J. BAK.

BABY CARRIAGE.

APPLICATION FILED JUNE 15, 1920.

1,372,588.

Patented Mar. 22, 1921.

2 SHEETS—SHEET 1.

FIG. 1

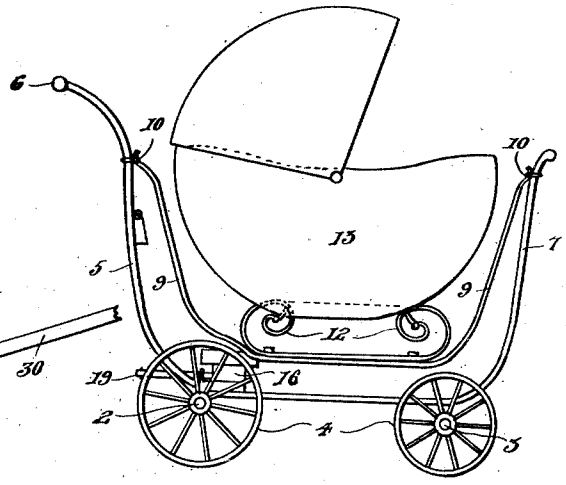


FIG. 4

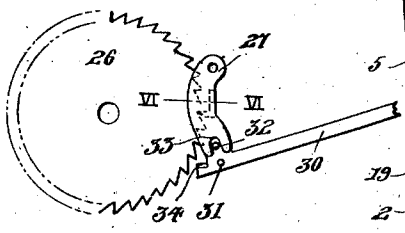


FIG. 2.

FIG. 5.

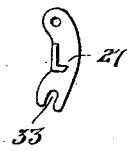
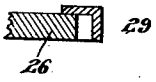


FIG. 6.



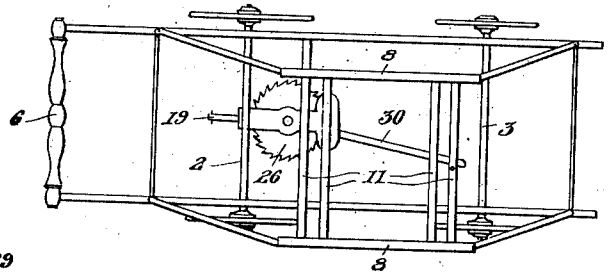
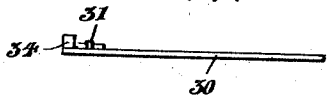
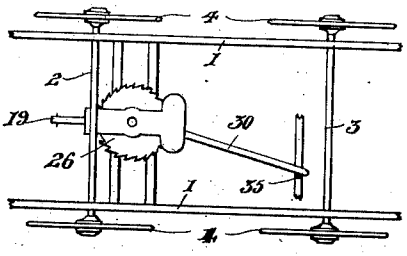


FIG. 3.

FIG. 7.





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2 SHEETS—SHEET 2.

FIG. 8.

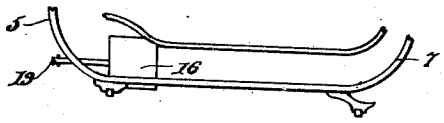


FIG. 9.

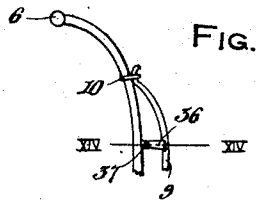


FIG. 10

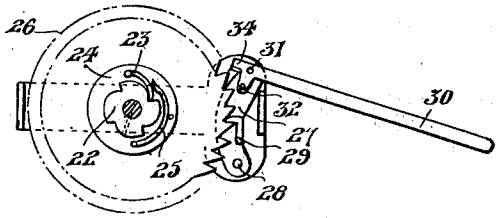


FIG. 11.

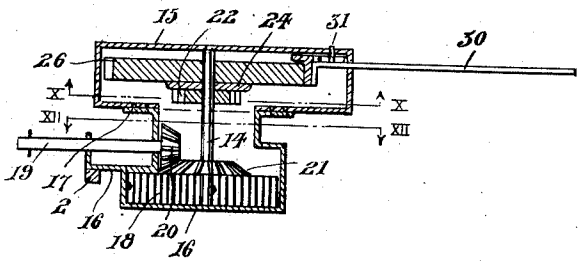


FIG. 12.

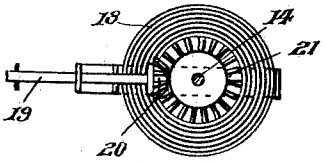


FIG. 13.

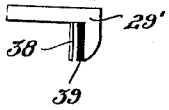
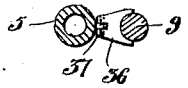


FIG. 14.



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UNITED STATES PATENT OFFICE.

JOZEF BAK, OF CHICAGO, ILLINOIS.

BABY-CARRIAGE.

1,372,588. Specification of Letters Patent. Patented Mar. 22, 1921.

Application filed June 15, 1920. Serial No. 389,177.

To all whom it may concern:

Be it known that I, JOZEF BAK, a citizen of Poland, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Baby-Carriages, of which the following is a specification.

This invention relates to certain new and useful improvements in baby carriages and particularly to that type wherein the basket or body carrying portion of the carriage is swingingly mounted.

A further object of the invention is to provide a baby carriage having a swinging body carrying portion with a spring motor associated therewith for oscillating the carriage body and being controllable to hold the body stationary.

With the above and other objects in view, the present invention consists in the novel form, combination and arrangement of parts hereinafter more fully described and shown in the accompanying drawings, wherein like reference characters indicate similar parts throughout the several views.

In the drawings,

Figure 1 is a side elevational view of a baby carriage constructed in accordance with the present invention,

Fig. 2 is a top plan view of the same with the carriage body removed,

Fig. 3 is a fragmentary plan view of the supporting structure with the body supporting carriage removed,

Fig. 4 is a top plan view of the escapement mechanism removed from the spring motor and carriage body,

Fig. 5 is a detail plan view of the escapement lever detached from the escapement mechanism,

Fig. 6 is a detail sectional view taken on line IV—IV of Fig. 4 showing the pawl of the escapement lever in engagement with the teeth of the escapement wheel,

Fig. 7 is a side elavational view of the carriage shifting arm detached from the escapement mechanism,

Fig. 8 is a fragmentary elevational view of the stationary carriage frame and swinging frame with the motor casing thereon,

Fig. 9 is a fragmentary view showing the swinging frame locked to the stationary frame,

Fig. 10 is a horizontal sectional view taken on line X—X of Fig. 11,

Fig. 11 is a vertical sectional view through the motor casing,

Fig. 12 is a cross sectional view taken on line XII—XII of Fig. 11,

Fig. 13 is an elevational view of a modified form of the escapement pawl, and

Fig. 14 is a cross sectional view taken on line XIV—XIV of Fig. 9.

Referring more in detail to the accompanying drawings, there is illustrated a baby carriage embodying a stationary frame, a swinging frame and a carriage body. The stationary frame embodies side bars 1 mounted on axles 2 and 3 which carry wheels 4. The rear ends of the side bars 1 extend upwardly to provide handle bars 5 with a cross hand grip 6 at the upper ends while the forward ends to the bars 1 are bent upwardly to provide mounting arms 7 as shown more clearly in Figs. 1 and 2, the stationary frame bars being substantially U-shaped in side elevation.

The swinging frame is of similar construction to the stationary frame and embodies lower horizontal side rails 8 having upwardly directed end bars 9 that are swingingly mounted at their upper ends as by cleats 10 upon the handle bars 5 and the foot bars 7. The side rails 8 of the swinging frame are maintained in spaced relation by the cross braces 11. As shown more clearly in Fig. 1, spring members 12 are mounted on the swinging frame and support any proper type of carriage body 13.

It is intended that the carriage body 13 and swinging frame move laterally of the stationary frame in a swinging movement suspended from the cleats 10 and to effect such swinging movement, there is provided a spring motor supported on the stationary frame and embodying an oscillating arm for engagement with the frame for moving the same. The spring motor embodies a vertical shaft 14 journaled at its upper and lower ends in straps 15 and 16, which straps are connected as at 17 and supported on the rear axle 2. A band spring 18 surrounds the shaft 14 and is connected at one end to said shaft while the other end of the spring is connected to the strap bearing 16 as shown more clearly in Fig. 1. The winding of the spring and manual rotation of the shaft 14 is effected by the crank shaft 19 rotatably mounted in the strap bearing 16 and carrying a bevel pinion 20 upon the inner end

thereof for constant engagement with the bevel gear 21 fixed to the shaft 14 above the spring 18. In order to maintain the spring 18 in a wound condition with the shaft 14 under tension, there is provided a ratchet wheel 22 keyed to the shaft 14 adjacent the upper end thereof and adapted to be engaged by the pawl 23 pivoted upon the disk 24 that is freely rotatable on the shaft above the ratchet wheel 22, the pawl 23 being maintained in constant engagement with the ratchet wheel under the influence of the spring 25. A toothed escapement wheel 26 is freely rotatable on the shaft 14 and is fixed to the disk 24.

The escapement lever is associated with the wheel 26 embodying an arm 27 pivoted as at 28 in the strap bearing 15 and carrying an escapement pawl 29 intermediate the ends thereof for engagement with the teeth of the escapement wheel 26. An oscillating arm 30, shown in detail in Figs. 4, 7, and 10 is pivoted as at 31 upon the strap bearing 15 and has a lug projection 32 that extends into the bifurcated free end 33 of the escapement lever 27 while the adjacent end 34 of the arm 30 coöperates with the teeth of the escapement wheel 26. The operation of the escapement mechanism which will be presently described causes an oscillation of the arm 30, the outer free end of which engages a pin 35 upon one of the cross braces 11 of the swinging frame to oscillate the frame and body carried thereby.

In placing the spring 18 under tension, the crank shaft 19 is rotated, which movement is communicated to the shaft 14 by the meshing gears 20 and 21, the spring thereby being placed under tension while the ratchet wheel 22 freely rides over the pawl 23 and is prevented from retrograde movement by said pawl. When the arm 30 is in the position shown in Figs. 4 and 10, the carriage body 13 is moved to one side of its balancing position and the pin 35 upon the cross bar 11 is in engagement with the free end of the arm 30 to move the same upon its pivot 31. This movement of the arm 30 causes the lug projection 32 thereof that freely extends into the bifurcated end 33 of the escapement lever 27 to move the lever on its pivot 28 to free the pawl 29 from engagement with the adjacent tooth of the escapement wheel 26, during which time the carriage body 13 is swinging in one direction while the terminal projection 34 upon the arm is moved for engagement with a tooth of the escapement wheel 26. The pawl 29 being free of engagement with the wheel 26, the wheel continues to rotate with the adjacent tooth engaging the lug 34 of the arm to reversely shift the escapement lever 27 and to cause the pawl 29 to engage the escapement wheel. The carriage body 13 again being overbalanced will repeat the pivotal movement of the arm 30 so that the spring 18 rotating the shaft 14 will cause a continuous operation of the escapement mechanism. When it is desired to retain the swinging carriage stationary, the notched arm 36 pivoted as at 37 to the handle bar 5 has the notched end thereof moved into engagement with the adjacent extension arm 9 of the swinging frame.

A modification of the escapement pawl 29 is shown in Fig. 13 wherein the pawl 29′ carries a spring finger 38 that is adapted for engagement with the teeth of the escapement wheel 26 while the cushion block 39 upon the pawl 29′ absorbs the shock of the operation of the spring and also presents an escapement mechanism that is noiseless.

While the preferred forms of the invention are herein shown and described, it is nevertheless to be understood that minor changes may be made therein without departing from the spirit and scope of the invention as hereinafter claimed.

What is claimed as new is:

1. A baby carriage of the type described comprising a stationary frame, a movable frame swingingly mounted thereon, a carriage body carried by the swinging frame, means carried by the stationary frame and engaging the swingingly mounted frame to shift the same, said means including a tensioned shaft, an escapement mechanism operated by said shaft, said escapement mechanism embodying a wheel, a lever pivoted adjacent said wheel and carrying a pawl for engagement with the wheel, an arm adapted to be operated by the movement of said lever to shift the swinging frame, the free end of said lever being bifurcated and a lug projection carried by said arm extending into said bifurcation to effect the shifting of said arm.

2. A baby carriage of the type described comprising a stationary frame, a movable frame swingingly mounted thereon, a carriage body carried by the swinging frame, means carried by the stationary frame and engaging the swingingly mounted frame to shift the same, said means including a tensioned shaft, an escapement mechanism operated by said shaft, said escapement mechanism embodying a wheel, a lever pivoted adjacent said wheel and carrying a pawl for engagement with the wheel, an arm adapted to be operated by the movement of said lever to shift the swinging frame, and a cushioned spring finger carried by the pawl for engagement with the escapement wheel.

In testimony whereof I affix my signature.

JOZEF BAK.