

(No Model.)

H. ABBOTT.

ORNAMENTING ENAMELED OR GLAZED SURFACES.

No. 309,911.

Patented Dec. 30, 1884.

Fig. 1.

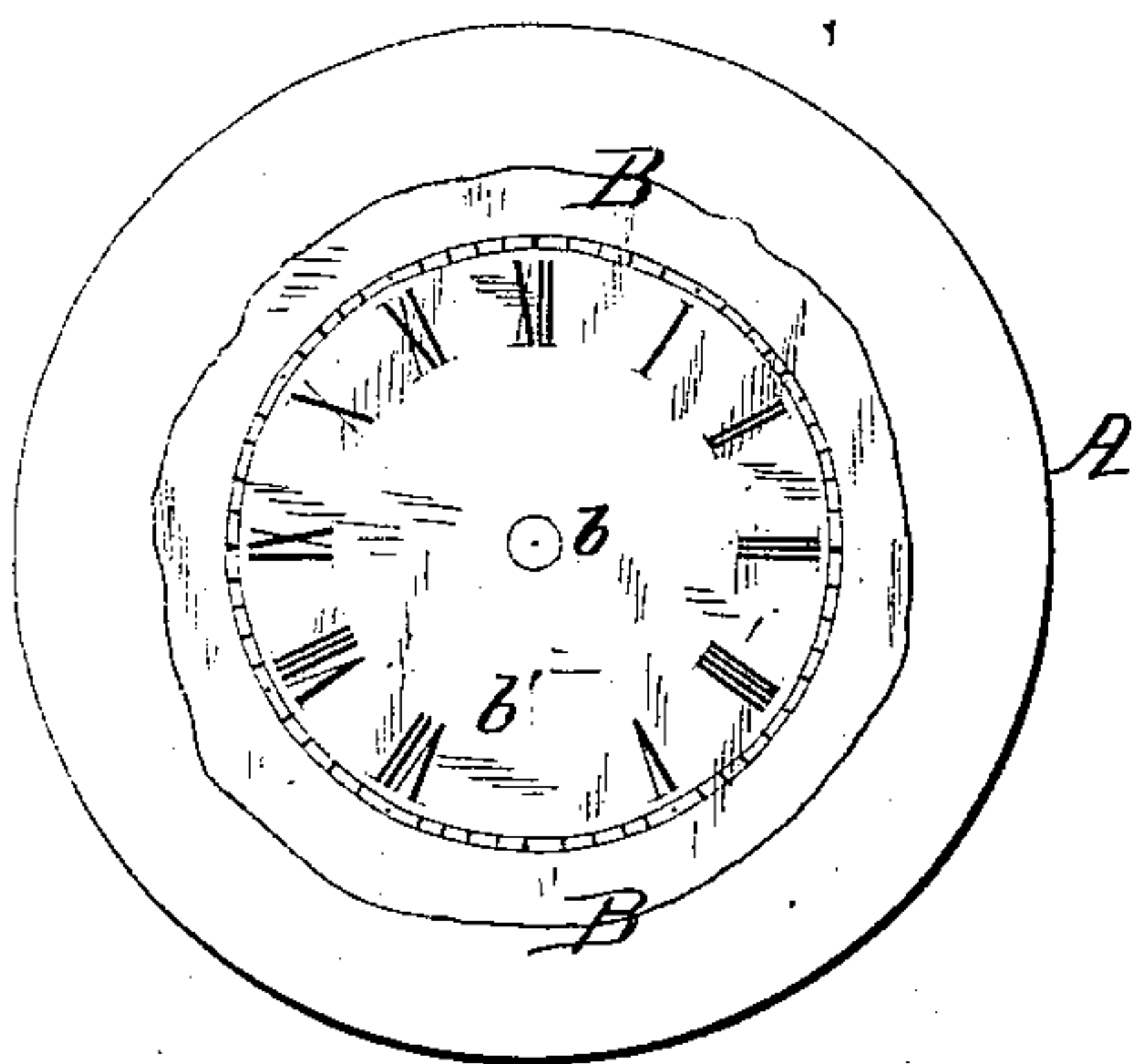


Fig. 2.

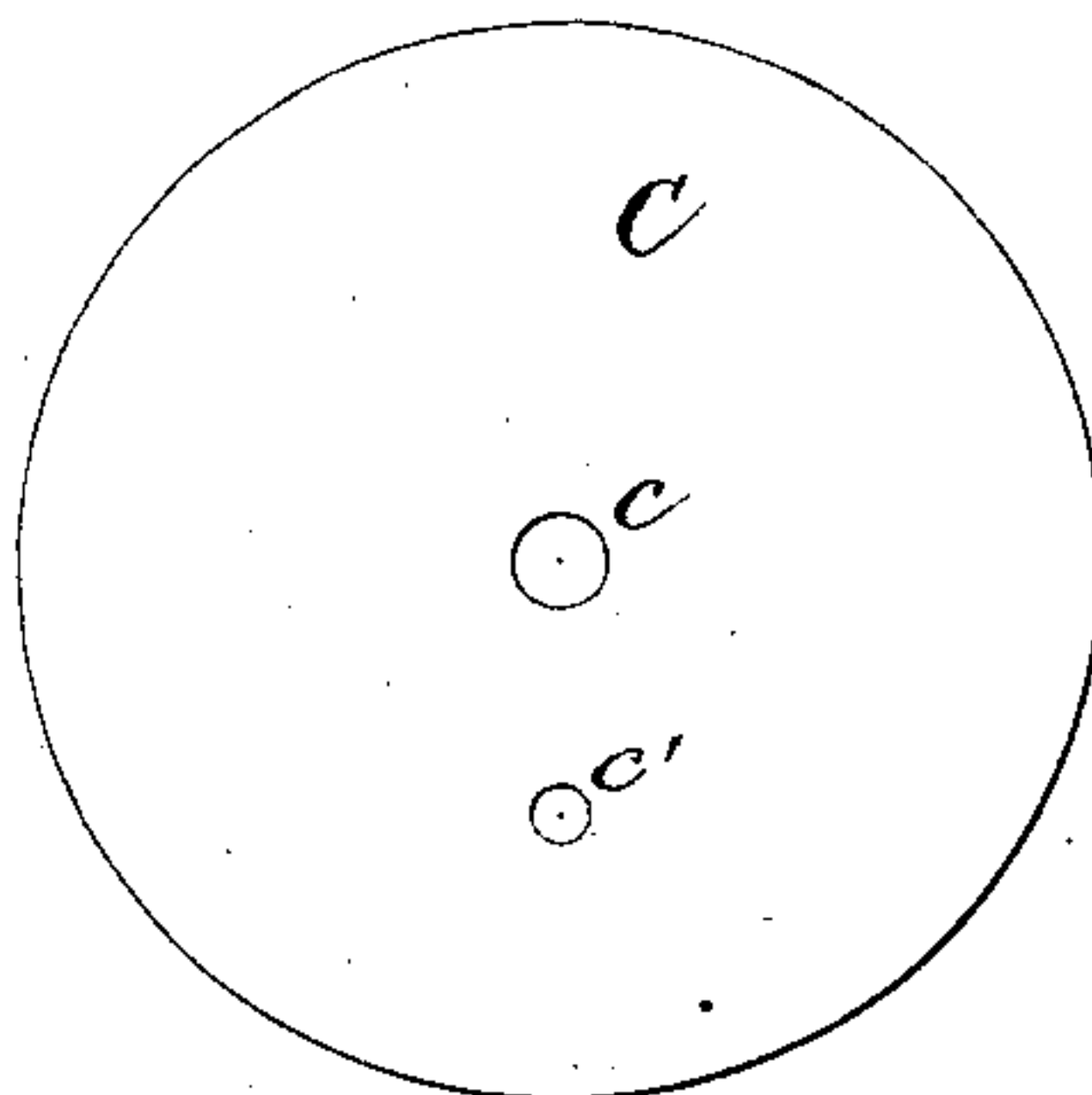


Fig. 3.

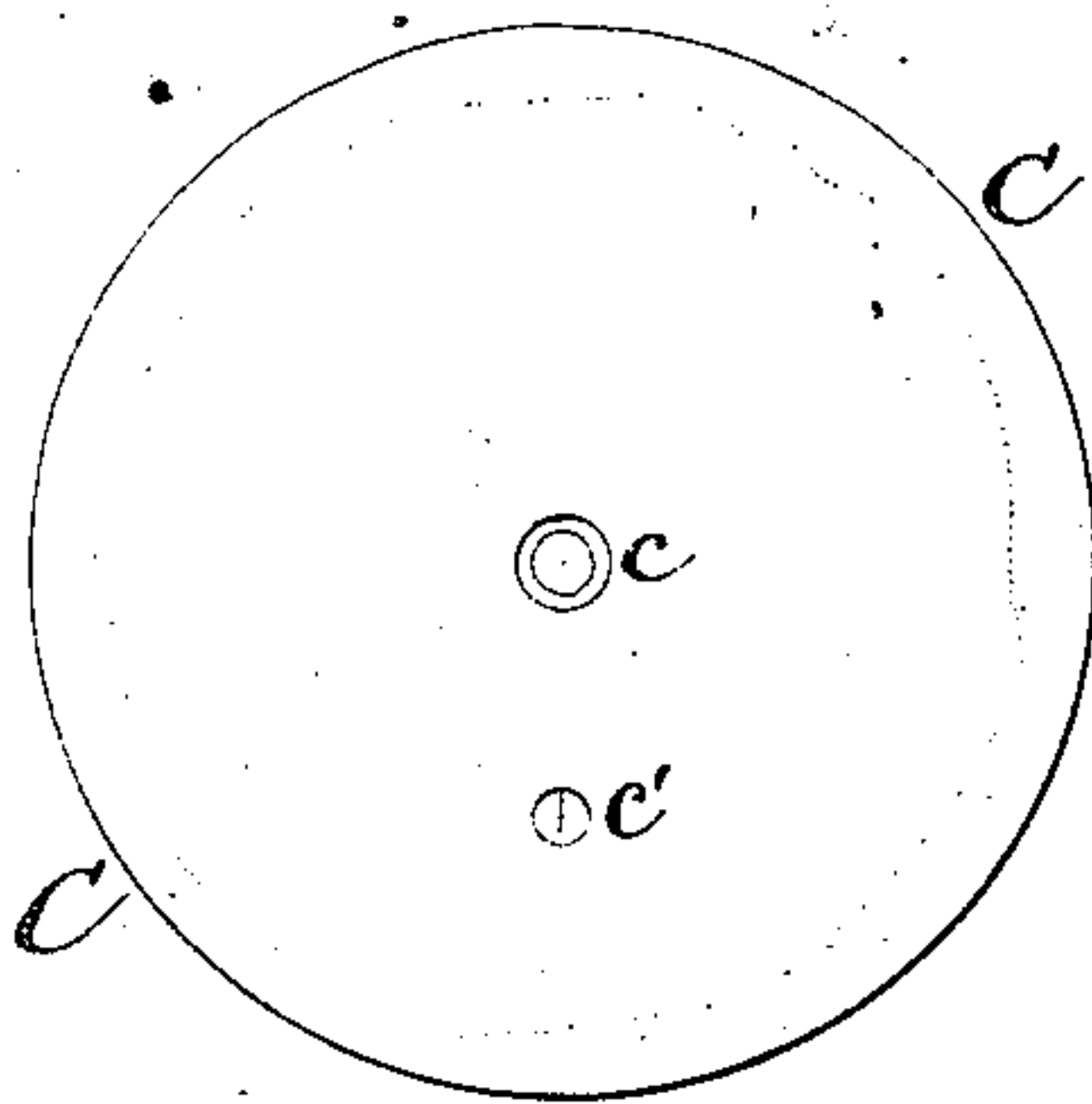
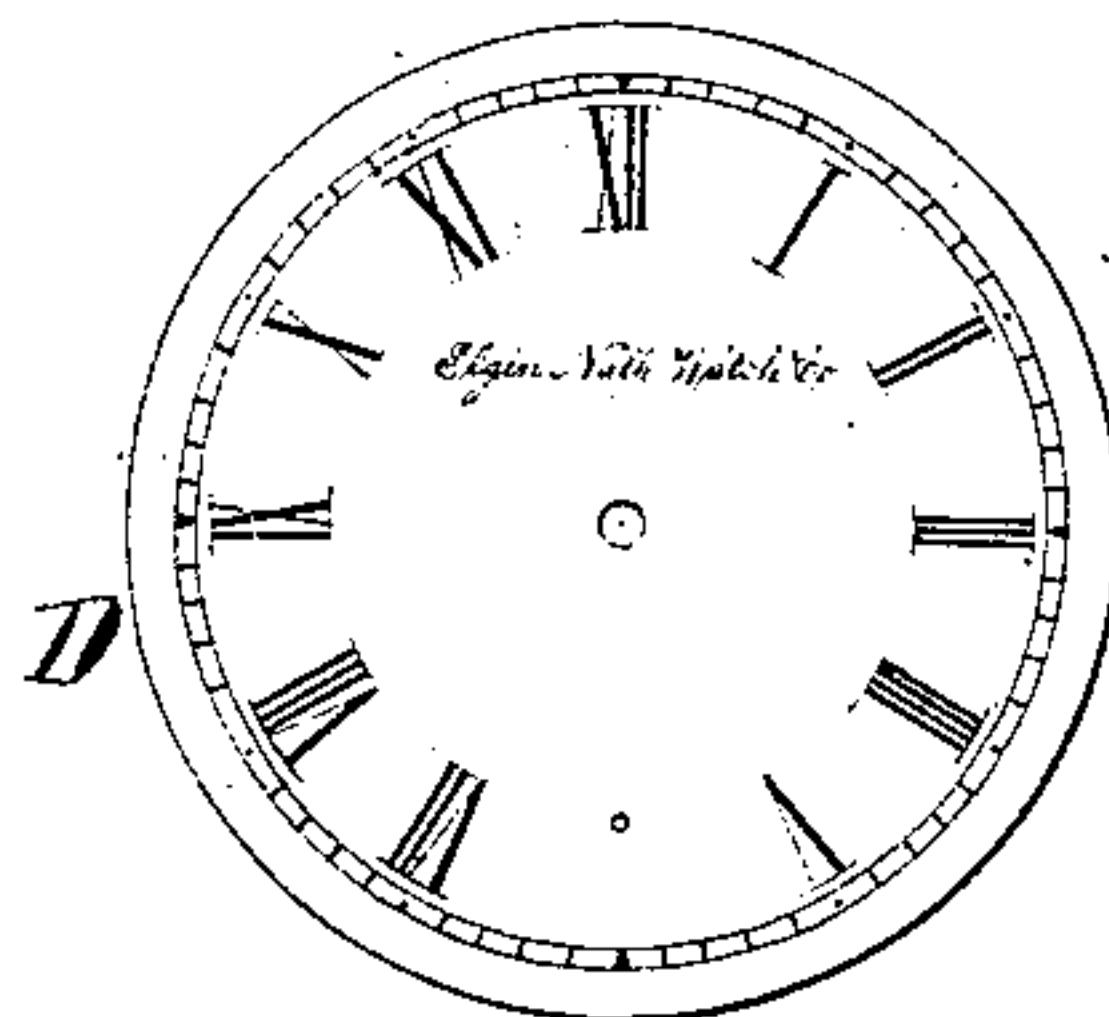


Fig. 4.



Witnessed:
Jas. E. Hutchinson.
Henry C. Hazard.

Inventor.
Henry Abbott, by
Crindle and Russell, his Attys.

UNITED STATES PATENT OFFICE.

HENRY ABBOTT, OF NEWARK, NEW JERSEY, ASSIGNOR OF THREE-FOURTHS
TO WINTON C. GARRISON, OF SAME PLACE, AND THE ELGIN NATIONAL
WATCH COMPANY, OF CHICAGO, ILLINOIS.

ORNAMENTING ENAMELED OR GLAZED SURFACES.

SPECIFICATION forming part of Letters Patent No. 309,911, dated December 30, 1884.

Application filed January 12, 1884. (No model.)

To all whom it may concern:

Be it known that I, HENRY ABBOTT, of Newark, in the county of Essex, and in the State of New Jersey, have invented certain
5 new and useful Improvements in Ornamenting Enameled or Glazed Surfaces; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

10 Figure 1 is a plan view of a transfer-film for a watch-dial before removal from the design-plate. Fig. 2 is a like view of the paper back used for the removal of said film. Fig.
15 3 is a plan view of said paper back and film combined, and Fig. 4 is a like view of a dial having upon its face said transfer-film.

Letters of like name and kind refer to like parts in each of the figures.

20 In the figuring or lettering of watch-dials by means of transfer-films, the great delicacy of such films renders it exceedingly difficult to remove one from the engraved plate and place it in position upon a dial without distortion or other injury. To render certain
25 and easy this heretofore difficult operation is the design of my invention, which consists in the method employed, substantially as and for the purpose hereinafter specified.

30 In the preparation of transfer-films a plate, A, preferably of copper, is provided with a suitable etched or engraved design and the sunk portions then filled with vitrifiable colored material, after which liquid collodion or
35 other analogous substance is then poured over its surface and caused to permeate and combine with said colored material. The collodion is now allowed to harden to the right consistency, and the coated plate is then immersed
40 in acid water until the film B has been loosened and is in condition for removal, after which said plate is placed face upward upon a table or other like support, and a disk of paper, C, previously wetted, is placed over
45 said plate and upon said film, and by the aid of a knife, tweezers, or other like instrument said parts are together turned up at one edge, and are then simultaneously peeled from off said plate. As the paper back C is larger than

the figured portion of the film B, a round hole, 50 *c*, is provided at its center, and another round hole, *c'*, in a position corresponding to the seconds-arbor opening of a watch-dial, while at the center of said figured film is provided
55 a circle, *b*, slightly smaller than said hole *c*, and in position to be covered by said hole *c'* is a straight radial line, *b'*. In placing said paper back upon said film before the removal of the latter from the plate A, said circle *b* and hole *c*, and said line *b'* and hole *c'* are caused
60 to register, whereby the exact position of said film is readily known. The dial D is now coated with an adhesive preparation, and the film B, upon the face of the paper back C, is then placed in position thereon, during which
65 last-named operation, as said film is transparent, the register-marks *b* and *b'* are easily brought over and caused to coincide with the center and seconds-arbor openings of said dial, so as to cause the design upon said film to occupy the precise position intended. 70

By means of the paper backing the film is perfectly supported and may be handled with ease and safety, while without such backing said film could not be removed from the engraved plate without being liable to become
75 torn, and it would be practically impossible to place it smoothly in the precise position required upon the dial.

While I have only illustrated my improvement as applied to the ornamentation of dials, 80 it will be seen that it is equally applicable in the ornamentation of any article, and that by means of openings in the paper back through which any previously-selected register-marks
85 can be seen, any design may be accurately placed in position upon an article to be ornamented.

Having thus fully set forth the nature and merits of my invention, what I claim as new is— 90

1. The method of removing a transfer-film from a design-plate to the surface upon which it is to be secured by first placing upon the back of said film a sheet of wetted paper, then peeling said film and paper simultaneously
95 from said plate, then placing said paper-backed film face downward upon the prepared surface, and, lastly, removing said paper backing, leaving

ing said film adhering to said surface, substantially as specified.

2. The method of accurately placing a transfer-film in position upon a prepared surface,
5 consisting, first, in placing upon the back of said film a sheet of wetted paper provided with openings which may be caused to coincide with register-marks upon said film, then
10 placing the latter face downward upon its prepared surface and registering the same there-

on by means of said paper, and, lastly, removing said paper backing, leaving said transfer-film in place, substantially as shown.

In testimony that I claim the foregoing I have hereunto set my hand this 19th day of 15 December, A. D. 1883.

HENRY ABBOTT.

Witnesses:

GEO. S. PRINDLE,
L. L. WOOLLEY.