

June 13, 1933.

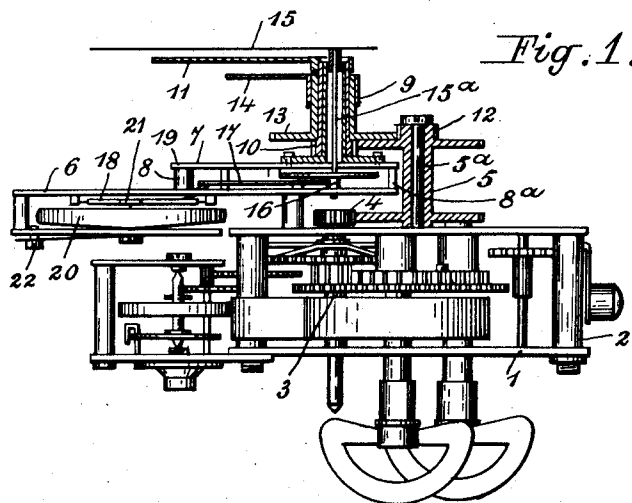
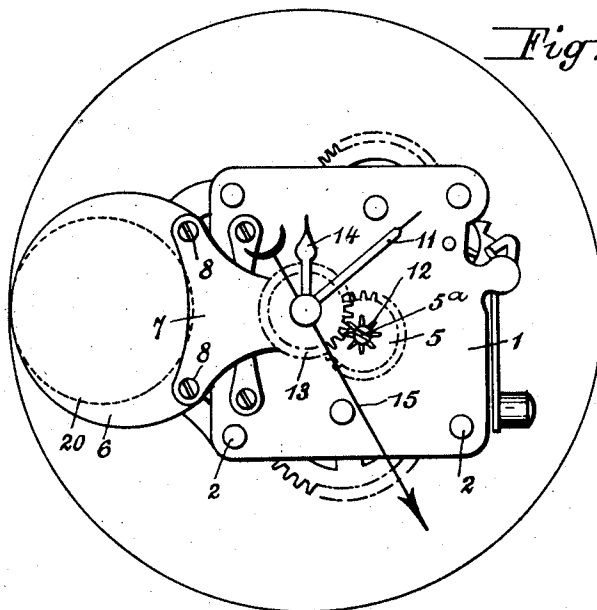
H. GODY

1,913,481

COMBINED ALARM CLOCK AND BAROMETER

Filed Dec. 4, 1931

3 Sheets-Sheet 1



INVENTOR.

Henri Gody.

By *Lacy & Lacy.*

Attys.

June 13, 1933.

H. GODY

1,913,481

COMBINED ALARM CLOCK AND BAROMETER

Filed Dec. 4, 1931

3 Sheets-Sheet 2

Fig. 3

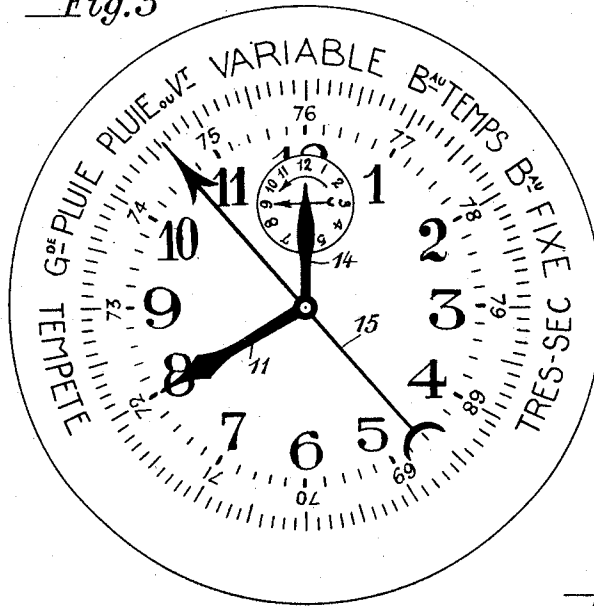


Fig. 5.

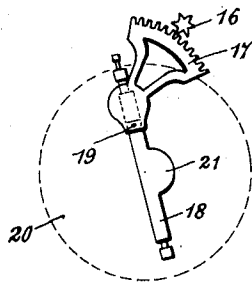


Fig. 4.

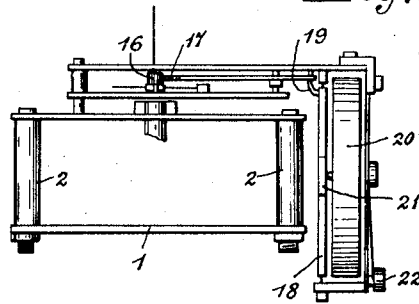
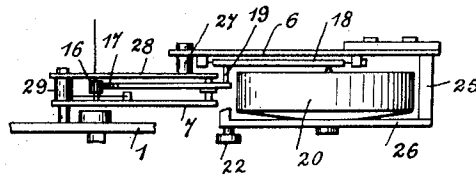


Fig. 6.



INVENTOR.

Henri Gody.

By Lacey & Lacey,

Attys.

June 13, 1933.

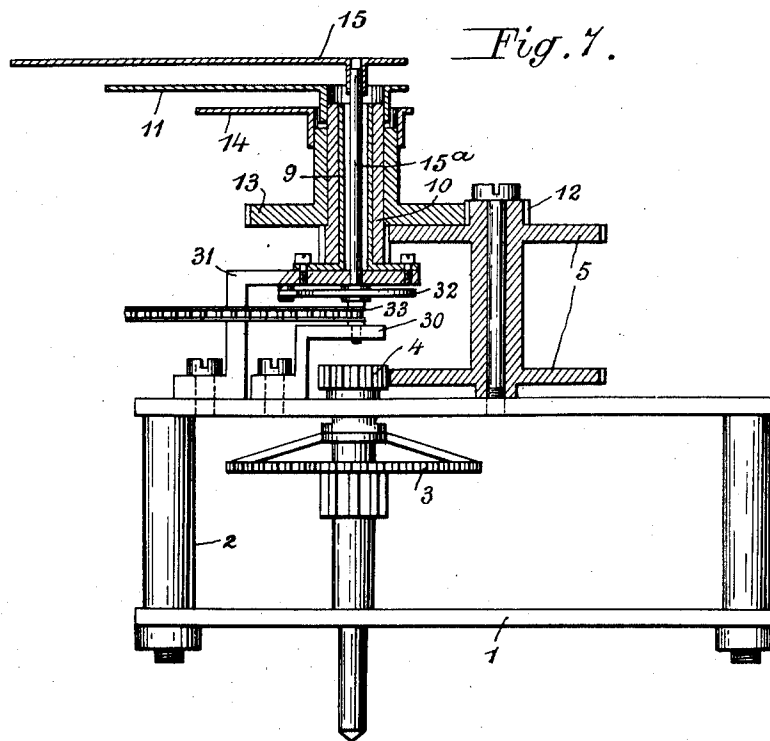
H. GODY

1,913,481

COMBINED ALARM CLOCK AND BAROMETER

Filed Dec. 4, 1931

3 Sheets-Sheet 3



INVENTOR

Hensi Gody.

By Lacey & Lacey,

Atty's

UNITED STATES PATENT OFFICE

HENRI GODY, OF AMBOISE, FRANCE, ASSIGNOR TO ANCIENS ETABLISSEMENTS
DUVERDREY & BLOQUEL, OF SAINT-NICOLAS D'ALIERMONT (SEINE-INFÉRIEURE),
FRANCE

COMBINED ALARM CLOCK AND BAROMETER

Application filed December 4, 1931, Serial No. 579,053, and in France December 5, 1930.

It has already been proposed, and chiefly in French patent No. 384,238 to combine a barometer with a watch by mounting the barometer pointer at the center of the clock dial. This arrangement has not as yet been applied to the case of a clockwork mechanism such as an alarm clock, owing to the special difficulties occasioned by the mounting of the device controlling the barometer pointer, in the center of the clockwork mechanism.

The present invention relates to an arrangement for combining, with a clockwork device, and chiefly with an alarm clock, a barometer whose indications may be observed upon the clock dial, and it concerns more particularly, to this effect, a wheelwork mechanism permitting to mount the shaft of the barometer pointer in the axis of the clockwork mechanism.

The said wheelwork mechanism is characterized by the fact that the cannon pinion secured to the shaft of the central wheel of the clockwork is not provided with a sleeve, and that it engages a double intermediate wheel which engages in turn a cannon-pinion carrying the minute hand and freely rotatable on a stationary sleeve in which the shaft of the barometer pointer is adapted to turn, the hour wheel rotates upon the said sleeve and is in gear engagement with a pinion secured to the double wheel.

The accompanying drawings show by way of example various embodiments of the invention.

Fig. 1 is a side elevational view of an alarm clock mechanism combined with a barometer of the sector or "rake" type, the special arrangement of the wheelwork being shown in vertical axial section.

Fig. 2 is a front view of the whole apparatus, on the side of the dial.

Fig. 3 is a front view of the dial.

Fig. 4 is a plan view showing the means actuating the barometer pointer.

Figs. 5 and 6 relate to modifications.

Fig. 7 is a vertical axial section of a modified arrangement applicable to a barometer mechanism of the chain type.

1 represents the main plates of the frame of the alarm clock, 2 the supports for said

frame, and 3 the central wheel of the clockwork.

According to the invention, the cannon pinion 4 mounted on the shaft of this central wheel is not provided with a sleeve and it is in gear engagement with a double intermediate wheel 5 which turns upon a bearing screw 5a. Between the two gear wheels of this double wheel are mounted the large plate 6 of the barometer and the small plate 7, connected together by supports 8—8a. On the plate 7 is mounted a sleeve 9 on which is freely rotatable a cannon pinion 10 whose sleeve carries the minute hand 11. On the other hand, the double wheel 5 carries a pinion 12 engaging the hour wheel 13 which is secured to the sleeve carrying the hour hand 14.

The pointer 15 of the barometer is mounted on the extended pivot shaft 15a of the pinion 16, passing through the sleeve 9. The pinion 16 is actuated by a sector 17 termed "rake" which is operated by a pivoting lever 18 by means of a pin 19; this lever 18 is actuated in the known manner by a projection on the vacuum box 20 which bears against a small plate 21 with which it is connected. A screw 22 permits to adjust the barometer by moving the vacuum box.

In the modification shown in Fig. 5, the vacuum box and the pivoting lever 18 are situated at right angles to the plates, and this allows the use of a thicker vacuum box if necessary. In this event, an elbow is made in the pin 19 of the lever 18.

In the modification shown in Fig. 6, the large plate of the barometer is made in two parts. The part 6 carries—by supports 25—a plate 26 to which is screwed the vacuum box 20, and it is raised by supports 27 above a small plate 28 forming the upper plate. This small plate is connected by supports 29 with a small lower plate 7 of the barometer. This allows a gain in height for the vacuum box. The attaching bridge is eliminated, as the large plate is screwed directly to the ring supporting the dial.

The preceding examples relate to barometers of the sector or "rake" type.

Fig. 7 shows the application of the inven-

tion to a barometer device employing a chain. Herein, the upper plate of the frame has screwed thereto a small bridge 30 in which is pivotally mounted a shaft 15a carrying the barometer pointer 15, this shaft being situated exactly in the axis of the cannon-pinion 4 unprovided with a sleeve. A larger bridge 31, also screwed to the plate of the clock, is situated above the small bridge 30, and the shaft 15a is also pivoted to the same. On the bridge 30 is further mounted (by screws) the sleeve 9 surrounding the shaft 15a, and about which is rotatable—as in the preceding devices—the free cannon-pinion 10 carrying the minute hand 11. Between the two bridges 30—31 is mounted the part of the shaft 15a carrying a volute spring 32 and a chain 33 which is actuated as in the known barometers having a chain mechanism.

It will be seen from the foregoing description that I have provided structure of the type described which may be readily adapted for use in conjunction with alarm clock mechanism so that the use of a barometer in conjunction with a timepiece will not be restricted to a watch.

I claim:

1. A combined clock and barometer including a dial and clockwork mechanism, means for mounting a supplementary pointer coaxially on said clock dial, said means comprising a central pinion mounted on the front end of the central shaft of the clock mechanism, a lateral axle mounted on the front plate of said mechanism, a double gear wheel rotatably mounted on said lateral axle and having one of its gear wheels meshing with said central pinion, a fixed sleeve mounted axially of the dial, a pinion rotatable about said sleeve and meshing with the second gear wheel of said double wheel, said pinion having an integral sleeve therewith, a minute hand mounted on said second-mentioned sleeve and rotatable by said pinion, a sleeve wheel rotatable on said second-mentioned sleeve, an hour hand mounted on said sleeve wheel, a shaft mounted in said fixed sleeve, a pointer on said shaft, and means for actuating said pointer, said means cooperating with said shaft and being located between said clockwork mechanism and the dial.

2. A combined clock and barometer including a clock having clockwork mechanism provided with a central shaft and a dial, means for mounting a supplementary pointer coaxially on the dial and comprising a central pinion mounted on the front end of the central shaft, an axle mounted on the front plate of said mechanism, a double gear wheel rotatably mounted on said axle and having one of its gear wheels meshing with said central pinion, plates mounted forwardly of the clockwork mechanism and extending between the wheels of said double gear wheels, a

sleeve mounted on one of said plates, a shaft extending through the sleeve, a pinion carried on the shaft, a pointer carried on the opposite end of said shaft, a sector meshing with said pinion, a vacuum box mounted on one of said plates, a pivoting lever actuable by said vacuum box, a pin on said lever for actuating said sector, and time-indicating means mounted concentrically of the sleeve and actuable by said clockwork mechanism through the double gear wheel.

3. A combined clock and barometer including clockwork mechanism having a central shaft, a front plate, and a dial, an axle mounted on the front plate, a double gear rotatable on said axle and having one of its gear wheels meshing with said central pinion, plates extending into the space between the two wheels of said double wheel, a sleeve mounted on one of said plates axially of the dial, a shaft mounted concentrically of said sleeve, a pointer mounted at the outer end of said shaft, a pinion mounted at the inner end of said shaft, a sector mounted between the plates and meshing with said pinion, a vacuum box mounted on one of said plates and having its axis at right angles to said plates, a pivoting lever cooperating with said box, a pin on said lever actuable by said box for swinging the sector and rotating the pinion and pointer, and time-indicating means mounted about said sleeve and driven by said clockwork mechanism through the double gear wheel.

4. A combined clock and barometer including clockwork mechanism having a central shaft and a dial, a central pinion mounted on the front end of said shaft, an axle mounted forwardly of said mechanism, a double gear wheel rotatable about said axle and having one of its gear wheels meshing with said central pinion, a fixed sleeve mounted axially of the dial and forwardly of the clockwork mechanism, plates extending between the wheels of said double wheel, a shaft rotatable within the sleeve, a pinion mounted on said shaft between said plates, a pointer mounted on the opposite end of said shaft, a sector mounted between the plates and actuating said pinion, a third plate mounted upon said first-mentioned plates, a vacuum box mounted on said third plate, a pivoting lever actuated by said box, a pin on said lever actuating said sector whereby rotation of the pinion and pointer will be effected, and time-indicating means rotatable about said sleeve and actuable by said double gear wheel through said clockwork mechanism.

5. A combined clock and barometer including clockwork mechanism having a frame and a dial, a lateral axle mounted on the frame, a double gear wheel rotatable on said axle, a pinion carried by said clockwork mechanism, a bridge mounted on said clock-

work frame, a fixed sleeve mounted on said
bridge, a shaft rotatably mounted within the
sleeve, a pointer carried on said shaft, a
pinion carried at the opposite end of said
5 shaft beneath said bridge, a second bridge
mounted on the clockwork frame beneath said
first-mentioned bridge and journaling the
end of said shaft, a pinion mounted on the
shaft between the bridges, a volute spring
10 mounted on said shaft and having its free
end secured to said first-mentioned bridge, a
chain connecting said shaft with tempera-
ture controlled actuating means, and time-
indicating means rotatable about the fixed
15 sleeve and actuatable by said clockwork
mechanism through said double gear wheel.

In testimony whereof I affix my signature.

HENRI GODY.

20

25

30

35

40

45

50

55

60

65