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W. J. ROUSSEL.

TELEGRAPH RECEIVER AND RECORDER.

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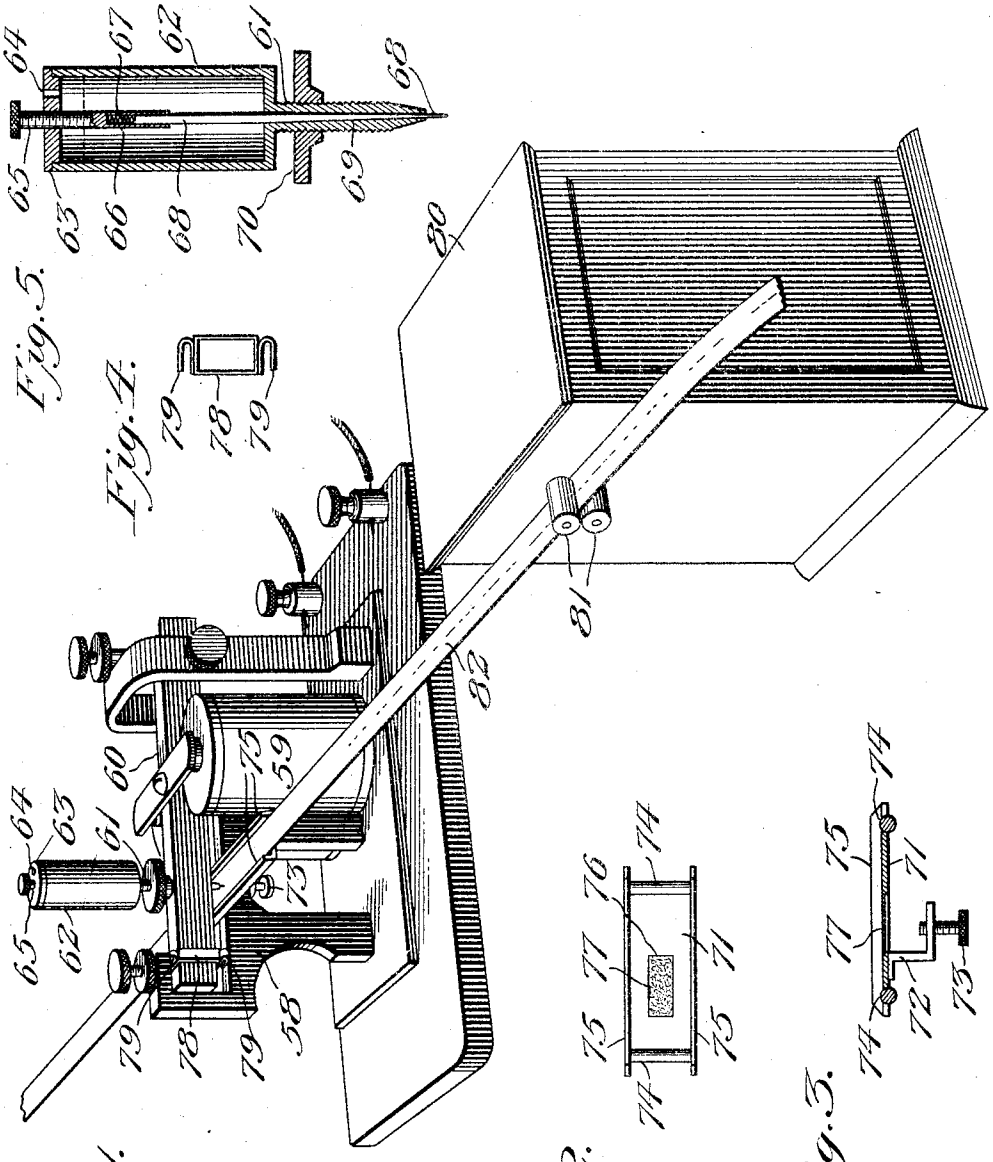


Fig. 5.

Fig. 4.

Fig. 1.

Fig. 2.

Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

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TELEGRAPH RECEIVER AND RECORDER.

SPECIFICATION forming part of Letters Patent No. 783,389, dated February 21, 1905.

Original application filed February 11, 1903, Serial No. 142,952. Divided and this application filed April 9, 1904. Serial No. 202,461.

To all whom it may concern:

Be it known that I, WILLIS J. ROUSSEL, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented new and useful Improvements in Telegraph Receivers and Recorders, of which the following is a specification.

My invention relates to new and useful improvements in telegraph receivers and recorders, and it forms a division of an application for Letters Patent for improvements in telegraph-transmitters, Patent No. 761,917, dated June 7, 1904.

The object of the invention is to provide mechanism whereby the message received may be marked in a suitable manner upon a strip of paper or other flexible material, said marks being recorded with the well-known Morse characters.

With the above and other objects in view the invention consists of a receiver which is of ordinary construction and which is provided with a series of attachments whereby a strip of paper or other flexible material can be drawn therethrough and the characters transmitted to the receiver indicated visually thereon.

The invention also consists of the further novel construction and combination of parts hereinafter more fully described and claimed, and illustrated in the accompanying drawings, showing the preferred form of my invention, and in which—

Figure 1 is a perspective view of the recording device. Fig. 2 is a plan view of the tape-guide. Fig. 3 is a central longitudinal section therethrough. Fig. 4 is an end elevation of my improved stop attachment for the armature of the recorder, and Fig. 5 is a vertical section through the ink-receptacle and showing the needle therein.

By referring to the drawings it will be seen that the recorder employs a telegraph-receiver of the usual construction, comprising a frame 58, magnets 59, and an armature 60. A passage is formed within the armature from the top to the bottom thereof and is adapted to receive a threaded stem 61, which projects downward from the bottom of a preferably cylindrical receptacle 62, having a cap 63 at its upper end provided with an air-vent 64. Within the center of this cap is mounted a screw 65, having a recess 66 in its lower end, within which is located a coil-spring 67. This spring is adapted to bear upon the end of a needle 68, which projects through stem 61 and serves to hold the passage 69 through said stem normally closed. A nut 70 is arranged on stem 61 and is adapted to bear upon the top of armature 60 and support the receptacle 62 in position thereon.

A guide-plate 71 is arranged upon the frame 58 at a point under the armature and is secured to said frame by means of a bracket 72, having a thumb-screw 73 therein, or in any other suitable manner. A roller 74 is preferably journaled at each end of the plate, and a flange 75 is formed at each side of said plate. An aperture 76 is formed within the plate at a point directly under the needle 68 of the stylographic pen, and this aperture is adapted to contain a pad 77, of rubber or other flexible material, whereby injury to the point of the needle will be prevented. A collar 78 is adapted to be placed upon the end of the armature 60, and this collar is provided at opposite ends with spring-arms 79, which are adapted to contact with the frame and limit the movement of the armature in either direction. These spring-arms also serve the purpose of sounders, whereby a message can be understood without referring to the tape adapted to be used in connection with the device. A casing 80, containing clockwork or any other form of motor, is adapted to be located at a point adjacent to and in front of the guide-plate 71, and rollers 81 project from one face of this casing and are adapted to be operated by the motor therein. A tape 82 of the kind ordinarily employed for receiving telegraphic messages is adapted to be placed upon and guided by plates 71 and are also extended between the rollers 81. The needle 68 of the stylographic pen is normally out of contact with the tape 82 and only contacts therewith when the magnet of the telegraph-receiver is energized. When a message is to

be received by means of the above-described device, the motor within the casing 80 is started so as to impart longitudinal movement to the tape. Each time a current passes from a transmitter to the recorder the armature 60 is moved downward by the magnets 59, and the needle 68, coming into contact with the tape at a point above the pad 77, is forced upward, and thereby compresses spring 67 and permits ink within the receptacle 62 to flow downward through stem 61 and upon the tape. As the tape passes under the needle the ink will leave an impression thereon until the circuit is broken, when the armature will be raised to its normal position and needle 68 removed from contact with the tape. As soon as the pressure from the needle is withdrawn spring 67 will reseat it in the passage 69 in a stem 61, and thereby shut off the flow of ink from receptacle 62. It will therefore be obvious that the length of each mark upon the tape 82 will be determined by the length of the period during which the circuit through a transmitter remains unbroken. By means of the screw 65 the pressure of the spring 67 upon needle 68 may be regulated.

In the foregoing description I have shown the preferred form of my invention; but I do not limit myself thereto, as I am aware that modifications may be made therein without departing from the spirit or sacrificing any of the advantages thereof, and I therefore reserve the right to make such changes as fairly fall within the scope of my invention.

Having thus described the invention, what is claimed as new is—

1. In a telegraph-recorder, the combination with a receiver comprising a frame, a magnet and an armature; of a stylographic pen adjustably mounted within and extending through the armature and above the frame, said pen comprising a receptacle, a tubular stem projecting from one end thereof and adjustably mounted within the armature, an adjusting device mounted in the other end of the receptacle, a needle slidably mounted within the stem and projecting into the adjusting device, and a spring within the adjusting device and bearing on the needle.

2. In a telegraph-recorder, the combination with a receiver having an armature; of a stylographic pen secured to and extending through the armature, said pen comprising a receptacle, a tubular outlet-stem projecting therefrom and through the armature, a cap secured in one end of the receptacle and having an aperture therein, an adjusting device within the cap and having a recessed end, a needle projecting through the stem and normally closing the same, said needle having one end within the recess and a spring within said recess and bearing upon the needle.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIS J. ROUSSEL.

Witnesses:
G. H. BROCKMAN,
S. V. GUILLOTTE.