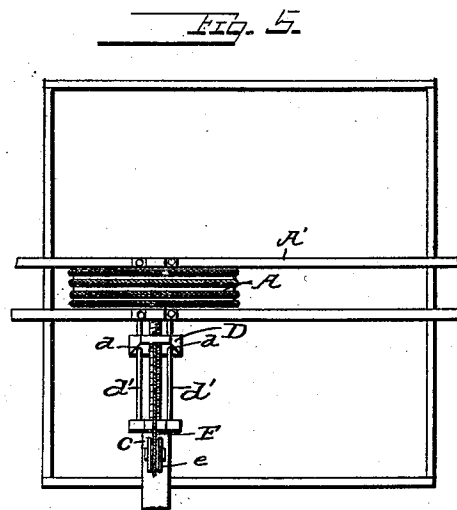
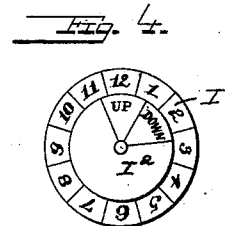
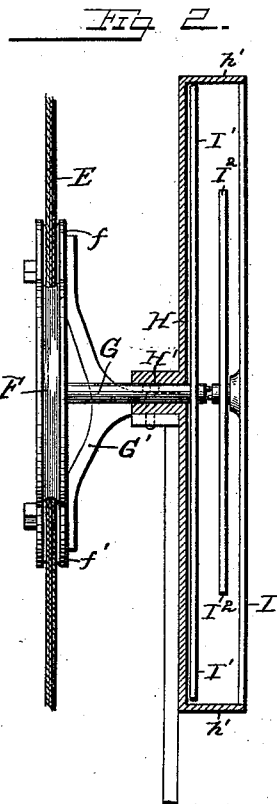
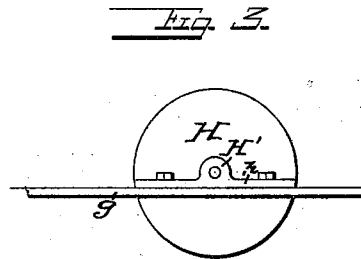
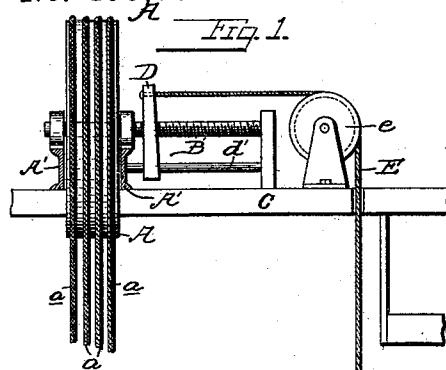


(No Model.)

A. L. MEYER.
INDICATOR FOR ELEVATORS.

No. 499,390.

Patented June 13, 1893.



Attest:
Wm. J. S. S. S.
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UNITED STATES PATENT OFFICE.

ABRAHAM L. MEYER, OF CHICAGO, ILLINOIS.

INDICATOR FOR ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 499,390, dated June 13, 1893.

Application filed November 14, 1892. Serial No. 451,898. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM L. MEYER, a citizen of the United States, and a resident of Chicago, county of Cook, and State of Illinois, have invented a new and useful Improvement in Indicators for Elevators, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

My invention relates to an improvement in indicators for elevators, for the purpose of visibly indicating, at each and every floor of the building, simultaneously, the exact point at which the elevator car is moving or at rest, and also the direction in which said car is traveling, either up or down.

The object of my invention is to produce a simple and inexpensive indicator and one which is reliable in its operation and not liable to get out of order, and, to this end, my invention consists in utilizing the power derived from the main sheave or pulley for driving the pointer or dial, through the interposition of a belt or cable and suitable gearing, as hereinafter fully described and pointed out in the claims.

In the accompanying drawings:—Figure 1 represents a side view, partly in section, of an elevator shaft or well, showing the main pulley or sheave, indicators and connections. Fig. 2 is an enlarged, transverse section through the indicator case, showing the dials in elevation and illustrating the manner of supporting the friction pulleys. Fig. 3 is a rear view of the dial or indicator case, showing the manner of supporting the same. Fig. 4 is a front elevation of the two dials or indicators. Fig. 5 is a plan view of the construction shown in side elevation in Fig. 1.

Like letters refer to like parts in the several figures.

A, represents the main sheave or pulley and a, a, a, a , the main hoisting ropes or cables; which are attached to the elevator car and run up over said pulley A, and thence to the hoisting engine. The pulley A is mounted in suitable bearings, supported upon cross-beams A', A' , in the usual manner, and has an extended shaft B, which is threaded or has a worm, as shown. The outer end of the extended shaft B, is supported in a bearing bracket C, also supported on a cross-beam c.

D, indicates an arm or nut, which is threaded to receive the extended shaft B, and also has perforations at d, d , through which pass rods or guides d', d' , extending from the beam A' , to the bearing bracket C, or otherwise suitably supported; these rods d' , serve to guide and steady the arm or nut D in its movements. The arm D is moved back and forth by the threaded shaft B, and carries the cord, cable or belt E, which drives the indicators, hereinafter described:

The cable or belt E, passes over a pulley, e , supported in a bracket, e' , on the cross-beam c , and thence extends down the elevator shaft, in its course passing between pulleys F, f and f' , at each floor of the building, whereby it is caused to impart motion to said pulleys. At the bottom of the shaft or well, the cable or belt has a weight depending from it, which is sufficient to hold it taut and draw down on the cable or belt and cause it to operate the pulleys referred to.

F, represents a pulley fixed on a spindle G, which passes into the indicator case H, and f and f' two smaller friction pulleys which force the cable or belt against and into close frictional contact with the pulley F, on the spindle G.

G' is a two-armed bracket, which is bolted to the top bar or rail, g , of the wire casing which incloses the elevator shaft and said bracket carries the spindles or stud shafts on which the pulleys f and f' are mounted.

H indicates the rear wall of the casing inclosing the indicator dials. Said rear wall is provided with a hub or sleeve H' , which forms a bearing for the spindle G and is also formed with a horizontal flange h , through which it is bolted to the top rail g , above referred to. h' , is a peripheral flange, which receives the front piece I, of glass. The spindle G, after it enters the casing H, has two dials I and I', of different diameters secured thereon. One of said dials has, upon its face, a series of numbers, arranged in a circle and corresponding to the floors in the building. The other dial has upon it, such words of information as "Up," "Down," &c. Between the dials, the spindle G, is divided or cut in two and the contiguous ends thereof are geared together by means of two teeth, one formed on each, whereby one part of the spindle may turn or

revolve a certain distance without affecting the other part, but so arranged and timed that when the elevator car arrives at the top of the shaft, the part of the spindle which carries the dial with the words "Up," "Down," &c., will be revolved, until the word "Down" is brought to the point where it can be observed and vice-versa, when the car reaches the bottom of the shaft, the said dial will be turned so as to display the word "Up."

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

1. The main sheave or pulley having an extended shaft, formed or provided with a worm or screw-thread and a traveling arm or nut operated thereby, in combination with the indicators and the cable interposed between said traveling arm and the indicators for communicating motion from one to the other substantially as and for the purpose described.

2. An indicator composed of two dials of different diameters, one dial being mounted on and in combination with a rotary spindle, and the other dial adapted to be turned by means of a tooth or spur carried by the spin-

dle and means for rotating said spindle, substantially as described.

3. An indicator for elevators consisting of two dials, mounted on a sectional spindle, the contiguous ends of which sections are formed or provided with one or more teeth, whereby one part of said spindle is adapted to turn part way around, independently and to then take up and turn the other part of said spindle and means for imparting motion to one part of the spindle, all substantially as and for the purpose described.

4. The main sheave or pulley, having an extended, threaded shaft, in combination with a sliding and threaded arm or nut, one or more guide rods on which said arm or nut slides and the indicator cable connected with and operated by said arm or nut, substantially as set forth.

In testimony whereof I have hereunto set my hand this 12th day of November, A. D. 1892.

ABRAHAM L. MEYER.

Witnesses:

REXFORD M. SMITH,
J. LAWRENCE GERRY.