

W. E. MCGRAW.
CLOCK CASE.
APPLICATION FILED APR. 20, 1908.

923,991.

Patented June 8, 1909.

3 SHEETS—SHEET 1.

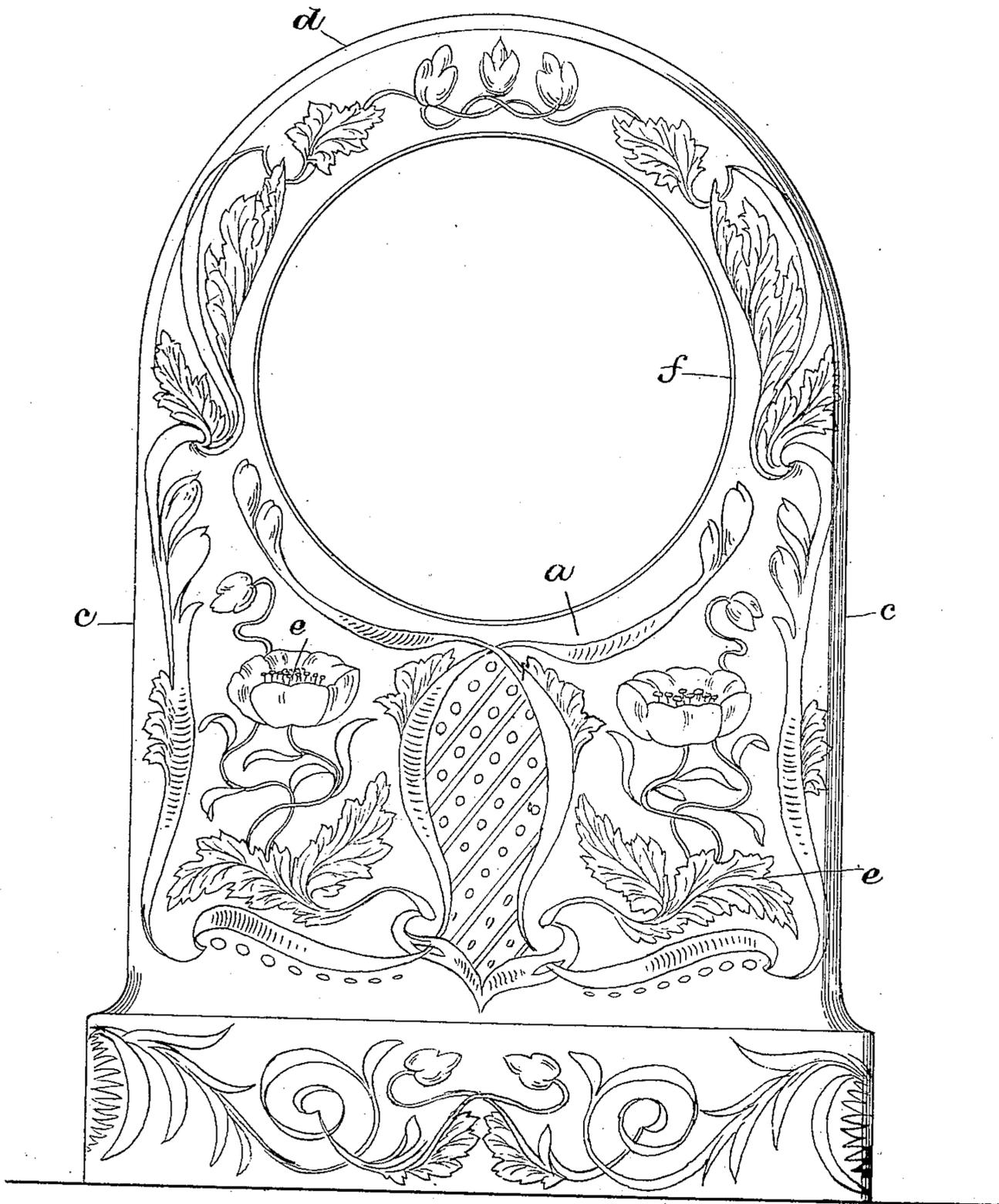


Fig. 1.

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Inventor:
Walter E. McGraw
By Chas. J. Howe
his Atty.

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3 SHEETS—SHEET 2.

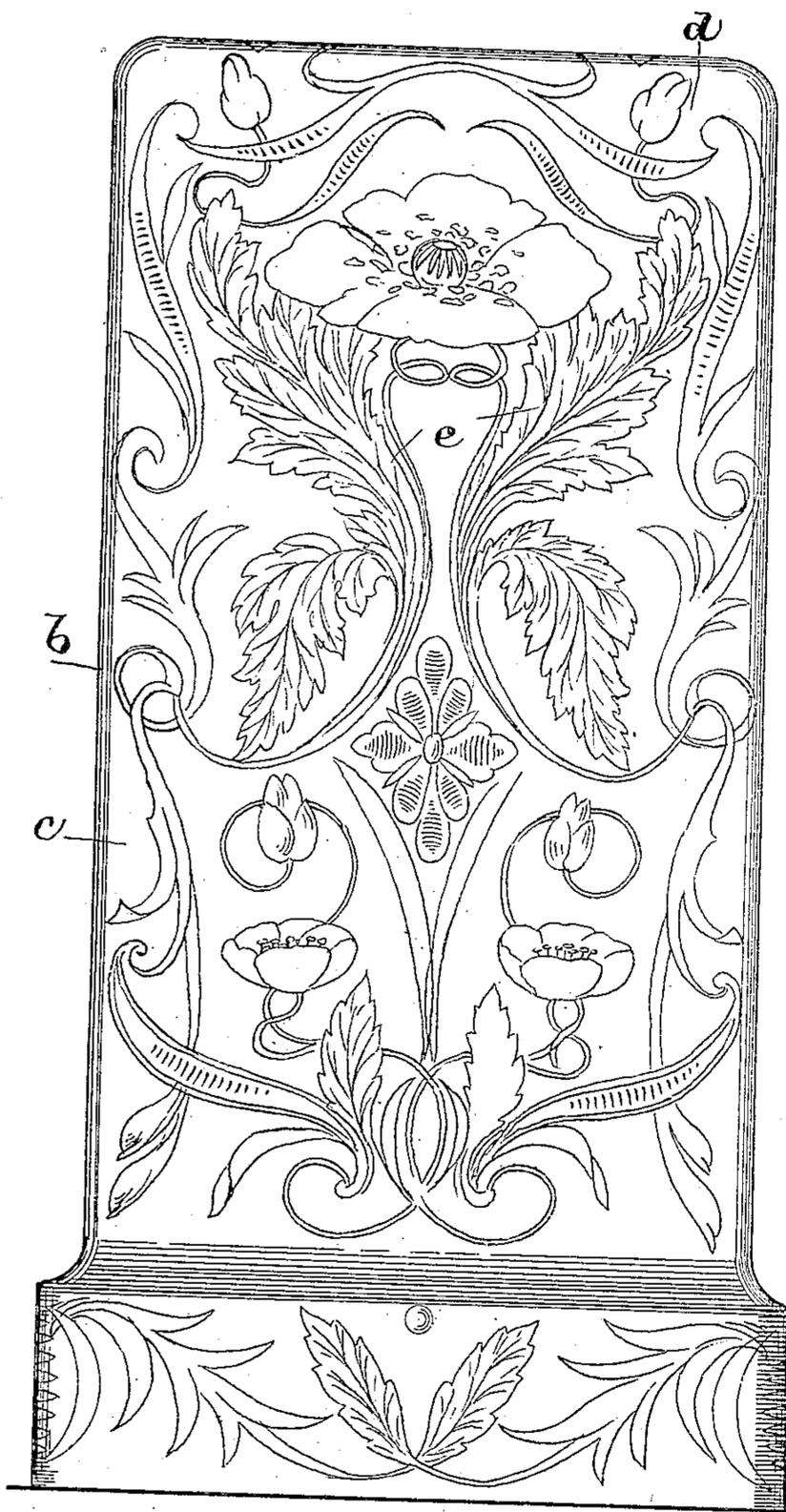


Fig. 2.

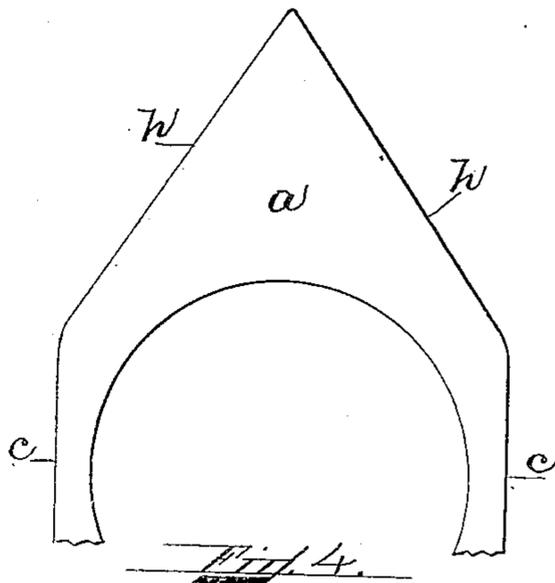


Fig. 4.

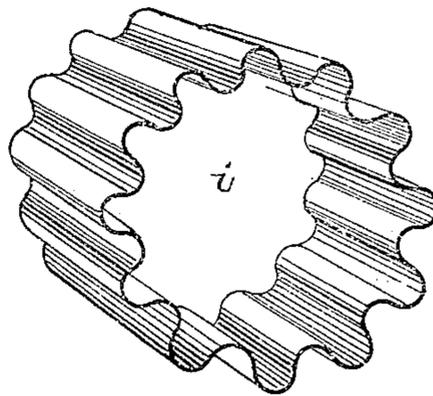


Fig. 5.

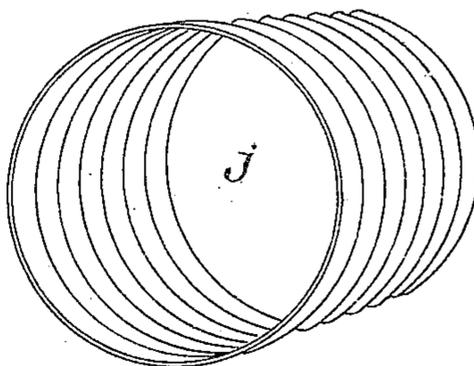


Fig. 6.

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3 SHEETS—SHEET 3.



Fig. 3.

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UNITED STATES PATENT OFFICE.

WALTER E. MCGRAW, OF EVERETT, MASSACHUSETTS.

CLOCK-CASE.

No. 923,991.

Specification of Letters Patent.

Patented June 8, 1909.

Application filed April 20, 1908. Serial No. 428,003.

To all whom it may concern:

Be it known that I, WALTER E. MCGRAW, a citizen of the United States, residing in Everett, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Clock-Cases, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to improvements in the construction and means for the ornamentation of cases for clocks, and to methods of exhibiting ornamental designs in clock cases.

One of the common types of cases used for clocks is open at the base, the case being usually made of marble, alabaster, glass, etc., and in the case of the use of transparent material, the parts of the clock movement are given a very high surface finish, because exposed to view, thus adding materially to the first cost of the movement, and moreover movements in such cases often become unsightly from oxidation of the metal parts and accumulations of dust that sift in under the clock, while the accuracy in time keeping of movements so exposed to dust is impaired.

The object of this invention is to protect the delicate time movement from dust, and at the same time present an attractive and even ornamental case to the observer. With this end in view, I put the movement within a dust tight metal shell and support the said shell in a transparent glass case, which I ornament with attractive designs etched over the glass surface, and, as a further unique feature, I highly polish the metal shell so the design on the glass is reflected through the transparent case, and in this manner or method produce a semblance of the design borne by the glass case, that renders the plain and otherwise obtrusive metal shell, a well blended feature of the general artistic make up of the clock case.

The invention consists in a clock case made of transparent material ornamented with designs produced on the surface thereof, a dust tight metal shell polished to a mirror like surface carrying the clock movement supported in the clock case, so the polished surface of the shell containing the movement is opposed to the glass surface bearing the design, and in the method of impressing reflected designs developed in the parts of the clock case to be more particularly pointed out.

Clock cases showing embodiments of my invention are illustrated in the drawings, in which:

Figure 1, is a front elevation of a clock case. Fig. 2, is a side elevation of the clock case. Fig. 3, is a similar side elevation of the clock case broken to show the inclosed reflecting shell. Fig. 4, is a front elevation of a Gothic case containing a cylindrical reflecting shell. Fig. 5, is a sketch showing a fluted shell. Fig. 6, is a sketch showing a corrugated shell.

In the form of the invention illustrated by Figs. 1, 2 and 3, the front wall *a* and rear wall *b* of the glass clock case are of plain surface and arched at the top, the side walls *c* of the case are plain and merge into the plain curved top *d*, while the base is open. Upon the front wall *a*, the side walls *c*, and the top *d* ornamental designs as *e* are produced in any convenient manner, as by an abrading wheel, etching, or the like. A case such as so far described is not adapted to hold delicate, close running time movements, as extraneous matter will enter at the base of the clock case, and find lodgment on the oiled pivots of the movement. To meet this condition the movement is inclosed in the close fitted metal shell *f*, which is mounted so as to rest in the front and rear walls of the clock case, thus preventing all access of dust to the movement.

In a utilitarian sense the clock case might now be used, but the blank, plain metal shell is inharmonious with the ornamental tracery of the designs on the glass surfaces, and does not satisfy the exacting requirements of a class of profitable trade. But it is found that by plating the metal shell with metals capable of exceptionally high polish, such as silver or gold, that a surface having the properties of a mirror may be produced and then made permanent by a suitable transparent gum lacquer. It is further found that if the reflecting surface so formed is arranged parallel to the surface of the design, that a virtual image as *g*, which is a reproduction of the design, will be transmitted by the metal shell through the glass case in accordance with the angle from which the same may be viewed, giving to the blank shell the effect of bearing an engraved design, but sufficiently distinct to be distinguishable from the design on the glass surface of the case. This intermingling of the elements of the actual design as *e* on the glass, with the virtual image *g* of

the design reflected from the metal shell, enhances the artistic effect of the clock case when viewed by a suitable receptive, as a living retina, or a photographically sensitized surface. If a surface of silver is used on the metal shell, the reflection approaches in effect the original design, while if a surface of gold is used on the metal shell, a more deeply shaded effect is produced by the virtual image. In cases in which the surface of the reflecting shell is not parallel to the surface of the glass case bearing the design, the virtual image thereof reflected is distorted or varied from the original design, such would occur in the arrangement shown in Fig. 4, in which the Gothic glass case bearing the design supports the plain, polished cylindrical shell carrying the movement, because the surface of the circular metal shell *f*, diverges from the inclined surfaces *h* of the glass case bearing the design that meet at the top of the clock case, in consequence of which varying extents of the said surfaces will be transmitted in the same beam of light, so the portion of the design and its image viewed will differ, or distortion or variation of the design as appears in the reflected image follow. If the shell is fluted as at *i* in Fig. 5, or corrugated as at *j* in Fig. 6, a blending of multiple distorted virtual images takes place, which are visible through the original design on the glass case. It may be noted that as the observer alters the direction in which the clock

case is viewed, the design and its virtual image appear to travel on each other, or give an effect of relative motion, distortion of the said image of the design occurring, in accordance with the angular relation of the surfaces of the glass case and the metal shell, and it will be found that this method of displaying the ornamentation of the clock case serves to so attract ones vision, that the otherwise plain, dust proof case is lost in the changing artistic design observed.

Having described my invention, I claim and desire to secure by Letters Patent of the United States:

A clock comprising a transparent outer casing having front rear and side walls, a closed top and an open bottom, said front and rear walls provided with alining openings, a metallic containing shell mounted in said openings, a design formed on the exterior of the outer casing, the outer faces of said shell lying substantially parallel with the casing exterior and having a highly polished surface reflecting the design on said outer casing.

In testimony whereof I have signed my name to the specification in the presence of two subscribing witnesses.

WALTER E. MCGRAW.

Witnesses:

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BEATRICE G. MOORHOUSE.