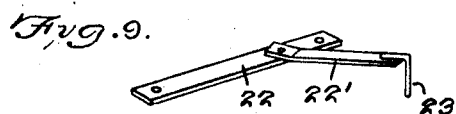
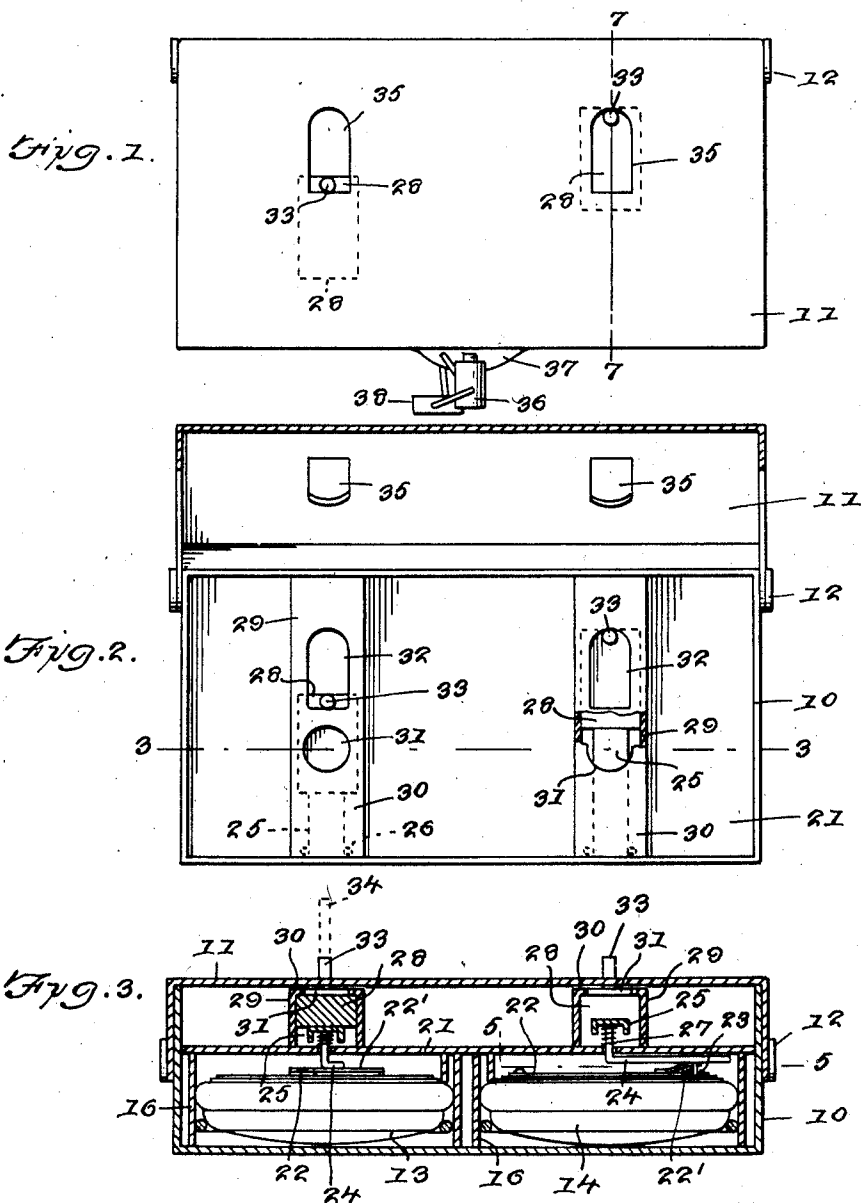


June 15, 1943.

M. R. THOMA
TIMING APPARATUS
Filed Oct. 6, 1941

2,321,876

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 4.

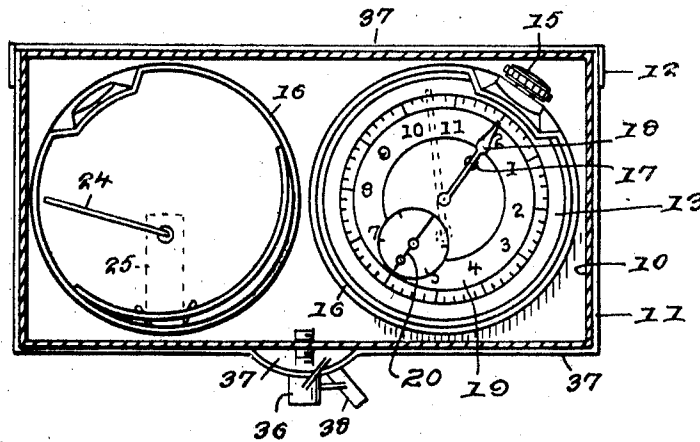


Fig. 5.

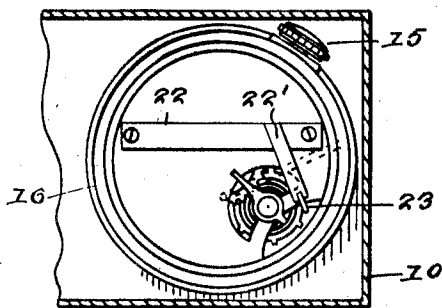


Fig. 6.

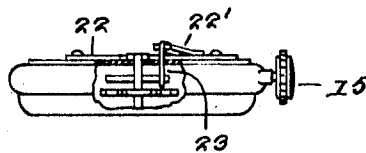


Fig. 7.

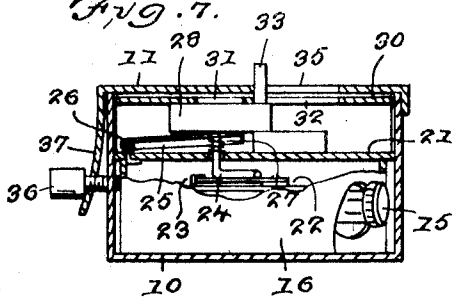
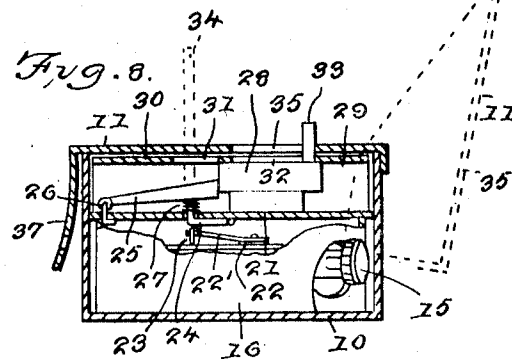


Fig. 8.



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2,321,876

TIMING APPARATUS

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Application October 6, 1941, Serial No. 413,892

4 Claims. (Cl. 161—18)

This invention relates to timing apparatus and more particularly to an apparatus for timing the flight of pigeons entered in a race.

The primary object of the invention is the provision of an apparatus of this character, wherein the construction thereof enables accurate timing of the flight of a pigeon, particularly when racing the same, and eliminates the possibility of the owner of a pigeon entered in the race, from making false representation of the registering of the time consumed thereby, when traveling from a starting to a finishing point.

Another object of the invention is the provision of an apparatus that includes a timepiece, such as a watch of the usual spring wound type, and which is confined within an enclosure or case, in a manner to eliminate any possibility of tampering therewith, for falsifying, as to the time of the flight, and the stopping and starting of the timepiece is accomplished in a novel manner.

A further object of the invention is the provision of a timing apparatus that is primarily designed for use in pigeon racing, it being usual to have the pigeons which participate in a race registered therefor, and each bird carries an identification band on its leg for that purpose, so that by the use of the apparatus, together with the band, the time of the flight can be accurately determined for official registering purposes.

A still further object of the invention is the provision of an apparatus of this character, which is designed to be officially closed and sealed before the start of a race, and upon the finish of the race, the registered identifying band worn on the leg of the bird is removed and deposited within the apparatus, and upon such deposit, the timepiece or watch is not only rendered active, but the band cannot be removed, nor can the watch be stopped, until the seal is broken for the purpose of ascertaining the running time of the watch and said running time is used in calculating the time of the finish of the flight, so that the time consumed by the bird in making the flight, can be ascertained.

A still further object of the invention is the provision of an apparatus of this character which is compact in form, simple in construction, thoroughly reliable and efficient in operation, fool-proof, eliminates surreptitious tampering therewith, and is likewise inexpensive to manufacture.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accom-

panying drawings and specifically pointed out in the appended claims.

In describing the invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:

Figure 1 is a top plan view of the apparatus constructed in accordance with the present invention.

Figure 2 is a view similar to Figure 1, showing the lid of the case in open position.

Figure 3 is a sectional view taken approximately on line 3—3 of Figure 2.

Figure 4 is a horizontal sectional view taken through the apparatus.

Figure 5 is a sectional view taken approximately on line 5—5 of Figure 3.

Figure 6 is an edge elevation of one of the watches employed in the form shown, and illustrates the watch partly in section.

Figure 7 is a sectional view taken approximately on line 7—7 of Figure 1.

Figure 8 is a view similar to Figure 7, with the parts in latched position.

Figure 9 is a perspective view of the stop means for each watch or clock employed in the apparatus.

Referring to the drawings in detail, it will be noted that the form of apparatus shown is designed for two watches, but it can be made for any number, or for a single watch or other timepiece. In any event, the apparatus shown includes a rectangular case 10 preferably made from sheet metal and equipped with a vertically swingable cover or lid 11 hinged as at 12 to the ends of the case 10 for free swinging movement. Disposed within the case 10 in side by side relation, is a pair of watches 13 and 14 respectively, each being identical and of the usual spring wound type and windable and set by a crown stem 15, that is readily accessible for that purpose when the holder 16 for the watches is removed from the case, as such is necessary for the inspection of the dials of the watches, in that the watches are mounted within the holder, in a manner whereby when the latter is disposed within the case, the dials face the bottom wall thereof, as best shown in Figure 3. Each watch 13 and 14 includes hour and minute hands 17 and 18 respectively, for traversing the dial 19 thereof, as well as a second hand 20 that traverses its dial, as indicated in Figure 4. The holder 16 of the watches is provided with a cover or concealing plate 21 which overlies the watches when the holder 16 carrying the same is placed within the

case 10, so that the watches are hid from view when the lid 11 of the case 10 is in open position.

The plate 21 of the holder 16 is shaped to fit within the case 10 and the holder is readily applicable and removable with respect thereto. Suitable means is provided for removably securing the watches within the holder, as clearly shown in Figure 3.

The usual lids of the watches are removed, as they are not used when the watches are employed with my apparatus, and a strip 22 is provided for each watch, the strip being fixed to the closure plate of the gear train of the watch, and secured to the strip 22 is one end of a stop trigger that includes a spring finger 22' having a pin 23 secured to and depending from its free end for engagement with the balance wheel of the watch for stopping the same. For that purpose, the spring finger is engaged by the free portion of a right angled bent arm 24 that has an upturned end portion fixed to a pivoted latching detent 25 that has its pivot 26 fixed to the plate 21, and the upturned end portion of the arm 24 works through an opening in the plate 21. The arm 24 is normally held elevated from the spring finger by a coil spring 27 sleeved about the upturned portion of the arm, and the spring 27 also normally holds the detent 25 elevated to a latching position for disposal in the path of a shutter or closure slide member 28 that is slidably mounted within an inverted channel shaped guide 29 fixed to and rising from the plate 21 of the holder 16.

The guide 29 is of a length coextensive with that of the width of the plate 21, to engage the front and rear walls of the case 10, to provide a receptacle for housing the identification band, not shown, when removed from the leg of a pigeon, upon completion of the flight. The top 30 of the guide 29 is provided with a circular opening 31 and an elongated opening 32. The circular opening 31 affords access to the detent 25, while the opening 32 has projecting therethrough a finger knob 33 fixed to and rising from the shutter 28, for sliding the latter along the length of the guide 29, a distance within the limits of the length of the opening 32, as will be apparent upon inspection of Figures 7 and 8, which likewise illustrates that the shutter 28 is held elevated above the plate 21 by suitable supporting means, so that the shutter 28 is in constant engagement with the under face of the guide 29, to bring about complete closing of the opening 32.

The shutter 28 is held in its latched position to close the opening 32, by the detent 25, as shown in Figure 8, and when in that position, the detent holds the arm 24 elevated so that it will be out of engagement with the balance wheel of its watch, and thus the watch will be running. To release the detent from latched engagement with the shutter, it is necessary to use a push pin, stick or the like 34, that may be conveniently carried within the case 10 and in use, the stick is to be inserted through the opening 31 to apply pressure against the detent to release the shutter 28 so that it can be moved through the medium of its knob 33, over and onto the detent 25 for holding the latter in depressed position, as shown in Figure 7. When the detent is depressed, the pin 23 on the free end of the spring finger 22' engages the balance wheel of the watch and stops the running thereof.

The lid or cover 11 has formed therein elongated openings 35, there being an opening 35 for each of the openings 32, and the openings 35 are arranged to register with the openings 32, when

the lid is disposed to closed position, as clearly shown in Figures 7 and 8, which likewise illustrates that the finger knobs 33 of the shutters 28 extend through the openings 35, to bring about movement of the shutters 28 when the lid 11 is in closed position.

The lid is releasably fastened in a closed position, preferably by a screw bolt 36, for disposal of the shank thereof through an opening in a front flange 37 formed on the lid 11, for the shank to be threaded in a threaded opening in the front wall of the case, as best shown in Figure 4, and the screw bolt is held against unauthorized removal by a wire type sealing element 38, which of course will serve as an indicator if broken, and thus be indicative of the fact that the apparatus has been surreptitiously handled.

In order that the manner in which my apparatus is generally used, will be clearly understood, it is deemed advisable to state that pigeon races are conducted by bird clubs which of course have racing as one of the objects thereof, and each member having a bird or birds in a race possesses one of the apparatus. Prior to the race, the members having a bird or birds entered therein, applies one of the identifying bands to the leg of the bird, the band being preferably of rubber to allow easy application and removal, and it also is provided with a number or other identification means which is recorded at the club headquarters.

The pigeons are first shipped to a designated point, and the distance between that point and the home lofts of the pigeons is accurately ascertained. Each member or owner of a pigeon that is entered in the race, brings his timing apparatus to headquarters, where it is set and sealed by a designated committee. For that purpose, the lid 11 of the case 10 is opened and the holder 16 with the watches therein is removed from the case. The watches are wound in the usual manner, it being understood that the watches are running at that time. In order to stop the watches, the push pin 34 is inserted into the opening 31 of each of the guides 29, for pushing the detent against the arm 24 which in turn will lower the pin 23 in engagement with the balance wheel and thereby stop the watch. Each of the watches is then set, with the minute and hour hands thereof on exactly twelve o'clock, and it is desired that the watch be stopped so that the second hand will point to the numeral 60. The opening 31 is then closed by sliding the shutter to the position of Figure 7, and the holder together with the watches therein is then replaced in the casing. When the watches are replaced, it will be obvious that the opening 32 of each guide is fully open to allow for the passage of the bands therein. The apparatus is then closed, locked and sealed and is therefore ready for use, and the member then takes the same to the home loft of the pigeon.

The pigeons are released at a designated time and upon arrival of the first pigeon at its home loft, the owner catches the same, removes the identification band and inserts the band into the opening 32. The shutter 28 is then closed, and such results in releasing the detent which in turn releases the pin from the balance wheel and the watch starts running. The same operation is carried out upon the arrival of the second bird in the event the owner or member has two birds entered in the race, and of course assuming that the apparatus that includes two watches is used.

It is a general rule in all bird clubs that after a member has timed his first bird, the apparatus must be turned into club headquarters within one hour, regardless of whether the second bird has arrived. When the apparatus is turned in, the seals are examined by the committee to see that they are intact and have not been tampered with, then they are broken and the lid is opened. The official in charge of the race then instructs the members to stop the watch or watches of the apparatus when he calls time for that purpose, the official using a suitable timepiece, and it will be obvious that the watches of the apparatus are stopped by the use of the push pin 34 and upon sliding the shutter over the detent to hold the pin in engagement with the flywheel. After the watches have been stopped, they are removed from the casing through the medium of the holder, to allow removal of the identification band and the band is checked with the records. Reading is then taken from a watch in the following manner. For example the official calls a stop when his watch is exactly fifty-eight minutes and thirty-six seconds past eleven o'clock. One of the contestant's watches reads twenty-eight minutes and thirty-five seconds past two o'clock, and upon deducting the reading time of the contestant's watch from that of the reading time of the official's watch, it will be ascertained that the contestant's bird arrived at its home loft thirty minutes and one second past nine o'clock. In order to ascertain the exact flying time of the bird, from its starting point to its home loft, it will be obvious that the time on which the bird started is deducted from the time on which it arrived at the home loft, or in other words, the time of arrival of the bird in the example given is thirty minutes and one second after nine o'clock. Assuming that the bird was released at thirty minutes and one second after eight o'clock, the exact flying time will be one hour.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

It is to be understood that changes may be made in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claims.

What is claimed is:

1. A timing apparatus comprising a case having a releasible cover provided with an opening, a watch mechanism having a balance wheel, a holder for said watch mechanism and insertable in the case, a guide arranged with said holder and having spaced openings, one of the openings for registering with the opening in the cover, a slide movable in the guide and closing the opening registering with the opening in the cover, and mechanism manually operated through the other opening in said guide and engaging the balance wheel for stopping the running of the watch

mechanism and locking the slide against movement.

2. A timing apparatus comprising a case having a releasible cover provided with an opening, a watch mechanism having a balance wheel, a holder for said watch mechanism and insertable in the case, a guide arranged with said holder and having spaced openings, one of the openings for registering with the opening in the cover, a slide movable in the guide and closing the opening registering with the opening in the cover, mechanism manually operated through the other opening in said guide and engaging the balance wheel for stopping the running of the watch mechanism and locking the slide against movement, and means for sealing the cover closed and giving access only to the opening in the guide in register with the opening in said cover.

3. A timing apparatus comprising a case having a releasible cover provided with an opening, a watch mechanism having a balance wheel, a holder for said watch mechanism and insertable in the case, a guide arranged with said holder and having spaced openings, one of the openings for registering with the opening in the cover, a slide movable in the guide and closing the opening registering with the opening in the cover, mechanism manually operated through the other opening in said guide and engaging the balance wheel for stopping the running of the watch mechanism and locking the slide against movement, means for sealing the cover closed and giving access only to the opening in the guide in register with the opening in said cover, and a concealing plate associated with the holder and guide for entirely covering the said holder and concealing it when within the case.

4. A timing apparatus of the character described, comprising a case, a removable cover for said case and having an opening, a watch mechanism in the bottom of the case having a balance wheel, a horizontal partition above the watch mechanism, a pivoted lever carried by the upper face of the partition, spring means for normally holding the lever in an upward position, an arm normally upwardly spring held passing through the partition and engaging the lever, means operated by the arm upon its downward movement to engage the balance wheel and stop the same, a horizontal partition adjacent the upper end of the case and having an opening registering with the opening in the cover, a second opening arranged above the lever, and a shutter sliding on the first mentioned partition and provided with an arm extending through the opening in the second partition and the opening in the cover, said shutter held against movement by the pivoted lever whereby the same may be moved upon the depression of the lever by a downward movement of an instrument passed through the second opening in the second partition.

MAURICE RUSSEL THOMA.