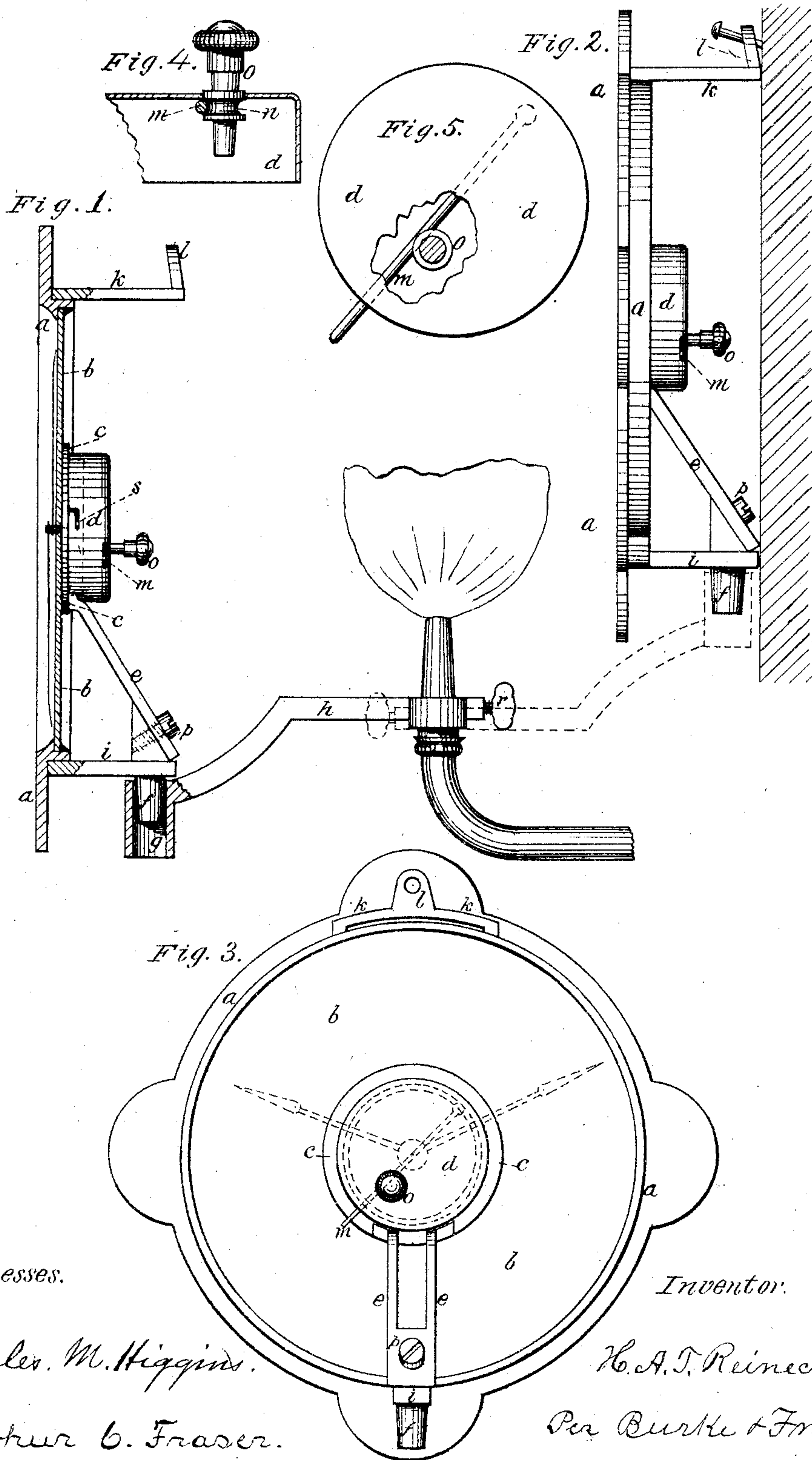


H. A. T. REINECKE Clocks.

No. 151,056.

Patented May 19, 1874.



Witnesses.

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN CLOCKS.

Specification forming part of Letters Patent No. **151,056**, dated May 19, 1874; application filed April 1, 1874.

To all whom it may concern:

Be it known that I, HERMAN A. T. REINECKE, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Clocks, of which the following is a specification:

My invention relates more especially to that class of clocks which are formed with a transparent dial to be placed before a light, the transmission of which through the dial enables the observer to read the time indicated; and its object is to produce a clock of this class which may be used in this manner, and as an ordinary clock to be hung upon the wall, and which shall be simpler in construction and neater in form. The invention consists essentially of a clock composed of a rigid frame of suitable form, in which is secured a preferably flat translucent dial behind, and at the center of which is arranged a disk, which retains the works, and is supported by an outwardly-inclined arm attached to the frame; the frame being provided at the back with two projecting arms, the lower one having a protruding shank formed to enter the socket of a short bracket attachable to a gas-burner or other source of light, by means of which the clock is held upright before the flame, the upper arm being formed with a perforated lug, by which the clock may be hung upon the wall when in ordinary use, in which case the lower arm rests against the wall, and acts as a brace to retain the clock in a position parallel with the wall. It consists also in a removable cap, which covers and protects the works attached to the central disk by bayonet-fastenings, and secured from accidental removal by the retained winding-key, and in the combination with the clock-frame of a reversible supporting-bracket, capable, by inversion, of supporting the clock either before or behind the light, as desired; also, in a winding-key provided with a groove upon its periphery, into which a spring, secured preferably to the removable cap, projects, and prevents the accidental removal of the key, but allows its rotation for winding purposes, the retraction of which spring allows the removal of the key when required.

Figure 1 of the accompanying drawings is a side elevation of my improved clock, shown arranged before a gas-burner, the dial and

dial-frame being in section. Fig. 2 is a full side elevation of the same hung upon the wall. Fig. 3 is an elevation viewed from the back of the clock, and Figs. 4 and 5 illustrate the mode of holding the winding-key in place.

As shown in the drawings, *a a* is a rigid frame of any suitable form or design, into which is embedded a dial, *b b*, preferably translucent. From the lower end of the frame an arm, *i*, projects backwardly, and upon its end is formed a shank, *f*, adapted to enter a socket, *g*, in the bracket *h*, attached to the gas-burner. From the top of the frame another arm, *k*, projects backwardly, and upon it is formed a perforated lug, *l*, as shown in Figs. 1, 2, and 3. A circular disk, *c*, rests against the back of the dial at the center, leaving an annular space exposed, upon which the hours are marked. This disk is supported by an outwardly curved or inclined arm, *e*, which extends therefrom, and is secured by the screw *p* to a triangular projection upon the end of the arm *i*. The arm *e* is forked, as shown in Fig. 3, so as to obstruct as little as possible the transmission of the light through the dial, and the object of its projection from the dial is, that its shadow shall be neutralized by one portion of the light falling on the shadow caused by the other portion, which would be impossible were the arm to rest close to the dial. Upon the disk *c* is formed a raised rim, (represented by the dotted lines in Figs. 1 and 3,) into which the works of the clock are placed, and they are covered and protected by a detachable cap, *d*, which embraces the raised rim, and is attached thereto by bayonet-fastenings, as shown at *s*, Fig. 1. The winding-key *o* is inserted through the cap at a point eccentric thereto, as represented in Fig. 3, and it thus prevents the partial rotation of the cap, and consequently prevents its removal while the key remains in place. The key is held in place in the manner shown in Figs. 4 and 5. Upon the key is formed an annular groove, *n*, into which a spring, *m*, secured preferably to the under side of the cap, presses; hence the key cannot be withdrawn without disengaging the spring, but can rotate freely to wind the clock. Thus secured, it is always in place when required, and is prevented from falling out and becoming lost.

As before stated, the cap *d* cannot be re-

moved while the key is in place, and to remove the key, it is necessary to release the spring *m*, and then withdraw the key, after which the cap may be readily removed. These operations, obviously, can be performed only by design, and hence complete security from accidental removal is effected.

When the clock is used as a nocturnal one, the bracket *h* is secured to the gas-burner by means of the thumb-screw *r*, and into its socket is placed the shank *f*, which thus supports the clock in an upright position before the gas-flame, as shown in Fig. 1, and, the light passing through the translucent dial *b*, the time indicated can be plainly discerned by the observer in front. When used as an ordinary clock, the shank is removed from the socket, and the clock hung upon the wall by the perforated lug *l*, as shown in Fig. 2, in which position the arm *k* rests against the wall at the top and the arm *i* at the bottom, and thus supports the clock in an upright position parallel with the wall.

The supporting-bracket *h* is of such a form that it may, by inverting it, be used to support the clock in a position behind the flame of the gas-burner, so that the light will be thrown upon the front of the dial, and the time thus read by the aid of reflected light, as represented by the dotted lines connecting Figs. 1 and 2. This enables an opaque dial to be used when preferred, and it may be formed directly upon the opaque metallic frame, if desired, for the invention is not necessarily confined to the use of translucent dials; but I prefer to use a translucent dial, as described.

I claim as my invention—

1. In combination with the frame *a* and dial *b*, the arm *k*, provided with the lug *l*, and the arm *i*, provided with shank *f*, arranged and operating substantially as and for the purposes set forth.

2. The reversible arm *h*, provided with the socket *g*, for holding, in connection with the stationary arm *i* and its shank *f*, the clock in position, either in front of or behind the light, substantially as described.

3. In combination with a partially-exposed translucent dial, *b*, and frame *a*, the disk *c c* and the supporting-arms *e e* and *i*, for holding the works, substantially as shown and described.

4. The winding-key *o*, provided with the annular groove *n*, in combination with the spring *m* of the cap *d*, as and for the purpose set forth.

5. The removable cap *d*, provided with the bayonet-fastening *s*, in combination with the secured key *o* and winding-stud, the latter being arranged eccentric of the cap, to prevent the partial rotation necessary to disengage the latter while the key is in place, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

H. A. T. REINECKE.

Witnesses:

J. FRASER,

CHARLES M. HIGGINS.