

N° 26,748



A.D. 1904

Date of Application, 8th Dec., 1904

Complete Specification Left, 5th Sept., 1905—Accepted, 7th Dec., 1905



PROVISIONAL SPECIFICATION.

“Improvements in Apparatus for Controlling Telegraphic Recorders and other Instruments”

We, MARCONI'S WIRELESS TELEGRAPH COMPANY, LIMITED, of 18 Finch Lane, in the City of London, and EDWARD PRIDDLE, of 9 Hall Street, Chelmsford, Electricians, do hereby declare the nature of this invention to be as follows:—

5 The object of this invention is to provide means for automatically starting an instrument such as a telegraphic recorder as soon for instance as the first signal of a message is received and for stopping the movement after the lapse of a certain time after the completion of the message.

According to our invention the clockwork driving the recorder or other instrument is controlled by a brake or its equivalent which is connected to a pin engaging a screw thread on a drum actuated by the clockwork. When the instrument is to be started the pin is lifted out of engagement with the thread by an arm operated by an electro-magnet so allowing the brake to be taken off by means of a spring. The pin is held up during the receipt of the message or so long as the instrument is to run but on the conclusion of the message the pin drops back into the screw thread which moves the pin and the arm carrying it gradually back against the spring to apply the brake and stop the clockwork after the lapse of a certain interval from the conclusion of the message. A means of adjusting the brake may be provided to enable it to act after a longer or shorter interval.

20 Though the invention has been described with reference to a telegraphic recorder it is obvious that it may be applied to the control of other instruments.

Dated this 8th day of December 1904.

CARPMAEL & Co.
Agents for the Applicants.

25 COMPLETE SPECIFICATION.

“Improvements in Apparatus for Controlling Telegraphic Recorders and other Instruments.”

30 We, MARCONI'S WIRELESS TELEGRAPH COMPANY, LIMITED, of 18 Finch Lane, in the City of London, and EDWARD PRIDDLE, of 9 Hall Street, Chelmsford, Electricians, do hereby declare the nature of this invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement:—

The object of this invention is to provide means for automatically starting an instrument such as a telegraphic recorder, as soon for instance as the first signal of a message is received, and for stopping the movement after the lapse of a certain period after the completion of the message.

According to the invention the clockwork driving the recorder or other

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Improvements in Apparatus for Controlling Telegraphic Recorders, &c.

instrument is controlled by stop mechanism, which is connected to a pin engaging a screw thread on a drum actuated by the clockwork. When the instrument is to be started, the pin is lifted out of engagement with the thread by a lever arm operated by an electro magnet, so allowing the stop to be taken off by means of a spring. The pin is held up during the receipt of the message or so long as the instrument is to run, but on the conclusion of the message the pin drops back into the screw thread which moves the pin and the arm carrying it gradually back against the spring to apply the stop and arrest the clockwork after the lapse of a certain interval from the conclusion of the message.

The accompanying drawing illustrates the application of the invention to a telegraphic recorder, but it is obvious that it may be applied to the control of other instruments.

Figure 1 of the drawings is a sectional elevation and Figure 2 a plan, only those parts of the instrument being shown which are necessary to enable the invention to be fully understood.

a is a spring barrel giving motion by means of a clock train *a*¹ to the spindle *b* fast on which is a pinion *b*¹ gearing with a pinion *c*¹ on a spindle *c*, which spindle may be used to actuate the paper feed of the telegraph recorder. The pinion *c*¹ also gears with a pinion *d*¹ on a spindle *d*, which has upon it a worm wheel *d*² gearing with a worm *e*¹ on the vertical governor spindle *e*.

This governor spindle is braked by an arm *f*¹ on a vertical rod *f* turning in bearings in the framing *g*.

On this rod *f* is another arm *f*² which carries by a horizontal pivot *h*¹ an arm *h* provided with a pin *h*² which is capable of engaging a screw thread on a drum *i* fast on the spindle *b*.

The arm *h* can be turned on its pivot *h*¹ so as to lift the pin out of the thread by a finger *k*¹ on a lever arm *k* fast with a shaft *k*² which carries an armature *l* normally held up from an electro magnet *l*¹ against a stop *l*² by a spring *l*³.

The parts are all shown in a position of rest. When however the magnet *l*¹ is energized, for instance by the first signal of an incoming message, the armature is attracted rocking the shaft *k*² which causes the finger *k*¹ to lift the arm *h* sufficiently to free the pin *h*² from the screw thread. Thereupon the rod *f* is turned by a spring such as *m* which is always bearing against the arm *f*², and the brake arm *f*¹ is moved out of contact with the governor spindle *e* which with the clock is therefore free to turn.

When the magnet is no longer energized *i.e.* at the termination of what is hereinafter called the necessary run of the clock say after the end of the message, the pin drops back into the thread on the drum by the revolution of which it is slowly moved back turning the arm *f*² against the spring *m*, so applying the brake to the spindle *e* and stopping the clock. The period for which the clock runs after the necessary run *i.e.* after the magnet is de-energized depends of course upon the amount the pin is moved back by the spring which can be regulated by a screw *n* which acts as a stop in the path of a stud *f*³ on the rod *f*. The more the screw *n* is withdrawn from its nut *n*¹ the longer will the clock continue to run. Of course if the magnet is energized by the telegraphic current the arm *h* will be continually rising and falling during the receipt of the message but each time it is lifted it will be pushed back by the spring *m* to the limit of its travel and there will therefore always be the given period during which the clock will run after the end of the message.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed we declare that what we claim is:—

1. The combination of a clock, stop mechanism normally holding the clock

Improvements in Apparatus for Controlling Telegraphic Recorders, &c.

at rest, means for automatically removing the stop, and means actuated by the clock for applying the stop after the lapse of a certain period substantially as described.

5 2. The combination of a clock, an electro magnet adapted to start the clock when energized, and means actuated by the clock for arresting its movement after the lapse of a certain period substantially as described.

10 3. The combination of a clock, stop mechanism normally holding the clock at rest, a screw threaded drum rotated by the clock, an arm adapted to engage the screw thread, an electro magnet adapted to disengage the arm from the thread when energized, a spring tending to remove the stop and to simultaneously move the arm relatively to the drum, and means for allowing the arm to again engage the thread substantially as described.

4. Apparatus for controlling telegraphic recorders and other instruments substantially as described and illustrated.

15 Dated this 2nd day of August 1905.

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20

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(2nd Edition)

Fig. 1

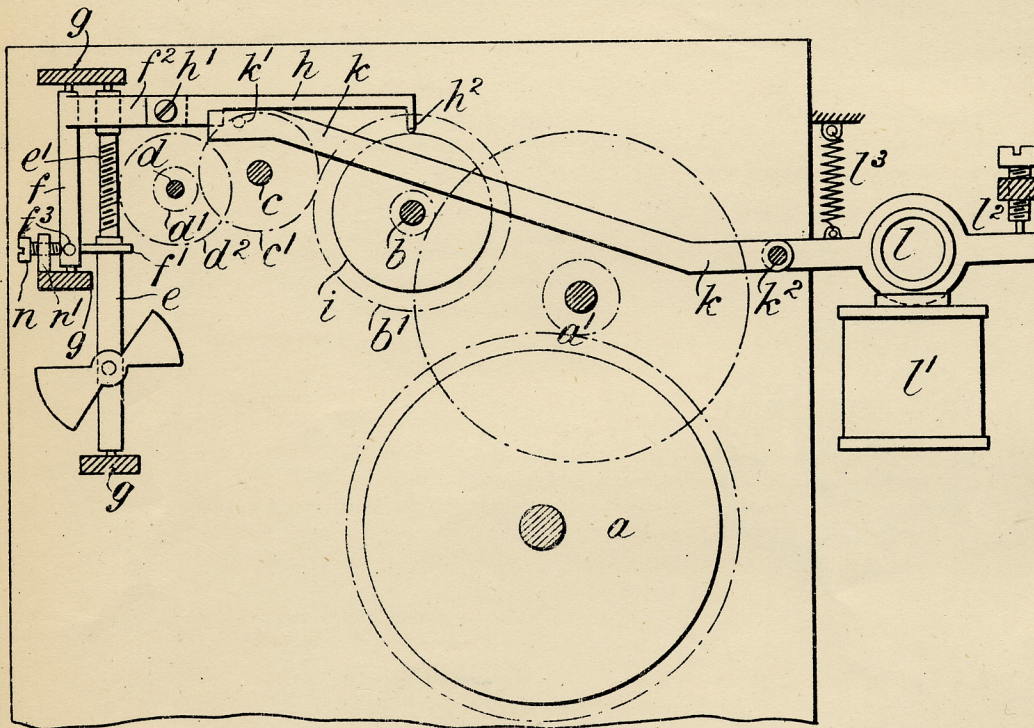


Fig. 2.

