

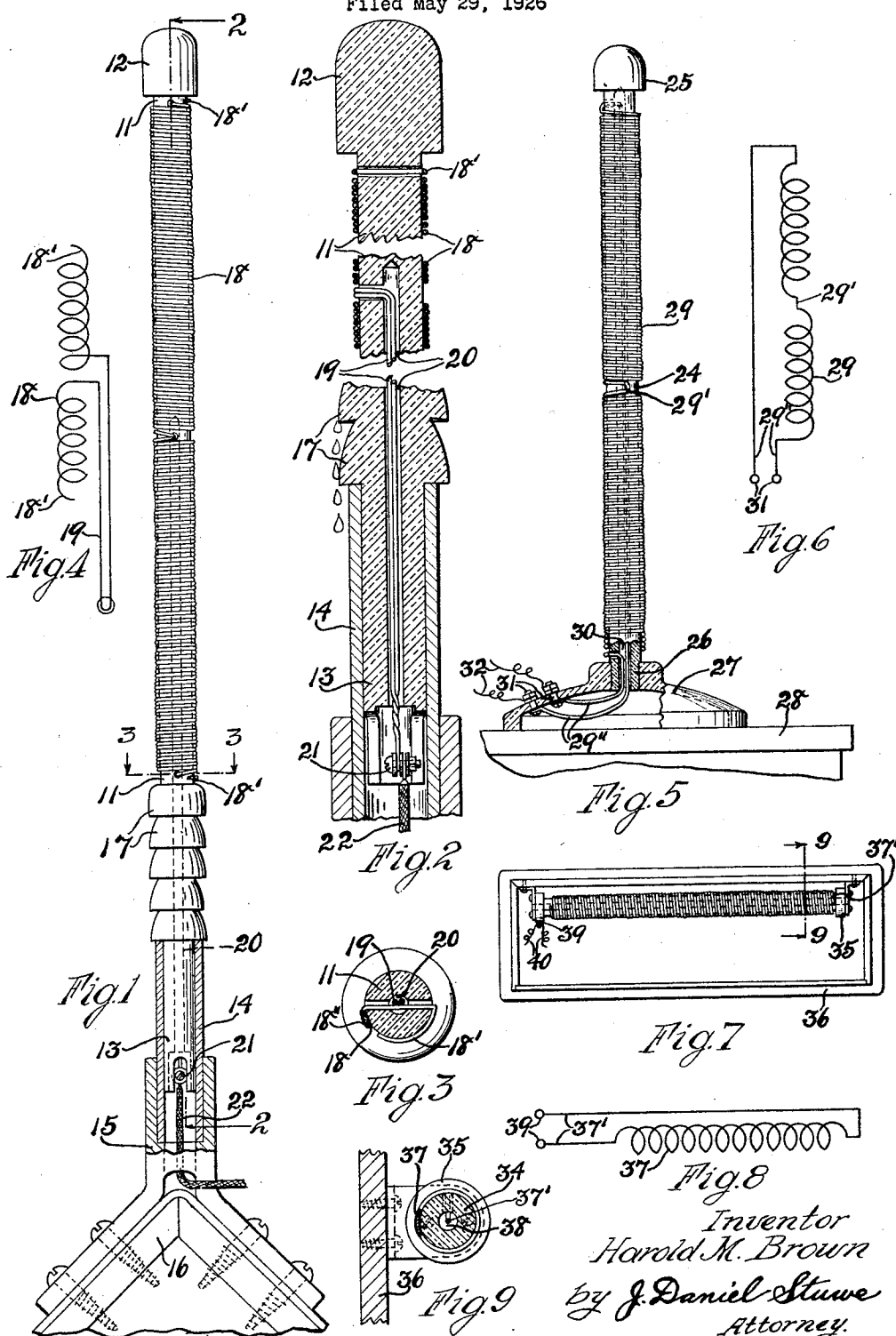
Sept. 11, 1928.

1,684,009

H. M. BROWN

ANTENNA

Filed May 29, 1926



Inventor
Harold M. Brown
by J. Daniel Stowe
Attorney.

UNITED STATES PATENT OFFICE.

HAROLD M. BROWN, OF ELMHURST, ILLINOIS.

ANTENNA.

Application filed May 29, 1926. Serial No. 112,508.

My invention relates to an antenna, and the main object of the invention is to provide an antenna for a radio and the like which may be used either outside of the building as an aerial, or inside of a building or a room, and in connection with a radio receiving set, said antenna being constructed in a very compact and durable form. Another object is to provide a compact antenna including a staff of insulating material and having insulated wire wound thereon. A further object is to provide an antenna including a staff of insulating material having a bore therein extending to one end, and having said end arranged to be mounted in a supporting bracket, while an insulated wire is wound on said staff and a part of said wire extends through said bore and emerges from said end for convenient attachment to a radio receiving wire.

Other objects and advantageous ends are accomplished with my invention, as will become apparent from the following description taken in connection with the accompanying drawing, in which:

Fig. 1 is an elevation, partly in section, illustrating one form of my improved antenna and being arranged in the shape of an aerial mounted on the outside of a building;

Figs. 2 and 3 are enlarged longitudinal and cross-sectional views respectively on lines 2—2 and 3—3 of Fig. 1;

Fig. 4 is a diagrammatic view of the wiring with its balanced winding used in this form of invention;

Fig. 5 is an elevation, partly in section, of a modified form adapted for use within a building and mountable on a dresser or a cabinet;

Fig. 6 is a diagrammatic view of the wiring used in this form of antenna;

Fig. 7 is a plan view of another modified form of antenna, arranged for mounting it within the radio box or cabinet;

Fig. 8 is a diagrammatic view of the wiring used in this form of antenna; and

Fig. 9 is an enlarged cross section on line 9—9 of Fig. 7.

The antenna, broadly, includes a staff of insulating material, such as wood, compressed rubber or fibre, bamboo, and the like, which is sufficiently rigid and durable for the purpose. The staff in each case has at least one end arranged to be mounted in a bracket or socket and has a bore extending

through said end into the staff, and an insulated wire is wound on said staff and extends partly through said bore and through said end to be connected to conducting means, as a radio receiving wire, leading from the antenna to the radio receiving set.

The form of invention shown in Figs. 1 to 4 inclusive comprises a staff of insulating material including a shank portion 11 with a head or enlarged part 12 at the top and having the lower end 13 arranged to be mounted in and supported by a sleeve 14 which is mounted in a bracket or socket member 15 fastened on the top of a building 16. Drip means or collar means 17 is provided between the shank portion 11 and the lower end 13, to prevent any moisture from flowing in a continuous stream down the staff to the bracket and roof, and thereby to prevent impairing the effectiveness of the antenna.

An insulated wire 18 is wound around the shank portion 11 of the staff, and this may be done by arranging the wire in the form of a balanced winding, with the two ends 18' fastened respectively near the head 12 and near the drip means 17, and the intermediate part of the wire being wound around the staff, as shown in Figs. 1 and 4, thus providing a balanced winding with the middle part 19 of the wire entering a bore 20 provided in said staff, and extending through said bore from substantially the middle of the staff to the end 13, where it is attached to a binding post or connecting element 21 from which a conductor or radio receiving wire 22 leads through the sleeve and bracket toward the radio receiving set (not shown). The wire is preferably a wire covered with a thin coating of insulating substance 18'', see Fig. 3, as is well known in this art. The construction used in this form of the invention is particularly arranged as an aerial, for use on the outside of a building, and the conductor or wire 22 is the usual lead-in wire.

The form of antenna shown in Figs. 5 and 6 comprises a staff having a shank portion 24 and a head or enlarged upper portion 25, and a lower end 26 arranged to be mounted in a bracket 27 adapted for using and mounting this form of antenna on a cabinet or dresser 28. An insulated wire 29 has its middle portion 29' fastened to the intermediate part of said shank 24 and is wound around the shank towards the head 25 and

towards the end 26, the ends 29'' of the wire then passing through a bore 30 in the staff, out through end 26 and beneath bracket 27 to binding post 31, from which the conductors or radio receiving wires 32 extend for connection with the radio receiving set (not shown). This wire may be arranged as a balanced winding, as shown, or in any desired manner.

10 The form of antenna shown in Figs. 7, 8 and 9 comprises a staff 34 having its ends supported in brackets 35 which are mounted in the radio cabinet 36. An insulated wire 37 is wound around said staff and preferably 15 has its ends 37' extending through a bore 38 in the staff and extending therefrom to binding posts 39 to which conductors or radio receiving wires 40 are connected, which lead to the radio receiving set.

20 What I claim as my invention and desire to secure by Letters Patent is:

1. A radio antenna comprising a staff with a bore, and insulated wire continuously wound around said staff to chiefly cover the 25 same and partly extending through the walls thereof and through said bore to one end of

the staff and being arranged for connection with a radio receiving wire.

2. A radio antenna consisting of a staff of insulating material arranged at one end to be 30 mounted in a socket, a bore provided in said staff and extending to said end, and an insulated wire wound on said staff and partly extending through the wall of said staff and through said bore to said end and having 35 means for connecting it to a radio receiving wire.

3. A radio antenna comprising a staff of insulating material arranged at an end to be 40 mounted in a bracket; a bore being provided in said staff and extending through said end, and an insulated wire wound around said staff for the greater length thereof and having a part fastened to the staff and another 45 part extending through the wall of said staff and then through said bore and emerging from said end adapted for connection with a radio receiving wire.

In testimony whereof I have signed my name to this specification.

HAROLD M. BROWN.