No. 658,375. Patented Sept. 25, 1900.

J. A. KENNEDY-McGREGOR.

ADVERTISING APPARATUS.

(Application filed Feb. 25, 1899.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

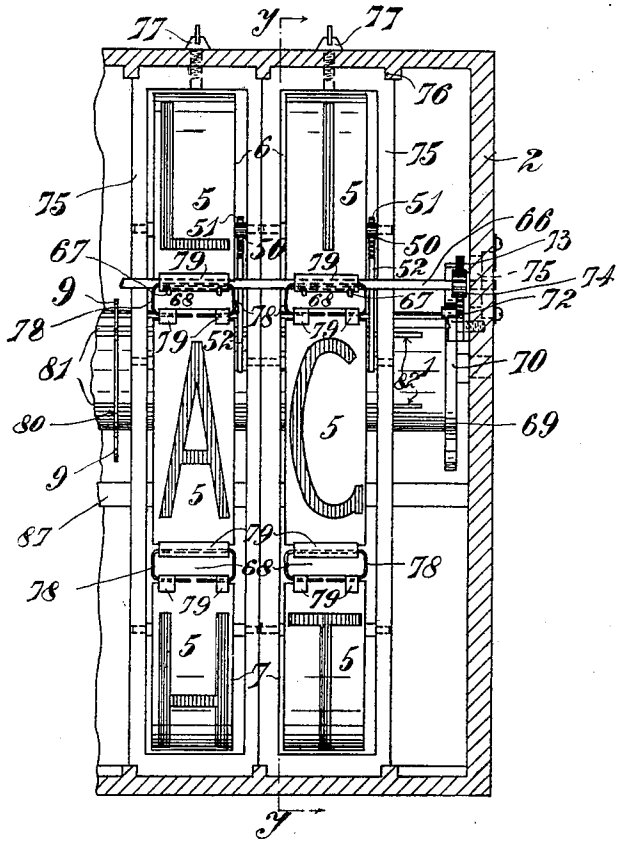


Fig. 3.

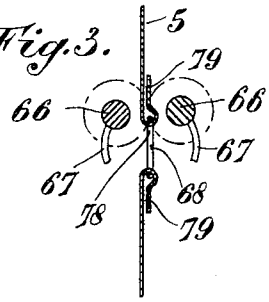


Fig. 5.

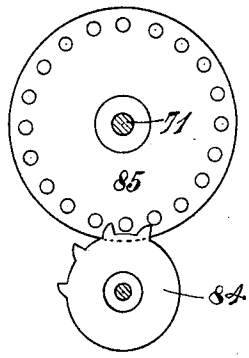
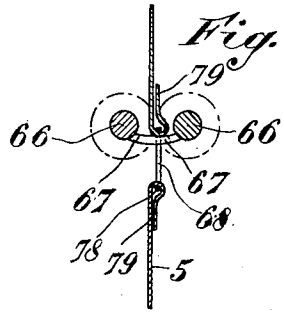


Fig. 4.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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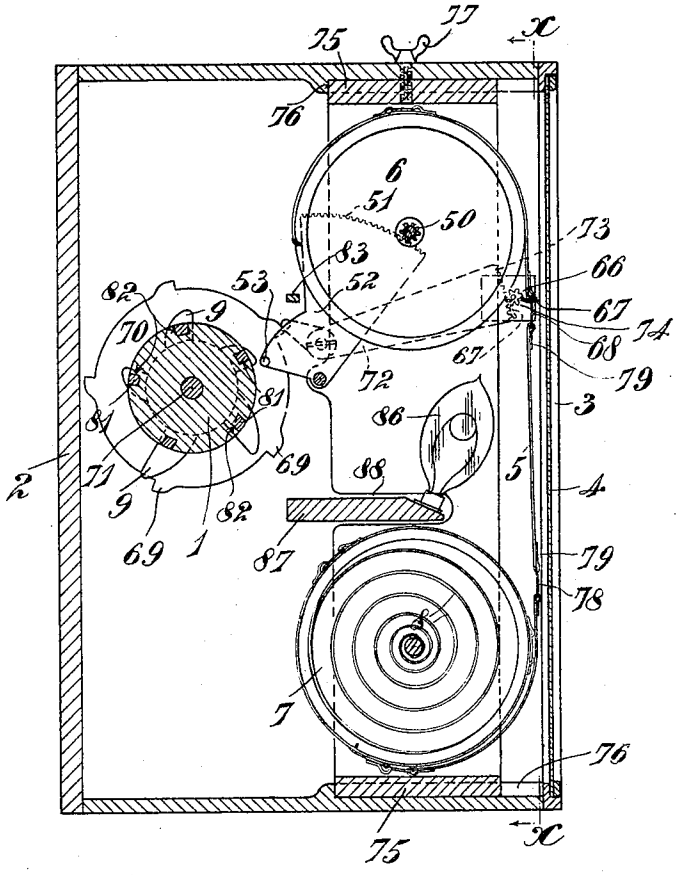
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ADVERTISING APPARATUS.

(Application filed Feb. 25, 1899.)

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Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN ALEXANDER KENNEDY-McGREGOR, OF LONDON, ENGLAND.

ADVERTISING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 658,375, dated September 25, 1900.

Application filed February 25, 1899. Serial No. 706,870. (No model.)

To all whom it may concern:

Be it known that I, JOHN ALEXANDER KENNEDY-McGREGOR, a subject of the Queen of Great Britain and Ireland, residing at Lee, London, in the county of Kent, England, have invented Improvements in Apparatus Suitable for Advertising and Like Purposes, of which the following is a specification.

In the specification of another application for Letters Patent filed by me August 18, 1898, Serial No. 688,929, there is described apparatus suitable for advertising and like purposes, wherein the letters or other devices to form words or other representations to be exhibited are on parallel strips of material that are moved lengthwise through suitable mechanism by the action of pins, projections, or cams of determined length and arrangement operated by a movable body, the arrangement being such that when the apparatus is in action a set of pins, projections, or cams will act to move the strips lengthwise, so as to bring opposite an opening or openings in the front of the apparatus the proper letters or devices on adjacent strips to form the word or words or other representation it is desired to exhibit, after which a fresh set of pins, projections, or cams will be brought into position to operate the strips and produce another word or set of words or other representation, these operations being constantly repeated so long as the apparatus is in motion.

Now the present invention has reference to improvements in apparatus of the kind referred to, whereby its working is improved and its construction simplified, as I shall now describe with reference to the accompanying drawings, wherein—

Figure 1 is a part longitudinal section on the line *x x* of Fig. 2, and Fig. 2 is a cross-section on the line *y y* of Fig. 1, showing apparatus of the kind referred to embodying my present improvements. Figs. 3, 4, and 5 are sectional detail views hereinafter more particularly referred to.

1 is a rotary-operating barrel arranged horizontally within a casing 2, in the front wall 3 of which is a slot-opening or glazed aperture 4, through which the advertisement to be exhibited can be seen. 5 represents the strips of flexible material carrying the letters, devices, or the like to be exhibited, such strips being arranged parallel to one another behind the front wall 3 of the casing and each of which is secured at its ends to the peripheries of two drums 6 and 7, arranged, respectively, at the upper and lower parts of the casing, and 9 represents pins, projections, or cams (hereinafter called "projections") of different lengths for operating the drums 6 and 7 and strips 5 through suitable mechanism, all substantially as described and shown in my said former specification.

In order that the letters, devices, or the like (hereinafter referred to as "letters") to form a word or words, pictorial device, or other representation (hereinafter referred to as a "word" or "words") to be exhibited shall be finally brought into a straight or other desired line, there is provided at the back or front of the movable strips 5, or at both the back and front of such strips, an alinement bar or device, which after the strips have been moved endwise more or less into their correct positions is caused to engage the strips and move them or permit them to move in such a way as to bring the exposed letters thereon to a common level and afterward to release the strips and enable them to be returned to their initial positions. For this purpose in the example shown there is employed an alinement-bar 66, provided with projections or fingers 67, which after the strips 5 have been moved endwise more or less into their correct positions are caused to enter holes or spaces 68 in the strips, as shown in full lines in Figs. 1 and 2, and bring the exposed letters into a straight line either by lifting any strips that may be too low or by acting as stops onto which the top edge of the holes in the strips are allowed to fall by arranging the projections 9 to release the pins 53, drums 6 and 7, and strips 5 at this time. The strips are or may be afterward released by moving the fingers 67 backward into the position shown in dotted lines in Fig. 2.

The alinement-bar 66 may conveniently be operated at the required times by cam-like projections 69 on a plate 70, fast on a rotary shaft, such as that 71 of the barrel 1, the said projections 69 operating one end of a lever 72, the other end of which carries a toothed segment 73 in gear with a pinion 74 on the alinement-bar 66, which is suitably supported

at its ends in bearings 75 at the ends of the casing 2. When there are two alinement-bars 66, arranged one on each side of the series of letter-strips 5, as shown in Figs. 3 and 4, the two sets of fingers 67 on such bars may be arranged to move from the inoperative positions shown in Fig. 3 toward each other and into the position shown in Fig. 4 to set the letters in alinement with each other.

To enable each letter-strip 5 to be readily withdrawn from the casing 2 in order that the letters may be readily changed when it is desired to change the advertisements to be exhibited, each pair of upper and lower drums 6 and 7, carrying a strip 5, together with the means for directly operating them from projections 9 on the drum 1 or other movable body, is mounted in a separate holder 75, adapted to be slid into guideways 76 in the casing 2 and to be fixed therein, as by a screw 77. To facilitate the interchanging of letters, each strip 5 may advantageously be composed, as shown, of a number of pieces of thin sheet material, such as linen, detachably connected together, as by loop-shaped connections 78, engaging eyes 79 on adjacent pieces of the strip, each of such pieces, excepting it may be the end ones, being provided with a letter or adapted to form the required letter.

The projections 9 of different lengths for moving the strips 5 endwise to different extents in order to bring different letters into position to form the desired advertisement can be variously shaped and be carried by a rotary barrel 1 or by endless bands or chains, as described in my said other specification.

In the arrangement shown in Figs. 1 and 2 the projections 9 are made of cam-like shape and are fixed in annular grooves 80 around the barrel 1, as by longitudinal bars 81, that pass through holes in the roots of the said projections and through longitudinal grooves 82 in the barrel and are fixed to the latter by screws. Each upper drum 6 is provided with a pinion 50, in gear with a toothed segment 51 on a pivoted plate 52, carrying a pin 53, arranged in the path of the corresponding set of projections 9 on the drum, and each lower drum 7 is connected to a spring 8, (or weight,) the arrangement being such that as each projection is brought into contact with the pin 53 it will cause the segment to rotate the upper drum 6 and pull the corresponding strip 5 partly off the lower drum 7, which will pull it back again into its initial position when the projection leaves the pin, the extent of movement of the strip, and consequently the particular letter brought into view, depending upon the length of the particular projection 9 brought into use.

83 is a fixed longitudinal bar or stop against which each segment-plate 52 bears when not acted upon by a projection 9.

The barrel 1 is or may be rotated in an intermittent manner from a continuously-rotating motor by any suitable means, such as by a mutilated wheel 84, connected with the motor and engaging a pin-wheel 85, connected to the said barrel.

By suitably forming the cam-like projections 9, so as to hold the pins 53 or other parts against which they act stationary for a short time, the barrel 1 or other movable body carrying them may be moved in a continous instead of an intermittent manner.

Electric lamps 86 (or other lamps) for illuminating the letters on the strips 5 may be carried by a longitudinal support 87, arranged within the casing 2 behind the said strips and extending through recesses 88 in the holders 75, carrying the drums 6 and 7, so as not to interfere with the removal of the latter.

What I claim is—

1. In apparatus of the character described, the combination with a plurality of longitudinally-movable strips or carriers arranged parallel to and independent of one another and each provided with a succession of characters to form part of the words or other devices to be exhibited, and means for intermittently moving said strips or carriers longitudinally to variable extents in opposite directions, of an alinement device common to all the strips or carriers and adapted to come into operation after each operation thereof and insure that the several characters brought into position for exhibition shall finally occupy the desired relative positions to one another.

2. In apparatus of the character described, the combination with a plurality of longitudinally-movable strips or carriers arranged parallel to one another and each provided with a succession of characters to form part of the words or other devices to be exhibited, and means for intermittently moving said strips or carriers longitudinally to variable extents, of an alinement-bar arranged transversely to said strips and provided with fingers or projections adapted to enter holes therein, and means for operating said alinement-bar and fingers at the required times, substantially as described.

3. In an apparatus of the character described, the combination with a plurality of longitudinally-movable strips or carriers arranged parallel to one another and each provided with a succession of characters to form part of the words or other devices to be exhibited and with holes between the characters, and means for intermittently moving said strips or carriers longitudinally to variable extents, of alinement mechanism comprising one or more bars arranged transversely across said strips and provided with fingers each adapted by partial rotation of the bar carrying it to enter a hole in the corresponding strip, a toothed segment for operating said bar or bars, and means for intermittently operating said segment, substantially as described.

4. In apparatus of the character described, the combination of a plurality of independent

longitudinally-movable flexible strips or carriers provided with a succession of characters to form part of the words or other devices to be exhibited, separate pairs of upper and lower drums to which the ends of said strips or carriers are attached, actuating mechanism for separately moving each pair of drums and the corresponding strip in one direction, controlling mechanism for simultaneously operating the sets of actuating mechanism and strips or carriers to variable extents in one direction, a case containing said parts and having an opening at the front side to permit of the several characters forming the desired word or device to be seen, and a plurality of removable holders each carrying a pair of said drums and the corresponding strip or carrier and actuating mechanism therefor, said holders being each adapted to be easily put in and removed from said case, substantially as described.

5. In apparatus of the character described, the combination of a plurality of longitudinally-movable flexible strips or carriers having a series of characters for separate exhibition, pairs of upper and lower drums to which the ends of said strips or carriers are attached, actuating mechanism for moving said drums and strips, controlling mechanism for operating said actuating mechanism and strips or carriers to variable extents in one direction, said controlling mechanism comprising cam-like projections of different lengths arranged in annular sets and each provided with a root, a rotary circular support for each annular set of cam-like projections, said support having notches or recesses into which the roots of the corresponding cam-like projections extend, and holding-down bars secured in longitudinal grooves in said support and passing through holes in the roots of the corresponding cam-like projections, substantially as described.

6. Apparatus of the character described, comprising a case having a longitudinal opening at its front side, a plurality of removable holders arranged side by side in said case, a pair of upper and lower drums mounted in each of said holders and one of which is a loaded drum, a plurality of independently longitudinally movable strips arranged side by side and each connected at its ends to one of said pairs of drums and provided with a succession of characters to form part of the words or devices to be exhibited, actuating mechanism mounted on each holder for operating the corresponding set of drums and strip or carrier, a rotary body arranged transversely behind said holders and provided with a plurality of annular series of cam-like projections of variable length adapted to successively operate said actuating mechanism, to variable extents, an alinement-bar extending transversely to and behind said strips and provided with fingers each adapted to enter a hole brought opposite to it in the corresponding strip, and means for intermittently operating said alinement-bar and fingers, substantially as described.

Signed at 77 Cornhill, E. C., in the city of London, this 2d day of February, 1899.

JOHN ALEXANDER KENNEDY-McGREGOR.

Witnesses:
EDMUND S. SNEWIN,
PERCY E. MATTOCKS.