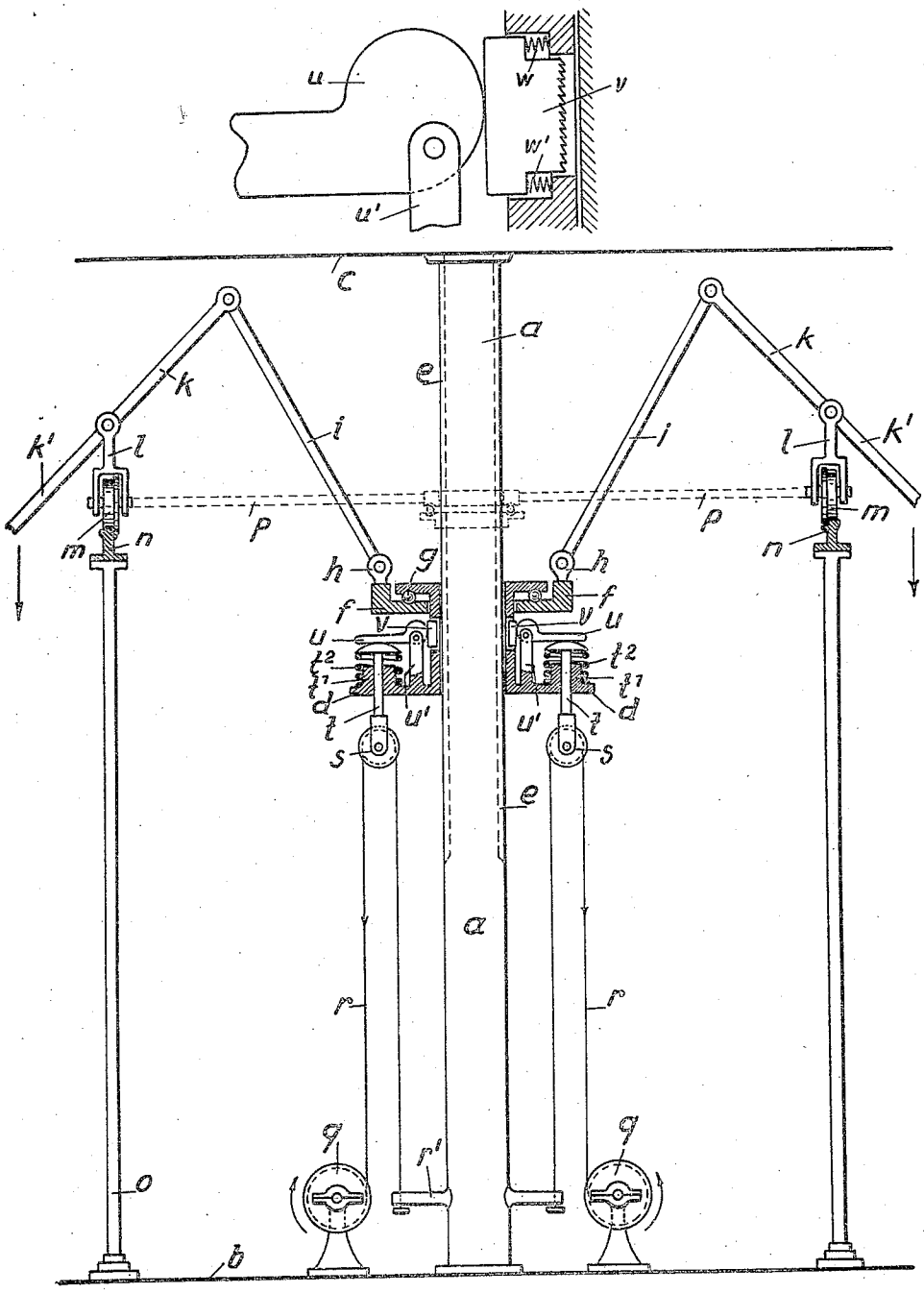
Feb. 28, 1933. L. SCHMIDT 1,899,060

DEVICE FOR ROTATING AND AT THE SAME TIME LIFTING THE GONDOLAS OF ROUNDABOUTS

Filed Dec. 5, 1931



Inventor:

Leopold Schmidt

Patented Feb. 28, 1933

1,899,060

UNITED STATES PATENT OFFICE

LEOPOLD SCHMIDT, OF WESERMUNDE, GERMANY

DEVICE FOR ROTATING AND AT THE SAME TIME LIFTING THE GONDOLAS OF ROUNDABOUTS

Application filed December 5, 1931. Serial No. 579,154.

This invention relates to a device for rotating and at the same time lifting the gondolas of roundabouts, in which the levers carrying the gondolas are connected at their inner end to a pulling device oscillating in vertical plane. In the known devices of this type the ascending and descending of the seat carriers is effected by pull ropes through the intermediary of a head guided on the rigid middle supporting device or the up and down movement of the middle supporting part is effected by a rigid lever device, the lower end of which is shifted by a vertical spindle.

As compared with these arrangements the invention presents the advantage of an extremely simple and clear construction and also the further advantage that the arrangement reduces to a minimum the possibility of breakdowns, such as can easily occur in the complicated known arrangement. This is attained in that the ropes causing in known manner the oscillating movement of the supporting levers, however with the aid of intermediate levers, engage on the under side of a guide ring, carrying at the same time on its under flange a rope fracture safety device and engaging and shiftable in longitudinal grooves in the middle column, each of the ropes being placed over rope pulleys, rotatable in the same direction, which are interconnected and positively connected to the driving mechanism.

An embodiment of the invention is illustrated diagrammatically in the accompanying drawing.

A stationary middle column *a* having a base *b* and a roof *c* is provided with longitudinal grooves or bars *e*, in which a guide ring *d* is mounted shiftable in vertical direction. A rotary disc *f* mounted on balls *g* is arranged within this guide ring *d*. The disc *f* has bearing lugs *h*, in which intermediate levers *i* are radially movable. These levers *i* are movably connected to double armed levers *k*, on the outer arm *k'* of which the passenger gondolas are mounted. The levers *k*, *k'* have supporting bearings *l*, which rest by means of wheels or rollers *m* on a rail *n*. The rail *n* is mounted on uprights *o*.

The rotary running movement of the gondolas may be effected in known manners or by means of a running system *p*.

If the gondolas are to be raised, the power drive of the rope drums *q* is engaged in the direction of the arrow, when by means of the ropes *r* and the pulleys *s* the guide rim is lowered on the column *a*. By means of the movement transmission *d*, *f*, *h*, *i*, *k* the outer lever arms with the gondolas mounted thereon are raised during the rotation. The lowering of the gondolas or the unwinding of the drums *q* is effected in known manner by interposing a brake disc or the like.

The ends of the ropes *r* are fixed in lugs *r'*.

As a protection against fracture or yielding of the pull rope the holders or pulleys *s* are mounted in guides *t* under the pressure of springs t^2. In the event of a fracture or giving of a rope, the rope holder presses with its wide end in upward direction against the lever *u*, which is mounted on a bracket *u'*. The lever *u* has an eccentric end which presses against a brake block *v*, which is provided with milled teeth on the surface directed towards the middle column *a*, in order to afford a good hold. The brake block is let into the casing and in inoperative position is pressed away from the column by means of springs *w*, *w'*.

Owing to the fact that the lever arms carrying the gondolas are never relieved, when in operation, a continuous pull or pressure always exists on the rope pulleys and holders. The springs t^2 are compressed, in order to prevent a braking effect from occurring.

I claim:—

A device for rotating and at the same time lifting the gondolas of roundabouts, comprising in combination a middle column having longitudinal grooves, a shiftable guide ring engaging in the grooves of said middle column, a flange on the lower end of said ring, rope pulleys mounted on said flange, driving ropes connected to said ring through the intermediary of said pulleys, means connected to said ropes to move said ring up and down on said column, a safety device in said ring to arrest the movement of said ring in the event of fracture or giving of

said ropes, a rotary disc engaging in said ring, intermediate levers connected at one end to said disc, and levers pivoted intermediate their ends connected at their inner ends to the other ends of said intermediate levers adapted to be oscillated by the up and down movement of said ring.

In testimony whereof I affix my signature.

LEOPOLD SCHMIDT.