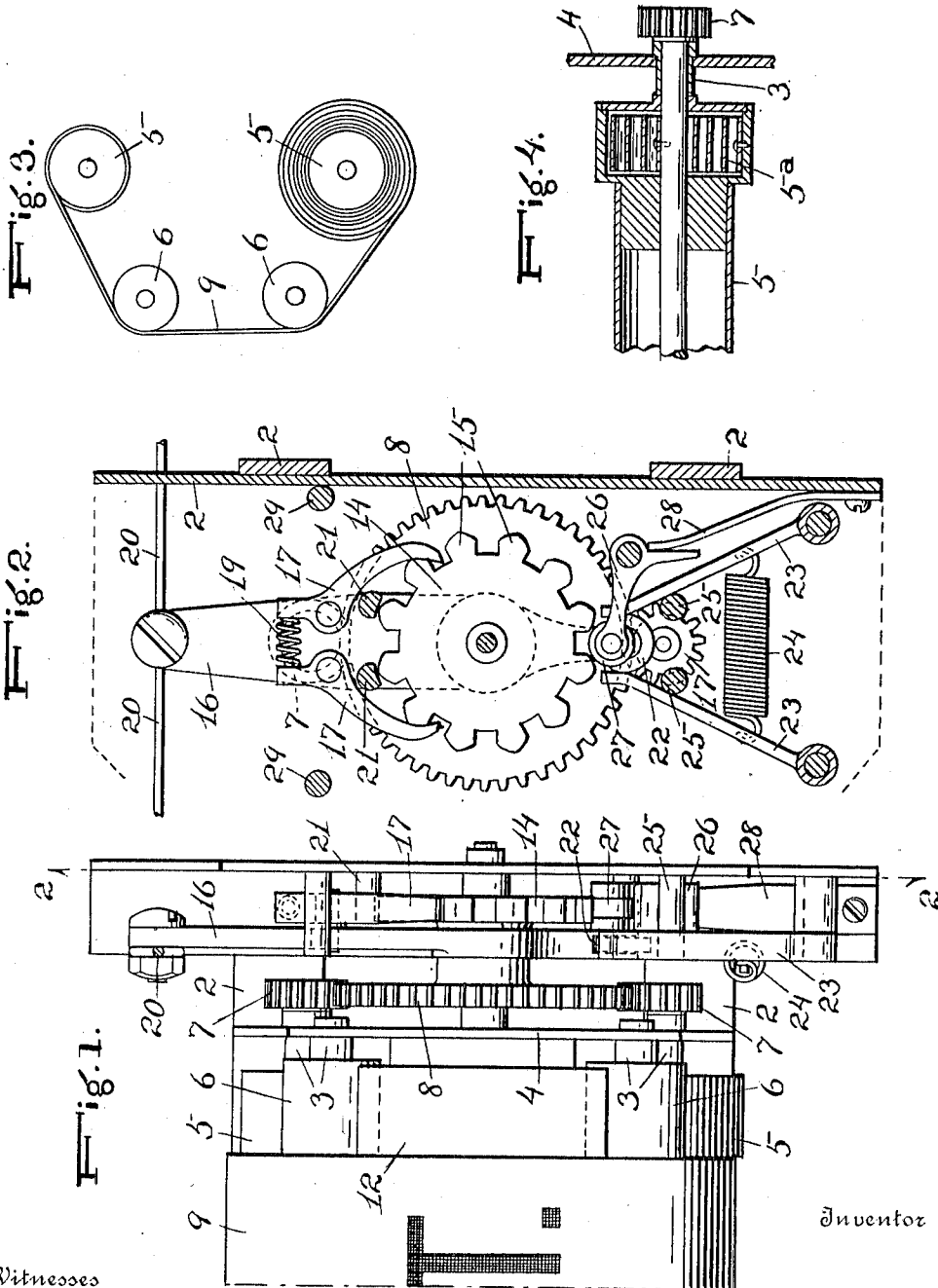


J. P. SHEAGREN.
 INTERMITTENT GRIP DEVICE FOR EXHIBITORS.
 APPLICATION FILED JAN. 20, 1913.

1,080,486.

Patented Dec. 2, 1913.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN P. SHEAGREN, OF BURLINGTON, IOWA:

INTERMITTENT-GRIP DEVICE FOR EXHIBITORS.

1,080,486.

Specification of Letters Patent.

Patented Dec. 2, 1913.

Application filed January 20, 1913. Serial No. 743,178.

To all whom it may concern:

Be it known that I, JOHN P. SHEAGREN, a citizen of the United States, resident of Burlington, in the county of Des Moines and State of Iowa, have made a certain new and useful Invention in Intermittent-Grip Devices for Exhibitors; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the invention, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a front view of the invention. Fig. 2 is a section on the line 2—2, Fig. 1. Fig. 3 is a detail end view of the rollers upon which the web or band is wound, the band, and the guide rollers. Fig. 4 is a detail sectional view illustrative of the spring connection between the band roller and its operating gear.

The invention has relation to changeable exhibitors designed for use mainly as reversible indicators for displaying the names of stations in railway cars and other vehicles, and it consists in the novel construction and combinations of parts as herein-after set forth.

In the accompanying drawings, illustrating the invention, the numeral 2, indicates a frame having bushed bearings 3, at its removable ends 4, for two parallel operating rollers 5, 5, and two parallel guide rollers 6, 6. The operating rollers 5, 5, are provided with gear wheels 7, which engage a large intermediate gear wheel 8, having its shaft journaled in bearings of the frame. The gear wheels 7 engage the intermediate gear wheel on opposite sides, in such wise that the rollers 5, 5, when the intermediate gear wheel is operated, turn in the same direction. The band 9, on which are printed, or otherwise marked, the names of the stations, has its ends connected to and rolled upon the rollers 5, 5, and its intermediate portion passes over the guide rollers 6, 6, and a flat plate 12, connected to the frame, between the guide rollers. The names on the band 9, are so spaced that the turning of the rollers 5, 5, intermittently, a partial rotation, will bring each name in succession squarely to the front for its display.

In order to insure the equalized and exact intermittent movement of the middle gear

wheel 8, governing the movements of the geared rollers, whether said movement be backward or forward, the shaft of the gear wheel 8, is provided with a ratchet wheel 14, having radial, symmetric or equal sided teeth 15, to engage pawls and check devices, in operative connection with an operating lever 16. This operating lever is pivoted on the shaft of the gear wheel 8, alongside the ratchet wheel 14, and is provided on each side of its outer or operating arm, with a pivoted pawl 17. These pawls are adapted to embrace by their inner ends a certain portion of the ratchet wheel, to include between them a certain number of teeth, and their outer ends are spread apart in an elastic manner by means of a spring 19. The outer or operating end of the lever is provided with an operating rod or device 20, for pulling or pushing. Between each pawl and the ratchet wheel extends a guide pin 21, secured in the frame, said guide pin serving to keep the pawl on one side of the lever out of engagement with the teeth of the ratchet wheel when the pawl on the other side is being operated to turn the ratchet wheel. The other, or inner end of the lever is provided with a roller bearing 22, engaging, on opposite sides, replacing or returning arms 23, which are pivoted to the frame, and are held to operative engagement with the roller bearing 23, by means of a strong connecting spring 24. Engaging each replacing arm is a check pin 25, which is designed to bear outward against the arm, in such wise as to hold it in fixed position when the opposite arm is being pushed outward by the roller bearing end of the operating lever.

A check device is provided to hold the ratchet wheel to exact position after each movement, this consisting of a lever 26, carrying a roller 27, at its end, said roller being of proper size to fit between the ratchet teeth sufficiently to engage them both. This lever 26, is pivoted to the framing and is kept to its work in an elastic manner by means of a spring 28.

When the operating lever is moved in one direction, from its central position, the pawl of that side engaging the ratchet wheel will turn the intermediate gear a certain distance, governed by a stop pin 29, which may be adjustable. This movement turns the band rollers and the name band the proper distance to display the name of the station

over the plate 12. Upon releasing the lever it will return to normal position, being actuated by the replacing arms. In this return movement the opposite pawl is held
5 out of the way by means of its guide pin. Successive movements of the lever will cause the names to be brought to position for display one after another. Movement of the
10 operating lever in the opposite direction, from its central or normal position, will actuate the ratchet wheel by means of the pawl on that side, to turn in the opposite
15 direction, and the band rollers will be turned in reverse in such wise that the names on the display band will be brought to position in reversed order of succession.

In the winding of the web or band from one roller 5 to the other it is obvious that the feed from one roller and the take up of
20 the other roller will vary in speed, so that slack of the band will need to be taken up. This is provided for preferably by connecting one of the rollers 5 to its operating gear

or pinion through the medium of a coiled spring 5^a.

I claim:—

Reversible shifting means for changeable exhibitors, comprising a shaft, a ratchet wheel upon said shaft, a lever pivoted upon said shaft and carrying upon one arm thereof
30 of opposed pawls engaging said ratchet wheel and upon the other arm thereof an anti-friction roller, and means for returning said lever to normal position after operation in either direction, consisting of
35 pivoted arms engaging opposite sides of said roller and a spring connecting said arms, and stops to limit the inward movement of the arms.

In testimony whereof I affix my signature, 40 in presence of two witnesses.

JOHN P. SHEAGREN.

Witnesses:

C. H. MOHLAND,
JOSEPHINE WEDERTZ.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."