

(No Model.)

2 Sheets—Sheet 1.

H. T. SKELLY & W. J. NEILSON.
STATION INDICATOR.

No. 500,082.

Patented June 20, 1893.

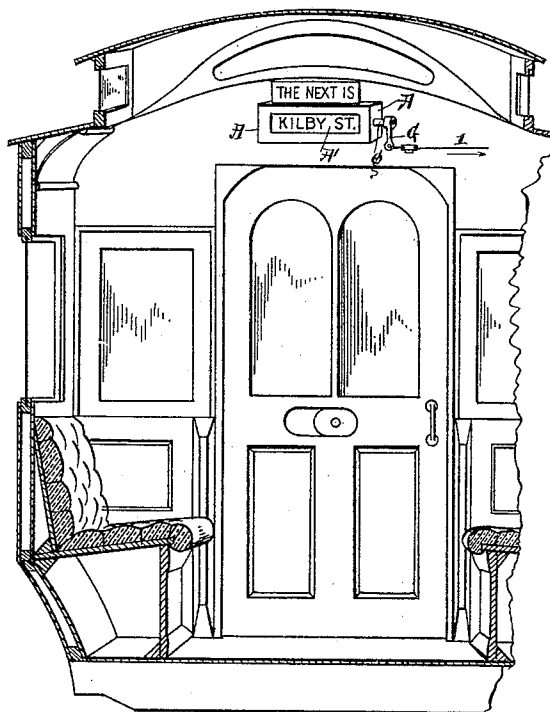


Fig. 1.

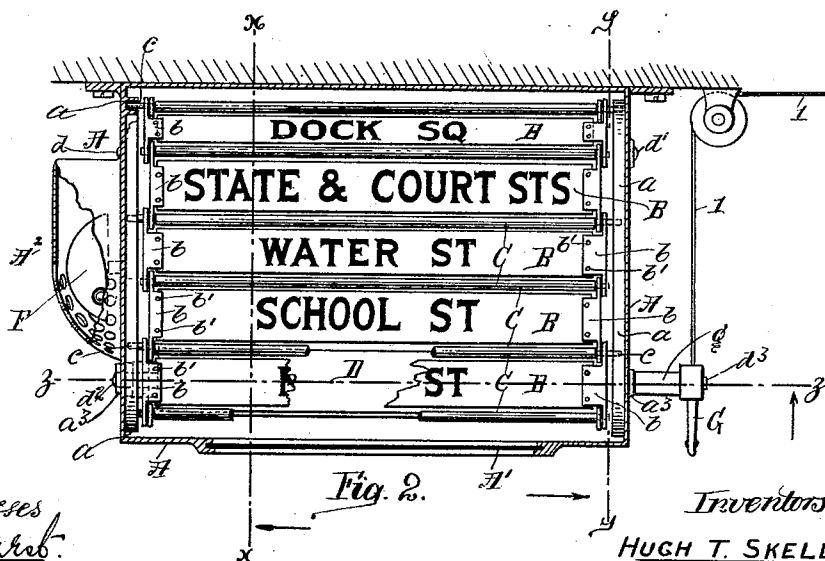


Fig. 2.

Witnesses
W. H. Corbett
Alan Arthur

Inventors
HUGH T. SKELLY
WILLIAM J. NEILSON

By

Thomas M. Skelly
Attorney

UNITED STATES PATENT OFFICE.

HUGH T. SKELLY AND WILLIAM JAMES NEILSON, OF BOSTON, MASSACHUSETTS.

STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 500,082, dated June 20, 1893.

Application filed November 30, 1892. Serial No. 453,655. (No model.)

To all whom it may concern:

Be it known that we, HUGH T. SKELLY and WILLIAM JAMES NEILSON, of Boston, in the county of Suffolk, State of Massachusetts, have invented a new and useful Indicating-Machine, of which the following is a specification.

This invention consists essentially, of an endless street or station indicating chain, such having alternately in its links engaging parts and disengaged parts with a suitable guideway, that acts partly to sustain such, and to guide it in its rotary movement, and to fold such links on their return after displayment; of the said chain being actuated by a suitable wheel and idler and such being regulated by a movable contact device and such engaged with a suitable trip gong device, and the wheel being actuated by an escapement means and such by a manipulating rope, whereby each card or link is moved consecutively; and of the above means being sustained within a suitable cabinet.

This invention has for its object to indicate forthcoming streets or stations while in a car.

In the drawings Figure 1 illustrates my invention located in a car. Fig. 2 is a plan section of my invention. Fig. 3 is a cross section on line (x) and (x). Fig. 4 is a cross section on line (y) and (y). Fig. 5 is a transverse section in detail on line (z) and (z) as indicated by Fig. 2 as with the other sectional views.

(A) represents the outward case of my invention, such having the card chain guideway (a) which is continuous. (A') denotes a glass face provided on the case, which is to permit displayment of the indicating moving cards (B). These cards have thereon such names as would represent a street or station that the car would next come to, as represented by Fig. 2 and are retained by the link parts (b). These link parts are so designed as to receive the ends of the card, and sustain such, by passing through both pins (b'). These pins are to prevent the card from becoming out of contact with their link parts (b) which have their bodies U shaped, as represented by Fig. 3. The ends of these links as last mentioned, are engaged with the rod (C) in such a manner as to be kept in one line with each other

and not receive a lateral movement, by being engaged with a smaller diameter thereof and with their card. These rods run horizontally with the raceways of the card chain and alternately engage with such as represented by Figs. 2 and 3.

By engaging the ends (c) of the rods alternately as described we are enabled to use a great number of cards in a comparatively small space as represented by Fig. 3, as the cards or links (B) when discharged by the rotary moving link engager (D) fold as shown by said view. This link actuator and sustaining wheel (D) can be designed various ways in construction, and shape. It can be either round, and the links to conform therewith, or have three or more angles thereon and the links to correspond with such. Thus the design of this wheel as shown by Figs. 2, 3, and 5, are not positive. The link wheel (D') is an idler having its axis as with the wheel (D) on the vertical sides of the case (A) as denoted by (d) and (d') respectively. The operating shaft or wheel (D) has a reduced portion at each end; said portion being square in cross section, the faces of which form bearing surfaces for the spring pressed plunger (E'), and to cause the said wheel to stop instantly with each card until shipped by the escapement means hereinafter described.

The plunger (E') is designed with a suitable broad face (e) to engage with the respective sides of the plunger actuator (E) to perform the function as previously described. The shank (e') of the plunger is guided by the projections (a') and (a²) on the vertical sides of the cabinet or case (A), and has a spiral spring (e²) engaged therewith and with a pin (e³) therethrough, and with the lug (a²). This is to give thrust of the plunger to the plunger actuator for such reasons as before described.

To the free end of the plunger shank is connected the depending arm (e⁴) engaged with the forked arm (f) of the gong arm fulcrum (f'); whereby the gong arm (f²) is caused to strike the gong (F) on the discharge of each link card (B) automatically, and thus cause attention to be had to the newly appeared card. This gong is placed in a suitable case (A²) having a series of holes there-through so as to permit the sound of the gong to be distinctly heard. (a³) represents the

journal bearings for the shaft D. The journal (d^3) has loosely mounted on it the sleeve (g) which carries the arms (G) and (g') respectively. The latter arm is provided with a suitable snap pawl (g^2) depressed by the spring (g^3) secured to said arm and freely engaged with the upper part of said pawl. To the journal (d^3) is secured a suitable ratchet wheel (H) in juxtaposition with the other parts on said journal; and with this ratchet wheel engages the pawl (g^2) combined as just described. The arm (G) on being swung in the direction denoted by the arrow on Fig. 4, and the pawl being engaged with the ratchet wheel, the wheel (D) causes the card chain to move in the direction as denoted by the arrow on the above view through the ratchet wheel being engaged with said pawl; and, when the manipulating rope (1) has been relaxed the pawl travels backward over the ratchet wheel without imparting movement to such, and engages with the next tooth of said wheel, ready to repeat the aforesaid. To facilitate the return of the arm or lever G to its primary position we attach the spring (g^4) to its arm (g') and to the vertical side of the cabinet (A). The arm or lever (G) is limited in its swinging movement by the stops (2) and (3) on the vertical side wall of the cabinet or case, and these stops can be provided with suitable material to form cushions for such to strike against.

Our invention it will be seen, can be easily engaged with a driving motor and made applicable as an advertising machine by simply substituting for the names of places, such names as may represent other things. Thus we do not wish to limit ourselves to any one application of our invention.

40 Having described our invention, we claim—

1. In an indicating machine as described, an endless displaying card chain consisting of opposite links designed to receive the ends of a card, such links pivoted on horizontal rods, cards combining said opposite links as to make a perfect link, said rods combining said links and designed to keep such in line with each other, the free ends of said rods engaging with a suitable continuous guideway and being disengaged alternately, a chain actuating wheel and a supporting wheel as described, a suitable cabinet such supporting said wheels axially, a card displaying opening thereon and the said guideways, suitable plunger engaging parts on the actuating wheel jour-

nals, plungers engaging with said parts and a spring giving thrust to such and sustained by the cabinet, an arm retained by the plunger and a forked lever engaged therewith and fulcrumed on said cabinet, a gong hammer actuated by the forked lever and a gong in juxtaposition with said hammer and retained by the cabinet, a perforated case enclosing said gong and mechanism and retained by said cabinet, a suitable lever loosely fulcrumed on a journal of the actuating wheel, a snap pawl carried by said lever, a suitable ratchet wheel secured to said journal and said pawl engaging with said ratchet wheel, a spring designed to return said lever after being moved, and stops to limit its movement, suitable means to actuate the lever to move the cards, substantially as set forth.

2. In an indicating machine, an endless card chain having its link connecting pins engaged and disengaged alternately with a continuous guideway, whereby the links are caused to fold after displayment, an actuating wheel and supporting wheel as described, a cabinet supporting said wheels axially, and having a card displaying opening and provided with guideways as described, a regulating means to govern the actuating wheel for the purpose described and such combined with a trip gong mechanism, a suitable lever loosely fulcrumed on a journal of the actuating wheel, a snap pawl carried thereon, a suitable ratchet wheel secured to said journal and a pawl engaged therewith, and said lever actuated by a rope or its equivalent means and having a spring engaged therewith to return such, substantially as set forth.

3. In an indicating mechanism substantially for the purpose described, a card chain, consisting of opposite links, designed to receive the ends of a card, such links pivoted on horizontal rods or pins, cards combining said opposite links as to make a perfect link, and said cards detachably connected with said opposite links and said rods or pins combining said links, and designed to keep such in line with each other, the free ends of said rods or pins engaging with a suitable guideway and not engaging with such alternately, substantially as described.

HUGH T. SKELLY.

WILLIAM JAMES NEILSON.

Witnesses:

THOMAS W. HOBDAV,

G. A. FORREST.