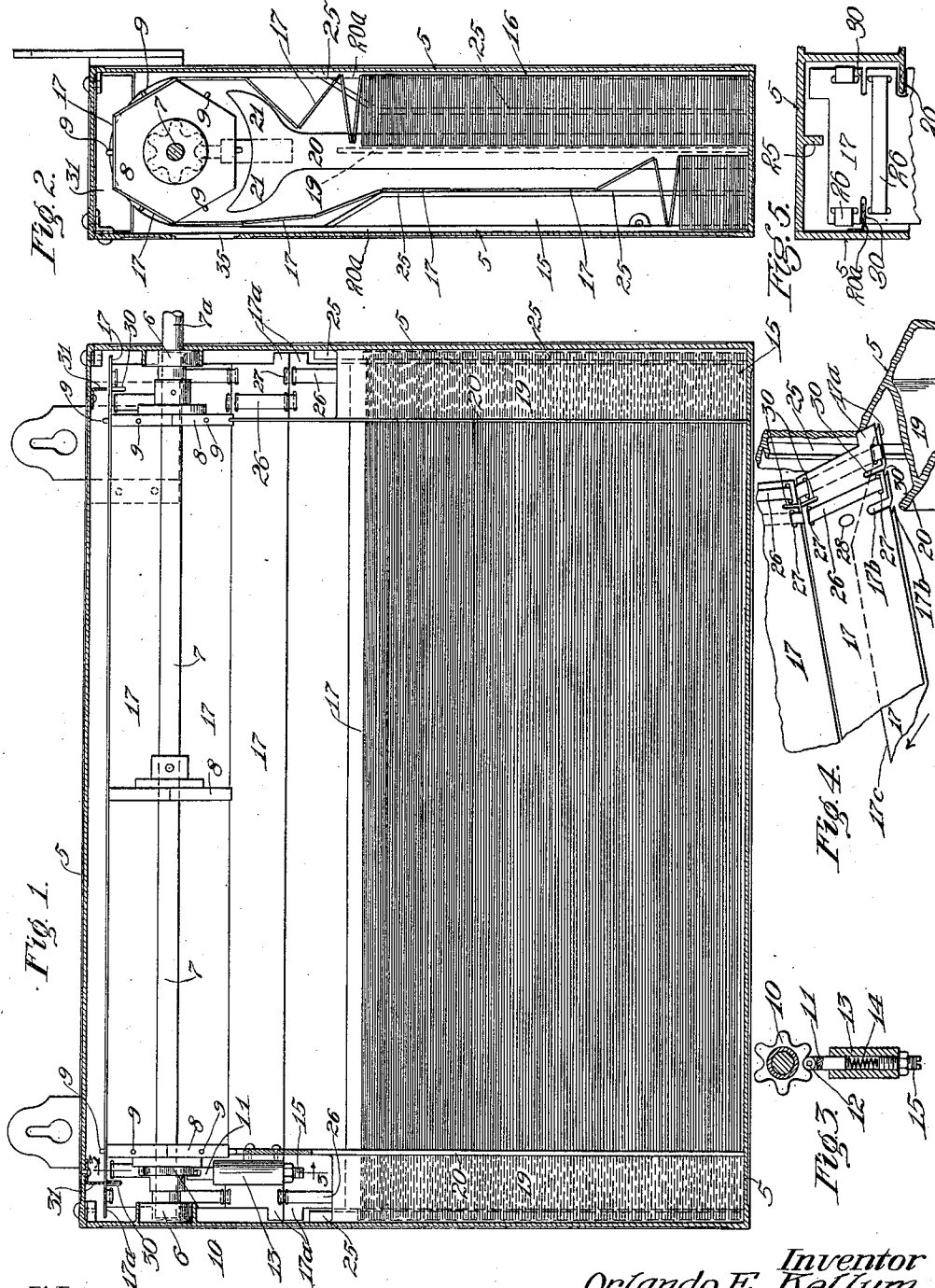


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EXHIBIT DEVICE.

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1,022,744.

Patented Apr. 9, 1912.



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# UNITED STATES PATENT OFFICE.

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## EXHIBIT DEVICE.

1,022,744.

Specification of Letters Patent.

Patented Apr. 9, 1912.

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*To all whom it may concern:*

Be it known that I, ORLANDO E. KELLUM, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles, State of California, have invented new and useful Improvements in Exhibit Devices, of which the following is a specification.

This invention relates to an exhibit device of the class adaptable for street and station indicators; and the invention consists particularly in certain improvements over my invention as set forth in my application filed March 16th, 1911, bearing S. N. 614,788.

In my present invention I am utilizing broadly the same mechanism as in my previous machine; consisting of a pair of chambers having guideways in combination with a polygonal rotatable member located above the guideways and adapted by its rotation to remove a chain of plates from one of the chambers and place it in the other, the chain of plates being adapted to fold so as to pile the plates flatly on each other. But I have introduced certain elements which make for more successful operation, including a new means of holding the plates in engagement with the polygonal rotatable member and a new system of guideways whereby the plates are forced to pile correctly, thus obviating any possible chance of mispiling. In general, I have also arranged the mechanism in more practical and convenient form.

In the accompanying drawings: Figure 1 is a longitudinal section of my improved device. Fig. 2 is a vertical cross section of the same. Fig. 3 is a section taken on line 3—3 of Fig. 1 and illustrating the stop mechanism of the device. Fig. 4 is a detail perspective view showing the arrangement of plates and their relation to the guideways. Fig. 5 is an enlarged horizontal detail section.

In the drawings 5 designates a case of suitable size and configuration for inclosing the mechanism of my device. Carried in bearings 6 and running longitudinally of the case is a shaft 7 which carries hexagonal members 8 having pins 9 set in their faces. Pins 9 are for the purpose of engaging with apertures in the exhibit plates in order to properly register and hold the plates on the hexagonal members. The hexagonal members form, in effect, a hexagonal drum over

which the exhibit plates pass; and in the form shown the device has all the advantages of a solid drum while being very much lighter. Shaft 7 projects from one end of the case as at 7<sup>a</sup> and is adapted to be connected to any suitable mechanism which will rotate it through one-sixth of a revolution at a time. Near its other end the shaft is provided with a small star wheel 10 with which a spring pressed plunger 11 carrying a roller 12 is adapted to engage, the plunger working in a casing 13 and being pressed upwardly by a spring 14 adjustable in tension by an adjusting screw 15. The parts are set so that the action of this stop mechanism tends to stop the whole device in the position shown; while a sufficiently strong rotative force applied to shaft 7 will rotate the shaft in spite of the retard applied by the stop mechanism.

Located in the lower part of the case are two storage chambers 15 and 16 in which the chain of plates 17 is piled. These storage chambers are only separated by walls 19 on each end of the case; and walls 19 are primarily for the purpose of holding the guides 20 rather than for separating the chambers. Guides 20 are of the configuration shown in Fig. 2 and have a widened crescent shaped upper portion 21 which extends around hexagonal member 8 with its ends in such position as to prevent the clinging of plates 17 to the hexagonal member. At each end of the case and in each chamber is a guide 25 which extends as shown in Fig. 2, projecting inwardly from the inner faces of the ends of the case to the extent shown in Fig. 1. Each of plates 17 is provided with a guide engaging lug 17<sup>a</sup> projecting from one end at the corner. When the plates are secured together by means of flexible tapes 26, these lugs 17<sup>a</sup> are secured adjacent each other so that, as shown in Fig. 4, one line of juncture of two plates will have two lugs 17<sup>a</sup> adjacent it, while the next line of juncture will have no lugs adjacent it. These lugs 17<sup>a</sup> project so as to engage with guides 25 and, consequently, the lines of juncture provided with these lugs cannot arrange themselves on the outside edges of the storage chambers but are pushed by the guides toward the inner edges. It is not necessary that they be guided completely to their final position, as it suffices to make the chain of plates start

bending in the proper directions when the plates will then continue to properly settle down to position.

Each of the plates is also provided with a notch 17<sup>b</sup> on its edge on which lug 17<sup>a</sup> is provided, the notches 17<sup>b</sup> being adapted for engagement with guides 20. These notches pass over the edges of guides 20 and by their action force the other edges of the plates toward the outside edges of the storage chambers. This action may be inferred from Fig. 4 where it is seen that, with the plates in the position shown and with the edge 17<sup>c</sup> of lower plate 17 prevented from moving outwardly (in the direction indicated by the arrow) on account of contact with the case, it is impossible to raise the plate 17 immediately above the lower plate upwardly because notch 17<sup>b</sup> will have its end engaged with the edge of guide 20 and prevent such upward movement. Consequently, the action of the two guides 20 and 25 is to force alternate lines of juncture of the plates toward opposite sides of the storage chambers. As before stated, it is not necessary that the plates be forced into their ultimate positions; it is only necessary that the bending action be started, when it will continue correctly. With my arrangement as shown it is absolutely impossible for the plates to pile incorrectly as it is rendered impossible for any particular edge of any plate to reach any but the correct side of the storage chamber.

The plates are strung together by means of flexible tapes 26 which pass through slots 27 in opposite directions and are passed between plates from one side of one plate to the opposite side of the adjacent plate, so that at the points of juncture of plates the tapes are "criss-crossed." This provides a simple and efficient means of connecting the plates and of relieving them from any direct strain due to a sudden pull on the chain of plates, all the strain from end to end being taken by the flexible members. Each plate is provided with an aperture 28 near its end which is adapted to be engaged by pins 9 on hexagonal members 8. By this means the chain of plates is registered in correct position on the hexagonal members and will always be moved to the correct position whenever the hexagonal members are moved correctly. Each plate is also provided with notches 30 in opposite edges and

these notches are adapted to be engaged by segmental plates 31 hung from the upper part of the case. This means prevents the plates from jumping off the hexagonal members when those members are quickly actuated. Extending downwardly from and forming continuations of segmental plates 31 are guide plates 20<sup>a</sup> which enter notches 30 in the edges of plates 17 farthest removed from each other, that is, edges adjacent the front and back of the case. These guide plates 20<sup>a</sup> suffice to guide the forward edges of the plates while passing downwardly and to keep the forward edges of the plates from rubbing against the front and back of the case and creating an excessive friction.

The plates are provided with any desired information which is viewed through an aperture 35 in one side of the case. This aperture may be duplicated in the other side of the case so that information may be seen on both sides of the mechanism and the plates may be made longer or wider in order to accommodate more information or two sets of the same information. This is all a matter of arrangement and is intended to be covered by my present invention.

Having described my invention, I claim:

In a device of the character described, the combination of a storage chamber having a guide projecting inwardly from each of its end walls and leading from its upper end at the front of the chamber to its lower end at a point removed from the front of the chamber and having a vertical guide extending along its rear side from top to bottom, a chain composed of a series of transverse plates hingedly secured together along their longitudinal edges, each plate being provided with a single lug extending from each end at one of its longitudinal edges, the plates being so arranged that the lugs thereon are adjacent each other at alternate lines of juncture of plates, and each plate being provided with a notch on its lug provided longitudinal edge and adapted to engage around the second mentioned guide.

In witness that I claim the foregoing I have hereunto subscribed my name this 14 day of June 1911.

ORLANDO E. KELLUM.

Witnesses:

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