March 29, 1949. C. K. STOTZ 2,465,492

ESCAPEMENT MECHANISM FOR ALARM CLOCKS

Filed Feb. 2, 1946

Fig. 1.

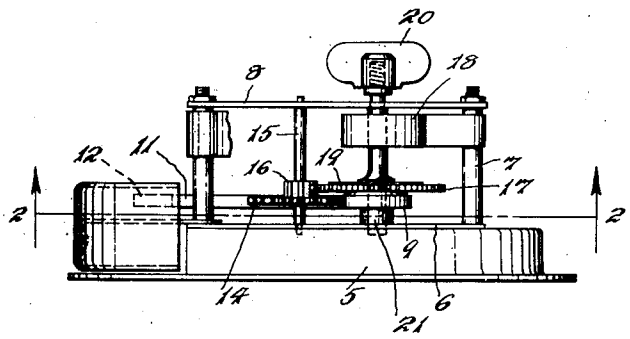
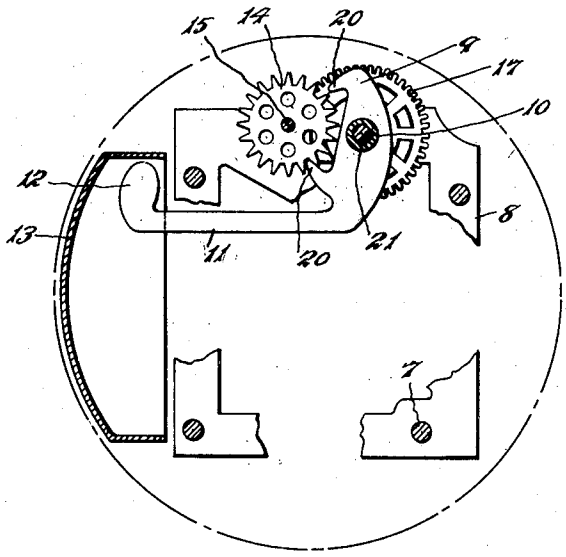


Fig. 2.



Inventor

CHARLES K. STOTZ.

By Louis V. Lucia

Attorney

Patented Mar. 29, 1949 2,465,492

UNITED STATES PATENT OFFICE

2,465,492

ESCAPEMENT MECHANISM FOR ALARM CLOCKS

Charles K. Stotz, Laconia, N. H., assignor to The Cha-Gobe Company, Hartford, Conn.

Application February 2, 1946, Serial No. 645,065

5 Claims. (Cl. 116—162)

1

This invention relates to alarm clock escapements and more particularly to a verge mechanism such as used for ringing an alarm clock bell.

An object of this invention is to provide such a mechanism which is simple in construction, durable, and which will eliminate a number of parts now commonly used in such mechanisms so as to effect substantial savings in the cost of manufacture, particularly when such clocks are produced in large quantities.

Further objects and advantages of this invention will be more clearly understood from the following description and from the accompanying drawings, in which—

Figure 1 is a top view of a portion of a clock mechanism embodying my invention.

Figure 2 is a rear view of said mechanism on the line 2—2 of Fig. 1.

As shown in the drawings, the numeral 5 denotes the front plate of a clock having the mechanism secured to the rear surface thereof. The said mechanism may include a base plate 6 having a number of pillars 7 supporting a top plate 8. The various gears, shafts, and other parts of the mechanism, not shown, being mounted between the said plates 6 and 8.

In the embodiment of my invention shown, I provide a rocker arm 9 which is pivotally mounted directly upon the main drive shaft 10 of the clock mechanism and carries an extension 11 having a hammer 12 at the end thereof adapted to strike a suitable bell 13; the said arm, extension and hammer being flat and in one piece.

An escapement wheel 14 is mounted upon a shaft 15 and has a pinion 16 which meshes with a driving gear 17 upon the main shaft 10 that is rotated by an alarm spring 18. It will be noted that the said shaft 10 also carries a conventional one-way clutch 19 and a winding key 20 by means of which the spring 18 may be wound.

It will be understood by those skilled in the art that the spring 18 will drive the shaft 10 which in return will rotate the gear 17. The said gear will rotate the pinion 16 and therewith the escapement wheel 14. The teeth of said wheel, engaging the fingers 20—20 on the rocker arm 9, will cause said arm to oscillate and, through the hammer 12, ring the bell 13.

Heretofore, the said rocker arm has been mounted on a separate shaft requiring a number of component parts which, in the production of clock mechanism on a large volume basis, represented a cost of a considerable amount. By my present invention, I have provided for the

2

elimination of unnecessary parts by mounting the rocker arm directly on the main shaft 10, simply positioning it thereon by the use of a spacer 21, and thereby effecting a substantial saving in the cost of manufacture.

Furthermore, by forming the rocker arm and its constituent parts flat and in one piece, I am able to substantially reduce the thickness of the clock mechanism by eliminating the extra shafts and component parts of the escapement mechanism which have heretofore been necessary.

I claim:

1. An escapement mechanism for an alarm clock comprising a rotatably mounted shaft, a spring for driving said shaft, a rocker bar pivotally mounted on said shaft, an escapement wheel adjacent to said shaft in operative engagement with said rocker bar means between said shaft and wheel for driving said wheel, a bell, and an extension on said rocker bar for striking said bell.

2. A clock mechanism comprising a frame, having a shaft rotatably mounted thereon, a spring for driving said shaft, a driving gear on said shaft, a separate shaft adjacent to the first shaft, a pinion on said second shaft in mesh with said driving gear, an escapement wheel rotatable with said pinion on said separate shaft, a rocker arm pivoted on said first shaft and having projections engaging said escapement wheel, a bell, and a hammer portion on said rocker arm for striking said bell.

3. A clock mechanism of the character described comprising a frame having spaced plates, a driving shaft rotatable between said plates, a spring for driving said shaft, a driving gear on said shaft, an escapement wheel shaft adjacent to said driving shaft, a pinion on said escapement wheel shaft in mesh with said driving gear, an escapement wheel on said escapement wheel shaft rotatable with said pinion, a rocker bar pivotally mounted on said driving shaft and having projections engaging with the teeth on said escapement wheel, a bell, and an extension on said rocker bar for striking said bell.

4. An escapement for an alarm clock mechanism comprising a driving shaft, a spring for driving said shaft, a driving gear on said shaft, a rocker arm pivotally mounted on said shaft, a spacer for positioning said rocker arm, an escapement wheel mounted on a separate shaft and in engagement with said rocker arm, a bell, means for transmitting a force from said driving gear to said separate shaft, and an extension on said

rocker arm for striking said bell; the said rocker arm and extension being on a single flat plane.

5. A clock mechanism comprising a pair of spaced plates, a gear train and a driving shaft between said plates, a spring for driving said shaft, means for transmitting power from said shaft to said gear train, a rocker arm pivotally mounted on said shaft, a bell, an extension on said rocker arm for striking said bell, and means for operating said rocker arm through said gear train.

CHARLES K. STOTZ.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,421,091	Latchem	June 27, 1922
1,965,772	Hanson	July 10, 1934
2,085,860	Lambert	July 6, 1937
2,117,873	Borgfeldt	May 17, 1938