C. H. KING, JR.

ADVERTISING MACHINE.

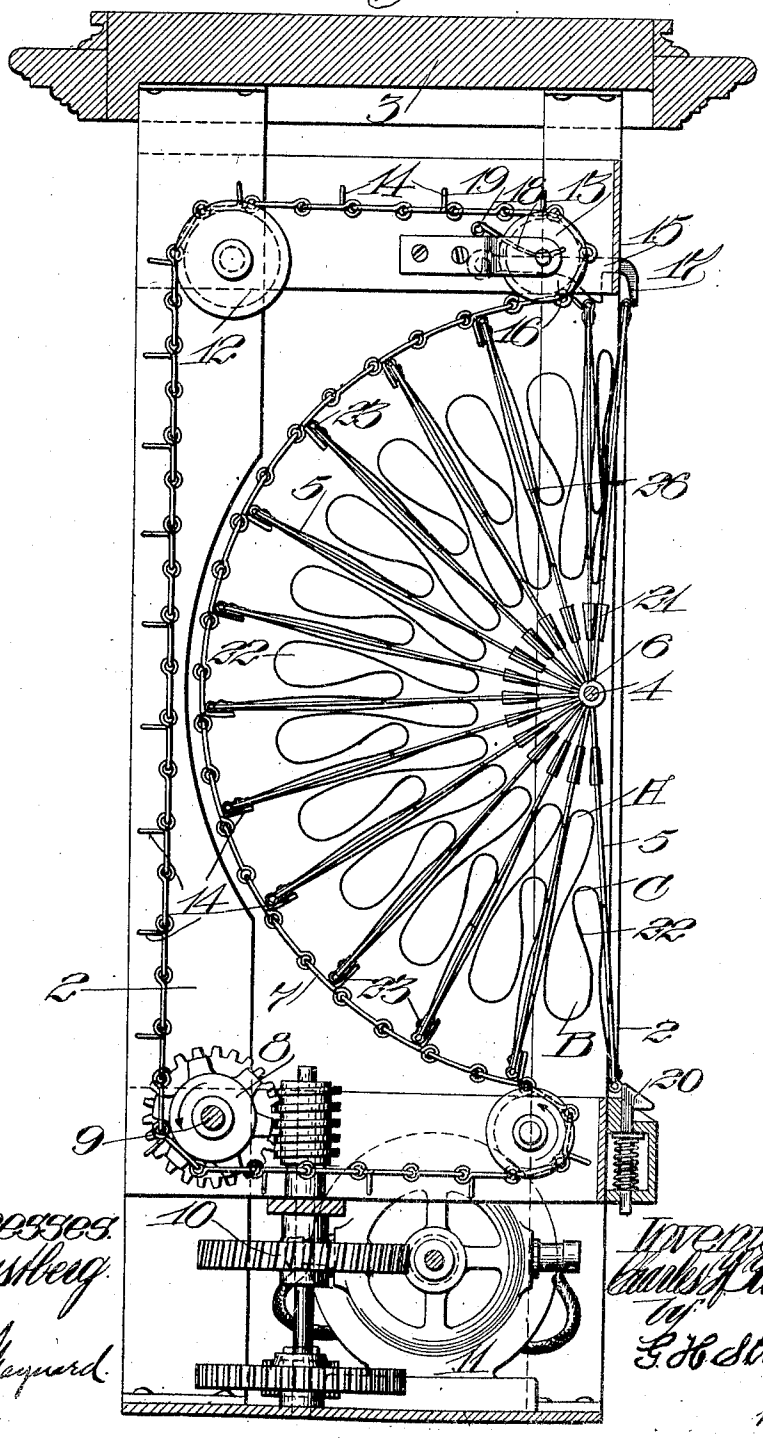
APPLICATION FILED FEB. 25, 1911.

1,002,588.

Patented Sept. 5, 1911.

3 SHEETS—SHEET 1.

Fig. 1.



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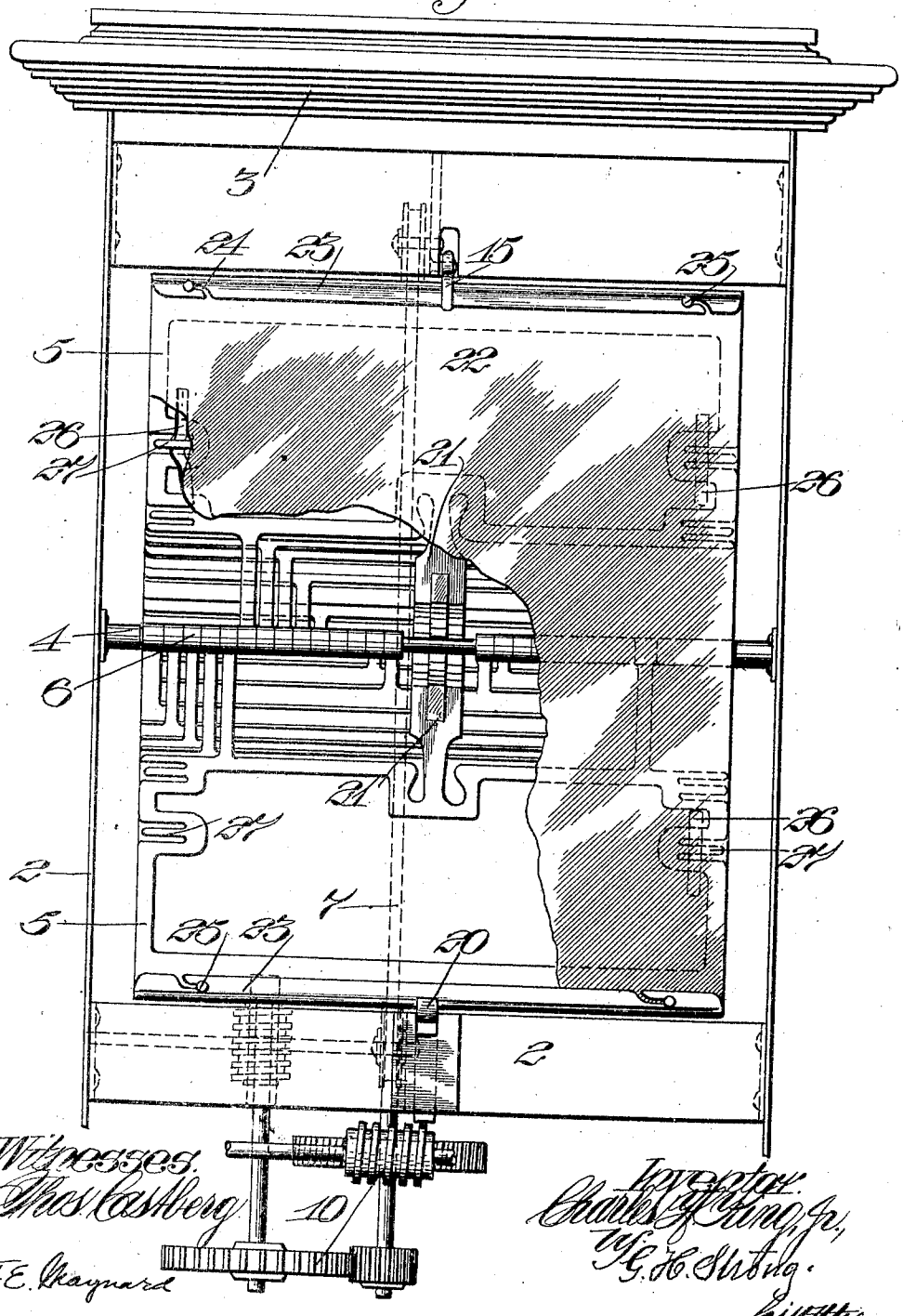
3 SHEETS—SHEET 2.

Fig. 2.



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3 SHEETS—SHEET 3.

Fig. 3.

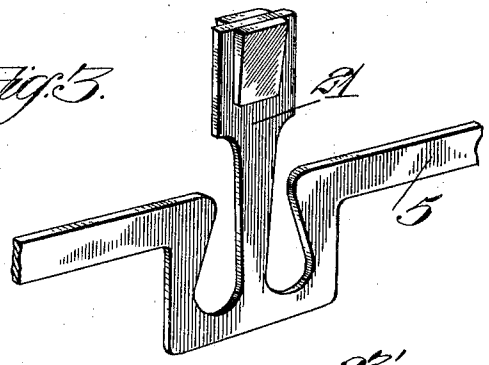


Fig. 4.

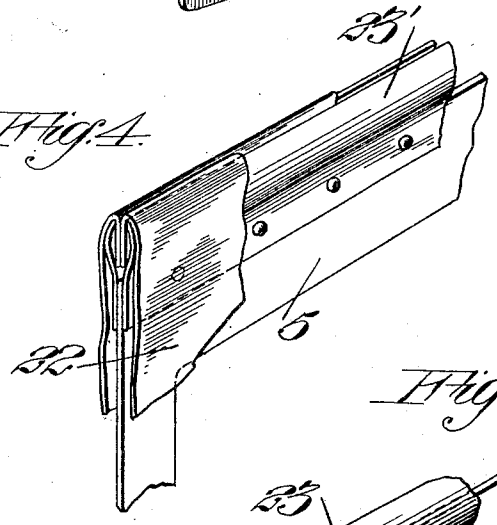
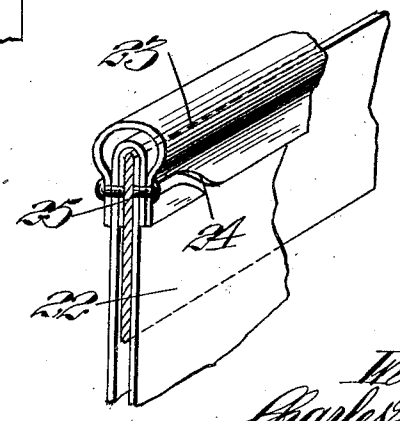


Fig. 5.



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UNITED STATES PATENT OFFICE.

CHARLES H. KING, JR., OF OAKLAND, CALIFORNIA.

ADVERTISING-MACHINE.

1,002,538. Specification of Letters Patent. Patented Sept. 5, 1911.

Application filed February 25, 1911. Serial No. 610,960.

To all whom it may concern:

Be it known that I, CHARLES H. KING, Jr., citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented new and useful Improvements in Advertising-Machines, of which the following is a specification.

This invention relates to an automatic advertising machine, and has for its object to provide an automatic, reliable, self-contained device adapted to accommodate a number of different sheets or wings for displaying signs, pictures, etc., and to provide means whereby the advertising signs may be readily removed and inserted.

The invention consists of the parts and the combination and construction of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a side elevation partly in section. Fig. 2 is a front elevation. Fig. 3 is a perspective view broken away showing the resilient tongue. Fig. 4 is a modification of the paper clamping member. Fig. 5 is an enlarged broken away perspective showing the paper clamp.

The invention embodies a suitable frame 2, which may be inclosed in an appropriate casing 3, and transversely journaled upon the frame 2 is a fixed bar or axle 4, upon which are loosely mounted a plurality of light, strong wings 5, provided with arms having hubs 6, embracing the axle 4. The wings 5 are adapted to swing in a continuous circle about the axle 4 in regular succession at suitable intervals, and are carried upwardly in succession by means of a flexible actuator, here shown as a sprocket chain 7, driven by a driving sprocket wheel 8, mounted upon a shaft 9 in suitable bearings on the frame 2, and to which shaft 9 power may be transmitted by any appropriate train of gears, as 10, deriving their power from a small electric motor or other prime mover 11, mounted adjacent the bottom of the casing 3. From the rear of the driving sprocket wheel 8 the chain passes upwardly over a direction pulley 12, thence horizontally forward over another idle pulley 13, from which it is led backwardly in a semicircular arc formed by the extremities of a number of radial collected wings 5, and from the lower end of the semicircular stretch of the chain 7 it passes over a guide pulley backwardly to the driving sprocket wheel 8. At suitable predetermined spaces upon the sprocket chain 7 are fastened projections 14, adapted to engage the lower side of the outer edge of the swinging wings 5 and carry the latter upwardly about their axle 4 as the chain 7 is driven. Adjacent the upper portion of the semicircular stretch of the actuating chain 7, there is pivoted an automatic latch 15, having a concaved cam surface 16, against which the outer edges of the wings 5 are successively adapted to ride as the wings are brought into vertical position above the axle 4. Upon the outer portion of the latch 15 is formed a depending hook 17, adapted to restrain the foremost of the swinging wings 5 from falling forwardly about the axle 4 until released by the following wing 5, which will lift the latch 15 against the tension of a spring 18 pivoted at 19 to the frame 2. As the latch 15 is actuated by one of the chain-impelled wings 5, it will lift sufficiently to release the foremost wing vertically above the axle 4, and this released wing will fall forwardly about the axle in an arc of approximately 180°, swinging across a vertically disposed locking bolt 20, resiliently supported upon a lower portion of the frame 2 and latched thereby. It is desirable to so accelerate the forward and downward swinging motion of a released wing 5 that its movement will be rendered sufficiently quick to be almost invisible to an observer and also to cause it to fall with sufficient momentum to insure its being carried past the locking bolt 20 by which it will be restrained in its lower position. This acceleration of motion is preferably obtained by a means formed integral with or upon each wing 5, thus avoiding the use of any separate actuating devices. In the present instance this means comprises a resilient tongue 21 formed in each of the wings 5, and which tongues are so shaped that the two swinging wings which are substantially vertical above the axle 4 will be thrust apart from one another by reason of the engagement of the spring tongues 21 of the wings 5. As the actuating chain 7 moves the uppermost wing 5 forwardly, causing it to lift the latch 15, it will be momentarily restrained by the depending point 17 of the latch, and the next following wing 5 will move forwardly so that the spring tongues 21 of these two wings will abut and become compressed so that the moment the latch 15

is lifted sufficiently by the second vertical wing 5, the foremost wing 5 will be projected forwardly by the resiliency of its tongue 21.

Having thus described in general the operating mechanism of my machine, reference will now be made to the advertising mediums which I employ and which consist of a number of removable, renewable and interchangeable sheets 22, which are of a length approximately equal to the diameter of the circle through which the swinging wings 5 move about the axle 4, and which may be of any width as determined by the length of each wing 5. These sheets 22 may be attached upon each side of the adjacent pairs of wings 5, so as to present flat planes to the front of the machine when the adjacent pairs of wings to which the sheets are attached are opened about the axle 4. A suitable means for removably attaching the sheets 22, upon which may be suitably printed, imposed, or otherwise formed advertising matter, to the adjacent faces of the wings 5, comprises clips or clamping members 23, adapted to be passed over the outer longitudinal edge of a wing and bind the stretched sheets 22 thereon, and in order to prevent the accidental displacement of the clips 23 these may be provided with curved slots 24 at suitable intervals, adapted to be passed over slight projections or pins 25 secured adjacent the outer edge of each wing.

An important feature of the present invention is the means to insure the advantageous folding of the sheets 22 between the adjacent faces of the several wings 5 as the latter swing into juxtaposition when released from their vertical positions above the axle 4. This means is here shown as comprising loops 26 of appropriate material which are secured upon the back of the advertising sheets 22, and which loops are adapted to be passed over bars 27 which are formed in or secured to the wings 5 near their transverse edges, and there are also provided other loops 28 adapted to be passed over the resilient tongues 27 formed upon the several wings 5. By means of these loops 26 and 27, positioned as they are, the former about one-fourth of the length of the paper from their ends, and the latter at about one-third the length of the sheet from the other end, the paper or other material of which the sheets 22 may be made, is caused to fold in lines A, B and C, as clearly shown in Fig. 1. It will be noticed that these lines of fold are all considerably separated from each other as regards the area of the advertising sheet 22, and this prevents the cramping and crimping of the folded sheets as they pass upwardly upon the actuating chain 7.

An important and distinctive feature in the present invention is that when a pair of adjacent wings, upon which is fastened a continuous advertising sheet, have been opened on one side of the axle 4, the sheet will be fully distended and the lower locking bolt will hold the lowermost wing sufficiently to cause the uppermost and foremost wing 5 to advance against the retaining hook, thus stretching the advertising sheet until it is smooth.

It will be noticed in Fig. 1 that the two foremost wings above and below the axle 4 stand forward at a slight angle and hold the sheet 22 in the position of a chord of an arc of a few degree less than a half circle whose center is the axle 4.

In Fig. 4 is shown a modification of sheet clip in the form of spring leaves 23′ attached adjacent to the outer edge of each wing 5.

Having thus described my invention, what I claim and desire to secure by Letters-Patent, is—

1. An advertising device comprising a suitable frame, a plurality of independent wings, a horizontal axle upon which said wings are loosely mounted, means for carrying said wings upwardly about said axle, means for retaining adjacent pairs of said wings in an open position on one side of the axle, and flexible advertisIng mediums each attached to opposite sides of adjacent pairs of wings.

2. An advertising device comprising an incased frame, a horizontal axle supported upon said frame, a plurality of independent wings mounted upon said axle, advertising sheets each attached to opposite sides of adjacent pairs of wings, and means for carrying said wings upwardly, said means including an actuating chain having a plurality of spaced projections adapted to lift successive wings.

3. An advertising device comprising a suitable frame, a horizontal axle mounted upon said frame, a plurality of advertisement-supporting wings, a sprocket chain passing over the outer ends of the wings having projections to extend under the lower sides of said outer ends for lifting said wings on one side of the axle, and means for temporarily sustaining the successive wings in a vertical position above said axle, said means comprising a spring-actuated latch adapted to be lifted to release a restrained wing by a following wing, said wings being provided with resilient devices whereby a released wing may be automatically projected forwardly by the following wing.

4. An advertising device comprising a suitable frame, an axle mounted upon said frame, a plurality of advertisement-supporting wings, means for lifting said wings on one side of the axle, means for tempora-

rily sustaining the successive wings in a vertical position above said axle, said means comprising a spring-actuated latch adapted to be lifted to release a restrained wing by a following wing, said means being provided with resilient devices whereby a released wing may be automatically projected forwardly by the following wing, receiving devices on said wings and means for securing an advertising medium upon said wings, said means including suitable loops secured upon the rear side of the advertising medium and adapted to be threaded over the receiving devices formed upon said wings.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

CHARLES H. KING, JR.

Witnesses:
F. E. MAYNARD,
JOHN H. HERRING.