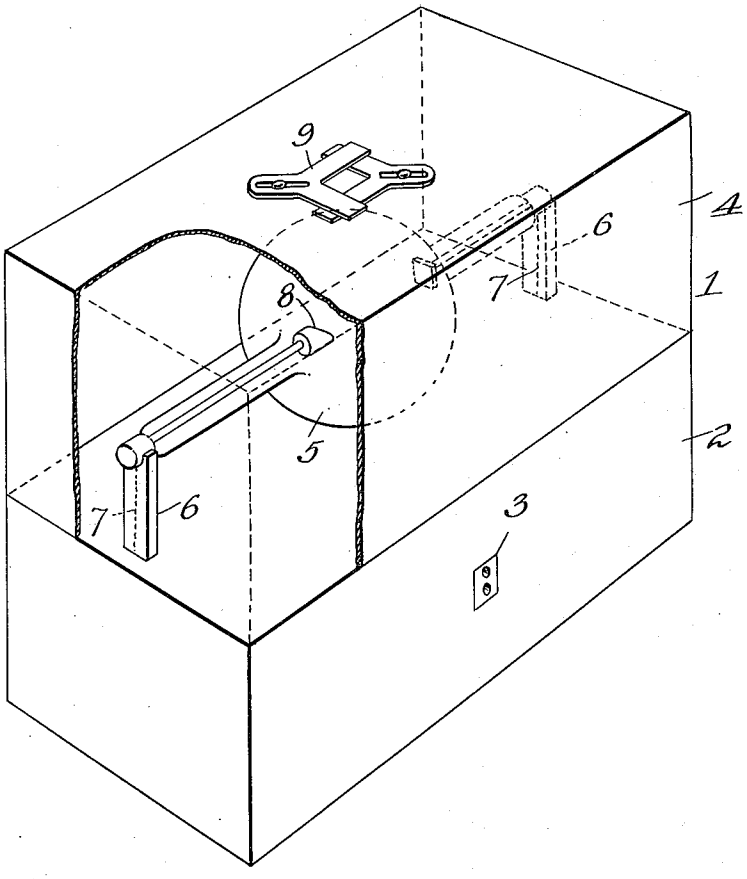
H. F. WAITE.

X-RAY APPARATUS.

APPLICATION FILED MAR. 22, 1917.

1,250,730. Patented Dec. 18, 1917.



Inventor
Harry F. Waite
By his Attorney
O. Alley Edwards

UNITED STATES PATENT OFFICE.

HARRY F. WAITE, OF NEW YORK, N. Y.

X-RAY APPARATUS.

1,250,730. Specification of Letters Patent. Patented Dec. 18, 1917.

Application filed March 22, 1917. Serial No. 156,523.

To all whom it may concern:

Be it known that I, HARRY F. WAITE, a citizen of the United States, and a resident of the city of New York, county of Queens, and State of New York, have invented a new and useful Invention in X-Ray Apparatus, of which the following is a specification.

The object of my invention is to provide a light and portable X-ray apparatus which may be placed in any desired position and used to any desired extent without regard to climatic conditions or disturbances, and without danger to any one from the high tension feed wires, or other high tension parts of the apparatus.

This, and other objects are accomplished by my invention, one embodiment of which is hereinafter more particularly set forth.

For a more particular description of my invention, reference is to be had to the accompanying drawing in which is shown one embodiment thereof.

My improved apparatus 1 is composed of a base 2 in which is placed any suitable high tension generating apparatus, as a step-up transformer or an induction coil, or whatever else may be used to generate a high tension current suitable for X-ray tubes. It is desirable that this base 2 be made weather-proof so as not to be subject to climatic conditions. At its side, or in any other suitable place, is put a plate 3 to which connections may be had for a low tension current. Two lead in wires, not shown, run to this plate 3 in the conventional manner.

Upon the base 2 is mounted a metal lined or similar casing 4 which is so made that it is impervious to X-rays. It may be made of wood and lined with lead, or it may be made of leaded glass, or in any other suitable way. It is desirable that it should be made so as to catch any stray X-rays that may be generated and not utilized for treatment or for other purposes. In this casing 4 is placed an X-ray tube 5 which is supported by pedestals 6 which rise from the base 2. These pedestals may be made of conducting material, or they may be made of insulating material with a conductor 7 embedded therein through which the tube is supplied with energy. These conductors are indicated by dotted lines.

On top of the casing and over the anode 8 of the tube is an aperture which is covered by the diaphragm 9 which may be adjusted so as to give a larger or a smaller opening and the target of the anode 8 is so placed that substantially all of the X-rays generated may be projected through the opening and either through or against the diaphragm 9, according to the extent to which it is opened.

It is obvious that this apparatus made as above described, may be used anywhere that may be desired, and placed under a patient or over a patient, or beside a patient, and it may be placed horizontally, vertically or inclined, or in any position, and under no circumstances is it subject to climatic conditions or is anyone in any danger from the high tension part of the circuit which is entirely concealed and protected.

While I have shown and described one embodiment of my invention, it is obvious that it is not restricted thereto but is broad enough to cover all structures that come within the scope of the annexed claim.

Having thus described my invention, what I claim is:

In a device of the class described, a base or cabinet of a portable nature adapted to contain any suitable high tension generating apparatus adapted to generate a high tension current suitable for X-ray tubes and a suitable connecting plate for connecting the cabinet and the apparatus therein with suitable electric power, a casing 4 arising from said base which is composed of material which is impervious to X-rays, means for supporting an X-ray tube in said casing 4, an X-ray tube in said casing, and supported by said means, and means for permitting a restricted number of X-rays to flow from said casing 4 when the apparatus is in use whereby a portable device is provided for generating and distributing of X-rays.

HARRY F. WAITE.