March 23, 1954

F. W. BARNETT

BAG DISPENSER

2,673,134

Filed June 6, 1949

4 Sheets-Sheet 1

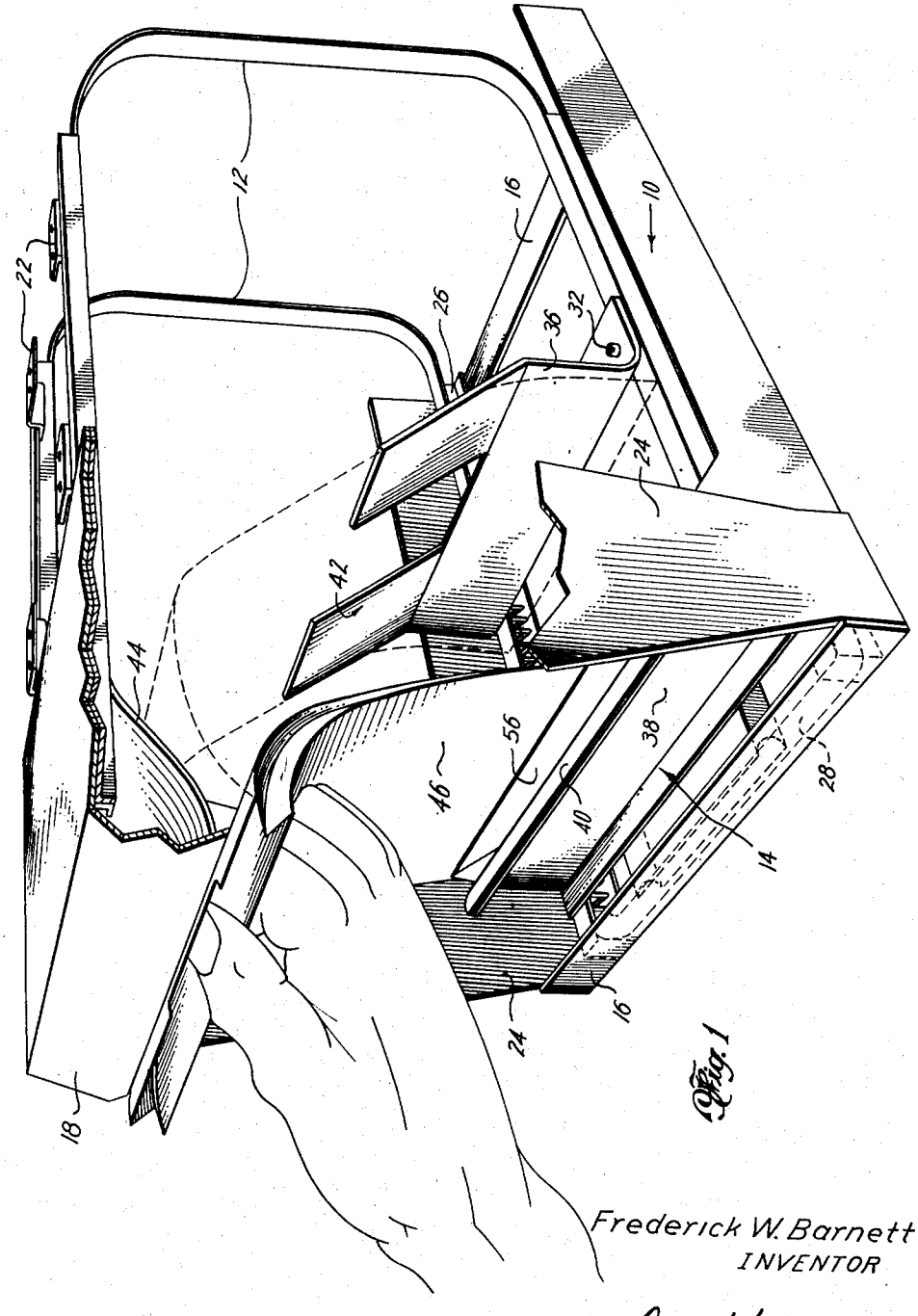



Fig. 1

Frederick W. Barnett
INVENTOR

BY James H. Weiler

ATTORNEY

March 23, 1954

F. W. BARNETT

BAG DISPENSER

2,673,134

Filed June 6, 1949

4 Sheets-Sheet 2

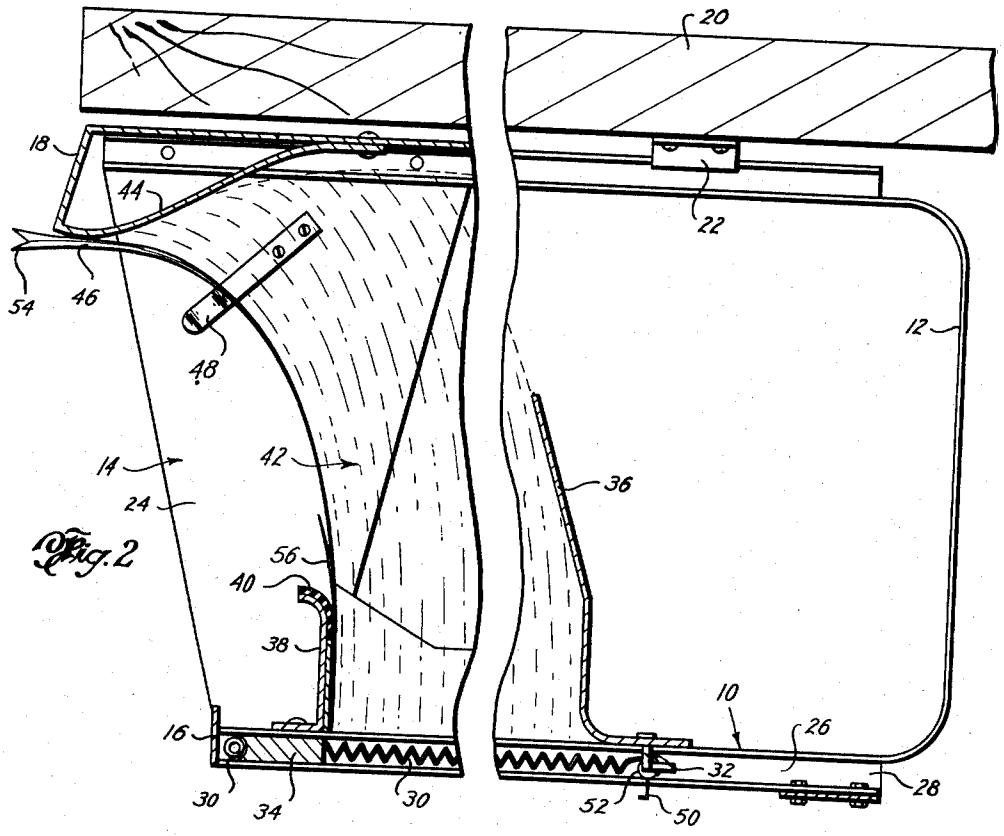



Fig. 2

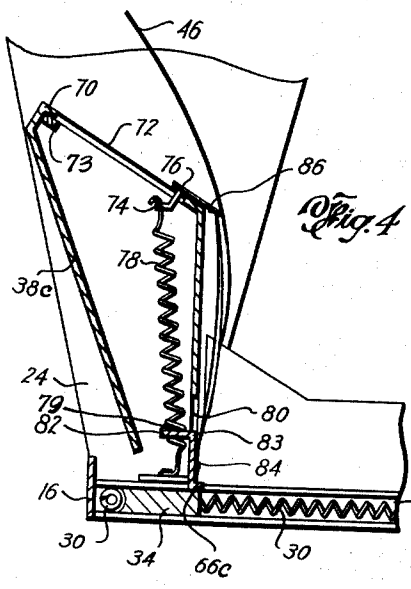



Fig. 4

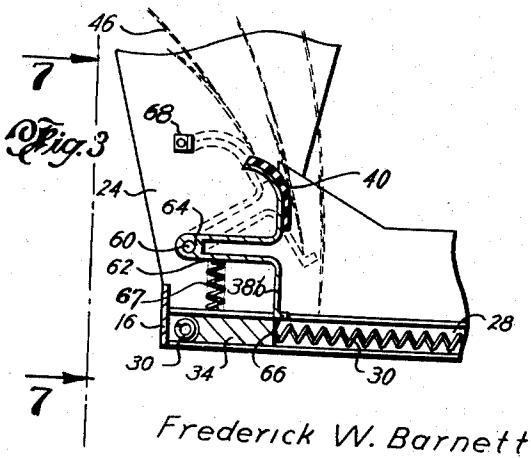



Fig. 3

Frederick W. Barnett
INVENTOR

BY James H. Weiler

ATTORNEY

March 23, 1954

F. W. BARNETT

BAG DISPENSER

2,673,134

Filed June 6, 1949

4 Sheets-Sheet 3

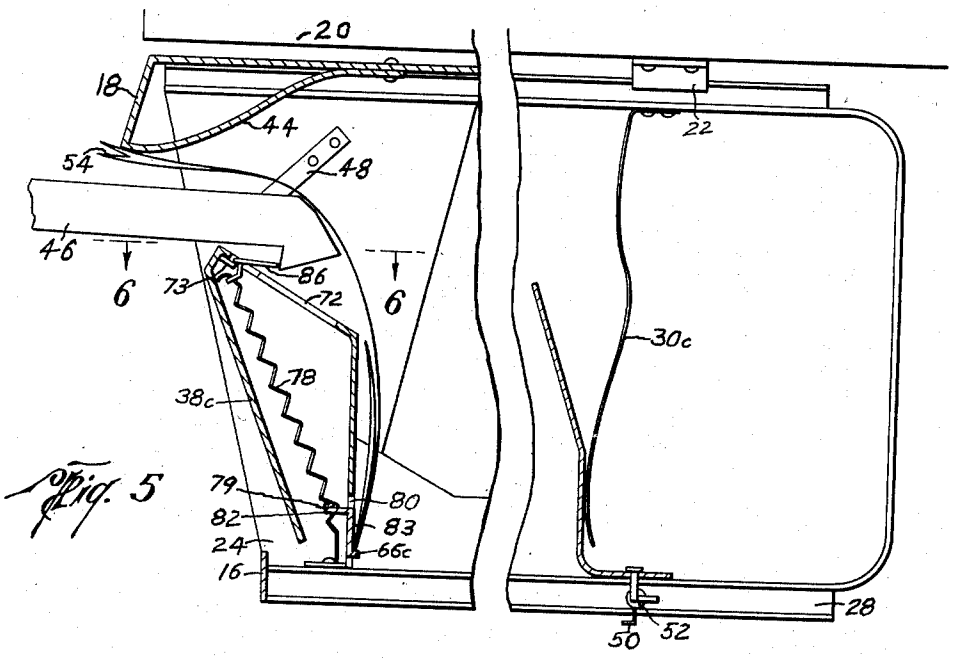



Fig. 5

Fig. 9

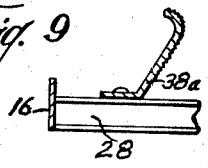



Fig. 6

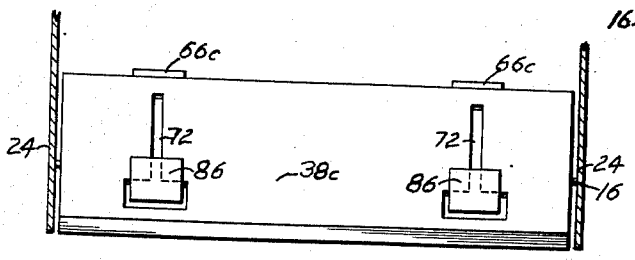



Fig. 8

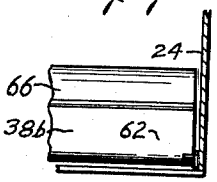
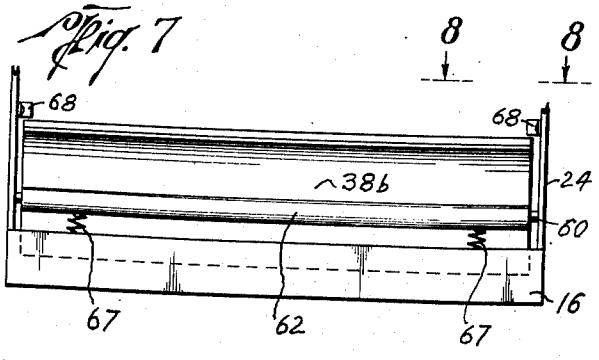



Fig. 7




Frederick W. Barnett
INVENTOR.

BY James F. Weiler

ATTORNEY

March 23, 1954

F. W. BARNETT

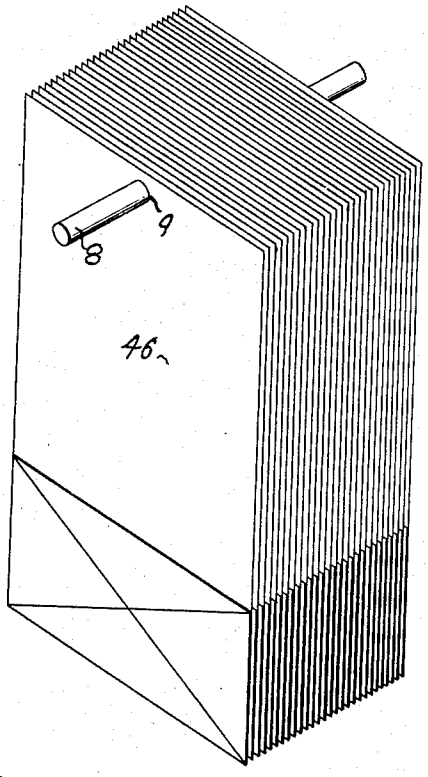
BAG DISPENSER

2,673,134

Filed June 6, 1949

4 Sheets-Sheet 4

Fig. 10



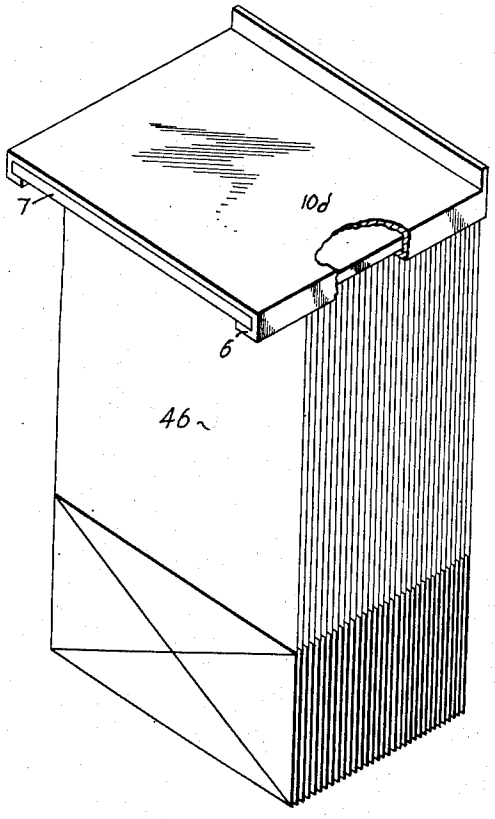




Fig. 11

Frederick W. Barnett
INVENTOR.

BY James F. Wiler

ATTORNEY

Patented Mar. 23, 1954

2,673,134

# UNITED STATES PATENT OFFICE

2,673,134

## BAG DISPENSER

Frederick W. Barnett, Houston, Tex., assignor of fifteen per cent to Latimer Murfee, Harris County, and fifteen per cent to Fulbright, Crooker, Freeman & Bates, Houston, Tex., a law partnership

Application June 6, 1949, Serial No. 97,417

13 Claims. (Cl. 312—61)

1

This invention relates to a bag dispenser and more particularly to a dispenser that will automatically open the bags as they are withdrawn.

In the prior art there are many containers and dispensers for sacks and the like, but these containers do not provide a means for opening the sacks which must be manually opened by the operator in a separate movement. Thus during rush periods at various stores considerable time and effort are expended in opening the sacks or bags separate and apart from withdrawing the latter from the dispenser.

Accordingly, it is a primary object of my invention to provide a dispenser that will automatically open a sack upon withdrawal thereof from the dispenser. It is a further object of my invention to provide such a dispenser of relatively few parts, that may be easily and cheaply manufactured. It is a feature of my invention to provide a dispenser in which the sacks need not be interlaced one with another to provide the necessary opening means.

A further and additional feature of my invention is the provision of means associated with an opening mechanism to advance successively the sacks in order that they may be easily and readily grasped for withdrawal by the operator.

An additional feature is the inclusion of a trip mechanism to engage the box portion of the sacks to be withdrawn.

Further and other objects will be apparent from the following description of my invention taken in connection with the accompanying drawings where like numerals designate like parts throughout the several views, and where,

Fig. 1 is a perspective view of my dispenser with parts broken away illustrating a preferred form thereof,

Fig. 2 is a side elevation of the dispenser illustrated in Figure 1 showing the device connected to the netherside of a counter,

Fig. 3 is an enlarged fragmentary side view of the bag-opening mechanism showing a modification thereof,

Fig. 4 is similar to Figure 3 and illustrates a further modification thereof.

Figure 5 is a side elevation of an alternate form of my dispenser,

Figure 6 is a fragmentary plan view taken along the line 6—6 of Figure 5,

Figure 7 is a fragmentary front view taken along the line 7—7 of Figure 3,

Figure 8 is a fragmentary plan view taken along the line 8—8 of Figure 7,

Figure 9 is a fragmentary detail illustrating another form of the stop member,

2

Figure 10 is a perspective view of a still further modification, and

Figure 11 is a perspective view of a still further modification.

Referring to the drawings, and particularly Figures 1 and 2, the numeral 10 designates the housing or the casing of the dispenser generally which may comprise two substantially U-shaped members 12 spaced apart and open at the bag dispensing end 14. The members 12 may be held in spaced relationship by means of transverse members 16 and head piece 18, which may be bolted or otherwise secured thereto. In use any number of transverse supporting members may be employed.

The dispenser may be secured to the nether side of counter 20 by means of conventional brackets 22 secured to the uppermost portions of members 12. Manifestly the bag dispensing end will be placed for easy reach of the operator and the vertical side members 24 connected to the housing members 12 may be tapered downwardly and inwardly in order not to interfere with the normal operations of the operator.

Depending from and integral with the lower portions of housing members 12 are channel members 26 which provide a guide-way 28 for spring member 30 extending around the front of the device and connected to pins or lugs 32 depending from the sack advancing member 36. A transverse front member 34, which may be of wood as shown, is provided at the forward lower end of the dispenser to provide a stop for the spring 30 and to act as a further transverse support for the housing members 12. The channels 28 provide a race for the cooperating pins or lugs 32 whereby sacks advancing member 36 resiliently and yieldingly advances the sacks forwardly toward the bag dispensing end, thereby providing a pressure feed proximate the lower portions of the bags to be dispensed.

At the lower forward end of the dispenser housing 10, a transverse stop member 38 is secured to the transverse support member 34 to provide a stop for the sacks. The upper inner end of the stop member 38 is curved upwardly and outwardly and may have a corrugated friction pad 40 conforming to the configuration thereof to frictionally engage the sacks or bags generally indicated by the numeral 42. The pad 40 may be of rubber, neoprene or other material suitable to provide a friction grip for the bags.

The nether portion 44 of the head piece 18 is upwardly and inwardly curved to provide a guide for approaching sacks in order that the foremost sack 46 may extend beyond the suc-

ceeding sacks so that the former may be readily grasped by the operator. To aid in extending the forward sack 46 in this manner the flat springs 48 may be secured to the side members 24 and the sack advancing member 36 may be inclined forwardly as shown.

In placing the sacks or the bags in the dispenser, the sack advancing member 36 may be brought to the back of the dispenser, and a hook 50 pivotably connected to race arms 32 by ring 52 may be hooked over the rearward part of channels 26, thus holding the member 36 in a retracted position in order that the sacks 42 may be conveniently placed in the dispenser. Many commercial sacks or bags have an extending upper edge 54 on the same side as the box portion 56 of the sack, and in order that the device may automatically open the sacks it is necessary that the side on which the box portion of the sack is folded be grasped, and the pressure feed and the yielding frictional contact effected by the bag advancing member 36 and the stop 38 and the friction pad 40 against the lower portion of the sacks will effectively cause the box portion 56 to be restrained from movement as the box portion side of the sack is urged outwardly thereby automatically opening the bag. Thus, in the type of sack or bag illustrated, the sacks should be placed so that the box portions 56 face forwardly. After the sacks or bags are placed in the dispenser as described, the hook 50 is disengaged so that the sack advancing member 36 provides a pressure drive and yieldingly and frictionally holds the lower portions of the sacks or bags 42 against the stop member 38 and the friction pad 40.

It is believed that the operation of the dispenser is apparent from the above description. By way of summary, after loading the dispenser in the manner indicated heretofore, the sacks are yieldingly and frictionally held at their lower portions and the forward ends successively emerge at the front of the device. By grasping the extending edge 54 of the sack 46, which must be the side on which the box portion thereof is folded, withdrawal thereof will automatically open the sack. The next sack is automatically brought into position to be withdrawn by the pressure feed from the bag advancing member 36 and the guide 44. This bag may then be withdrawn and the next succeeding bag brought into position.

While I have described a preferred embodiment of my dispenser in some detail, it is manifest that broadly my invention comprises a housing or casing to hold the sacks or bags and means to provide a pressure feed and to yieldingly and frictionally grip the lower portion of the sacks, so that the latter will automatically open on withdrawal. The housing or casing may be of any desirable type of construction and the pressure feed means may be actuated by tension springs or as illustrated in Figure 5 by compression or flat springs 30*a* or in other manner known to the art. Moreover, the friction grip may be integral with the housing or the housing itself may provide sufficient friction to frictionally engage the box portion so that the latter is restrained on withdrawal of the bag thereby opening the bag, as shown in Figure 9 and indicated by the numeral 38*a*. It is manifest, however, that the friction stop and the friction pad are preferred. In placing the sacks in the dispenser the edge thereof to be grasped, normally the leading edge, should be the box portion side of the sacks; otherwise, there is no requirement as to the manner of placing the sacks or bags in the dispenser.



If desired the pressure feed may be utilized to force the bags against the back of the housing. Such an arrangement may be utilized for particularly large sacks where the top of the housing may be open and the sacks withdrawn from the top of the device.

Figures 3, 7 and 8 illustrate a modification of the forward stop member 38. Here a transverse bar 60 is provided between side braces 24 providing an axle so that the member 38*b* may be pivotally secured thereto. In this modification the member 38*b* is forwardly bowed at 62 thereby providing a bearing 64 so that the former may readily pivot on pivot rod or axle 60. The lower inner portion of the member 38*b* may be inwardly and horizontally turned to provide an ear or an ejector 66 of such width to preferably engage the bottoms of two sacks. Thus the forward sack will be in an advanced position and easily grasped, and when so withdrawn the member 38*b* will pivot on the axle 60 and will automatically bring the next succeeding sack into leading and forward position to be withdrawn. A stop member 68 is secured to the inner sides of the side members 24 to provide a stop for the member 38*b*. The configuration of member 38*b* is such that in combination with the feed pressure against the bottom of the sacks produced by the advancing member 36, the forward stop 38*b* will be brought back to its initial position as indicated in the drawing after a sack has been withdrawn. The ear 66 should be flush with the floor of the housing or casing 10 or with the top of the members 26, and, while not necessary, a spring means 67 may be utilized to aid in returning the forward stop member 38*b* to its initial position. All other parts are similar to the above described preferred form and it is believed that the operation of this modification is apparent from the description. This modification is particularly adapted for large or stiff sacks or bags.

A still further modification of the forward stop member is illustrated in Figures 4, 5 and 6. Here the stop member 38*c* is secured to the forward transverse member 34 as in Figures 1 and 2. The upper portion 70 of member 38*c* is upwardly, and outwardly inclined and is provided with a longitudinal slot 72 to slidingly receive the depending pin 74 of the trip arm 76. The key or pin 74 is connected to the spring 78 as shown, the latter being secured to the lower forward housing support member 34. A longitudinal slot 80 is provided in the lower portion of the vertical face of member 38 which slidingly receives pin or key 82, the latter being connected to the spring 78 in any conventional manner such as by welding indicated by the reference numeral 79 a short distance from the bottom thereof.

The key 82 extends to and is integral with a lower ejector member 83 having a vertical face 84 which in turn is flush with the inner vertical face of the member 38*c*. The slot 80 is recessed to receive the ejector face 84, and the lower portion of the latter is inwardly and horizontally turned to provide the ear 66*c* flush with the top of the floor of the casing or housing 10.

In operation of this modification, the ear 86 of the trip arm 76, which may be made of spring steel, will engage the box portion of the forward sack or bag 46, thus urging the trip arm along the slot 72. The bags usually open when the trip arm 76 is approximately two-thirds along the

slot 72 by means of the tension of the spring 78 restraining the box portion from upward movement. Inasmuch as the trip arm 76 is fashioned of spring steel, the box portions of the bags are readily released from the ear 86 thus permitting removal of the bags from the dispenser without wedging or tearing the bags. If desired the upper end of the slot 72 may be so formed to provide raising of the ear 86 to release the bags. This may be accomplished by the spring 78 pulling the forward end of the trip arm 76 until it strikes the stop member 73 disposed at the forward end of the slot 72, as better illustrated in Figure 5. As the spring 78 is tensioned, the lower ejector 83 will be raised along the slot 80 an amount the spring 78 stretches between the point it is joined thereto and the bottom of the spring and the ear 86c will raise the next-succeeding sack into leading and forward position so that it may be readily grasped for withdrawal. In this modification the box portion of the sacks or bags must face forwardly so that that ear 86 will engage the box of the sack and open the same. The other parts of the dispenser are the same as the preferred form.

While this last modification has been described in connection with a single trap mechanism, it is apparent that in practice for large sacks it may be desirable to have trip mechanism disposed at either side of the stop member, or a plurality thereof spaced thereon, as illustrated in Figure 6.

In stores where various sizes of sacks are used it may be desirable to have a single housing containing a plurality of dispensing compartments adapted to the size and stiffness of the sacks as to which modification for opening the sack is to be utilized. While I have shown my dispenser connected to the nether side of a counter or like member it is manifest that it may be connected to walls and the like in any conventional manner or may be simply placed or secured on counters, floors and the like.

It seems manifest that if desired the sacks may be withdrawn by grasping the bottom of the sacks and restricting the movement of the side of the sack on which the box-portion of the sack is disposed, such usually being the leading edge. Referring to Figure 10, the latter may be secured in a bag dispenser by providing a perforation 9 in the upper portion of the box-side edge and providing a small rod 8 on which the sacks may be suspended through the perforations. If desired the bags may be disposed as a unit, and with reference to Figure 11 the upper edges of the box portion side of the bags being cemented to the blank 7, the whole to be inserted into the dispenser 10d having the depending inwardly-turned flanges 6 into which the blank 7 may be positioned. It is only necessary that the side of the bag on which the box-portion is disposed be restrained as the bag or sack is grasped at the bottom and withdrawn. Thus the bag is automatically opened as it is withdrawn.

Broadly my invention comprises means to restrain movement of the box-portion side of the bag and applying withdrawal force to a portion of such restrained side, a preferred embodiment comprising a housing or casing to hold a supply of sacks or bags and a combination pressure feed and frictional gripping means, which may be integral with the housing or casing, for the lower portion of the sacks or bags in order that the box portion of the sack or bag will be yieldingly and frictionally restrained so that the sack or bag will open upon withdrawal.



I claim:

1. A dispenser for bags comprising, a housing including a bag dispensing opening, a guide member disposed at the upper end of the said opening adapted to guide said bags into successive leading position, a pair of spaced channels disposed at the lower end of said housing, a forwardly inclined bag advancing member carrying depending lugs adapted to slide in said channels, spring means connected to said lugs to yieldingly advance said bag advancing member, and a forward stop adapted to frictionally engage the lower portion of said bags.

2. In a dispenser including a casing adapted to contain a plurality of bags and an opening for withdrawal of the bags therethrough whereby the bags are automatically opened, the combination of a stop member adapted to frictionally engage the lower portion of the said bags and means to advance the said bags toward the said opening and the said stop member, the said stop member comprising a pivotally disposed transverse bar and an ejector formed on the lower end thereof adapted to engage the bottom portions of the said bags.

3. In a dispenser including a casing adapted to contain a plurality of bags and an opening for withdrawal of the bags therethrough whereby the bags are automatically opened, the combination of a stop member adapted to engage the lower portion of the said bags and means to advance the said bags toward the said opening and the said stop member, the said stop member comprising a transverse bar including an upper face inclined toward said opening, at least one longitudinal slot in said inclined face, at least one trip member slidable in said slot and adapted to engage the upper box-portion of the said bags, and spring means connected to said trip member whereby withdrawal of said bag will urge said trip member along said slot thereby restraining said box portion and opening said bag.

4. In a dispenser including a casing adapted to contain a plurality of bags and an opening for withdrawal of the bags therethrough whereby the bags are automatically opened, the combination of a stop member adapted to engage the lower portion of the said bags and means to advance the said bags toward the said opening and the said stop member, the said stop member comprising a transverse bar including a substantially vertical face, an upper outwardly inclined face, longitudinal slots in said faces, trip members slidably disposed in said upper slots and including portions extending beyond said vertical face adapted to engage the upper portion of the box portion of the said bag, ejectors slidable in said lower slot adapted to engage the bottoms of the said sacks, and spring means connected to the said trip members and the said ejectors whereby the said box portion will be yieldingly restrained on withdrawal and will urge the said trip members and the said ejectors along said slots.

5. In a dispenser including a casing adapted to contain a plurality of bags and an opening for withdrawal of the bags therethrough whereby the bags are automatically opened, the combination of a stop member adapted to frictionally engage the lower portion of the said bags and means to advance the said bags toward the said opening and the said stop member, the said stop member including an ejector adapted to engage the lower portion of the said bags.

6. A dispensing device for bags adapted to automatically open a bag upon withdrawal therefrom comprising, a casing adapted to hold a plurality of such bags, said casing having an opening through which the bags may be withdrawn, a pressure feed to advance said bags, a stop member proximate said opening, and friction means on said stop member for engaging and restraining box portions of such bags upon withdrawal of such bags from said opening.

7. A dispensing device for bags adapted to automatically open a bag upon withdrawal therefrom comprising, a casing adapted to hold a plurality of such bags, said casing having an opening through which the bags may be withdrawn, a pressure feed to advance said bags, a stop member proximate said opening, friction means on said stop member for engaging and restraining box portion of such bags upon withdrawal of such bags from said opening, and a guide in said opening whereby the forward bag will extend beyond the next succeeding bag.

8. A dispensing device for bags adapted to automatically open a bag upon withdrawal therefrom comprising, a casing adapted to hold a plurality of such bags, said casing having an opening through which the bags may be withdrawn, a pressure feed to advance said bags, said pressure feed comprising a bag advancing member and spring means associated with said bag advancing member to yieldingly urge said bag advancing member into engagement with said bags, a stop member proximate said opening, and a friction pad on said stop member for engaging and restraining the lower portion of said bags upon withdrawal of said bags from said opening.

9. A dispensing device for bags adapted to automatically open a bag upon withdrawal therefrom comprising, a casing adapted to hold a plurality of such bags, said casing having an opening through which the bags may be withdrawn, a pressure feed to advance said bags, said pressure feed comprising a bag advancing member and spring means associated with said bag advancing member to yieldingly urge said bag advancing member into engagement with said bags, a stop member proximate said opening, a friction pad on said stop member for engaging and restraining the lower portion of said bags upon withdrawal of said bags from said opening, and a guide in said opening whereby the forward bag will extend beyond the next succeeding bag.

10. In a dispenser including a housing adapted to retain a plurality of sacks and an opening for withdrawal of the sacks therethrough whereby the bags are automatically opened, the combination of a stop member, a friction member on said stop member for engaging and restraining the lower portion of said sacks, and means to advance the said sacks toward said opening and said stop member.



11. A dispenser for bags adapted to automatically open a bag upon withdrawal therefrom comprising, a casing adapted to contain a plurality of such bags, said casing having an opening for withdrawal of the bags therethrough in its upper forward end, a stop member, said stop member comprising a transverse bar disposed at the lower forward end of said casing proximate said opening and including a friction pad disposed on said transverse bar for engaging and restraining the lower portion of such bags upon withdrawal of a bag from such opening, and means to advance said bags toward said opening and said stop member.

12. A dispenser for bags adapted to automatically open a bag upon withdrawal therefrom comprising, a casing adapted to contain a plurality of such bags, said casing having an opening for withdrawal of the bags therethrough in its upper forward end, a stop member, said stop member comprising a transverse bar pivotally disposed at the lower forward end of said casing proximate said opening and including a friction pad disposed on said transverse bar for engaging and restraining lower portions of such bags upon withdrawal of such bags from such opening, and means to advance said bags toward said opening and said stop member.

13. A dispenser adapted to contain a plurality of bags and adapted to open such bags as they are withdrawn therefrom comprising, a housing for said bags, said housing having an opening for withdrawal of said bags in an upper portion thereof, a stop member at the lower portion of such opening, said stop member being upwardly and outwardly flared, friction material on said stop member for engaging and restraining bags, and resilient means to urge such bags against such friction material and toward such opening.

FREDERICK W. BARNETT.


**References Cited** in the file of this patent

UNITED STATES PATENTS

| Number | Name | Date |
|---|---|---|
| 821,113 | Mount | May 22, 1906 |
| 1,010,468 | Weaver | Dec. 5, 1911 |
| 1,682,580 | Pratt | Aug. 28, 1928 |
| 1,768,118 | Cofrin | June 24, 1930 |