Sept. 17, 1957 G. KRASNOSKY 2,806,604

ARTICLE DISPLAY COUNTER

Filed July 7, 1953 3 Sheets-Sheet 1

FIG. 1

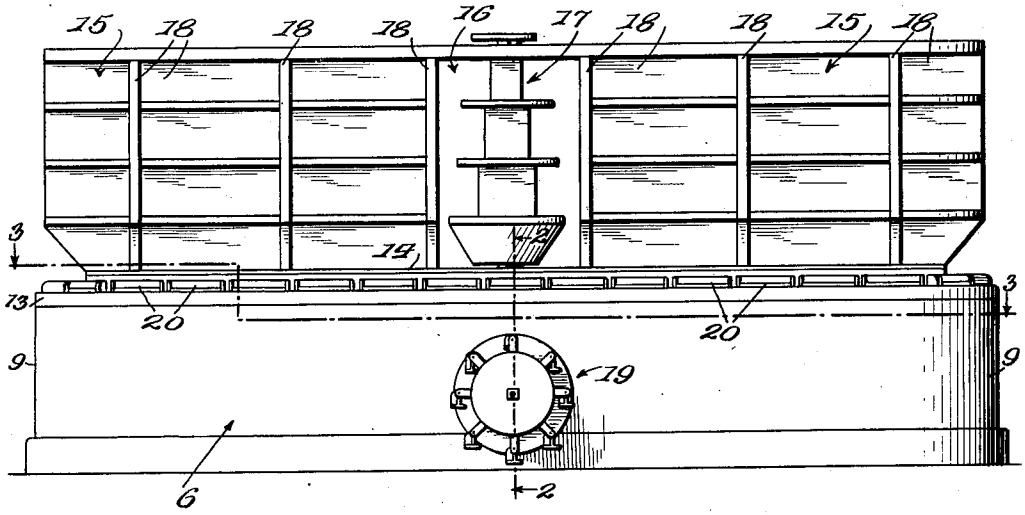
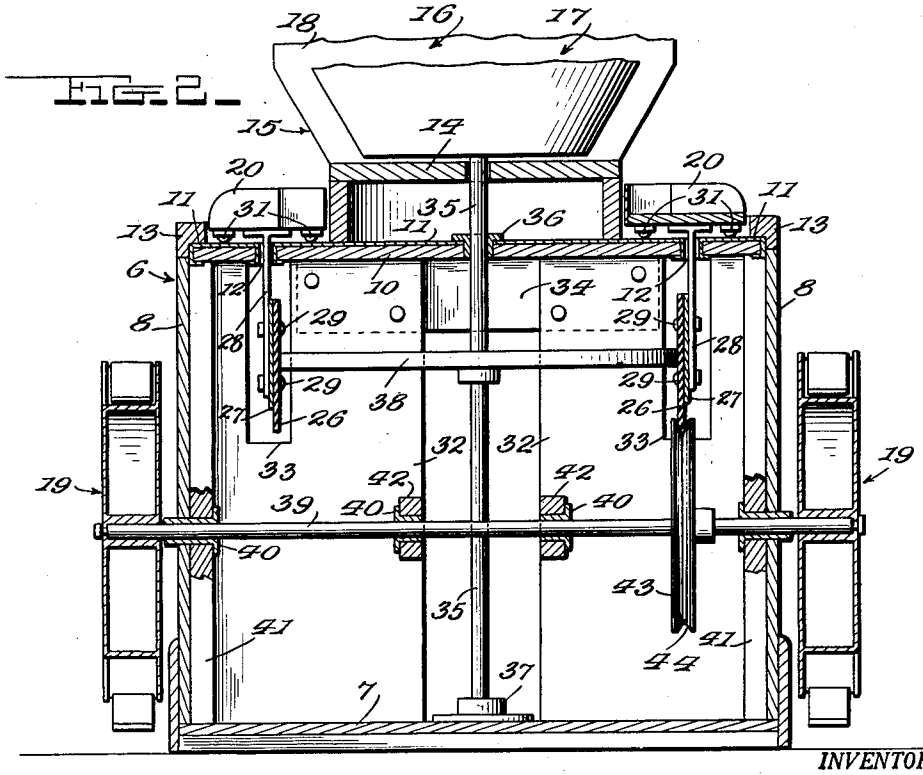


FIG. 2



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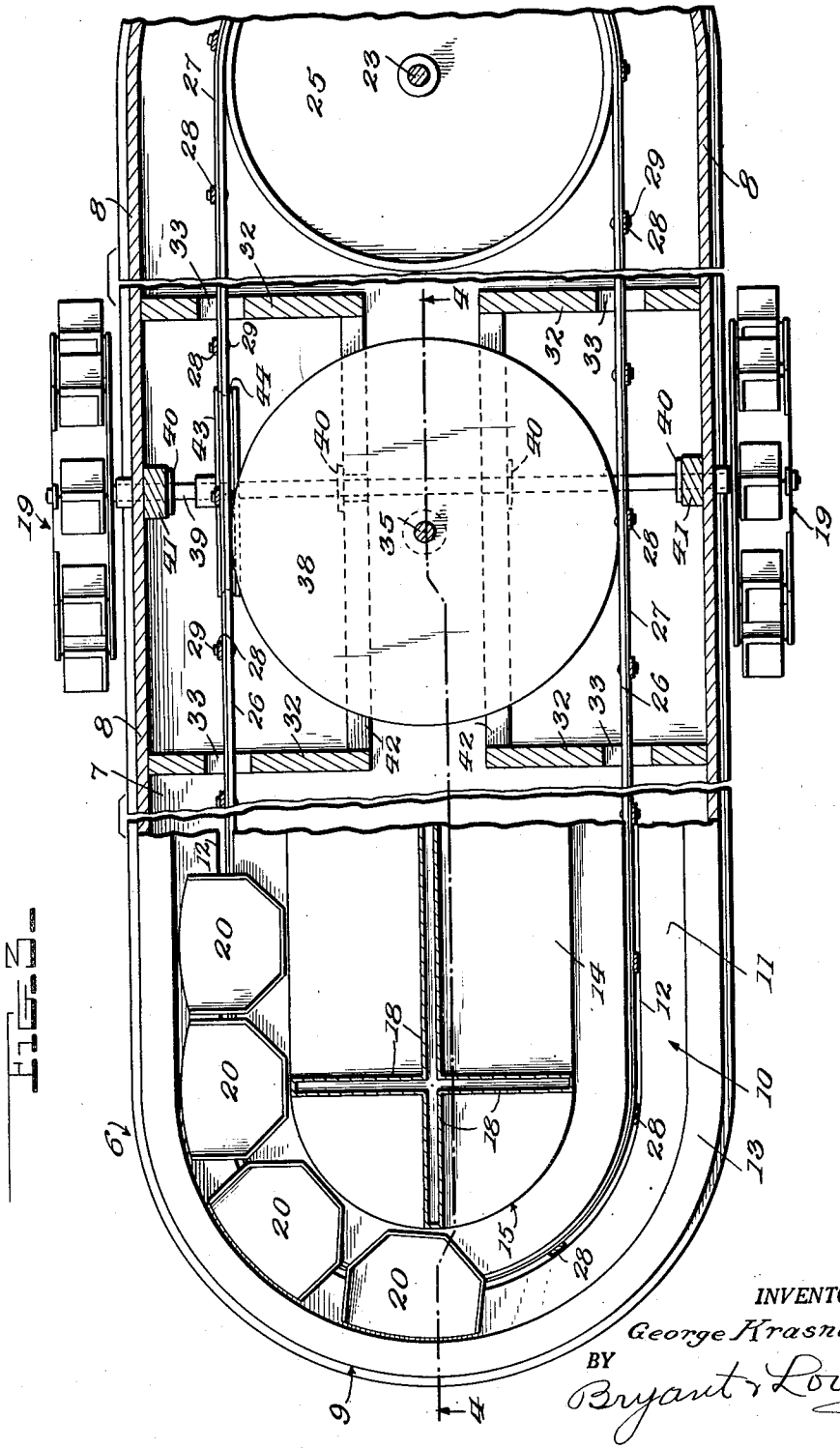


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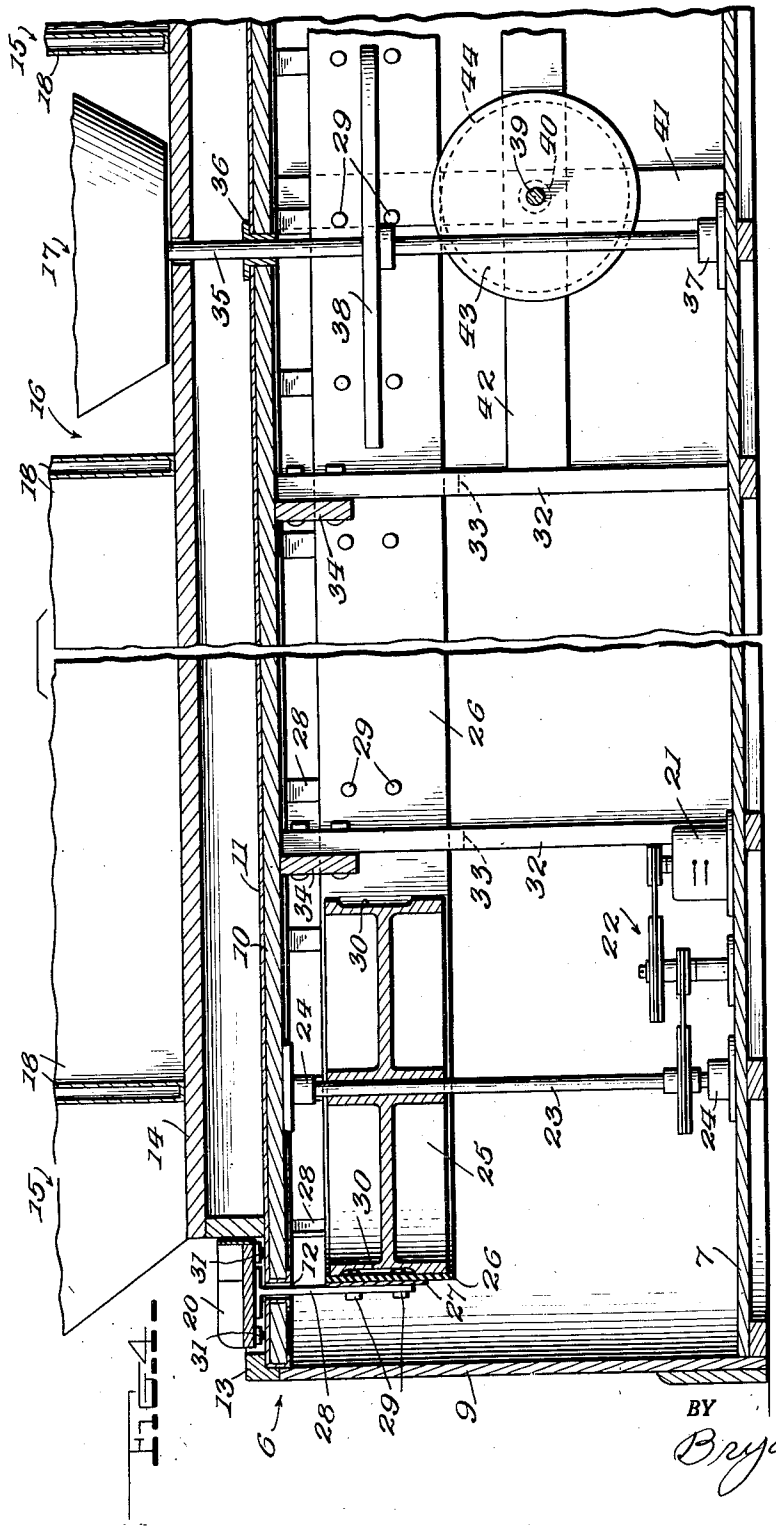


FIG. 4

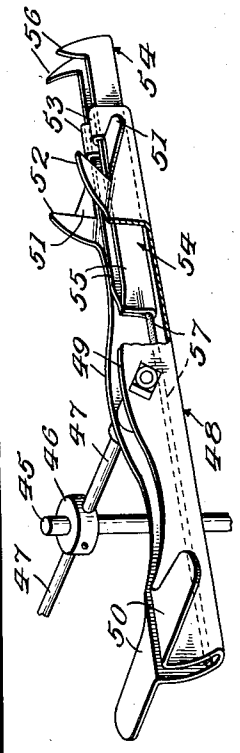


FIG. 5

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ARTICLE DISPLAY COUNTER

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Application July 7, 1953, Serial No. 366,428

2 Claims. (Cl. 211—1.6)

This invention relates to display counters for articles of merchandise and is of the general type in which traveling trays or other supports are provided for the articles.

One object of the invention is to provide a novel display counter which will present an endless succession of horizontally traveling articles and one or more successions of circularly traveling articles.

An endless driven belt carries article supports for most of the articles, and one or more rotary supports are provided for additional articles; and another object of the invention is to provide a novel construction in which a driving wheel for each rotary support is driven by said belt.

An additional object of the invention is to provide a vertical-axis article supports having a drive wheel whose periphery is engaged at diametrically opposed points by the two reaches of the belt, respectively, thereby providing ample driving friction between the belt and wheel even though the article support may be heavily loaded.

A further object of the invention is to provide a novel construction in which the aforesaid belt is disposed in side contact with a drive wheel for a vertical-axis article support, and is in edge contact with a drive wheel for a horizontal-axis article support.

A still further object of the invention is to dispose the two drive wheels rather close together and to peripherally groove the drive wheel which contacts with the edge of the belt, whereby this wheel will hold the belt in driving contact with the other drive wheel.

The aforesaid belt is trained around spaced pulleys mounted on vertical axes, and brackets project upwardly from said belt through an endless slot in the top of the counter to carry the article supports; and another object of the invention is to provide said brackets with rollers which roll upon an endless track on the counter, thereby suspending the brackets for smooth traveling and also suspending the belt against creeping downwardly from the pulleys.

A further object is to provide the counter with stationary shelves associated in a novel and attractive manner with the traveling article supports.

A still further object is to provide a novel holder for attractively displaying men's or ladies' shoes either on the fixed shelves or the traveling supports.

Yet another object is to provide a counter of the type set forth which will be of extreme simplicity, free from expensive maintenance troubles and well adapted for the attractive display of a wide variety of articles.

With the above and other objects in view that will become apparent as the nature of the invention is better understood, the same consists in the novel form, combinations and arrangements of parts hereinafter more fully described, shown in the accompanying drawings, and particularly claimed.

In the drawings:

Fig. 1 is a side elevation, and a view of the other side would be identical;

Fig. 2 is an enlarged vertical transverse sectional view on line 2—2 of Fig. 1;

Fig. 3 is a horizontal sectional view substantially on the planes of line 3—3 of Fig. 1, repetitious portions being broken out;

Fig. 4 is a vertical longitudinal sectional view substantially on line 4—4 of Fig. 3, repetitious portions being broken out; and

Fig. 5 is a sectional perspective view showing one of the shoe supports.

The general construction shown in the drawings is preferred and will be rather specifically described, but it is to be understood that numerous variations could well be made both as to structure and embellishment without departing from the spirit and scope of the invention as claimed.

A horizontally elongated casing **6** is provided having a floor **7**, side walls **8**, end walls **9** and a top **10**. All of these elements may well be of wooden construction and when such construction is followed, the top **10** will preferably have a sheet metal covering **11**. This top is provided with a continuous slot **12** spaced inwardly from its edge, and said edge is provided with a finishing moulding or rim **13**.

The central longitudinal portion of the top **10** is provided with an upward step **14** upon which stationary shelving **15** is mounted for article display. The shelving **15** has a gap **16** between its ends in which a vertical-axis article display rack **17** is received. If perishable articles are to be displayed, the shelving **15** and/or its supports **18** may be hollow to circulate a cooling medium.

At the sides of the casing **6** there are two horizontal-axis article display devices **19** preferably constructed to simulate Ferris wheels, and upon the casing top **10** over the slot **12**, there is a plurality of article supporting trays **20** within the confines of rim **13**. The driving elements for all of the display devices **17**, **19**, and **20** are housed within the casing **6** and include a motor **21** and suitable speed reduction means **22**. A suitable access door (not shown) may of course be provided in the casing for these elements.

Two vertical shafts **23** are mounted in suitable bearings **24** in the casing ends, and the motor **21** is operatively connected to one of these shafts by means of the speed reduction means **22**. Each shaft **23** carries a large pulley **25**, and a flat belt **26** is trained around the two pulleys. This belt may well be reinforced on its outer side by a flexible metal band **27**. T-brackets **28** have their shanks secured by bolts **29** against the band **27**, and the pulleys **25** may be peripherally grooved at **30** (Fig. 4) to clear the heads of these bolts. The brackets **28** extend through the slot **12** and are secured to the trays **20**, and these trays have rollers **31** resting on the track formed by the metal counter cover **11**. Thus, the trays **20** are supported for smooth movement over the counter top **10** and the belt **26** is suspended by the brackets **28**. The belt cannot therefore creep downwardly from the pulleys **25**.

Internal frame members **32** are provided for the sides of the casing **6** and are notched at **33** to receive the two reaches of the belt **26**. There may be any adequate number of these frame members, and their upper ends support transverse bars **34** for supporting the casing top **10**.

A vertical shaft **35** carries the display rack **17** and is mounted in upper and lower bearings **36** and **37**. This shaft is disposed centrally between the two reaches of the belt **26** and is provided with a drive wheel **38** contacting with the inner side of both of said reaches, whereby there will be ample frictional contact between the

belt and drive wheel to effectively drive the rack **17** even though the latter be heavily loaded.

A transverse shaft **39** extends through the casing **6** near the vertical shaft **35** and carries the two "ferris wheels" **19**. Suitable bearings **40** are provided for this shaft. Two of these bearings are shown in vertical posts **41** secured against the casing sides **8**, and two more in horizontal longitudinal bars **42** secured to some of the above described frame members **32**.

The shaft **39** is provided with a drive wheel **43** having a V-groove **44** receiving the lower edge of one reach of the belt **26**, whereby said belt will drive the "Ferris wheels" **19**. Moreover, the groove **44** holds this belt reach snugly against the drive wheel **38** of the rack **17** and avoids any jerky rotation of said rack.

In operation, the motor **21** drives the belt **26** and thus causes continuous travel of the trays or the like **20**. This belt drives the wheel **38** to rotate the rack **17** and also drives the wheel **43** to rotate the "Ferris wheels" **19**. Thus, the various articles placed on the trays, rack and "Ferris wheels" will be advantageously displayed.

When displaying shoes, devices such as that shown in Fig. 5 may be employed to advantage. In this view, a post **45** is shown to be engaged with either a fixed or a movable support. This post carries a vertically adjustable collar **46** having two oppositely projecting arms **47**. Upon each of these arms, a shoe support is mounted, only one of said shoe supports however being shown. This support includes an elongated, sheet metal, channeled body member **48** having parallel side walls **49**. The front ends of these walls are provided with two laterally projecting wings **50** to support a shoe sole. Near their rear ends the walls **49** have other laterally projecting wings **51** to support a shoe heel. Immediately in advance of the wings **51**, abutment fingers **52** project upwardly from the flanges **49** to abut the front of the shoe heel. Directly behind the wings **51**, the walls **49** have inwardly and downwardly bent tongues **53** forming guides.

A sheet metal heel-clamping member **54** of channeled form is slidably disposed in the rear portion of the channel member **48** and has its side walls **55** engaged with the guides **53**. The rear ends of the walls **55** have upstanding hooks **56** to engage the rear side of the shoe heel.

An elastic element **57** is attached at its rear end to the front end of the member **54** and is suitably anchored at its front end in the channel of the member **48**. This elastic element **57** exerts a constant forward pull on the member **54**, causing the hooks **56** to hold the shoe heel tightly against the fingers **52**. The shoe heel rests on the wings **51** and the sole on the wings **50** and the shoe will therefore be solidly held.

From the foregoing, it will be seen that a novel and advantageous construction has been provided for attaining the desired ends. However, attention is again invited to the possibility of making variations within the scope of the invention as claimed. For example, the counter could well be of angular form in top view instead of straight, with suitable idlers, for guiding the belt around the corner. Then, too, there could be any desired number of the racks **17** and "Ferris wheels" **19**. The casing and its framing elements could be of any adequate construction, and any appropriate materials could be employed for the various elements.

I claim:

1. In a display counter having a horizontally disposed endless driven belt and a series of horizontal article supports connected to and movable with said belt, said belt having supporting pulleys at opposite ends thereof and spaced reaches; a first wheel peripherally contacting a side face of at least one of said reaches to be driven frictionally thereby, a rotary article display device operatively connected with and driven by said wheel, a second wheel peripherally contacting the same reach as said first wheel and disposed to be driven by said reach and to hold said reach against the first wheel for better driving engagement, and a second rotary display device operatively connected with and driven by said second wheel.

2. In a display counter, an endless driven belt having a flat vertical side and a lower edge, vertical-axis pulleys around which said belt is trained, a series of article supports connected to said belt, a vertical-axis wheel peripherally contacting with and frictionally driven by said vertical side of said belt, a horizontal-axis wheel having a peripheral groove receiving said lower edge of said belt, said horizontal-axis wheel being driven by said belt and holding the latter in driving contact with said vertical-axis wheel, mounting means for said wheels and said pulleys, and article display devices connected with and driven by said wheels.

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