

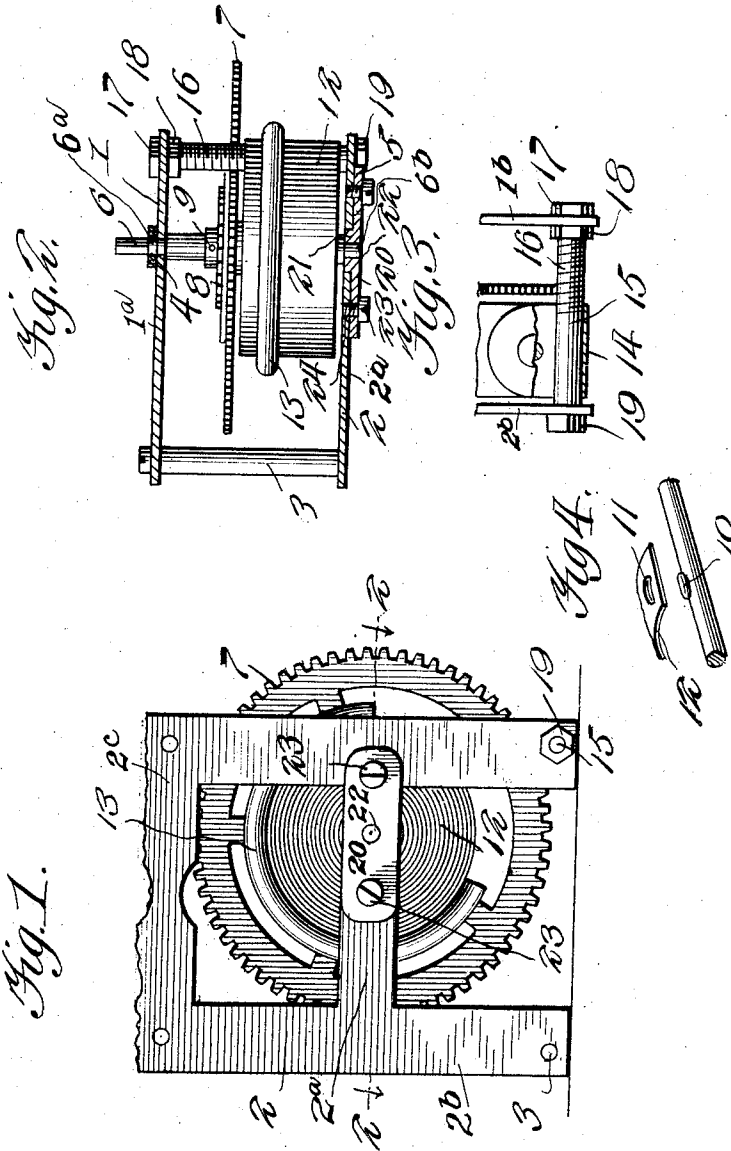
S. SCHEER.

CLOCK FRAME.

APPLICATION FILED SEPT. 29, 1909.

1,040,023.

Patented Oct. 1, 1912.



Witnesses

Hugh H. Hottel
Wm. North

Inventor
Samuel Scheer

By *Victor J. Evans*
Attorney

UNITED STATES PATENT OFFICE.

SAMUEL SCHEER, OF RICHMOND, VIRGINIA.

CLOCK-FRAME.

1,040,023.

Specification of Letters Patent.

Patented Oct. 1, 1912.

Application filed September 29, 1909. Serial No. 520,134.

To all whom it may concern:

Be it known that I, SAMUEL SCHEER, a citizen of the United States, residing at Richmond, in the county of Henrico and State of Virginia, have invented new and useful Improvements in Clock-Frames, of which the following is a specification.

This invention relates to improvements in clock frames and more particularly to a clock frame so constructed and arranged as to provide means whereby the main spring may be removed therefrom without impairing the usefulness of any of the parts of the clock, and it consists in the novel arrangement of parts hereinafter fully set forth.

The invention has for its object to provide a cheap and simple means whereby main springs may be quickly removed from clock mechanism without necessitating the operation of removing the frame, while at the same time provides the arbor carrying the main gear wheel and the spring with firm and reliable bearings.

With the above, and other objects in view, which will be more apparent as the description progresses the invention resides in the novel construction and arrangement of parts hereinafter fully described and claimed.

In the accompanying drawing, Figure 1 is a rear elevation of a part of a clock frame constructed in accordance with the present invention. Fig. 2 is a longitudinal sectional view upon the line 2-2 of Fig. 1. Fig. 3 is a detail view, partly in section illustrating the spring engaging post of the frame. Fig. 4 is a fragmentary perspective view of the inner convolution of the spring and a portion of the spindle.

In the accompanying drawing the numeral 1 designates the front plate of the frame and the numeral 2 the rear plate thereof. These upright members are effectively retained in spaced relation with each other through the medium of suitable posts 3 of the ordinary construction commonly employed in such devices. The plates 1 and 2 are provided with cross bars 1^a and 2^a, located inwardly of the ends thereof and integral with the side bars 1^b and 2^b. These cross bars serve to space the side bars 1^b and 2^b from each other.

The front plate of the frame is provided with a suitable opening 4 which is in line with a larger opening 5 provided in cross bar 2^a of the rear plate of the frame. Both of these openings 4 and 5 are adapted for

the reception of the reduced extensions of a winding spindle 6. The opening 4 is adapted to receive the reduced end 6^a of the winding arbor 6, while the opening 5 is considerably larger than the arbor to permit the ready removal of said arbor. This gear 7 has rotatably mounted thereon a suitable ratchet wheel 8 secured to the spindle through the medium of a removable pin 9, which extends through the hub 8^a of said ratchet wheel. The spindle 6 is provided with the usual offset or hook 10 which is adapted to connect with the usual hole 11 provided in the inner end of the winding or operating spring 12. The spring 12, in the present instance is adapted to be temporarily retained in its wound position through the medium of a suitable ring 13, of that class commonly employed by clock makers, and the said spring has its outer end or convolution bent upon itself to provide an eye 14 whereby it is connected with a lower threaded post 15 provided upon the frame. This post 15, as clearly illustrated in Fig. 3 of the drawing has screw threads 16 on one end of its body and which is adapted for the reception of a securing nut 17 and a binding nut 18. The opposite end of the post is also threaded and is adapted for the reception of a nut 19, whereby the said post not only retains the end of the spring 12, but also effectively retains the lower portions of the frame plates 1 and 2 in proper spaced relation with each other.

The cross bar 2^a is provided with threaded openings 24 which receive the screws 23 that removably hold the plate 20 against said cross bar. The plate 20 is provided with a circular bearing shoulder or boss 21, which snugly fits in the opening 5 of said cross bar 2^a, and which has an opening adapted to receive the reduced end 6^b of the winding arbor 6. The boss 21 has a central opening 22 corresponding with the cylindrical cross sectional contour of the reduced extension of the spindle 6 to provide an effective as well as a removable bearing therefor. The rectangular plate 20 is removably connected to the face plate 2 of the frame through the medium of threaded retaining elements 23 which are adapted to pass through suitable openings provided adjacent the ends of the plate 20 and to engage threaded openings 24 within the face plate 2.

From the above description, taken in con-

nection with the accompanying drawing, it will be noted that when it is desired to remove the main spring from the spindle 6, it is merely necessary to withdraw the pin 5 9 from the spindle 6, and after removing the plate 20, to unscrew the nut 19 of the post 15, and to adjust the nut 18 upon the threads 16, so that the post may be withdrawn from the eye 14 of the spring 12. The spindle 6 10 is then forced through the enlarged opening 5 and the spring as well as the gear 7 may be removed from the frame, it being understood that the inner convolution of the spring 12 will readily yield so as to allow 15 the hook 10 to be withdrawn from the hole 11 of the said spring. It will be further noted that the boss 21 of the plate 20 is of a thickness corresponding with that of the thickness of the cross bar 2^a, so that the 20 shoulders of the spindle will be provided with a firm bearing and so that any ordinary spindle may be employed, and it will be also noted that by providing the post 15 with the threads 16 it will be unnecessary 25 to entirely withdraw the said post from the frame so that the post will not be displaced and may be readily inserted within the eye 14 of the spring when the said spring is repositioned upon the frame.

30 Having thus fully described the invention what is claimed as new is:

In combination, a pair of clock frame plates having side bars and cross bars inte-

gral with said bars and located inwardly of the ends of said side bars, said cross bars 35 having alining openings, one of said cross bar openings being larger than the other, posts securing the plates together, one of said posts being adapted to engage the eye of a main spring and being formed with 40 screw threads and slidable through one of the frame plates, nuts threaded on said screw threads and against the sides of said plate and adapted to permit the removal of said screw-threaded posts from one or both 45 of said plates, a plate removably secured to one of the cross bars of said frame plates and having a boss snugly fitted in the larger cross bar opening, a winding arbor having reduced ends engaging the boss and the 50 opening in the opposite cross bar, a main gear wheel and a ratchet wheel rotatable on said gear wheel and mounted on said arbor, said ratchet wheel having a hub, and a pin 55 extending through said hub into the arbor and removably connecting the main gear and ratchet wheels to said arbor, said arbor being removable through the larger cross bar opening.

In testimony whereof I affix my signature 60 in presence of two witnesses.

SAMUEL SCHEER.

Witnesses:

M. D. HOGE, Jr.,

WM. TIETZ.