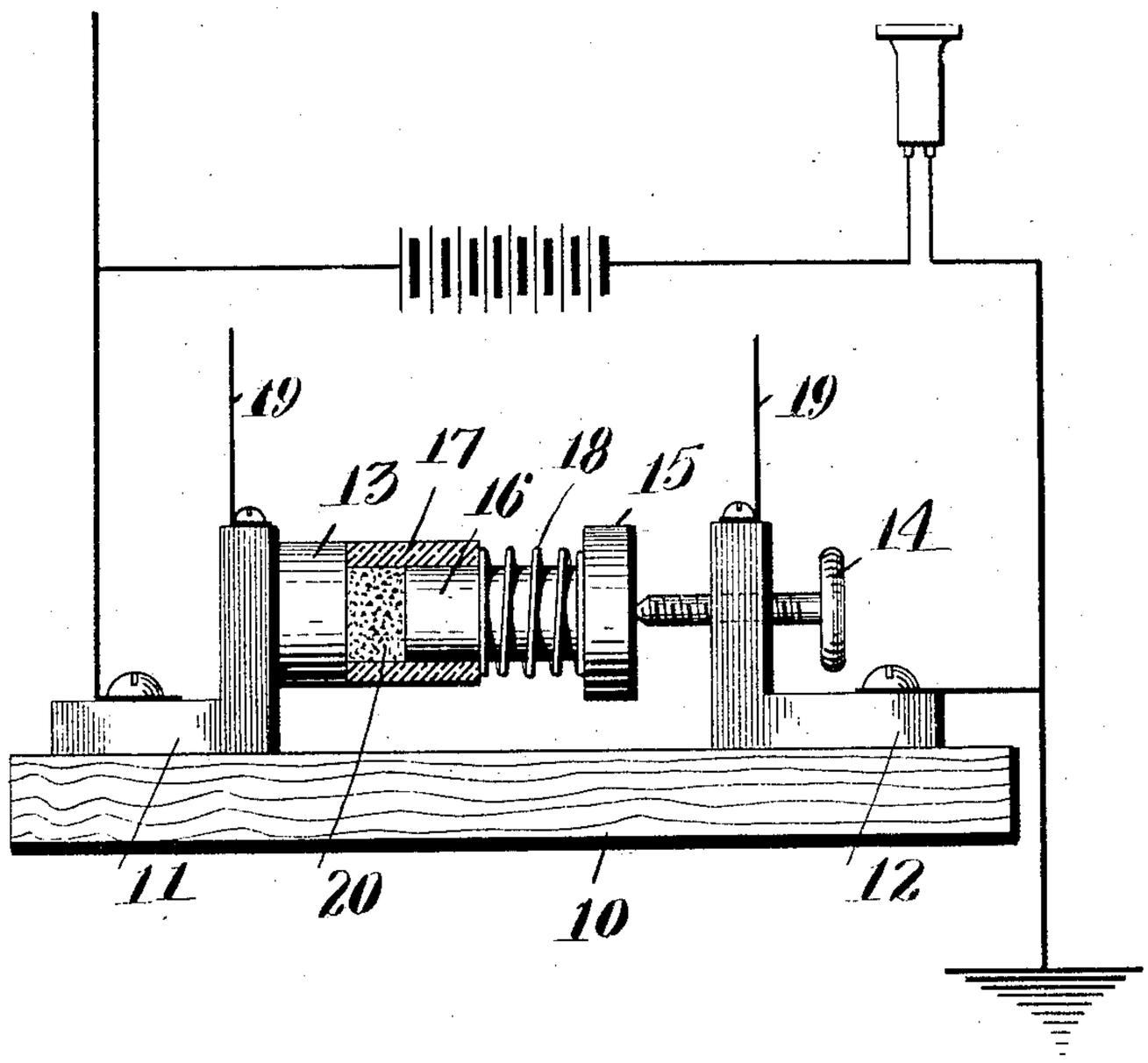
F. G. SARGENT.

COHERER.

APPLICATION FILED MAY 15, 1908.

908,504. Patented Jan. 5, 1909.



Witnesses:

C. F. Wesson.

E. M. Allen.

Inventor:
F. G. Sargent
By Attorneys
Southgate & Southgate

UNITED STATES PATENT OFFICE.

FREDERICK G. SARGENT, OF WESTFORD, MASSACHUSETTS.

COHERER.

No. 908,504. Specification of Letters Patent. Patented Jan. 5, 1909.

Application filed May 15, 1908. Serial No. 433,104.

To all whom it may concern:

Be it known that I, FREDERICK G. SARGENT, a citizen of the United States, residing at Westford, in the county of Middlesex and State of Massachusetts, have invented a new and useful Coherer, of which the following is a specification.

This invention constitutes an improvement over my previous invention set forth in my Patent No. 883,241 granted March 31, 1908, and relates to a coherer for wireless telegraphy and the like.

The principal objects of the invention are to provide an improved form of coherer in which the parts are held together resiliently in a simple and convenient manner and to improve the cohering material in such a way that the de-coherence of the same may be greatly facilitated.

Further objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawing which shows a side elevation of a coherer partly in section constructed in accordance with this invention.

This drawing shows the invention constructed in a form in which, on a non-conducting base 10, are mounted a pair of metallic supports or brackets 11—12. On the bracket 11 is a disk or plate 13 preferably of carbon. On the other bracket is mounted an adjusting screw 14 which engages the end of the other electrode 15 preferably made of metal, as for example steel. The electrode 15 is provided with a reduced portion 16 which constitutes a plug on which is mounted a tube or cylinder 17 of rigid non-conducting material, preferably glass. Elastic means is provided, preferably in the form of a spring 18, bearing on a shoulder on the electrode 15 and on the end of the glass tube for forcing the plug and tube apart against the adjusting screw 14 and holding the end of the glass tube against the face of the disk or plate 13. The end of the plug may be either flat or pointed and may bear directly on the plate 13 without any cohering particles between.

In the space between the end of the plug 16 and the face of the glass disk is located the cohering material 20 when that is used. This material preferably consists of a mixture of two or more kinds of fine particles some of which are preferably conducting and others non-conducting. The conducting particles may conveniently be made of metal, as for example zinc, and the other particles are preferably formed of rubber so that they will always tend to separate the conducting particles after the cohering action has ceased so as to de-cohere the same in a simple and automatic manner. Any other elastic substance may be substituted for the rubber, especially if it is non-conducting, and in fact the other parts of the invention can be used with a cohering material comprising a conducting substance, as for example, carbon mixed with the metallic particles.

Capacities or rods 19 are shown extending vertically from the two brackets 11 and 12. They are set at right angles to the axis of the coherer for greater efficiency. One extends upwardly and the other may extend either upwardly or downwardly.

While I have illustrated and described a preferred form of the invention and composition for a cohering material, I am aware that many modifications may be made therein without departing from the scope of the invention as expressed in the claims. Therefore, I do not wish to be limited to the particular details shown and described, but—

What I do claim is:—

1. A coherer comprising a fixed carbon disk or plate, an adjustable metallic plug, a rigid non-conducting glass cylinder or tube on the plug projecting beyond the end thereof, and resilient means for forcing the end of the tube against the disk.

2. A coherer comprising a conducting disk or plate, an adjustable plug, a rigid non-conducting cylinder or tube on the plug projecting beyond the end thereof, and resilient means for forcing the end of the tube against the disk.

3. A coherer comprising a disk or plate, an adjustable plug, a non-conducting cylinder or tube on the plug projecting beyond the end thereof, a spring for forcing the end of the tube against the disk, and cohering material between the disk and the end of the plug.

4. A coherer comprising a conducting disk or plate, an adjustable conducting plug, a non-conducting cylinder or tube on the plug projecting beyond the end thereof, resilient means for forcing the end of the tube against the disk, and cohering material between the disk and the end of the plug comprising zinc and elastic non-conducting particles.

5. A coherer comprising a metal electrode, a carbon electrode, and a cohering material comprising a mechanical mixture of loose dry zinc and elastic non-conducting particles.

6. A coherer having a cohering material comprising a mechanical mixture of loose dry zinc and elastic non-conducting particles.

7. A coherer comprising a cohering material consisting of a mechanical mixture of loose dry zinc and rubber particles.

In testimony whereof I have hereunto set my hand, in the presence of two subscribing witnesses.

FREDERICK G. SARGENT.

Witnesses:
CHAS. G. SARGENT,
WM. F. SARGENT.