March 22, 1927. 1,621,992

A. MEISSNER

VALVE GENERATOR ARRANGEMENT

Filed Sept. 3, 1921

Fig. 1

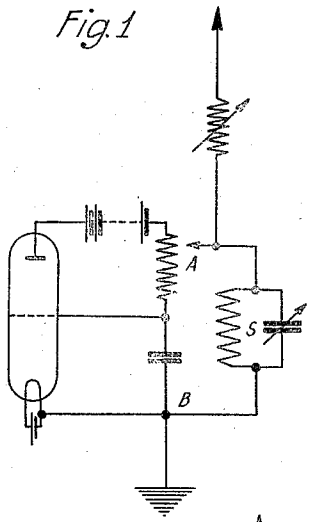
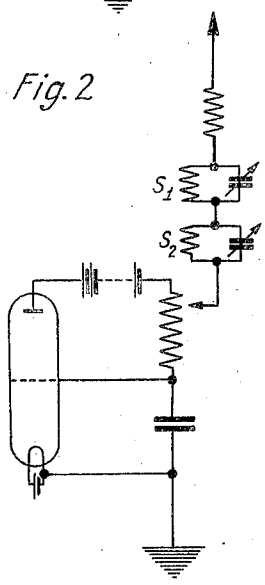


Fig. 2



Inventor
ALEXANDER MEISSNER

By his Attorney Lia J Adams

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UNITED STATES PATENT OFFICE.

ALEXANDER MEISSNER, OF BERLIN, GERMANY, ASSIGNOR TO GESELLSCHAFT FÜR DRAHTLOSE TELEGRAPHIE M. B. H. HALLESCHES, OF BERLIN, GERMANY, A CORPORATION OF GERMANY.

VALVE GENERATOR ARRANGEMENT.

Application filed September 3, 1921, Serial No. 498,418, and in Germany December 22, 1917.

(GRANTED UNDER THE PROVISIONS OF THE ACT OF MARCH 3, 1921, 41 STAT. L., 1313.)

In all the circuit arrangements for cathode tubes for the generation of oscillations, over-oscillations or harmonics occur in the oscillating circuit, and this manifests itself by the deviation of the current curve from the sine form. The over-oscillations may have harmful effects. In wireless telegraph senders, e. g. in which the antenna is connected with the tubes as an energized circuit, such disturbing oscillations are radiated into space and materially interfere with the proper operation of neighboring receiving stations. An object of my invention is, therefore, to use a special means for eliminating the over-oscillations from circuits in which they are not needed.

Other objects will be apparent from the following description in claims when read in connection with the accompanying drawing wherein:

Fig. 1 shows a single closed oscillating circuit to eliminate over oscillations; and

Fig. 2 a plurality of closed oscillating circuits connected to the antenna for the same purpose.

Referring first to Fig. 1, if a direct connection is used for the tube sender, a closed oscillating circuit S is connected in parallel to the terminals of the tube coupling A and B, and the oscillating circuit is tuned to the fundamental frequency of the generator. The circuit presents to the fundamental frequency an infinitely high resistance and does not absorb any energy. However, the circuit serves as a shunt path for harmonics of the fundamental frequency, and thus prevent the harmonics from reaching the antenna. If the circuit is adjusted to the wave length, it may serve also as a wave meter.

Another means is disclosed in Fig. 2, wherein the same tube circuit is connected to ground. In this case, one or a plurality of closed oscillating circuits S^1, S^2 are connected to the antenna, and these circuits are individually tuned to the most prominent harmonics and present against them an infinite resistance, but present no resistance to the basic frequency. For this reason, the harmonics cannot be radiated.

Claims.

1. An arrangement for transmitting radio frequency energy comprising a vacuum tube generator, an antenna connected with the generator, and closed circuits in the antenna tuned individually to different harmonics of the basic frequency of the generator for preventing radiation of such harmonics from the arrangement.

2. An arrangement for transmitting radio frequency energy comprising, a source of desired and undesired frequencies, an antenna connected with said source, and closed circuits in the antenna individually tuned to different undesired frequencies for preventing radiation of such undesired frequencies from the arrangement.

3. An arrangement for transmitting radio frequency energy comprising, a source of desired and undesired frequencies, a transmission circuit connected with said source, and closed circuits in said transmission circuit individually tuned to different undesired frequencies for preventing transmission of such undesired frequencies.

In testimony whereof I affix the signature.

ALEXANDER MEISSNER.