

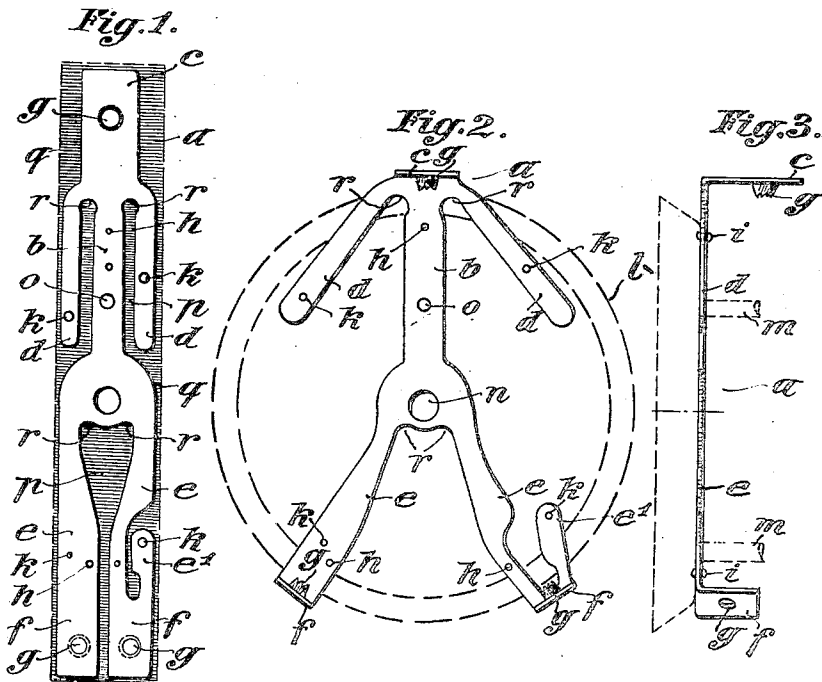
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SUPPORTING STRUCTURE FOR THE MECHANISMS AND/OR DIALS OF CLOCKS

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## SUPPORTING STRUCTURE FOR THE MECHANISMS AND/OR DIALS OF CLOCKS

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This invention relates to a supporting structure for the mechanisms and/or dials of clocks, and more particularly alarm clocks having a circular casing, and also to a method of producing supporting structures of this nature.

Heretofore these supporting structures, more particularly in alarm clocks having a circular casing, have been furnished with an annular form. The ring serves for the attachment of the dial, and also to support the same, which is particularly necessary if the dial consists merely of cardboard. On the annular support it has been usual to provide lugs for the attachment of the clockwork mechanism and for the attachment of the support in the casing. Generally speaking, these supporting structures are produced in a stamping operation. Obviously, however, from the point of view of manufacture, an annular stamping is extremely unfavorable, as in each case there is the circular waste piece of considerable size removed from the centre, whilst waste pieces of gusset-like form result between each two adjacent stampings.

It is the object of the invention to overcome the drawbacks referred to, residing in the necessity for maintaining a large stock of material, in unnecessarily large quantities of material passing between manufacturer and consumer, in loss of interest on capital and the like, and to provide a supporting structure for the purpose in question which can be produced in a stamping operation with a minimum of waste.

In the accomplishment of this object the invention accordingly comprises a method of producing supporting structures for the mechanisms and/or dials of clocks, and more particularly alarm clocks having a circular casing, which consists in stamping out the structure in a form in which its arms, legs, bridges and like parts are disposed in close proximity to one another in a plane, so that they enclose between them a minimum of waste inner area, and thereupon imparting to the said structure its final form following the stamping operation by moving the said arms, legs, bridges and the like apart in the said plane.

A supporting structure which is particularly adapted in its form for production by the method referred to includes a bridge portion which proceeds from the centre of the dial and forms the body of the supporting structure and possesses arms and legs for the attachment and support of the dial and the clockwork mechanism, the said arms and legs being situated close up against the body, i. e., in adjacent disposal to one

another, so that the stamping possesses a substantially rectangular form.

The invention is illustrated by way of example in the accompanying drawing, which shows a supporting structure adapted for use in an alarm clock having a circular sheet metal casing.

Fig. 1 shows the supporting structure in its form following the stamping operation, whilst

Figs. 2 and 3 are a general view and elevational view respectively of the said supporting structure in the finally completed form.

The supporting structure referred to generally as *a* possesses a bridge *b* proceeding from the centre of the dial. This bridge terminates in attachment lugs *c*, which in the manner usual in supporting structures of this kind is secured to the sheet metal casing by means of the bush for the stopping lever.

The bridge *b* forms at the same time the body of the supporting structure, from which there extend the arms *d* and the legs *e*. On the legs there are bent attachment lugs *f* which, in the usual fashion, are screwed to the casing by means of the legs of the alarm clock. For attachment purposes there are provided in the lugs *c* and *f* threaded holes *g*. In the body *b* and the legs *e* there are provided holes *h* for the dial rivet *i*. The dial *l*, which is produced in the conventional manner from a piece of cardboard, is indicated in broken lines in Figs. 2 and 3. For the attachment of the clockwork mechanism there are provided in the supporting structure holes *k*, through which screws having sunk heads are screwed into the ends of the members *m* indicated in broken lines in Fig. 3. As shown in the drawing, the leg of the supporting structure on the right possesses a special small arm *e*<sub>1</sub>, over which there is located the attachment hole *k*.

The supporting structure is preferably stamped out in the form shown in Fig. 1. The arms are in close proximity to the body *b*, and the legs *e* are also close together, so that the outer marginal line of the stamping encloses a minimum inner area, whilst by reason of its substantially rectangular form there is only a narrow piece of waste material *q* between two adjacent stampings. The total waste area is indicated in Fig. 1 by cross-hatching.

Preferably upon the stamping operation the attachment lugs *c* and *f* are simultaneously bent vertically. In an additional operation the arms *d* and the legs *e* are bent off from the body *b* until they assume the position shown in Fig. 2.

Experience has shown that the arms and the legs can be bent quite readily in the cold condi-

tion if care is taken that sharp corners are avoided at the bending points and a proper rounding *r* is produced. The clockwise mechanism is screwed to the supporting structure in the usual fashion, to which there is also riveted the dial. The bridges *b* and *c* extending from the centre of the dial in star-like fashion together with the arms *d* provide a sufficient support for the dial, so that this is unable to warp and the ring cannot stand away from the glass.

The use of the method according to the invention is not limited to the production of supporting structures for clocks. It can be used for the production of substantially flat frames or supports of a desired kind. This method, for example, can also be used with advantage for producing the cover plates of clocks, as it is exactly in the case of cheap clocks produced in large numbers, and particularly alarm clocks, that these cover plates possess numerous openings and consequently require the use of an unnecessarily large amount of material.

What I claim as new and desire to secure by Letters Patent is:

1. A supporting structure for the mechanism and/or dials of clocks, particularly alarm clocks having circular casings, comprising a frame member having a bridge extending from a center point and which forms the body of the frame member, arms and legs integral with and in the same plane as the bridge and extending from the bridge, said arms and legs being substantially parallel and close to each other and to the bridge and capable of being adjusted to angular positions relative to the bridge in the same plane thereof to conform to the particular casing and mechanism to which the structure is to be adapted.

2. A supporting structure according to claim 1, in which three supporting lugs are provided integral with the frame member at right angles thereto of which one consists of an extension of the bridge adjacent the part where the arms join the bridge and one on the end of each leg.

3. A supporting structure according to claim 1, in which there are two arms and two legs provided symmetrically arranged relative to the bridge.

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