(No Model.)

# E. F. WEAVER.

## Revolving Telephone Stand.

No. 243,663. Patented June 28, 1881.

FIG. 1.

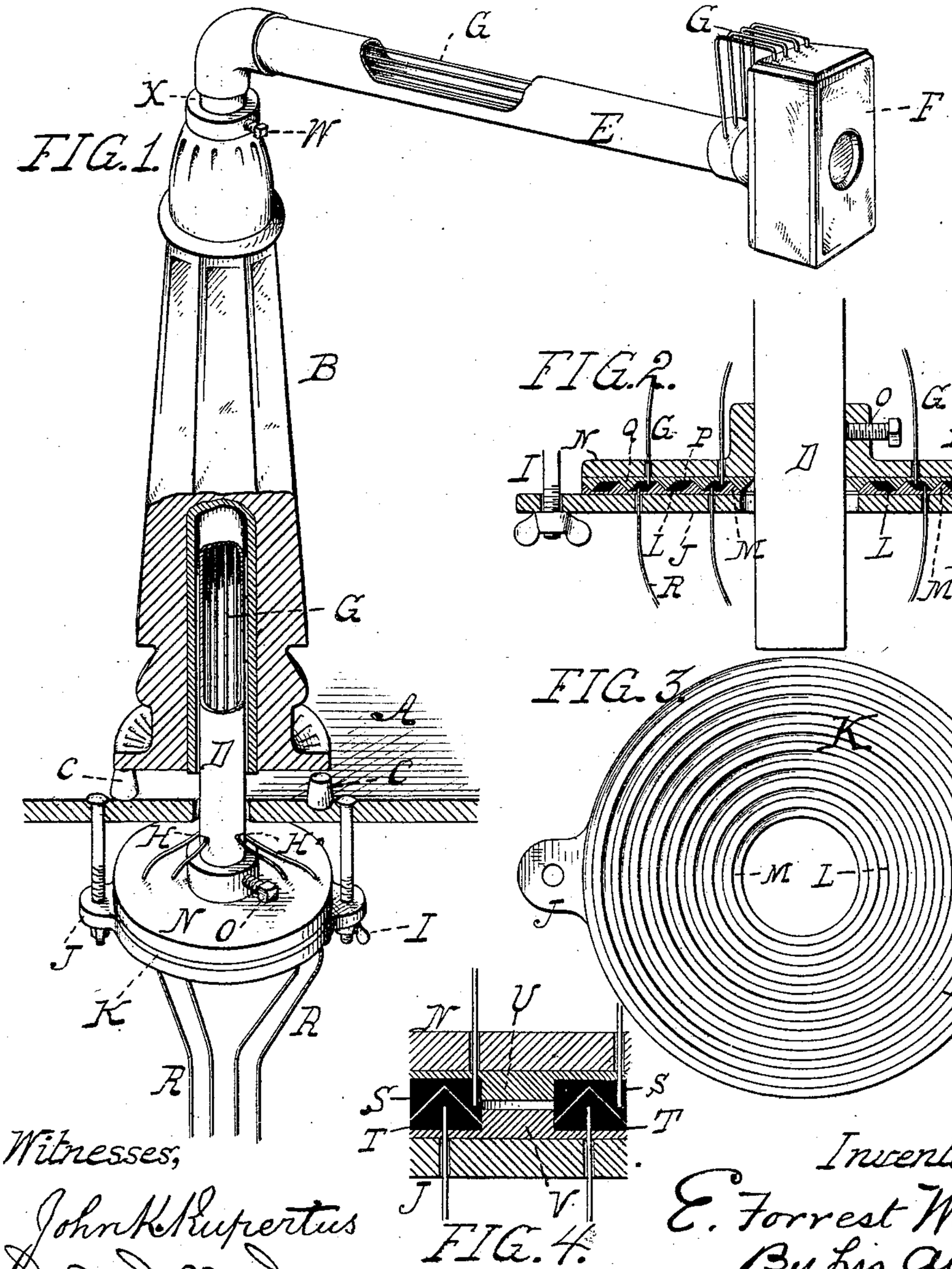


FIG. 2.




FIG. 3.







FIG. 4.

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# UNITED STATES PATENT OFFICE.

E. FORREST WEAVER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO GEORGE H. PERKINS, OF SAME PLACE.

## REVOLVING TELEPHONE-STAND.

SPECIFICATION forming part of Letters Patent No. 243,663, dated June 28, 1881.

Application filed February 17, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, E. FORREST WEAVER, of Philadelphia, Pennsylvania, have invented a Revolving Telephone-Stand, of which the following is a specification.

The object of my invention is the construction of a revolving stand for a telephone-transmitter, telephone, call-bell, or other telephonic device, which, being erected in the center of a circular table or desk, for instance, and being equipped with a single transmitter, will permit of the revolution of such transmitter or other device about the table without disarrangement of its wires or disestablishment of its electric current, so that several operators seated around the table can, in turn, employ the same transmitter.

In the accompanying drawings, Figure 1 represents, in perspective, an apparatus conveniently embodying my invention. Fig. 2 is a vertical transverse sectional detail of the current-connecting disks and wire-inclosing stem or tube. Fig. 3 is a top-plan view of the lower disk, and Fig. 4 a transverse sectional detail of a modified construction of the connecting-disks.

Similar letters of reference indicate corresponding parts.

In the accompanying drawings, A represents the table or operator's desk, which may be of any convenient character and dimensions.

B is a vertical standard, of any desired construction, and of either plain or ornamental contour, which is best erected centrally upon the table, and may, if desired, be placed upon insulating-blocks C. The standard is best made hollow, to contain a tube or wire-holding stem, D, which extends above it at its upper extremity, and which also passes downward through the table. Above the standard the tube branches at a right or other desired angle, to form a tubular extension, E, to the outer extremity of which a transmitter of any desired form is affixed. The telephonic wires G from the transmitter are entered within the tubular extension and carried through it, and thence through the tube D to a point below the table, where they emerge from the tube through orifices H.

Hung to the under side of the table by means of thumb-screws or other height-adjusting connections I, is a horizontal plate, J, upon which is supported the lower connecting-disk K, made either as a separate piece or as an integral part of said plate. The upper surface of this disk is provided with a series of concentric rings, alternately formed of conducting material L and of non-conducting material M. The cross-section of these rings is well made in the form of an isosceles triangle, although not necessarily of such form.

N is the upper connecting-disk, adjustably attached to the wire tube D by means of a collar and set-screw device, O, the under surface of which is provided with a series of concentric rings formed alternately of conducting material P and of non-conducting material Q, of corresponding shape with those of the lower disk, in the manner, for instance, of male and female dies. This upper disk is adjusted upon the lower disk, so as to remain in frictional contact therewith when the current is sought to be established, the current being broken when the disks are not in contact. When the disks are in contact the metal or conducting rings of both are in contact, as are also the rings of non-conducting material, from which relationship of parts results a continuous contact of each corresponding pair of metal rings, whatever may be the relative position of the disks in respect to the rotation of the one upon the other. The upper wires, G, after emerging from the wire-holder D, are each separately passed through the upper disk, and their ends embedded in separate metal rings thereof, each separate wire being connected with a separate ring.

R is a series of lower wires, corresponding in number to the upper wires, passed from beneath through the lower disk, and having their ends embedded in the metal rings thereof.

From the above description, and from an inspection of the accompanying drawings, and especially of Fig. 2, it will be obvious that when the disks are in contact an electric current can be established and maintained throughout the upper and the lower wires, whatever may be the relative position of the upper disk with respect to its rotation upon the lower disk, and of the transmitter with respect to the table. In other words, the position of the transmitter

at any point in its path does not in the least affect the passage of the electric current so long as the disks are in contact, although if the disks be not in contact the currents are at once broken.

The office of the upper and lower rings of non-conducting material, which are or are not in contact by corresponding pairs according to the construction resorted to, is to insulate the parallel wires of the same circuits from each other. The current, in its flow through any given upper and lower wire, exists, of course, throughout the upper and lower rings in which said wires are respectively entered.

I have represented in Figs. 2 and 3 a form of ring which I consider both serviceable and simple. I do not desire, however, to confine myself to any specific form of ring, as the essence of such portion of the invention as relates to these rings lies only in their being of such form as will insure the contact of contiguous conducting-rings throughout their extent, whatever their relative position, and in their being separated by means of con-conducting rings. I have accordingly represented in Fig. 4 a modified form of construction, in which the conducting-rings are of the shape of angular tongues and grooves, the grooves being lettered S and the tongues T, while the separating or insulating rings are respectively of rectangular section, as indicated by the letters U V.

In order to provide for the adjustment of the transmitter at any given height from the table, to accommodate its position to operators sitting at different heights, I have provided an adjusting-screw, W, and collar X at the top of the standard upon which the wire tube depends, and by means of which it may be raised or lowered with respect to the standard. In raising or lowering, the set-screw O of the upper disk is likewise to be adjusted so as to permit of the upper disk's remaining in contact with the lower disk at any given height at which the transmitter is placed, it being borne in mind that said upper disk is capable of a vertical movement upon the wire tube. To permit of this vertical movement the upper wires are made sufficiently long to belly out between the points of their emergence from the wire tube and of their introduction into the upper disk. A further accommodation as to height can be secured by means of the adjustable connections I, which enable the raising or lowering of the disk-supporting plate J.

Such being what I consider a convenient construction of my invention, it is obvious that many formal changes will be apparent to a skilled mechanic. Thus, for instance, the standard might be made to rotate or to be self-extensible, and the disks might be placed above rather than beneath the table, or might be contained within a standard made hollow to receive them. Further than these, many formal changes in the form of the parts and in their relation may be made without departing from the gist of the invention—that is to say, from such a construction of a revolving transmitter as will insure the continuous connection of its wires for the uninterrupted passage of the electric current at whatever position in its path the transmitter may be placed.

It is obvious that the disks may be made of any desired size, so as to accommodate them for use with any desired number of wires, and that the standard or tubular extension can be equipped with telephones, call-bells, and other telephonic attachments in addition to the transmitter.

Having thus described my invention, I claim—

1. In combination with the wires of a telephone-transmitter or other telephonic device, which are divided at a given point, two series of concentric rings alternately of conducting and non-conducting material, in combination with the divided wires, substantially in the manner set forth.

2. In combination with the wires of a telephone-transmitter or other telephonic device, which are divided at a given point, a pair of disks provided each with corresponding pairs of rings of insulating and of non-insulating material, into the former of which the divided wires are entered, substantially in the manner and for the purpose specified.

3. In combination with a hollow standard erected from a table or other suitable support, a hollow wire-containing tube fitted and adapted to revolve within said hollow standard, and connecting with a wire-containing tubular extension, supporting upon its outer extremity a telephone-transmitter, substantially as set forth.

4. In combination, the wire tube D, adapted to be revolved, and provided with a telephone-transmitter or other telephonic device, the upper disk, N, constructed as described, and adapted to revolve with the wire tube, and the lower disk, K, constructed as described, and fixed so as not to revolve, as and for the purposes set forth.

In testimony whereof I have hereunto signed my name this 10th day of February, 1881.

E. FORREST WEAVER.

In presence of—

J. BONSALL TAYLOR,

JOHN JOLLEY, Jr.