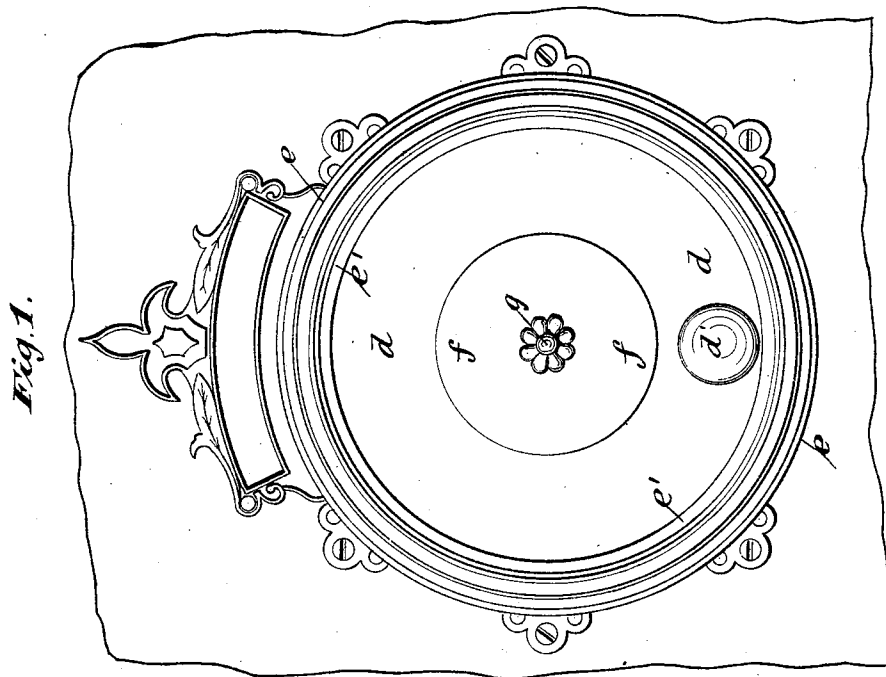
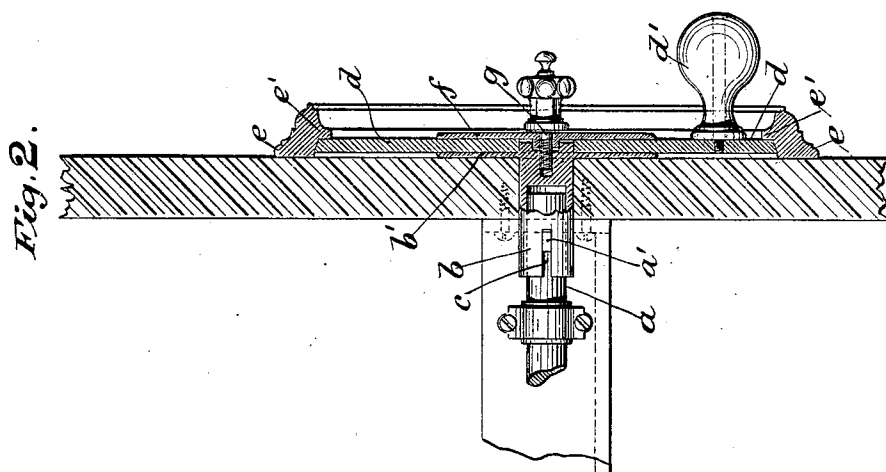


(No Model.)

C. A. ROEPKE.
WINDING DEVICE FOR MUSICAL BOXES.

No. 592,832.

Patented Nov. 2, 1897.



WITNESS:

H Richard Wobse
Ottomunk

INVENTOR:

INVENTOR:
Carl Albert Koepske

Richardson

UNITED STATES PATENT OFFICE.

CARL ALBERT ROEPKE, OF MANCHESTER, ENGLAND, ASSIGNOR OF ONE-HALF TO ROEPKE & CO., LIMITED, OF SAME PLACE.

WINDING DEVICE FOR MUSICAL BOXES.

SPECIFICATION forming part of Letters Patent No. 592,832, dated November 2, 1897.

Application filed January 18, 1897. Serial No. 619,667. (No model.) Patented in England January 1, 1897, No. 41.

To all whom it may concern:

Be it known that I, CARL ALBERT ROEPKE, a subject of the Emperor of Germany, residing at Manchester, in the county of Lancaster, England, have invented new and useful Improvements in Winding-Up Devices for Musical Boxes, Orchestrals, and the Like Instruments, (for which I have obtained Letters Patent in Great Britain, No. 41, dated January 1, 1897,) of which the following is a specification.

This invention relates to improvements in that class of musical boxes, orchestrals, and the like instruments which are worked by a spring or weight and wound up by a crank-handle or key. As such instruments are now constructed, the said crank-handles or keys are adapted to be taken off and are thus liable to get lost, and the instrument itself is easily overwound.

The object of my invention is to remedy these defects and thus prevent annoyance and breakage in overwinding the instrument or winding up in the wrong direction. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side view, and Fig. 2 a longitudinal section, of my improved means for winding up the said spring or weight.

In carrying out my invention I dispense with the said crank-handle or key and employ in lieu thereof means for turning the said spring or weight winding-up shaft, which are permanent and not adapted to be removed and which prevent the instrument being overwound or damage thereto by winding in the wrong direction. To this end I employ upon the spring or weight winding-up shaft *a* a sleeve *b*, having a flange *b'* near its outer end and at its inner end slots *c*, adapted to engage correspondingly-shaped projections *a'* on the shaft *a*, and thereby couple the sleeve *b* to the latter. Upon the outer end of the sleeve *b* I employ a disk *d*, having a knob *d'*, over which is secured a ring *e*, preferably to the outside of the case of the instrument, which ring may be formed with a flange *e'* and prevents the disk *d* being removed from the sleeve *b b'* or winding-up shaft *a*. To the outer end of the sleeve *b* I secure, by means of a screw *g*, a plate *f*, whereby the disk *d* can be drawn tight against the flange *b'* of the sleeve *b*. When rotating the disk *d* by means of its knob *d'*,

the shaft *a* will join in the rotation until the spring or weight of the instrument is wound up sufficiently. If the rotation of the disk *d* is continued, the resistance of the said spring or weight will cause it to slip between the flange *b'* and plate *f*, and thus disengage it from the sleeve *b b'*—i. e., the shaft *a*—which is also the case when turning the disk in the wrong direction. The amount of grip upon the disk *d* by the flange *b'* and plate *f* can readily be regulated in accordance with the strength of the spring or the size of the weight of the instrument as may be required by tightening or turning back the screw *g*.

I may remark that the portion of the disk *d d'* around the flange *b'* and plate *f* may be formed with one or more arms, as shown in dotted lines, Fig. 1, the outer ends of which or a rim formed thereon being adapted to run in the ring *e e*, or the disk *d d'* may be formed sectional, as will be readily understood.

A modification of my invention consists in dispensing with the sleeve *b b'* and forming or furnishing the shaft *a* itself with the flange, plate, and screw *b', f, and g*, respectively, as will be readily understood, the sleeve *b b'* being only employed for convenience in fitting the instrument to the case.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A winding device for music-boxes consisting of a disk *d*, the shaft *a*, the rings *e, e'*, secured over the disk, and means including the disk *b'* for holding the disk in frictional contact with the shaft to allow the disk to slip when the device is wound, substantially as 90 described.

2. A winding device for music-boxes consisting of a disk *d*, the shaft, the flange *b'*, and the friction-clamp for connecting the disk with the shaft, with means for rotating the disk, substantially as described. 95

3. A winding device comprising the shaft, the flange *b'* connected thereto, the plate *f* with means for adjusting said plate, and the friction-disk clamped between the plate and flange, substantially as described. 100

In witness whereof I have hereunto set my hand in presence of two witnesses.

CARL ALBERT ROEPKE.

Witnesses:

ALFRED BOSSHARDT,
STANLEY E. BRAMALL.