March 11, 1930. R. H. PAULSON 1,750,539

RECORDING MACHINE

Filed March 16, 1929 4 Sheets-Sheet 1

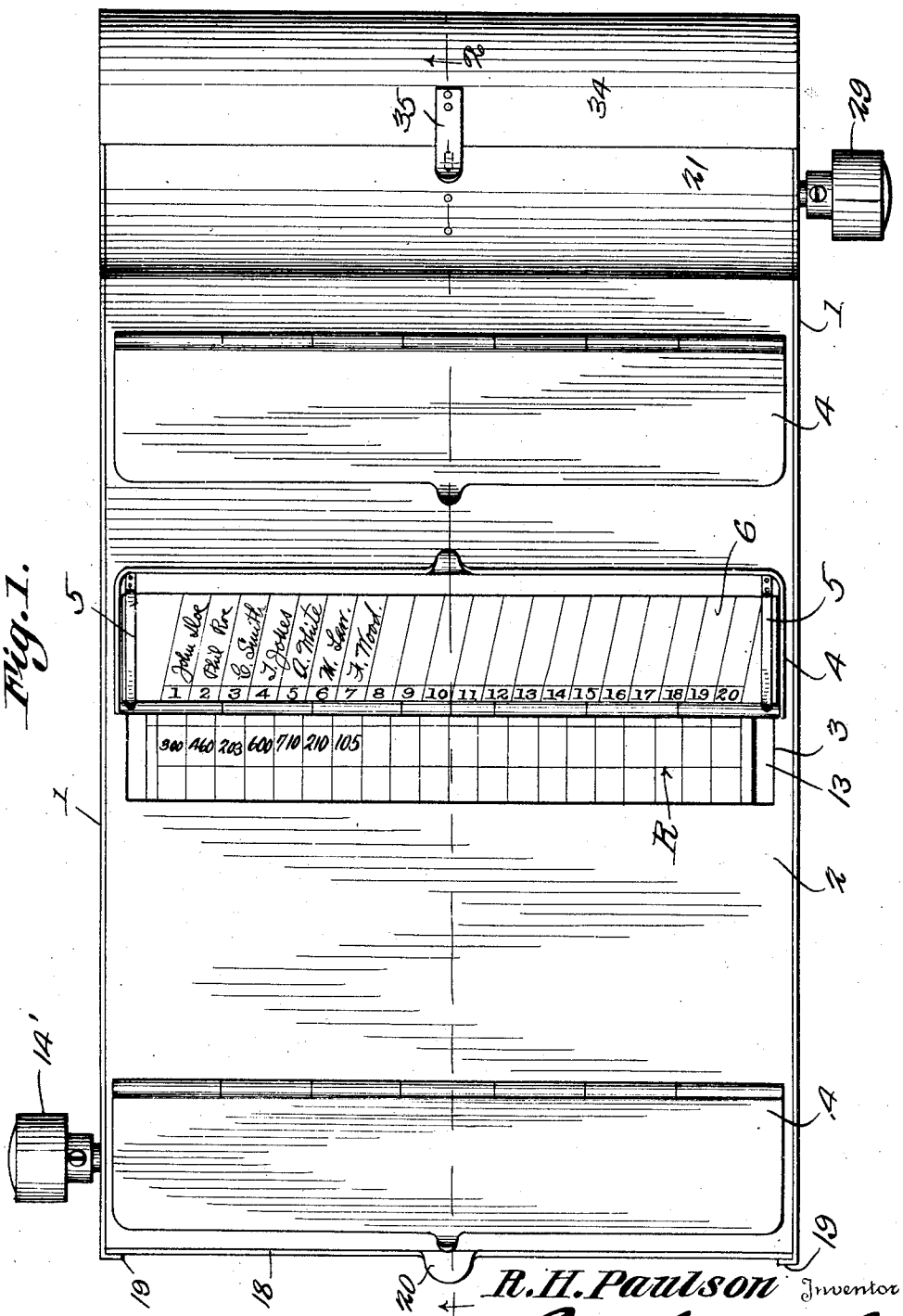


Fig. 1.

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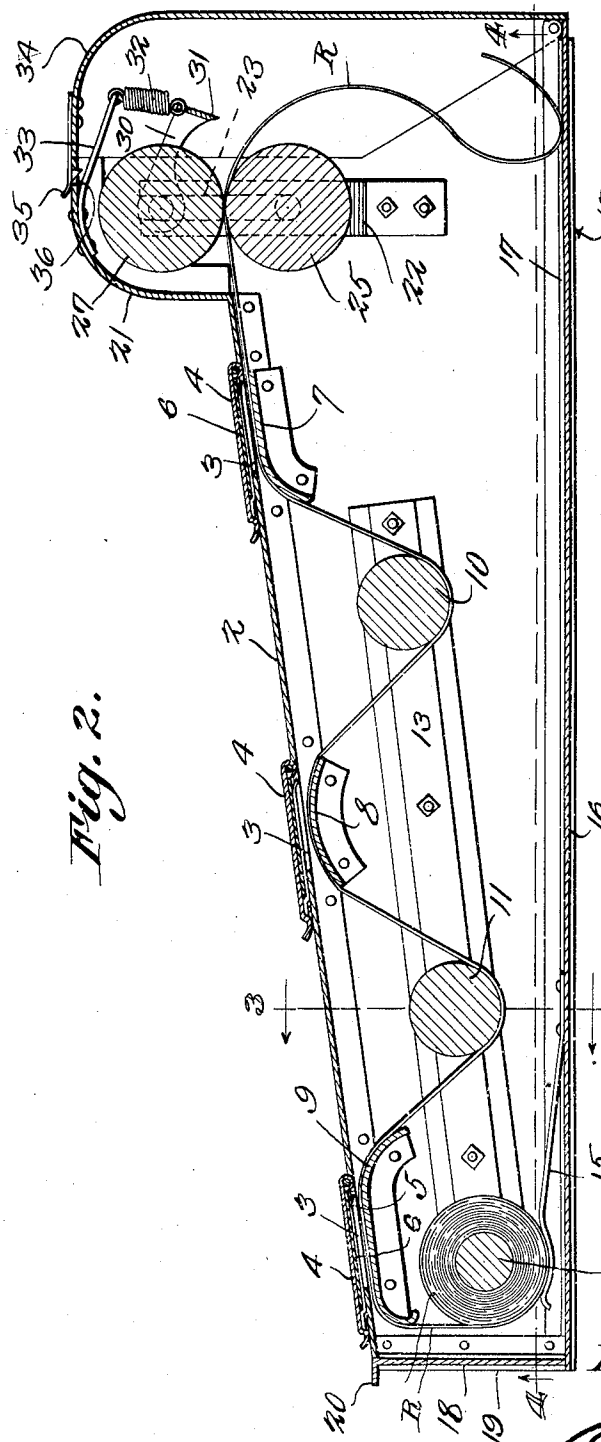


Fig. 2.

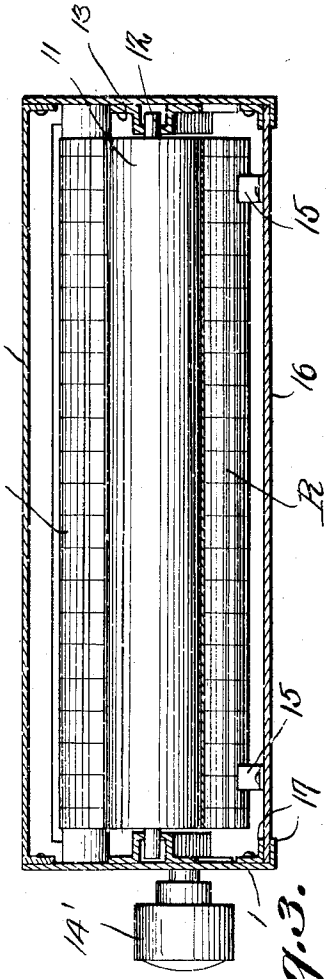


Fig. 3.

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RECORDING MACHINE

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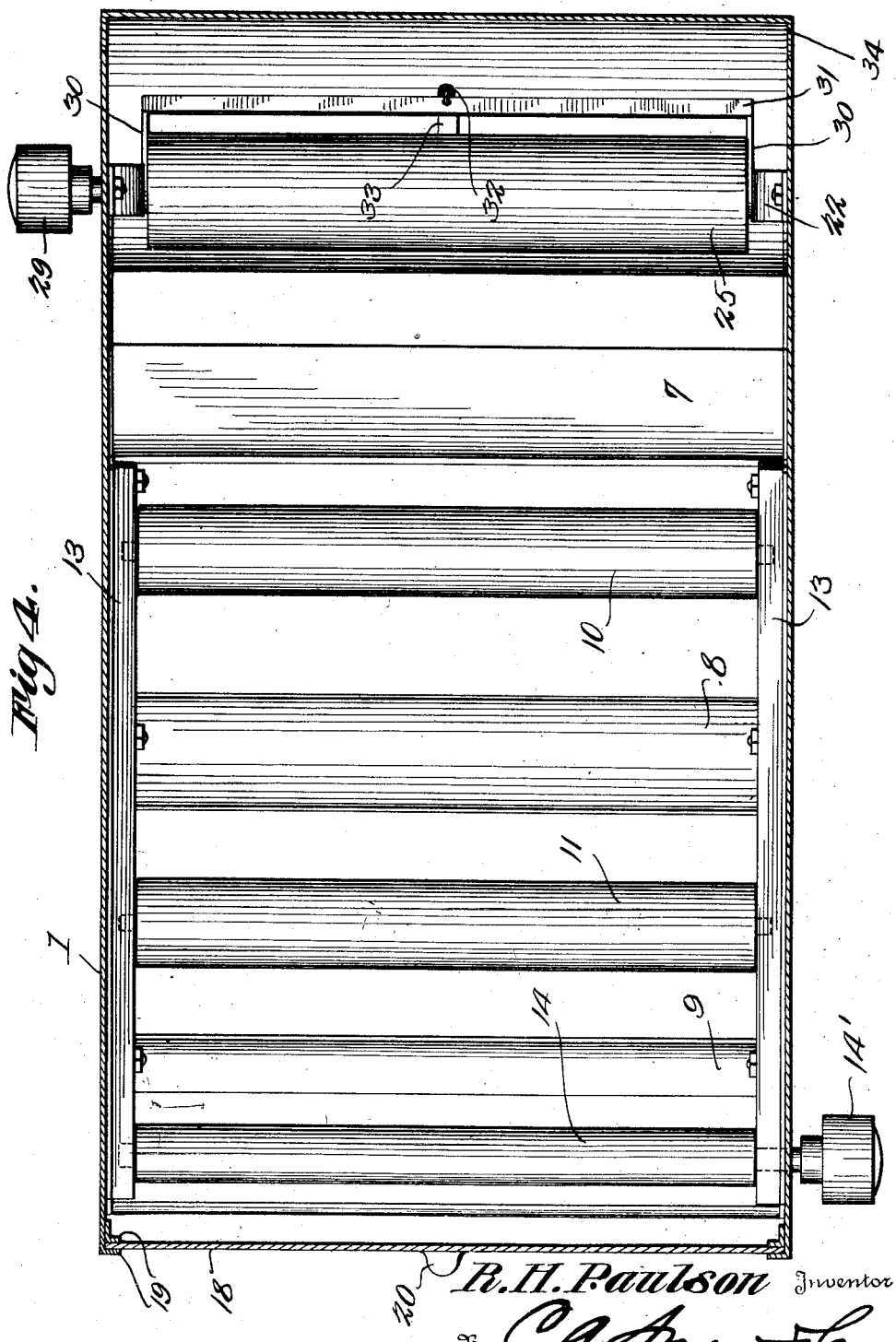


Fig 4.

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RECORDING MACHINE

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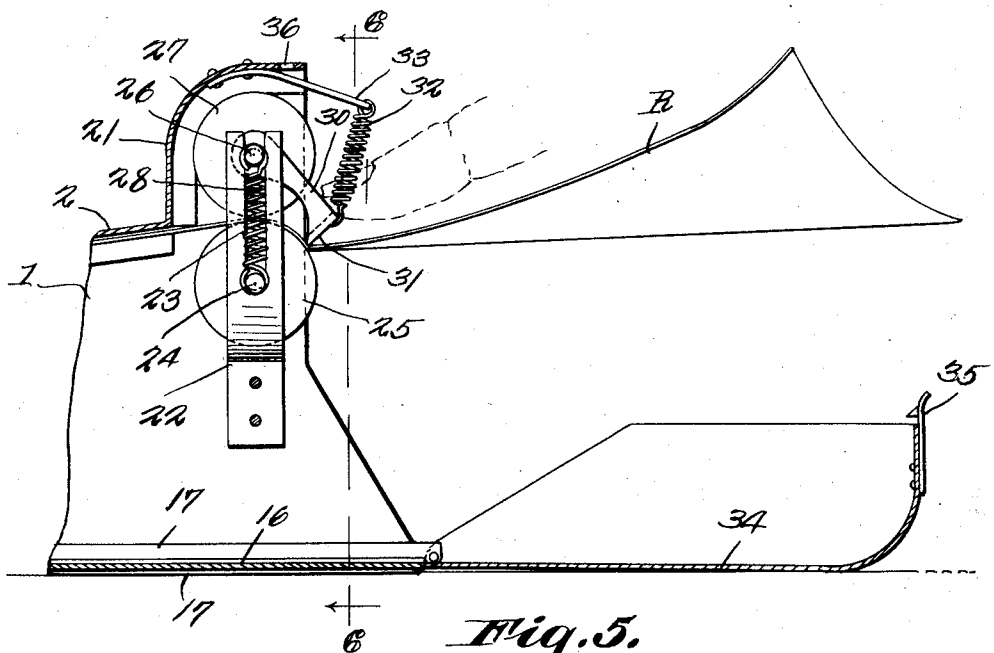


Fig. 5.

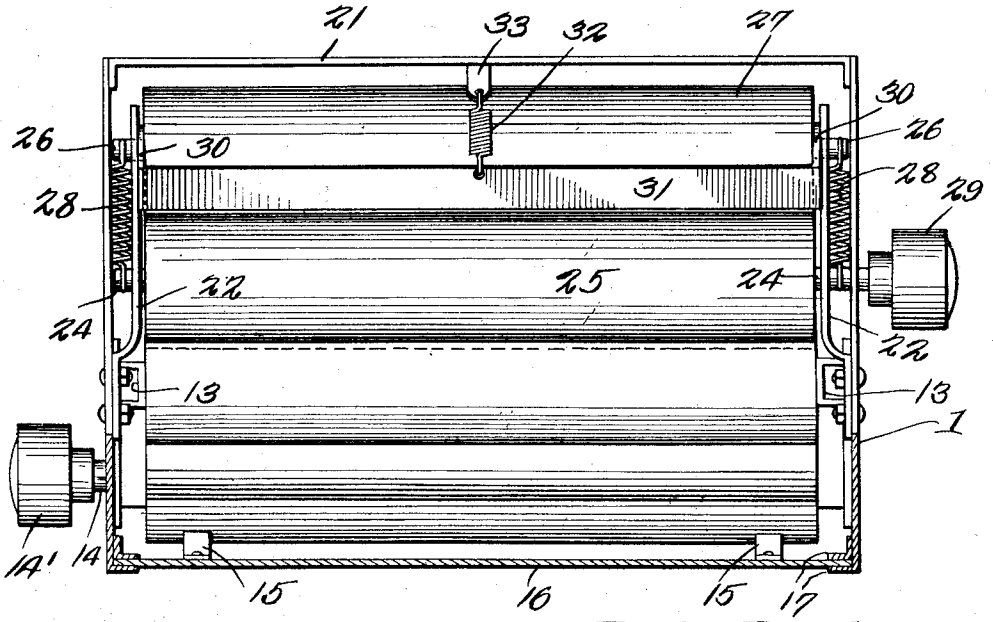


Fig. 6.

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Patented Mar. 11, 1930 1,750,539

UNITED STATES PATENT OFFICE

RUDOLPH H. PAULSON, OF COLFAX, WISCONSIN

RECORDING MACHINE

Application filed March 16, 1929. Serial No. 347,669.

This invention relates to a machine designed primarily for use in recording the amount of merchandise received from different customers through different collecting agents. It is more especially designed for keeping a record of the amounts of milk collected from customers along different routes during every day of the week so that, at the end of a week, there will be a permanent record of the amount of milk received from each customer during the week and the total amount collected during the week by each agent.

A further object is to provide a device of this character which is simple and compact in construction and requires but one adjustment daily.

A still further object is to provide a recording device the interior mechanism of which can be reached readily for the purpose of assembling or repairing the parts and for loading it with a web or strip of paper or the like on which entries are to be made.

With the foregoing and other objects in view which will appear as the description proceeds the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed may be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings,

Figure 1 is a top plan view of the device, one of the closures, with the names of patrons and customers on one route, being in open position to expose the spaces in which entries are to be made.

Figure 2 is a section on line 2—2, Figure 1, all of the closures being shut.

Figure 3 is a section on line 3—3, Figure 2.

Figure 4 is a section on line 4—4, Figure 2.

Figure 5 is a vertical longitudinal section through one end portion of the casing showing the end closure open and the parts in position to tear off a portion of the web or record strip.

Figure 6 is a section on line 6—6, Figure 5.

Referring to the figures by characters of reference, 1 designates a casing provided with a top 2 preferably inclined, there being spaced transverse windows 3 in this top each of which is adapted to be closed by a hinged cover 4 normally resting on the top 2. Each of these covers has spring clips 5 on one face thereof for gripping a card 6 or the like divided into parallel columns which are consecutively numbered as shown. Each of these columns is adapted to receive the name of one of the customers on a predetermined route. In other words all of the customers on one route will have their names entered in the columns on one card 6. When the cover is in closed position the card 6 is concealed from view as will be apparent by referring to Figure 1.

Connecting the sides of the casing 1 directly under the windows 3 are curved guide plates 7, 8, and 9 respectively and mounted for rotation in the casing below the spaces between these guide plates are guide rolls 10 and 11 the trunnions 12 of which are journaled in paneled strips 13 secured to the sides of the casing 1.

Journaled in the strips 13 beneath the guide plate 9 is a spool 14 having a knob 14′ whereby the spool can be readily rotated from a point outside the casing. A record strip R of paper or other suitable material is wrapped on the spool 12 and is frictionally engaged by retarding springs 15. These springs are attached to a bottom plate 16 slidable longitudinally between guide flanges 17 that extend inwardly from the sides of the casing 1 adjacent the bottom thereof.

An end closure 18 is slidable between inwardly extending flanges 19 carried by the sides of casing 1 at the front end thereof and this closure, when in normal position, bears downwardly on the end of the bottom plate 16. The end closure 18 has a lip or finger piece 20 whereby it can be easily raised or lowered relative to the casing.

That end of the casing 1 remote from the closure 18 has an upwardly projecting exten-

sion 21 and secured to said end of the casing at the sides thereof and projecting into the extension 21 are brackets 22 provided with longitudinal slots 23 extending downwardly thereinto from their upper ends. In the lower portions of these slots are seated the trunnions 24 of a lower feed roller 25 while in the upper portions of the slots are mounted the trunnions 26 of an upper feed roller 27.

The trunnions of the upper and lower rollers are connected by springs 28 that serve to draw the rollers together so that they will pinch upon the strip R extending therebetween. One of the trunnions 24 may be extended through one side of the casing and provided with a knob 29 whereby said roller can be rotated readily.

Pivotally mounted on the trunnions 26 are arms 30 extending from the ends of a blade 31. This blade is normally supported yieldingly by a spring 32 extending downwardly from an arm 33 that is fastened to the top of the extension 21. A closure 34 is hingedly mounted between the sides of casing 1 adjacent one end of the bottom plate 16 and is adapted, when closed, to fit against the adjacent end of the housing or casing 1 where it will be held by a latch 35 engaged in an opening 36 in the top of extension 21 as shown particularly in Figure 2.

The record strip or web R is marked with longitudinal columns, these columns being adapted to register with the columns on the cards 6 as will be apparent by referring to Figure 1.

In practice all of the customers or patrons on one route travelled by a truck, have their names entered in the columns on one card 6 while the customers on another route have their names entered on another card 6. The size of the apparatus depends on the number of routes from which collections are made, it being understood that one window 3 and card 6 is provided for each route. In the structure illustrated provision is made for entering receipts from three routes.

At the beginning of a week's work the record strip or web R is threaded through the structure by passing it from spool 14 over guide plates 9, under roll 11, over plate 8, under roll 10, and over plate 7 to the pass between the rolls 25 and 27. The names of the various customers have of course been entered on the proper card. After all collections have been made along one route the window assigned to said route is opened, thereby exposing the names and numbers of the customers along the said route. In the adjacent spaces on the record strip R the clerk enters the amount of merchandise received from each customer on that day. In the present instance the entries are made in numbers of gallons.

After returns have been received from all of the routes and the necessary entries have been made the record strip R is moved longitudinally by rotating knob 29 thereby to bring into position the spaces to be used on the next day. Thus the machine is set ready to receive additional entries. At the end of a week or a month the closure 34 can be opened and that portion of the record strip on which the entries have been made can be torn off along the edge of the blade 31, it being understood that this blade is swung downwardly against the strip R so as to bind it on the roll 25 and there hold it during the tearing operation.

Obviously the strip R can easily be placed in position in the casing after the bottom plate 16 and the end closure 18 have been removed.

While this apparatus is designed particularly for making a record of milk collections, it is to be understood that it can also be used for making a record of the collection of other kinds of merchandise.

What is claimed is:

1. Apparatus of the class described including a casing having a transverse window, a closure for the window, rolls in the casing, a guide under the window and between the rolls, means for supporting a rolled record strip in one end portion of the casing, said strip being adapted to extend over the guide and under the rolls, feed rolls in the casing for the reception of the record strip therebetween, means for binding said rolls upon the strip, means for rotating the rolls to draw the strip longitudinally across the window, and means for holding the strip against free and unrestrained movement, said means including a removable bottom plate slidably connected to the casing, and springs carried by said plate for wedging engagement with a rolled record strip.

2. Apparatus of the class described including a casing having a transverse window, a closure for the window, rolls in the casing, a guide under the window and between the rolls, means for supporting a rolled record strip in one end portion of the casing, said strip being adapted to extend over the guide and under the rolls, feed rolls in the casing for the reception of the record strip therebetween, means for binding said rolls upon the strip, means for rotating the rolls to draw the strip longitudinally across the window, and means for holding the strip against free and unrestrained movement, said means including a removable bottom plate slidably connected to the casing, and springs carried by said plate for wedging engagement with a rolled record strip, and a closure movably connected to one end of the housing, said end of the housing being enlarged and cooperating with the closure to provide a space for the reception of used portions of the record strip.

3. Apparatus of the class described includ-

ing a casing having a window, a closure for the window, rolls in the casing, a guide under the window and between the rolls, means for supporting a rolled record strip in one end portion of the casing, said strip being adapted to extend over the guide and under the rolls, feed rolls in the casing for the reception of the record strip therebetween, means for binding said rolls upon the strip, means for rotating the rolls to draw the strip longitudially across the window, and means for holding the strip against free and unrestrained movement, said means including a removable bottom plate slidably connected to the casing, and springs carried by said plate for wedging engagement with a rolled record strip, and a closure movably connected to one end of the housing, said end of the housing being enlarged and cooperating with the closure to provide a space for the reception of used portions of the record strip, and a blade yieldingly supported adjacent the feed rolls, said blade being shiftable to bind a portion of the record strip upon one of the feed rolls to facilitate severing a portion of the record strip.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

RUDOLPH H. PAULSON.