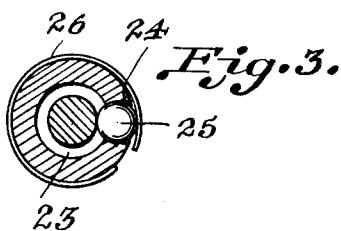
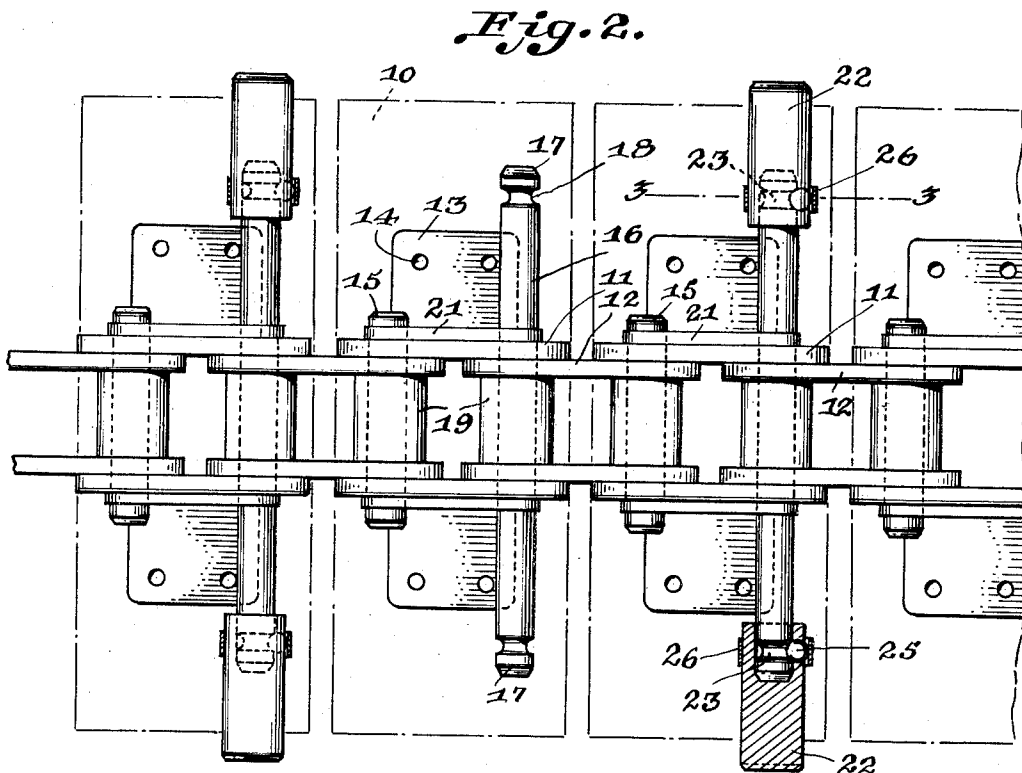
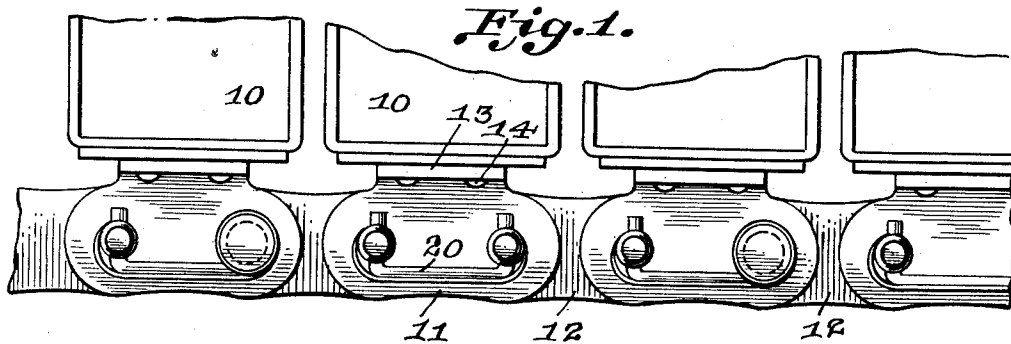


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W. P. SHOMAKER
MAGAZINE CARRIER CHAIN

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MAGAZINE CARRIER CHAIN

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Application August 26, 1931, Serial No. 559,581

7 Claims. (Cl. 198—189)

The present invention relates to chain construction, particularly adapted for the support and carrying of a series of magazines, such as may carry stacks of envelopes, sheets, or the like, and this application is a continuation in part of application Serial No. 557,165 filed August 14, 1931.

An object of the present invention is to provide a magazine carrier chain wherein certain of the links of the chain are constructed for attachment to the individual magazines so as to not only support the same but hold the magazines in proper spaced relation along the chain.

Another object of the present invention is to provide pivot pins and improved means for holding the same through the interfitting or adjacent ends of the chain links and which admits of the quick and easy removal of the pins and the consequent quick and easy removal or interpositioning of magazines to obtain the desired number of the magazines in the endless structure.

The invention also aims at the provision of pivot pins mounted in the chain at desired points to serve as strikers for tripping various mechanisms which may be used in envelope handling machines, such as disclosed in the application referred to, and to provide these strikers or tripping pins with detachable striker-fingers so that the fingers may be optionally mounted on the striker-pins according to the desired operation of the machine with respect to certain of the magazines.

The invention further aims at the provision of an improved construction of detachable striker-finger which may be quickly and easily snapped into position upon the desired end of the pin, and quickly removed therefrom.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claims appended hereto.

In the drawing, wherein like symbols refer to like or corresponding parts throughout the several views.

Figure 1 is a fragmentary top plan view of a section of a magazine carrier chain constructed according to the present invention.

Figure 2 is an inner side elevation of the same, and

Figure 3 is an enlarged transverse section taken on the line 3—3 of Figure 2 through one of the detachable striker-fingers mounted on an adjacent striker-pin.

Referring now to the drawing, the improved chain is adapted to carry a plurality of magazines 10 which are arranged in a row, and spaced apart

and are adapted to be mounted in an endless structure so that the magazines 10 may be brought to a desired point consecutively and by the desired operation of the chain.

The chain comprises a plurality of attaching links 11 and a plurality of intermediate connected links 12. Each attaching link 11 comprises a flat plate of elongated contour and which is suitably apertured near its opposite ends, and which at one side is apertured with an integral laterally turned flange 13 providing a plate or bracket adapted to be secured by rivets 14, or the like, to the inner end of an adjacent magazine 10. The attaching links 11, as shown in Figure 2, are disposed in pairs, and the links of each pair have their flanges 13 extending outwardly in opposite directions so as to engage and be secured to the adjacent magazine 10 at spaced points vertically of the latter.

For connecting together the adjacent attaching links 11, the connecting links 12 are employed, and the links 12 are also disposed in pairs, are of suitably elongated construction and are apertured near their opposite ends. The apertured opposite end portions of the connecting links 12 are in overlapping relation against the inner opposite sides of the attaching links 11 with the apertures in register for receiving therethrough the pivot pins 15 and the striker-pins 16 which hingedly connect the links 11 and 12 together and provide an endless structure. The pivot pins 15 are relatively short and the striker-pins 16 are provided with elongated opposite ends terminating in beveled heads 17 defined by annular grooves 18 which are provided in the striker-pins 16 at the inner sides of the heads. The pins 16 and 17 may be disposed in any desired number and relation in the chain structure, and in Figures 1 and 2 it will be noted that the pins 15 and 16 are alternately disposed throughout the length of the chain.

For the purpose of holding the connecting links 12 in suitably spaced apart relation and at the inner sides of the attaching links 11, spacing sleeves 19 are mounted upon the intermediate portions of the pins 15 and 16 and engage at opposite ends against the inner opposite sides of the connecting links 12.

The means employed for removably holding the pins 15 and 16 through the links 11 and 12, and for admitting the quick and easy removal and replacement of the pins, comprises a retaining pin 20 for each attaching link 11, each retaining pin being substantially of U-shape with an elongated or bridge portion so as to dispose

the substantially parallel ends of the pin 20 in register with through openings formed in the pins 15 and 16. The openings in each pin are spaced apart therein a distance slightly greater than that between the pairs of attaching links 11 so that when the retaining pin 20 is fitted in the openings adjacent one of the attaching links 11, the openings in the opposite end portions of the pins 15 and 16 are in proper register with the opposite link 11 and the second retaining pin 20 may then be inserted so as to dispose the retaining pins 20 at the opposite sides of the opposite attaching links 11. This holds the pins 15 and 16 from longitudinal displacement from the links 11 and 12, and the two adjacent pins 15 and 16 are thus held by a single retaining pin 20 at opposite sides of the chain. To prevent the retaining pin 20 from accidentally moving out of the openings in the pins 15 and 16, a spring clip 21 is provided for each retaining pin 20. Each clip 21 is composed of an elongated spring metal body portion with inwardly curved opposite ends adapted to engage about the outer sides of the pins 15 and 16 and with the body portion of the spring clip lying against the bridge or connecting portion of the retaining pin 20 as shown in Figure 1. Thus, the spring clip 21 releasably holds the pin 20 in engagement with the adjacent pivot pins 15 and 16.

The striker-pins 18 are adapted to selectively and removably carry striker-fingers 22. Each striker-finger 22 comprises an elongated body portion preferably cylindrical in contour and which at one end is provided with a socket 23 adapted to receive the head 17 and the outer adjacent portion of the striker-pin 16, as shown in Figure 2. Each striker-finger 22 is also provided, in one side of the socket 23, with an inwardly flaring opening 24 in which is seated a retaining ball 25, or the like, adapted to project into the socket 23 and proportioned to engage in the annular groove 18 at the inner side of the head 17. A spring band 26 is fitted about the socketed end of the striker-finger 22 and, as shown in Figure 3, has one end engaging over the ball 25 for yieldingly urging the latter inwardly while the other portion of the spring band 26 engages about the striker-fingers 22 to an extent sufficient to retain the band on the striker-finger. Any suitable means may be provided for holding the spring band 26 on the striker-finger, although the tension of the band is deemed sufficient for the purpose. The striker-fingers 22 may thus be drawn from the ends of the striker-pins 16, and readily snapped on the ends thereof according to the adjustment desired so as to dispose a striker-finger 20 opposite a selected magazine and at either the upper or lower side of the endless chain. Thus, each chain so constructed may be used to actuate at least two different trip devices in connection with the envelope machine shown in the application referred to.

In use, it is readily apparent that when it is desired to remove a magazine 10 from the endless structure, it is only necessary to snap the spring clip 21 out of engagement with the adjacent pins 15 and 16 at one side of the chain, and to then withdraw the adjacent retaining pin 20 from engagement with the pins 15 and 16. The pivot pins 15 and 16 may now be moved lengthwise through the openings in the adjacent links 11 and 12 so that the pair of links 11 with the corresponding magazine 10 may be removed from the chain structure and a pair of the links 12

removed therewith. This admits of the connecting together of the adjacent remaining magazines by the insertion of an adjacent pin 15 or 16 when the remaining ends of the links 11 and 12 are overlapped and brought into register. This operation may be quickly performed because the use of cotter pins and other fastening devices usually employed in connection with the pivot pins are unnecessary and the single retaining pin 20 is used for both of the adjacent pins 15 and 16.

It is apparent that the striker-fingers 22 may be quickly and easily snapped upon either or both ends of the striker-pins 16 opposite the desired magazine or magazines and to thus effect the tripping of the mechanism of the machine when certain magazines are brought to a desired point for the desired treatment of the envelopes or sheets, which are carried thereby.

Of course, the chain structure shown in the present drawing may be duplicated so as to provide two or more series of attaching and connecting links should the magazines be of such height as to require support at different points throughout the height.

It is obvious that various changes and modifications may be made in the details of construction and design of the above specifically described embodiment of this invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claims.

What is claimed is:

1. A magazine carrier chain, comprising pairs of spaced apart attaching links having outwardly turned flanges for attachment to magazines, connecting links extending across the inner sides of the attaching links, spacers arranged between the connecting links to hold the same against the inner opposite faces of the attaching links, pins extending through the registering portions of the attaching and connecting links and through the spacers and having openings therethrough near their opposite ends, retaining pins having angular end portions removably fitting through the openings of said pivot pins and extending between the adjacent pivot pins of each attaching link, a spring clip carried over each retaining pin and engaging at opposite ends over the pivot pins for holding the retaining pins in place, and removable striker-fingers mounted upon the ends of selected pivot pins.

2. A magazine carrier chain, comprising alternate pairs of attaching and connecting links, pivot pins engaging through the adjacent portions of said links for pivotally connecting the same together, said attaching links adapted for engagement with magazines, certain of the pivot pins having elongated ends with annular grooves therein and heads beyond the grooves, and striker-fingers detachably and selectively mounted upon said elongated ends of the pivot pins and having each a socket therein for the reception of the head and groove of the pivot pin, and spring means carried upon each striker-finger in register with the socket therein for yielding engagement in the annular groove of the pin when the striker-finger is snapped over the head thereof.

3. A magazine carrier chain, comprising alternately disposed attaching and connecting links, pivot pins connecting said links together, certain of said pivot pins having elongated grooves and headed ends, striker-fingers removably positioned upon the elongated ends of the pivot pins, 150

each striker-finger having a socket therein for the reception of the grooved and headed end of the pin, a ball carried in the side of the striker-finger for engagement in the groove of the pin, and a spring band carried about the striker-finger with one end against said ball for yieldingly urging the latter into the groove of the pin.

4. A magazine carrier chain, comprising a pair of attaching links disposed in spaced relation and with the out-turned flanges for attachment to the inner ends of magazines, pairs of connecting links arranged in overlapping relation between adjacent attaching links, a short pivot pin engaging through the overlapping portions of one end of pair of attaching and the adjacent end of the pair of connecting links, and a long pivot pin engaging through the overlapping portions of the other end of the pair of attaching and its adjacent end of the pair of connecting links and detachable trip fingers selectively engaged with the long pivot pins.

5. A magazine carrier chain, comprising spaced attaching links adapted to be secured to a plurality of magazines, intermediate connecting links arranged between the attaching links and overlapping the ends of the same, short and long pivot pins engaging the overlapping ends of the

attaching and connecting links, striker-fingers selectively engaged over the long pivot pins, and means for detachably holding the striker-fingers on the pins.

6. A chain having links overlapping at their ends and having registering openings in said overlapping ends, pins extending through the registering opening to pivotally connect the links together and having openings therethrough near their opposite ends, a rod having angularly bent ends engaged at said ends through the openings of the adjacent pins for holding the latter through the links, and a spring clip extending over the rod and having rolled ends for snapping engagement about the pivot pins to retain the rod interlocked therewith.

7. A chain having links overlapping and apertured at their ends, long and short pins selectively engageable through the apertures of the link ends for pivotally connecting the links together, removable holding devices engaging the adjacent pins to retain the same in said apertures, spring clips connecting the devices to the pins and securing the devices from accidental removal, and removable trip fingers selectively engageable with the long pins.

WESLEY P. SHOMAKER.

30	105
35	110
40	115
45	120
50	125
55	130
60	135
65	140
70	145
75	150