June 12, 1923. 1,458,227

J. P. FREEMON ET AL

CHANGEABLE EXHIBITOR

Filed Sept. 27, 1922 2 Sheets-Sheet 1

Fig. 1.

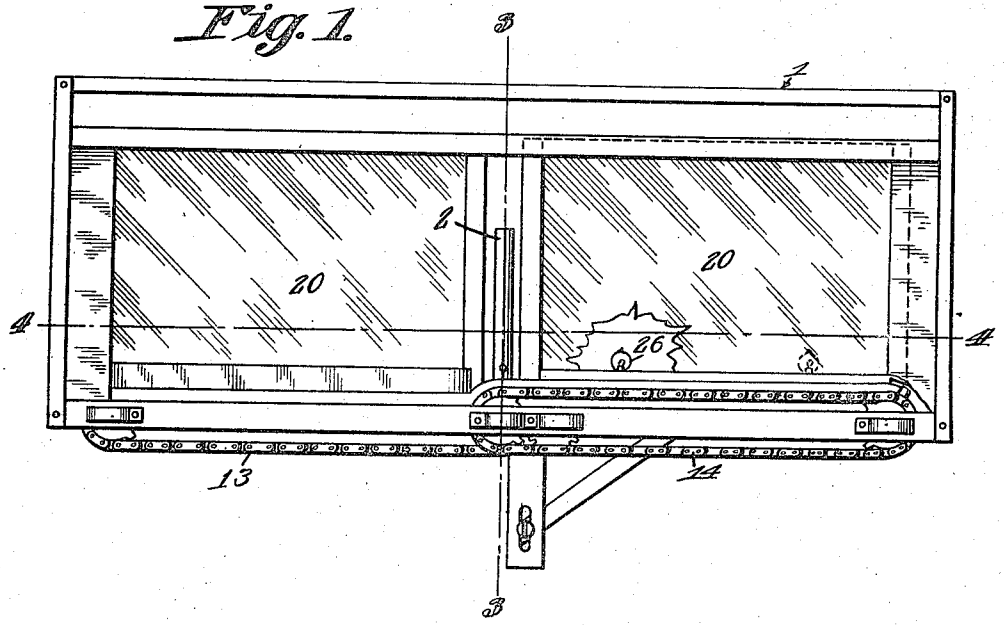
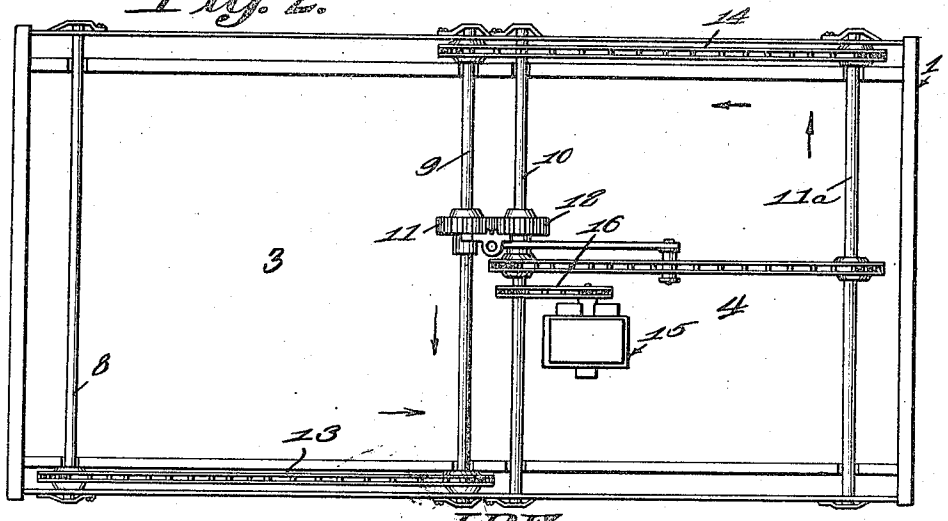


Fig. 2.



J. P. Freemon AND E. P. McFadden Inventors

By Cachow & Co

Attorneys

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2 Sheets-Sheet 2

Fig. 3.

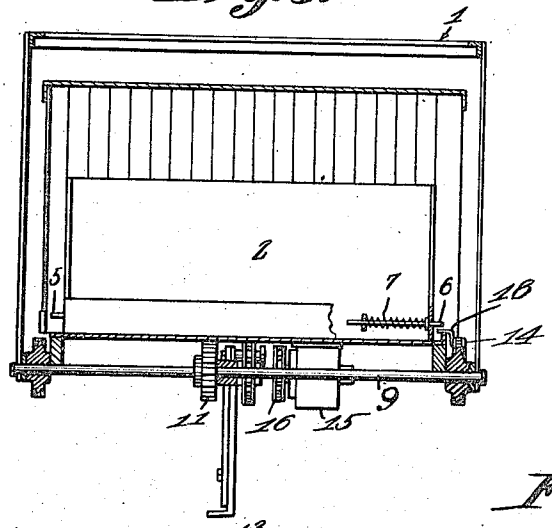


Fig. 5.

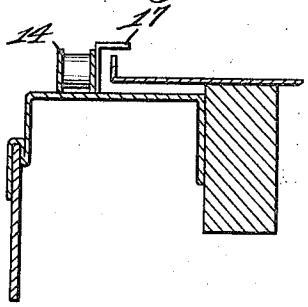
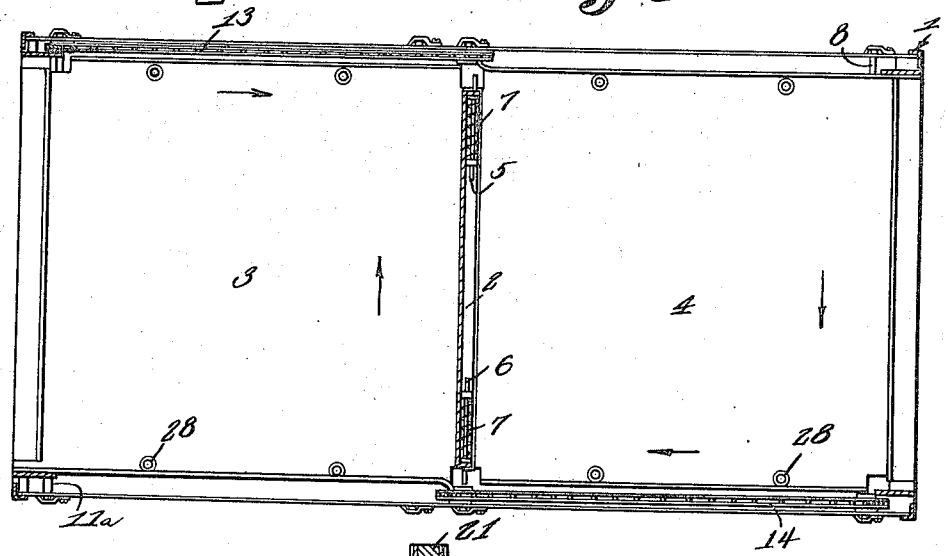


Fig. 4.



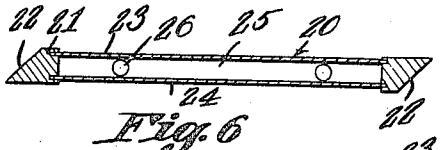


Fig. 6

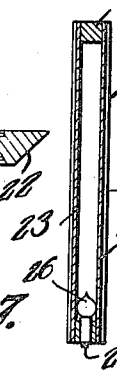


Fig. 7.

J. P. Freemon and E. P. McFadden Inventors,

By C. A. Snow & Co.

Attorneys

Patented June 12, 1923. 1,458,227

UNITED STATES PATENT OFFICE.

JOHN P. FREEMON AND EURA P. McFADDEN, OF ANN ARBOR, MICHIGAN.

CHANGEABLE EXHIBITOR.

Application filed September 27, 1922. Serial No. 590,888.

To all whom it may concern:

Be it known that we, JOHN P. FREEMON and EURA P. McFADDEN, citizens of the United States, residing at Ann Arbor, in the county of Washtenaw, State of Michigan, have invented a new and useful Changeable Exhibitor, of which the following is a specification.

This invention relates to advertising apparatus and more particularly to automatic changing signs in which two series or sub-packs or display cards or signs are disposed within a suitable containing housing, the card from the front of one sub-pack being removed in a serial manner to the front of a companion sub-pack, and in due order the card at the rear of the last mentioned sub-pack is moved to the rear of the first mentioned sub-pack. Incidentally to such shifting of the cards from one sub-pack to the other, the said sub-packs have lateral movement bodily in the case of one sub-pack in a forward direction and in the case of the other sub-pack in a rearward direction.

The object of the invention is to provide a simple and efficient mechanism for shifting the signs at regular intervals so that all of the signs are brought into position for display in regular order.

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:—

Figure 1 represents a front elevation of an exhibitor constructed in accordance with this invention with parts broken out for convenience in illustration.

Fig. 2 is a bottom plan view thereof.

Fig. 3 is a transverse vertical section taken on the line 3—3 of Fig. 1.

Fig. 4 is a horizontal section taken on the line 4—4 of Fig. 1 with the signs omitted.

Fig. 5 is a detail sectional view.

Fig. 6 is a longitudinal section of one of the signs forming a part of the invention, and

Fig. 7 is a transverse section thereof.

In the embodiment illustrated, a main frame or housing 1 is shown preferably of skeleton metal form although not necessarily so.

This frame or housing is here shown rectangular in form and is divided transversely about midway its ends by an upright hollow partition 2 which forms sign containing compartments 3 and 4.

Arranged below the compartments 3 and 4 are transversely extending shafts 8, 9, 10 and 11ª, the two shafts 9 and 10 being arranged in close proximity and each having a gear wheel 11 and 12 respectively which mesh with each other as is shown clearly in Fig. 2, operating to drive the end shafts 8 and 11ª by means of sprocket chains 13 and 14 which pass over sprockets carried by said shafts, the chain 13 being located at one side of the frame in rear of the compartment 3 while the chain 14 is located in front of the compartment 4. These chains are designed for shifting the signs presently to be described.

A motor 15 of any suitable character, preferably electric is connected to drive shaft 10 by means of a chain 16 passing over suitable sprockets on the motor shaft and on the shaft 10 whereby the chains 13 and 14 are driven continuously in opposite directions.

Spring pressed pins 5 and 6 are mounted at the lower end of the hollow partition 2 with their front ends projecting into the paths of the signs to be shifted, as will be presently more fully described. Coiled springs 7 are mounted on these pins 5 and 6 and exert their tension to normally force and yieldingly hold the pins in projected position.

Each of the chains 13 and 14 are provided with pull hooks 17 and 18 which are designed to engage the signs to be shifted.

The signs 20 comprise rectangular frames 21 preferably composed of wood, the ends 22 of which are beveled in opposite directions so that the signs will force themselves into position to displace the other signs as they are moved by the chains to facilitate the movement of the signs and to engage the spring projected pins 5 and 6 which prevent more than one sign being passed from one compartment to the other at a time.

It is simply necessary to have one sign more in one compartment than in the other, it being understood that both compartments

3 and 4 are of equal dimensions, and will accommodate an equal number of signs. For instance, we will say compartment 4 contains ten signs which fill it to its capacity, and compartment 3 contains nine signs, the apparatus being in motion pull hook 17 engages the right hand end of the sign at the front compartment 4, thereby shifting the sign toward the left which results in the shifting of this sign from the front of compartment 4 to the front of compartment 3, thereby filling compartment 3 to its capacity, ten signs, leaving compartment 4 with only nine signs. After pull hook 17 has transferred the sign from the front of compartment 4 to the front of compartment 3 and has been disengaged, pull hook 18 immediately engages the left hand end of the sign at the rear of compartment 3, thereby shifting said sign from the rear of compartment 3 toward the right which results in the shifting of the sign from the rear of compartment 3 to the rear of compartment 4, again filling compartment 4 to its capacity thereby forcing the sign pack forward placing the sign at the front of compartment 4 in position to be engaged by the pull hook 17 immediately after pull hook 18 has disengaged from the sign at the rear of compartment 4. By shifting one sign at a time in continuous succession, a gradual pull of the motor will be given and friction will be reduced to a minimum and will not in any way interfere with the displaying of the signs at the front or the rear.

These signs are exactly alike except for the advertising matter contained on their opposed faces. These faces 23 and 24 are made of transparent material and spaced laterally to form between them light chambers as 25 in which are mounted electric light globes, any desired number of which may be employed, two being here shown and numbered 26. These globes 26 are mounted in suitable sockets with their contacts 27 projecting below the bottom bar of the frame as shown in Fig. 7, and are designed to contact with cooperating contacts 28 carried by the housing so that when passing from one compartment to the other, the electric lights will be cut off and when in operative position the contacts on the sign will engage those of the housing to light the lights 26.

The operation of this apparatus is as follows:—

The compartments being filled with signs 20 disposed in upright position one at the front and one at the rear of each compartment being exposed to exhibit the advertising matter contained on their outer faces. The motor 15 being set in operation, the chains 13 and 14 travel continuously in opposite directions so that at predetermined intervals, the pull hook 17 will engage the right hand end of the sign at the front of compartment 4 and shift this sign toward the left, which results in the shifting of the sign from the front of compartment 4 to the front of compartment 3. After pull hook 17 has disengaged from the sign at the front of compartment 3, the sign located at the rear of compartment 3 is shifted toward the right and exposed at the rear of compartment 4. This shifting of these signs thus leaves exposed the succeeding sign at the front of compartment 4 and the similar sign at the rear of compartment 3.

As these signs move in the manner above described, the beveled ends 22 will engage the pins 5 and 6, moving said pins inwardly against the tension of their springs permitting the signs to be shifted individually without danger of two signs passing at the same time.

It will thus be seen that these double-faced, double-walled signs will exhibit either by day or night the matter contained on their opposed faces and that they will automatically shift at predetermined intervals without requiring any attention after the motor 15 has been once set in motion, the shifting being controlled by the position of the pull hooks on the chains.

We claim:—

1. In a changeable exhibitor, the combination of a main frame adapted to contain two alined packs of display cards arranged in close proximity with a transverse space between them, a motor, endless chains actuated by said motor and having card engaging means individual to the front and rear of the packs and adapted to successively shift a card from the front of one pack to the front of the other and from the rear of one to the rear of the other whereby a gradual pull of the motor will be given, thereby reducing friction to the minimum and avoiding interference with the display of the signs.

2. In a changeable exhibitor, the combination of a main frame adapted to contain two alined packs of display cards, endless chains having card engaging means individual to the front and rear of the packs of cards and adapted to successively shift a card from the front of one pack to the front of the other and from the rear of one to the rear of the other, means for operating said chains, and spring projected means located in the path of the cards to be shifted whereby the cards are shifted individually without danger of two cards passing at the same time.

3. In a changeable exhibitor, the combination of a main frame adapted to contain two alined packs of display cards, endless chains having card engaging means individual to the front and rear of the packs of cards and adapted to successively shift a card from the front of one pack to the front of the other

and from the rear of one to the rear of the other, means for operating said chains, and spring projected pins located in the paths of the cards to be shifted to avoid two cards passing at the same time.

4. In a changeable exhibitor, the combination of a main frame adapted to contain two alined packs of display cards, endless chains having card engaging means individual to the front and rear of the packs of cards and adapted successively to shift a card from the front of one pack to the front of the other and from the rear of one to the rear of the other, means for operating said chains, and means whereby the cards are shifted individually without danger of two cards passing at the same time, the cards having their opposed ends beveled in opposite directions to facilitate their passage over said last mentioned means.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures in the presence of two witnesses.

JOHN P. FREEMON.
EURA P. McFADDEN.

Witnesses as to John P. Freemon:
F. G. GUSTAFSON,
JEAN V. FREEMON.

Witnesses as to Eura P. McFadden:
C. H. JACOB,
ERMA M. BUTTERFIELD.