

- [54] **SELF-SERVICE DEVICE FOR SEWING
THREAD PACKAGES**
- [75] Inventor: **Jurgen Lahmann, Haus Orehta,
Germany**
- [73] Assignee: **Gutermann, Fa., & Company,
Gutach, Germany**
- [22] Filed: **Sept. 14, 1971**
- [21] Appl. No.: **180,256**
- [30] **Foreign Application Priority Data**
Sept. 14, 1970 Germany..... P 20 45 322.9
- [52] U.S. Cl..... **221/92, 221/310, 312/72**
[51] Int. Cl. **A47f 3/02**
[58] **Field of Search**..... **221/310, 309, 307,
221/92, 143, 303, 304, 130; 312/72, 73, 45**

[56] **References Cited**
UNITED STATES PATENTS

- | | | | |
|-----------|--------|------------|-----------|
| 2,234,424 | 3/1941 | Alley..... | 312/45 |
| 2,582,207 | 1/1952 | Shaw..... | 222/143 X |

FOREIGN PATENTS OR APPLICATIONS

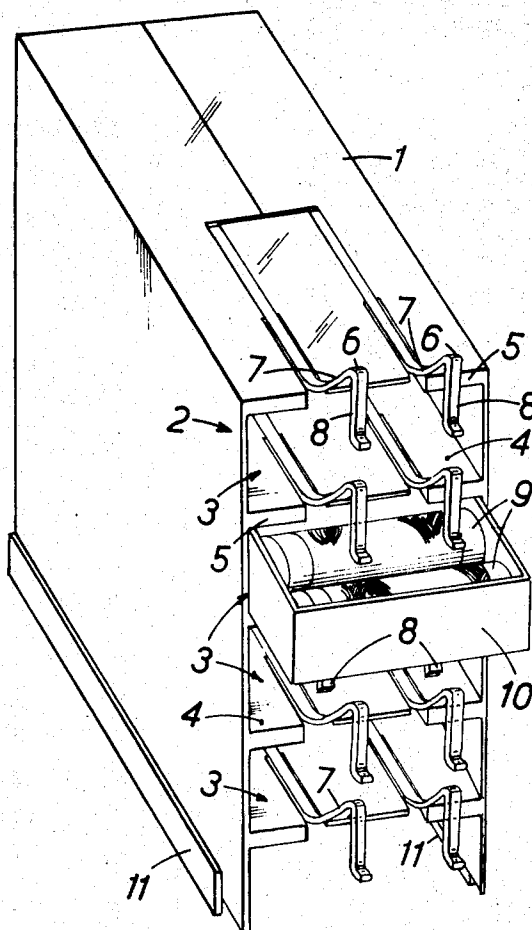
210,667	4/1966	Sweden.....	221/309
245,382	1/1926	Great Britain.....	312/45
181,218	12/1935	Switzerland	

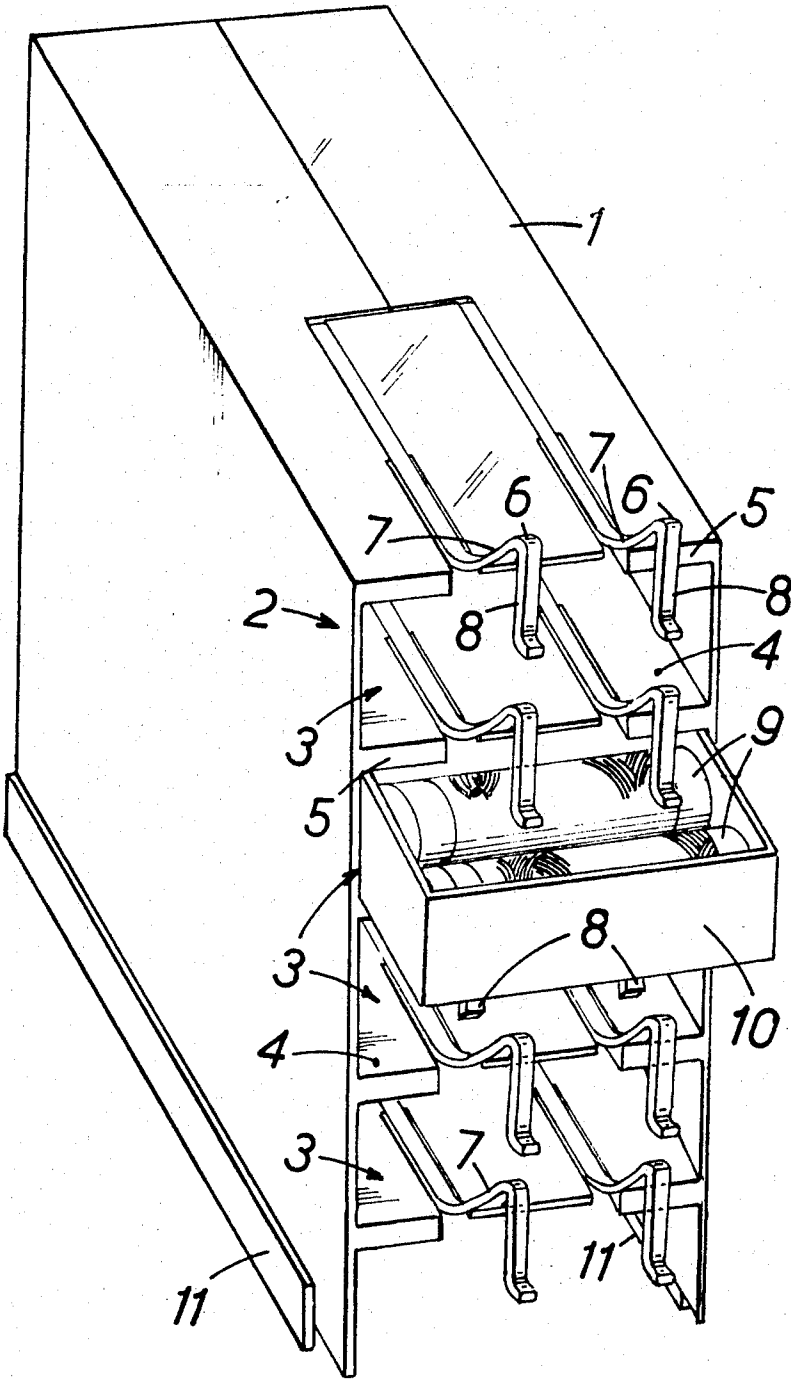
Primary Examiner—Robert B. Reeves
Assistant Examiner—David A. Scherbel
Attorney—Cushman, Darby & Cushman

[57] ABSTRACT

A self-service unit for dispensing sewing thread packages comprising a plurality of elongated compartments for housing the packages, each compartment having an open mouth in the front of the unit and extending rearwardly from said mouth, each compartment mouth being provided with upper and lower spring jaws to retain the packages within the compartment, and the upper and lower spring jaws being retractable and the compartments being of such dimensions that a box of packages may be inserted into each compartment through the mouth for filling purposes.

7 Claims, 1 Drawing Figure





SELF-SERVICE DEVICE FOR SEWING THREAD PACKAGES

This invention relates to a self-service unit for dispensing sewing thread packages in shops and other sales outlets.

Such units for dispensing sewing thread packages are known comprising a multiplicity of elongated compartments extending from a mouth at the rear of the container to a mouth in the front of the container. The compartments are filled through the rear mouths with thread packages of the appropriate colour for each compartment and, due to the fact that the compartments slope downwardly towards the front, the thread packages display themselves in the front mouths to intending purchasers. An obstruction is disposed at the front mouth of each compartment to prevent the packages falling out. The packages have to be lifted over or forced past such obstructions before they can be removed from the containers.

Two difficulties arose with such known form of dispensing units. In the first place, the means for feeding the packages into the compartments through the rear mouths is unsatisfactory. If the width of the mouths and the compartments was substantially greater than the length of the packages to be fed thereinto, the packages tend sometimes to twist as they are travelling down the compartments so that they present themselves longitudinally towards the front mouth rather than laterally. It is because of this that such mouths and compartments have been made to close tolerances so that the width is only a fraction greater than the length of the packages. This however has lead to packages becoming jammed in the compartments, and special hooks have to be provided so that the sales staff can loosen the more severe cases of jamming.

Another difficulty has been that the obstructions provided at the front mouths of the compartments have tended to obscure the front thread package from full view by the customer, and customers have accordingly succumbed to the temptation of pulling the front package out to match the colour and, if the colour turns out to be the wrong one, they tend to replace the packages in the wrong compartments. It has moreover been difficult to replace the packages anyway with the known forms of obstructions.

It is the object of the present invention to provide a new design of dispensing unit of this type which will enable the sales staff to feed the packages into the compartments with much greater facility, precision and speed. The invention achieves this object by designing the unit in such a way that the packages can be readily fed in from the front, utilising the box of packages, in which form they are supplied to the shops, as a magazine for such front feeding. A further advantage of front feeding is of course that the units may then be placed with their backs against a wall, while the old units have to allow access from the rear for the purpose of feeding the packages into the rear mouths of the compartments.

In the preferred form of the invention, the obstructions provided at the front mouths of the compartments are designed so that the front package is displayed to the full view of the customer, who can then readily match it without withdrawal.

According to the present invention, a self-service unit for dispensing sewing thread packages comprises

a plurality of elongated compartments for housing the packages, each compartment having an open mouth in the front of the unit and extending rearwardly from said mouth, each compartment mouth being provided with upper and lower spring jaws to retain the packages within the compartment, and the upper and lower spring jaws being readily retractable and the compartments being of such dimensions that a box of packages may be inserted into each compartment through the mouth for filling purposes.

In the preferred form of the invention, the compartments are arranged in at least one vertical row, and adjacent compartments in the row are divided from each other by a partition. Each partition will then form a part of the mouths of the adjacent compartments which it divides. Each such partition can be provided with spring means which are so shaped as to form the lower spring jaw of the mouth above and the upper spring jaw of the mouth below.

These spring means suitably comprise at least one spring finger having an upwardly inclined extension to form the lower jaw and a downwardly inclined extension to form the upper jaw, the two extensions thus normally having a substantial L-shape. The upwardly inclined extension is suitably concave so as to form a suitable abutment against which the front package in the compartment will rest.

In the preferred form of the invention, each spring jaw comprises two spring fingers, so that the package can clearly be viewed between them.

The invention is illustrated in the accompanying drawing which shows a perspective view of a suitable unit in accordance with the invention.

In the drawing, the unit has an outer frame 1 which is suitably completely closed at the rear where it can abut against a wall. The front of the unit is generally open and shows a plurality of compartments 2 having open mouths 3. The compartments 2 are divided by partitions 4.

Each partition 4, and the upper face 5 of the unit, is provided at the front end with two spring fingers 6. Each finger 6 has a concave upwardly inclined extension 7 and a downwardly inclined extension 8. Spools 9 are shown housed in each compartment 2 and are prevented from falling out of the mouths 3 by being gripped on their upper side by the extensions 8 and on the lower side by the extensions 7 of the spring fingers 6.

The unit 1 is shaped in side elevation in the form of a trapeze so that when the back face is against a vertical surface such as a wall, the compartments are disposed at a sharp downward angle.

The drawing also shows the feeding of spools 9 into one of the compartments in a box 10 which constitutes a magazine. For this purpose the feeding method is to remove one end face of the box 10, depress the lower spring fingers and insert the end of the box all the way into the compartment, the latter being of such dimensions as to permit this. The upper spring fingers are then depressed so as to hold the spools in the compartment while the box is withdrawn. This is a simple and foolproof method of feeding which avoids any possibility of jamming.

The lower portion of the unit 1 is designed in such a way that it can fit onto another and similar unit so that an assembly of units can be created. For this purpose, the sides and rear of the unit are provided with exten-

sion pieces 11 which are adapted to clip over the top face 5 of a similar unit.

It will be seen that the spools 9 are fully visible to the customer, but can be readily removed by a slight pull which will open up the opposing spring fingers. These spring fingers are anchored at a certain distance within the compartment so that they are readily retractable.

What we claim is:

1. A self-service unit for dispensing sewing thread packages comprising at least one vertical row of elongated compartments for housing the packages, each compartment having an open mouth in the front of the unit and extending rearwardly from said mouth, each compartment mouth being provided with upper and lower spring jaws to retain the packages within the compartment, spring means being provided between adjacent compartment mouths, each spring means so shaped as to form the lower spring jaw of the immediate mouth above and the upper spring jaw of the immediate mouth below, and the upper and lower spring jaws being readily retractable and the compartments being of such dimensions that a box of packages may

be inserted into each compartment through the mouth for filling purposes.

2. A self-service unit as claimed in claim 1 wherein the spring means comprises at least one spring finger having an upwardly inclined extension to form a lower jaw and a downwardly inclined extension to form an upper jaw.

3. A self-service unit as claimed in claim 2 wherein the upwardly inclined extension is concave.

4. A self-service unit as claimed in claim 1 adapted to fit together with other and similar unit or units to form a unit assembly.

5. A self-service unit as claimed in claim 4 wherein the base of the unit has two side extension pieces adapted to clip to the top of another and similar unit.

6. A self-service unit as claimed in claim 1 wherein the compartments are closed at the rear end.

7. A self-service unit as claimed in claim 1, wherein adjacent compartments are separated by partitions, each of which partitions extends in its plane further forwardly than the partition above it.

* * * * *

25

30

35

40

45

50

55

60

65