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MOTION-WORK FOR TIME-PIECES

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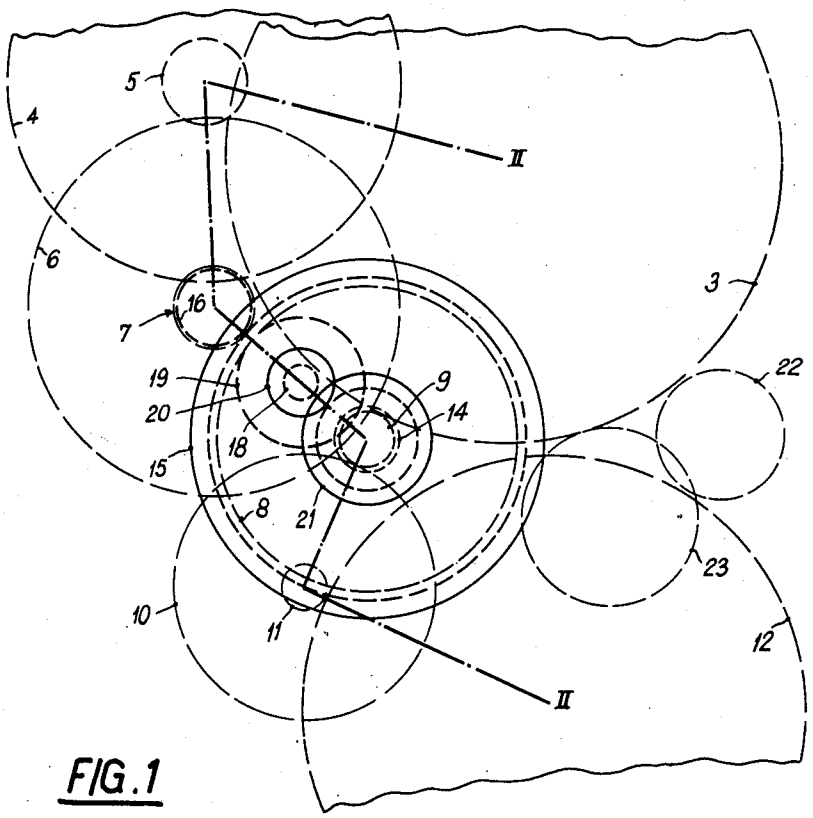


FIG. 1

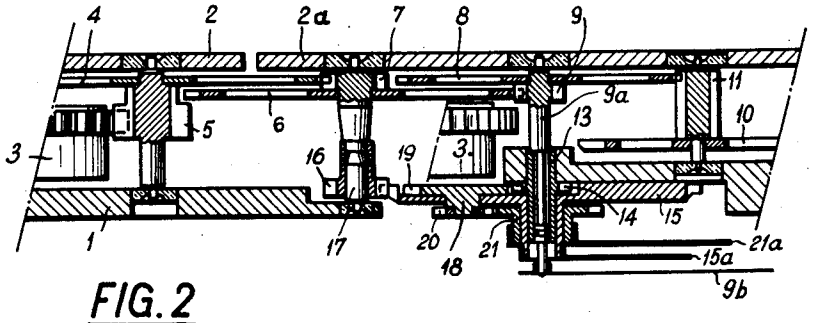


FIG. 2

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MOTION-WORK FOR TIME-PIECES

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My invention has for its object a motion-work for time-pieces. According to said invention, the motion-work includes a stationary pinion, a wheel carrying the minute hand and controlled by a pinion secured to a spindle of the time-piece movement through a friction coupling, said minute hand wheel being provided with at least one eccentric bearing inside which is revolvably carried a gear, the wheel of which meshes with said stationary pinion, while its pinion controls a wheel carrying the hour hand.

I have illustrated by way of example a preferred embodiment of my invention, as applied to a movement including a central seconds wheel, in the accompanying drawing wherein:

FIG. 1 is a plan view of a part of said movement and FIG. 2, a cross-section through line II—II of FIG. 1.

In said drawing, 1 designates the plate of the movement, 2 and 2*a* the different bridges, and 3 the spring barrel controlling the balance wheel 12 through the agency of the following gears: center wheel and pinion 4—5, third wheel and pinion 6—7 secured to the spindle 17, fourth wheel and pinion 8—9 secured to the central spindle 9*a*, the lower end of which carries the seconds hand 9*b* and, finally the escape wheel and pinion 10—11, which latter is connected with the balance wheel 12 through the agency of the escape means which are not illustrated.

Numeral 13 designates a sleeve fitted into the plate 1 and inside which the central spindle 9*a* rotates. Said sleeve is rigid with a stationary pinion 14, the teeth of which are cut therein. Numeral 15 designates a wheel rigid with a sleeve carrying the minute hand 15*a* and meshing with the pinion 16 frictionally fitted with a slight fit over the spindle 17 carrying the third wheel and pinion 6—7.

Said wheel 15 is provided with an eccentric bearing revolvably carrying a further gear including a hub 18, a wheel 19 meshing with the stationary pinion 14 and a pinion 20 meshing with a wheel 21 revolving freely over the sleeve rigid with the wheel 15 and carrying the hour hand 21*a*. The time-setting spindle which is not illustrated is connected through the wheels 22—23 with the wheel 15.

It is apparent that the central seconds wheel 8 is inserted in series between the spring barrel and the balance wheel. On the other hand, the pinion 16 controls the wheel 15 which drives into rotation the gear 19—20, so that the latter revolves round its axis because it meshes

with the stationary pinion 14, while the pinion 20 of last mentioned gear controls the hour wheel 21 and makes it turn twelve times more slowly than the minute hand. Obviously, instead of the friction coupling formed, in the case illustrated, by the pinion 16 and the spindle 17, I may resort in a modification to an arrangement wherein the teeth of the wheel 15 are fitted with slight friction over the body of said wheel.

What I claim is:

1. In a time-piece movement including a barrel, an eccentric center gear driven by the barrel, a third gear driven by the center gear, a fourth gear spindle controlled by the third gear, and a seconds hand rigid with said spindle, the combination of; a stationary sleeve, a wheel coaxially and loosely mounted on said sleeve, a minute hand rigid with said wheel, a pinion coaxial with and frictionally driven by the third gear and operatively engaging the wheel loosely mounted on said sleeve, an hour wheel freely revolvable round the fourth gear spindle, an hour hand carried by the hour wheel, a stationary pinion coaxially rigid with the sleeve, a gear including two rigidly coaxial pinions pivotally secured to the wheel loosely mounted on the sleeve at an eccentric point of said loosely mounted wheel, said coaxial pinions meshing respectively with the hour wheel and with the stationary pinion.

2. In a time-piece movement including a barrel, an eccentric center gear driven by the barrel, a third gear driven by the center gear, a fourth gear spindle controlled by the third gear, and a central seconds hand rigid with said spindle, the combination of; a stationary sleeve coaxial with said spindle, a wheel coaxially and loosely mounted on said sleeve, a minute hand rigid with said wheel, a pinion coaxial with and frictionally driven by the third gear and operatively engaging the wheel loosely mounted on said sleeve, an hour wheel freely revolvable round the fourth gear spindle, an hour hand carried by the hour wheel, a stationary pinion coaxially rigid with the sleeve, a gear including two rigidly coaxial pinions pivotally secured to the wheel loosely mounted on the sleeve at an eccentric point of said loosely mounted wheel, said coaxial pinions meshing respectively with the hour wheel and with the stationary pinion.

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