United States Patent [19]

Jackowitz

[11] **3,785,681**

[45] **Jan. 15, 1974**

[54] **INVENTORY CONTROL APPARATUS AND METHOD**

[76] Inventor: **Edward C. Jackowitz,** 78 Lanning St., Southington, Conn.

[22] Filed: **Feb. 8, 1972**

[21] Appl. No.: **224,500**

[52] **U.S. Cl.** **283/55**

[51] **Int. Cl.** **B42d 15/00**

[58] **Field of Search** 283/55; 40/16.2

[56] **References Cited**

UNITED STATES PATENTS

3,123,385 3/1964 Bromwell 283/55

Primary Examiner—Lawrence Charles
Attorney—David S. Fishman et al.

[57] **ABSTRACT**

An inventory control apparatus and method are presented wherein letter identification tags, letter conversion cards, and order sheets are employed to form a simple and easy to use system. Letter identification tags are placed on store shelves, with each letter being associated with a particular inventory item. Master letter conversion cards have letter designations keyed to the letter designation on the shelves along with word or other code designations for the particular inventory items. The letter conversion cards and disposable order sheets are retained in a binder and inventory control is maintained simply by a clerk making appropriate quantity notations on the order sheet at locations opposite to letter designations of items to be restocked.

4 Claims, 6 Drawing Figures

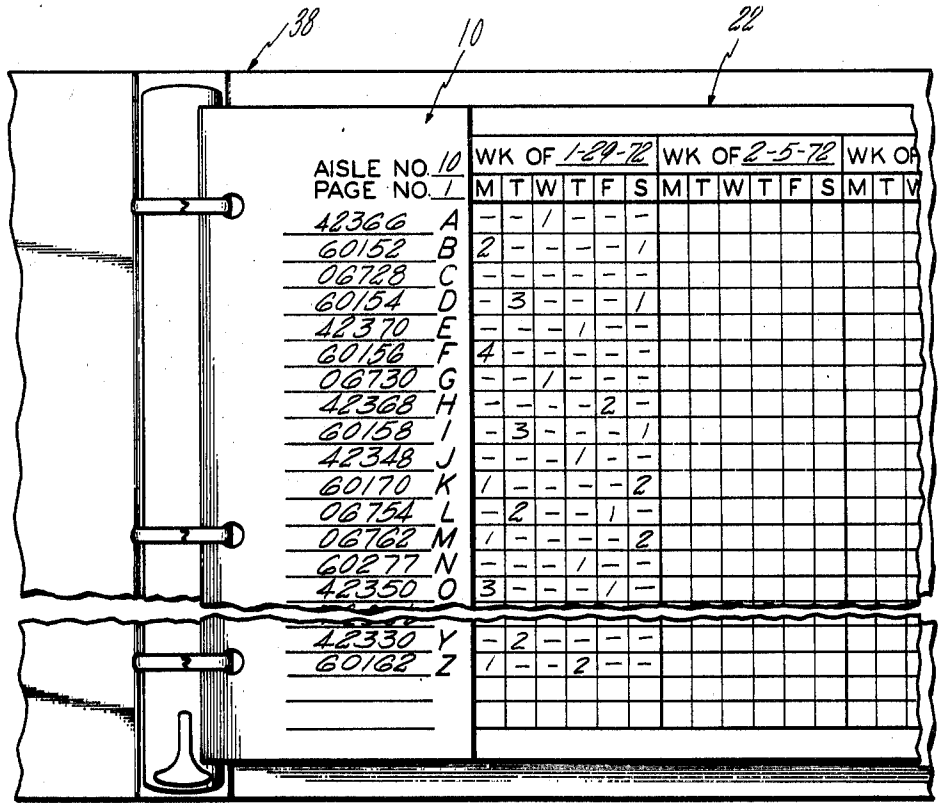


FIG. 1

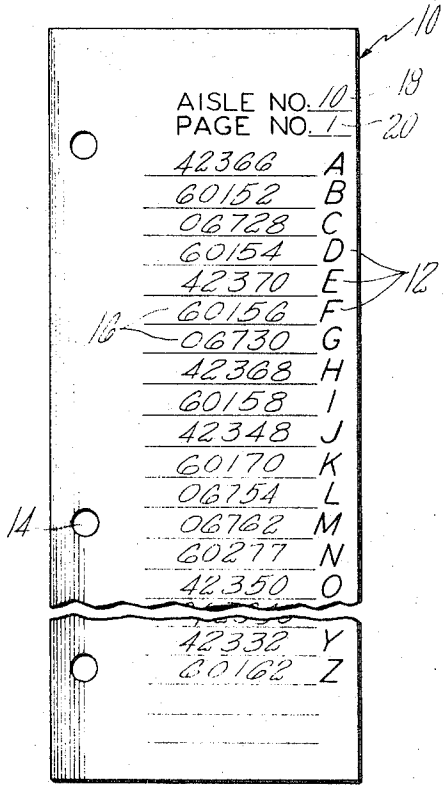


FIG. 3A

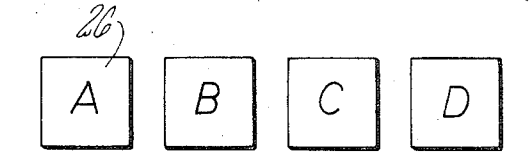


FIG. 3B



FIG. 2

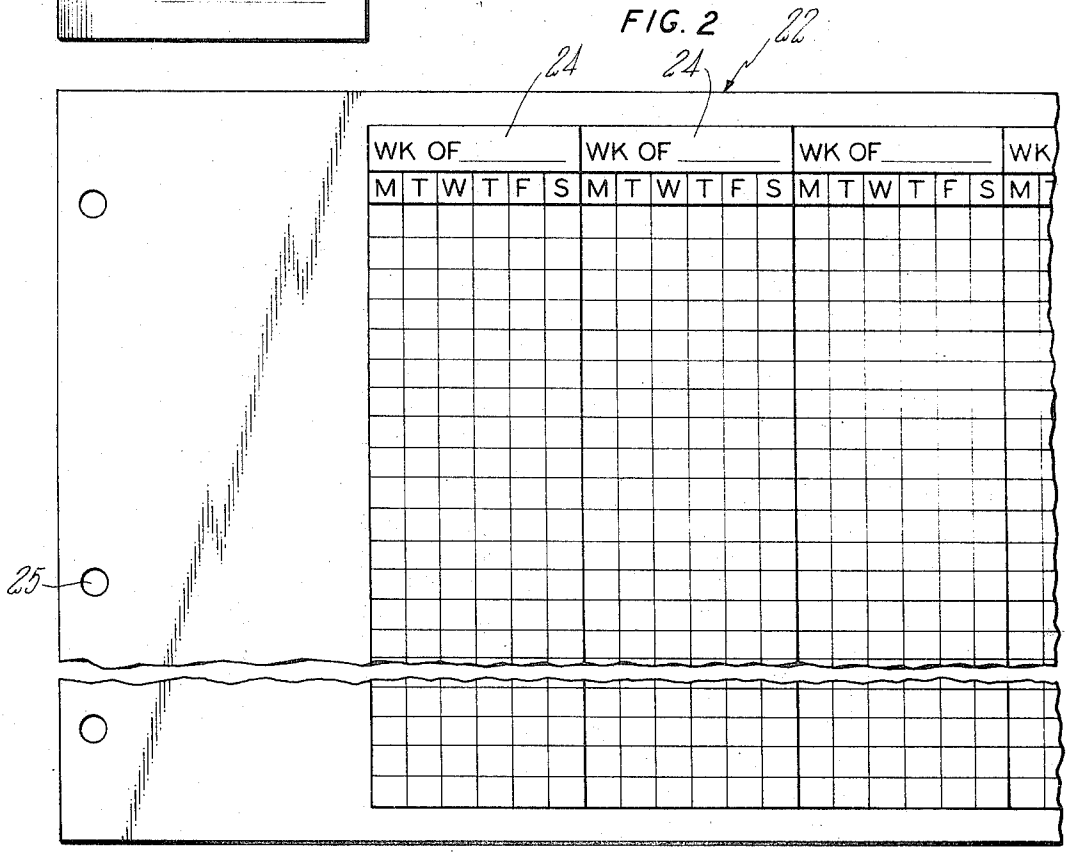
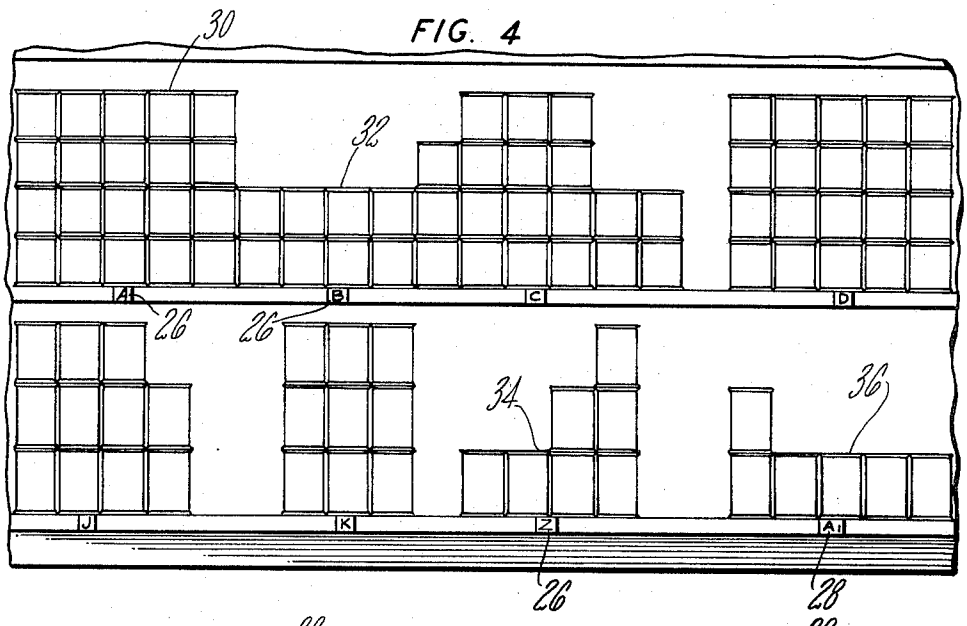


FIG. 4


30
32
A
B
C
D
26
26
34
36
J
K
Z
A1
26
28

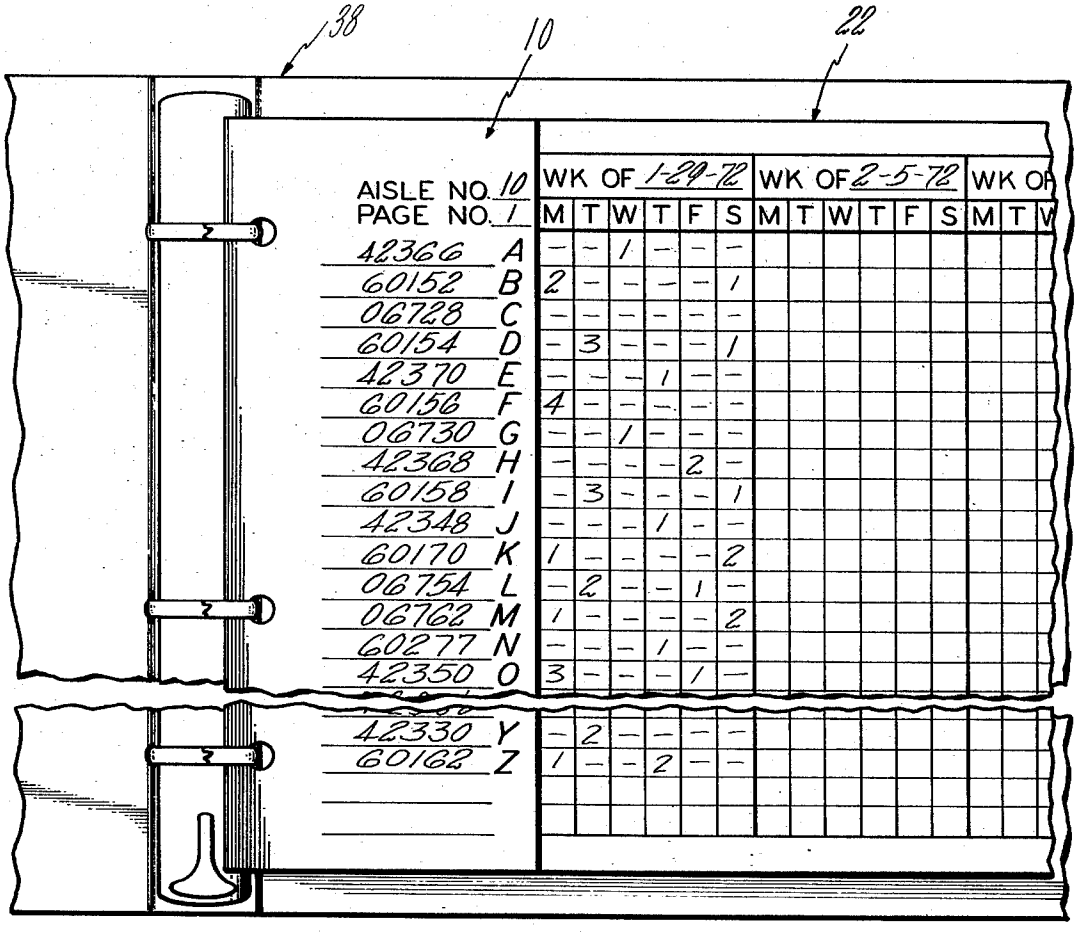

38
10
22
AISLE NO. 10
PAGE NO. 1
WK OF 1-29-72
WK OF 2-5-72
M T W T F S M T W T F S M T W
42366 A
60152 B
06728 C
60154 D
42370 E
60156 F
06730 G
42368 H
60158 I
42348 J
60170 K
06754 L
06762 M
60277 N
42350 O
42330 Y
60162 Z

FIG. 5

INVENTORY CONTROL APPARATUS AND METHOD

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention relates to apparatus and methods for inventory control. More particularly, this invention relates to apparatus and methods for inventory control wherein shelf items in a store, or any items being stored for sale, are identified by letter designations, and inventory control in ordering is effected by means of overlapping letter conversion cards and disposable order sheets, the letter conversion cards being keyed to the letter designations of the shelf items.

2. Description of the Prior Art

Inventory control and stocking and ordering are particularly bothersome problems in many marketing environments wherein items are stocked on shelves or bins and are periodically replenished as the items are sold. These problems are particularly acute in such establishments as modern-day supermarkets which have literally hundreds or thousands of shelf items for sale. Proper operation of an establishment such as the supermarket requires frequent inspection of the shelves and ordering of items which need to be replenished. While this task may seem simple on first thought, careful and knowledgeable consideration of the problem reveals that it is presently a complex, inefficient and time-consuming job. For example, considering just one item such as tuna fish, as many as a dozen different factors might have to be noted to identify a particular item to be ordered and re-stocked. First, of course, the brand has to be identified. Then, size or weight must be identified along with characteristics such as color, chunk, flake or solid type, packing fluid such as oil, brine, or water, and source such as Japanese, Alaskan or domestic. Considering the facts that most supermarkets carry many different brands of an item such as tuna fish, all offering the same sizes and varieties as the other brands, rapid identification for commodities of this type are difficult even for an experienced employee or a store manager. When this problem is multiplied several hundred or thousand of times for all of the items in the store, the magnitude of the problem begins to be understood. Accordingly, since properly stocked shelves are critical to the efficient and effective operation in many retail establishments, especially establishments such as self-service supermarkets, it has usually been necessary to assign the inventorying responsibilities to skilled personnel, thus making the task both time-consuming and expensive.

Personnel assigned to such inventory operations tend to develop individual recognition systems, but that tendency actually contributed to long range inefficiency in that one person would be unable to complete the job started by another person; training of new personnel was difficult because of lack of uniformity; and the effectiveness of even an experienced person was dependent on the continued use by the manufacturer of the same label. Accordingly, the previous manual systems have been time-consuming, costly, required skilled personnel, and have been highly susceptible to error, thereby leading to inaccuracies and to highly undesirable shortage conditions.

Some recent attempts have been made to modernize inventory controls systems and equipment, but these attempts have involved very sophisticated and expensive equipment such as optical character reading equipment.

SUMMARY OF THE INVENTION

The foregoing and other disadvantages of the prior art are overcome by the apparatus and method of the present invention wherein letter identification tags, letter conversion cards, and order sheets are employed in a simple, efficient and effective inventory control system. In accordance with the present invention, the shelves, bins or other containers on which the inventory items are stored are each marked with successive letters of the alphabet. The person taking the order is supplied with a letter conversion card and a plurality of disposable order sheets. A letter conversion card has letter designations thereon corresponding to the letter designations of the inventory items, and each letter on the letter conversion card has a corresponding identifying designation for the inventory item. The order sheets have lined divisions corresponding to and aligned with the letter designations on the letter conversion card. Accordingly, the inventory control person needs only to walk past the particular storage area in question and note a quantity to be ordered in the appropriate location on the order sheet aligned with the letter designation corresponding to the letter designation of the stock item to be ordered.

For example, in a supermarket environment, the inventory control clerk would walk down the aisle being examined, and he would mark the number of cases to be ordered of any particular item in the appropriate place on the disposable order sheet at a location opposite the letter corresponding to the letter designation of the item on the shelf.

Accordingly, one object of the present invention is to provide a novel and approved apparatus and method for inventory control.

Another object of the present invention is to provide a novel and approved apparatus and method for inventory control which is applicable to any industry using a code to order products.

Another object of the present invention is to provide a novel and approved apparatus and method for inventory control whereby inventory or ordering time is reduced and which can be accomplished by unskilled personnel.

Still another object of the present invention is to provide a novel and improved apparatus and method for inventory control which is extremely accurate and less susceptible to error than previous systems.

Other objects and advantageous of the present invention will be apparent and understood to those skilled in the art from the following detailed description and drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

Referring now to the drawings, wherein like elements are numbered alike in the several figures:

FIG. 1 is a letter conversion card for use in the present invention.

FIG. 2 is a disposable order sheet.

FIGS. 3A and 3B are letter identification tags.

FIG. 4 is a diagramatic representation of a section of a supermarket shelf bearing the letter identification tags of the present invention.

FIG. 5 is a diagramatic showing of the overlay relationship of the letter conversion cards and disposable order sheets in accordance with the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Since the present invention is particularly suitable for use in supermarkets, the following description of a preferred embodiment will be set forth in that environment; however, it will be understood that the invention is suitable for use in any product distribution environment and can be used at either wholesale, retail, or in warehousing.

Referring now to FIG. **1**, a letter conversion card **10** is shown. The card has alphabet designations **12** ranging from A through Z aligned along one edge of the card. The opposite edge of the card has holes **14** so that the card can be retained in a ring binder. Each letter designation has associated therewith a code designation **16** which is shown in FIG. **1** as being a number code. At the top of the card **10** there are designations **18** for the aisle number or department, corresponding to a particular aisle or department in a super-market, and a page number **20**, corresponding to the number of letter conversion cards for that particular aisle.

Referring now to FIG. **2**, a disposable order sheet **22** is shown. The top of sheet **22** is divided into major segments **24** for designation of successive weeks of a month. Immediately below the week designation in each major segment **24** are letter symbols corresponding to the days of the week Monday, Tuesday, Wednesday, Thursday, Friday and Saturday. The main body of sheet **22** is divided into a grid arrangement by the intersection of horizontal and vertical columns. The vertical columns correspond to the day designations of each week, and the horizontal columns correspond to and are positioned to be aligned with the letter designations of A through Z of a letter conversion card **10.** The left edge of order sheet **22** has holes **25** so that the order sheet can be incorporated in a ring binder, and the grid arrangement on sheet **22** and the left-most week division **24** are displaced from the left edge of the sheet a distance approximately equal to the width of a letter conversion card **10.** Thus, the letter conversion card can overlay the order sheet **22** so that the letter designations **12** are aligned with the horizontal rows on sheet **22.**

Referring now to FIGS. **3A** and **3B**, letter identification tags **26** and **28** are shown. These tags are of thin plastic sheeting, and the tags are identical except that the A tag **28** has a subscript designation **1** accompanying it. The A tag with a subscript designation would be used in those situations wherein the number of items or products to be controlled by the inventory system exceeds the number of letters in the alphabet, in which event the A, tag **28** with subscript designation is then employed to start a second round of alphabet designations. Of course, if the second round of letters are exhausted, a letter tag with a **2** subscript on the A tag would be employed, etc. The subscript designation is used only on the A tag because the tags for a complete alphabet should be close enough together to allow the the clerk to determine at a quick glance which round of letters he is on. Of course, all the letters of each round could have the subscript, but that would then limit the use of the letters to each particular round.

Referring now to FIG. **4**, a diagramatic representation of a part of a supermarket shelf is shown. Canned items **30, 32, 34** and **36** are shown on the shelves with arbitrary letter identification tags A, B, Z and A_1 corresponding, respectively to the several different canned goods **30, 32, 34** and **36.** Each of the letter designation tags serves in the present invention to fully identify the goods with which it is associated, and the tags are inserted in metal molding on the bottom of the shelves or otherwise fastened to the shelves. Assuming that the shelf shown in FIG. **4** is in an aisle identified as aisle number **10,** a letter conversion card **10** is formed with an appropriate identifying code or name for each product placed opposite the appropriate letter designation **12** on the card. For example, and referring now to either FIG. **1** or FIG. **5,** assuming that canned goods **30** are small cans of white tuna packed in oil and have a pre-existing warehouse code identification number **42366,** that code designation is placed opposite letter A in the letter conversion card. Similarly, assuming that product **32** is cans of tuna packed in water which has a warehouse inventory code identification number **60152,** that code number is placed opposite letter B on the letter conversion card, and so on in similar fashion for each letter identification tag associated with the numerous products in the aisle.

Referring now to FIG. **5,** it is contemplated that the system of the present invention will be most conveniently adaptable to an arrangement such as a looseleaf binder **38** or other similar carrier. A plurality of letter conversion card may be housed in the ring binder, each letter conversion card **10** having associated therewith a plurality of disposable order sheets, each sheet corresponding to a full month if so desired. The clerk taking inventory of the store shelves now needs only to walk down the aisle with the ring binder opened to the appropriate letter designation card for that aisle, and the entire inventory procedure can then be accomplished by marking in appropriate squares the number of cases of each item that need to be ordered. For example, if the inventory is being taken on Saturday of the first week, quantity numbers would be inserted in the appropriate grid squares aligned with the appropriate letter and day designations. Thus, if on visual inspection of the shelf the clerk has determined that no cases of item A should be ordered, 1 case of B, no cases of C, 1 case of D, etc. he would merely note the appropriate quantity numbers in the grid boxes. This, of course, can be accomplished by a clerk who has only very limited knowledge or familiarity with the identification of the products. No special knowledge is needed since the letter code designations, which are arbitrary in that they have no descriptive relationship to the goods, provide all of the identification needed to accomplish the inventory review of the shelves. Furthermore, an order book for any store or department is tailored to the particular store or department.

Accordingly, it can be seen that apparatus and a method have been presented for efficient, effective and economic inventory control.

What is claimed is:

1. Inventory control apparatus including:

a plurality of tags, each tag having an arbitrary symbol thereon to identify particular goods associated therewith, the arbitrary symbol having no descriptive relationship to the goods;

a conversion card having a plurality of symbols in a linear array adjacent one edge thereon, said symbols on said conversion card corresponding to said symbols on said tags, and said conversion card also having a plurality of identifying designations thereon having pre-existing identifying relationships with particular goods for identifying each of said particular goods, each of said identifying designations being aligned on said conversion card with the symbol corresponding to the same particular goods; and

an order sheet having grid segment areas thereon defined by first divisions corresponding to ordering periods and second divisions corresponding to goods to be ordered;

said conversion card overlapping said order sheet with one edge of said conversion card abutting a grid segment area on said order sheet and said symbols on said conversion card being aligned with said second divisions on said order sheet.

2. Inventory control apparatus as in claim **1** including:

a plurality of retainer holes in said conversion card along an edge opposite to said one edge thereof; and

a plurality of retainer holes in said order sheet in alignment with said holes in said conversion card;

said conversion card and said order sheet being adapted to be retained in a ring binder; and

said grid segment area on said order sheet being spaced from said retainer holes therein by an amount approximately equal to the width of said conversion card.

3. Inventory control apparatus as in claim **2** wherein:

said symbols on said tags are letters, and said symbols on said conversion card are letters corresponding to the letters on said tags.

4. Inventory control apparatus as in claim **3** wherein:

said first divisions on said order sheet correspond to days of the week.

* * * * *