to maintain alignment of the support being stacked relative to the newspapers being directed toward the stacking region and to restrain each support to experience only linear movement as it enters into and through the stacking region.

16. The device of claim 13 further comprising outfeed conveyor means being positioned in the path of movement of said supports and immediately beyond said stacking region for directing each completed stack of newspapers in a direction lateral to the movement of said moving means.

17. The device of claim 16 wherein said outfeed conveyor is comprised of a plurality of rollers arranged in spaced parallel fashion to permit passage of the support tines therebetween.

18. The device of claim 16 further comprised of means for counting newspapers in said stream;

said counting means further comprised of means for generating an output signal after reaching a predetermined count;

said output signal being used to drive said latch release means to unblock the blocked support.

19. The device of claim 10 wherein said moving means is comprised of at least one closed loop chain means

coupling said supports thereto at spaced intervals along said chain means.

20. The device of claim 19 comprising a plurality of rotatably mounted sprocket means arranged at spaced intervals and engaging said chain means for moving said chain.

21. The device of claim 20 further comprising motor means;

slip clutch means coupled between said motor means and at least one of said sprocket means to permit slippage between said motor means and said chain means when one of said supports is blocked by said latch means

22. The device of claim 10 wherein said movable member is comprised of a latch member pivotally mounted at one end thereof;

said bias means comprising spring means arranged to be urged against said latch member at a point a spaced distance from the pivotal mounting;

solenoid means having an armature pivotally coupled to said latch member at a point located a spaced distance from said pivotal mounting;

means for energizing said solenoid means for moving said latch member out of the path of movement of the blocked support.

23. The device of claim 22 wherein each of said supports is provided with a shoulder for abutting said latch member upon approaching the stacking region;

said latch member having a pivotally mounted roller for abutting the shoulder of a support about to enter the stacking region for facilitating removal of said latch member from the path of movement of the blocked support.

24. The apparatus of claim 10 wherein said moving

means is further comprised of means for moving said supports around a closed loop path wherein a substantially linear portion of said path constitutes said stacking region.

25. The apparatus of claim 10 wherein each support is comprised of a back portion joining extending fingers to form an L-shaped profile.

26. The apparatus of claim 25 wherein said newspaper stream moving means is further comprised of means for guiding said newspapers in a substantially horizontal direction;

said support guiding means guiding said supports to linearly move along a diagonally aligned path past the downstream end of said newspaper moving means to intercept and stack said newspapers;

downstream end of said newspapers to impinge against the back portion of the support receiving newspapers.

said newspaper guiding means being aligned to cause the downstream end of said newspapers to impinge against the back portion of the support receiving newspapers.

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ALLEN N. KNOWLES, *Primary Examiner*.

U.S. Cl. X.R.

271—64, 76, 88; 198—35, 154