No. 710,372. Patented Sept. 30, 1902.

H. SHOEMAKER.

DECOHERER.

(Application filed June 12, 1902.)

(No Model.)

Fig 1.

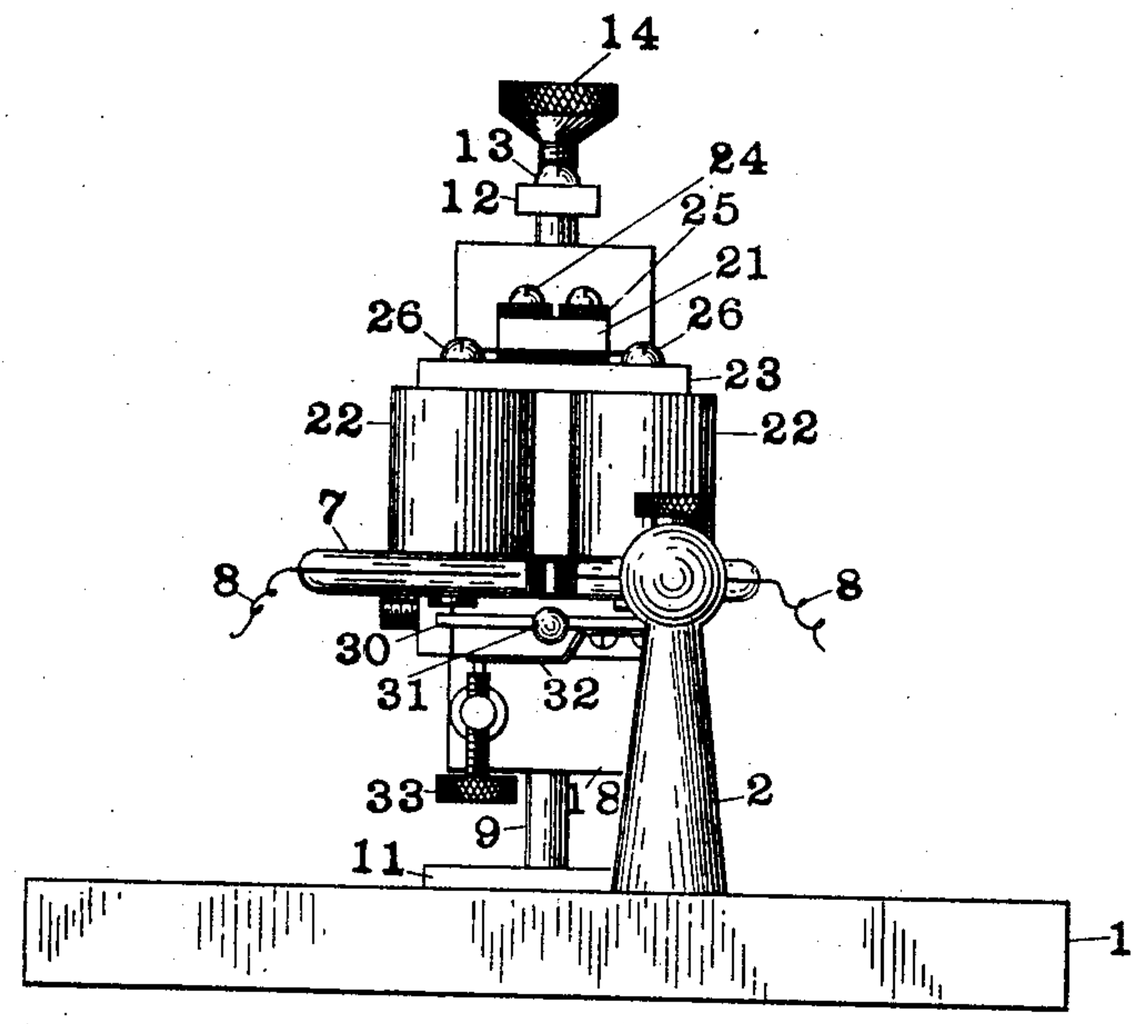
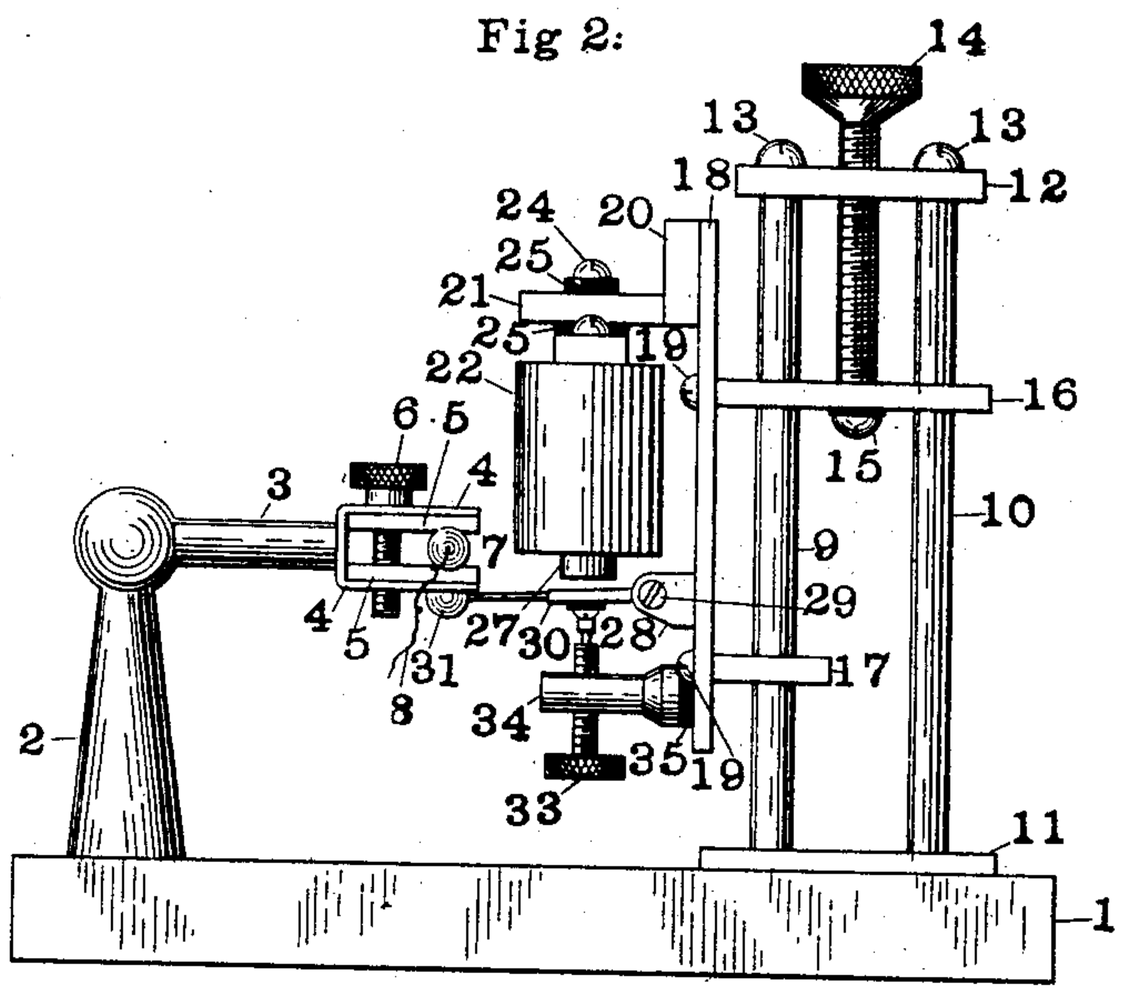


Fig 2.



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DECOHERER.

SPECIFICATION forming part of Letters Patent No. 710,372, dated September 30, 1902.

Original application filed January 11, 1902, Serial No. 89,249. Divided and this application filed June 12, 1902. Serial No. 111,303. (No model.)

To all whom it may concern:

Be it known that I, HARRY SHOEMAKER, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a new and useful Decoherer, of which the following is a specification.

My invention relates to electrical signaling systems in which electrical radiant energy is employed for affecting receiving devices, more common among which is the filings-coherer which requires to be restored after the cessation of a train of waves to its normal condition.

More specifically, my invention comprises a decoherer whereby the mechanical shock given to a coherer-tube may be carefully regulated and nicely adjusted during the operation of the receiver.

Reference is to be had to the accompanying sheet of drawings, in which—

Figure 1 is a front elevation of the decoherer, and Fig. 2 is a side elevation of the same.

1 represents any suitable base, upon which is mounted the vertical standard 2, which has a horizontally-projecting arm 3, terminating in two jaws 4 4, lined with cork, felt, or other soft material, which is represented at 5 5. Extending from jaws 4 4 is a clamping-screw 6, which operates to draw the jaws 4 4 together, and in so doing they clamp the coherer-tube 7 between the linings 5 5.

The coherer-tube 7 contains the usual contacts, between which are located the filings or other wave-responsive material.

The leading-in wires are represented at 8.

9 and 10 represent vertical guide-rods secured to the plate 11 on the base 1 and are bridged at the top by a member 12, secured to said rods 9 and 10 by screws 13. Into the member 12 is tapped the screw 14, which at its lower extremity is secured by means of screw 15 to the member 16, which embraces rods 9 and 10 and is capable of vertical movement along them. Embracing rod 9 only is member 17, which is also capable of vertical movement over said rod 9.

To the horizontal members 16 and 17 is secured the metallic plate 18 by means of screw 19.

At 20 is shown a right-angled bracket of metal secured to the vertical face of the plate 18 and carrying on its horizontal projection 21 the electromagnets 22, whose back armature is represented at 23 and is secured to the horizontal portion of bracket 20 by the screw 24 and insulated from said portion 21 of the bracket 20 by material 25. The screws 26 secure the back armature 23 to the cores 27 of the electromagnets 22. Below the pole of the electromagnets 22 and secured to the plate 18 is the pivot-bracket 28, in which is pivoted at 29 the armature 30, carrying the hammer 31. Upon the armature 30 is a contact-spring 32, which makes contact with screw 33, mounted in post 34, which in turn is mounted on plate 18, but insulated therefrom by material 35.

The windings of the electromagnets 22 are in a circuit controlled by the relay, which is under the control of the coherer 7, as is usual in wireless signaling systems. The windings of the electromagnets 22 are likewise in series with spring 32 and the contact-screw 33, which amounts, therefore, to the usual trembling-bell arrangement. In other words, when the circuit of the electromagnets 22 is closed armature 30 is attracted upward, but in so doing breaks such circuit at contact-screw 30, and the armature therefore falls back, due to the deënergization of the magnets 22, again closing the circuit and being then attracted. This occurring very rapidly gives the trembler effect.

It is to be noticed that the distance of the armature 30 while in its normal position with respect to the poles 27 of the electromagnets 22 is adjustable by the screw 33. This attains, therefore, an adjustment of the strength of the blow delivered by the hammer 31 to the coherer-tube 7. At the same time, however, an adjustment of the screw 14 will cause magnets 22 and the hammer 31 to move vertically on the guide-rods 9 and 10, thereby securing a delicate and nice adjustment of the whole tapper device with relation to the coherer-tube 7. By means of these two adjustments, therefore, the tapping of the co-

herer-tube is perfectly controlled and easily changed under various conditions.

The decoherer described herein is described but not claimed in my application filed January 11, 1902, Serial No. 89,249, of which this application is a division.

What I claim is—

1. A decoherer comprising guideways, a plate movable parallel to said guideways, an electromagnet mounted on said plate, a hammer pivoted to said plate and in operative relation with said magnet.

2. A decoherer comprising guide-rods, a plurality of members embracing said guide-rods and supporting a plate, an electromagnet secured to and insulated from said plate, an armature and hammer pivoted to said plate and in operative relation with said magnet.

3. The combination of a member, clamping-jaws supported thereby, linings for said jaws, and a non-self-restoring wave-responsive device held by said jaws between said linings.

4. A decoherer comprising a member, jaws supported by said member, a wave-responsive device clamped between said jaws, and a tapper mechanism adjustable with respect to said wave-responsive device.

5. A wave-responsive device, means for clamping the same in fixed position, a hammer for delivering a blow to said wave-responsive device, means for operating said hammer, and an adjustable support for said hammer and its operating means.

6. A decoherer which comprises vertical guideways, a plate movable parallel to said guideways, an electromagnet mounted on said plate, and an armature and hammer pivoted to said plate and in operative relation with said magnet.

7. A decoherer which comprises vertical guide-rods, a plurality of members embracing said rods and supporting a plate, an electromagnet secured to and insulated from said plate, and an armature and hammer pivoted to said plate in operative relation with said magnet.

8. In a wireless telegraph-receiver, a vertical standard, a bracket extending horizontally from said standard, linings for said bracket, a wave-responsive device between said linings, an armature and hammer adjustably secured with respect to said wave-response device, an electromagnet coöperating with said armature, a vertical plate carrying said magnet and armature, and a plurality of members secured to said plate and movable over vertical guideways.

9. In a wireless telegraph-receiver, a wave-responsive device carried by a support, an electromagnetic tapper mounted on guides, and means for adjusting said tapper along said guides and with respect to said wave-responsive device.

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