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DRY SPOT CROSS ARM TERMINAL BOX

Filed Nov. 14, 1925

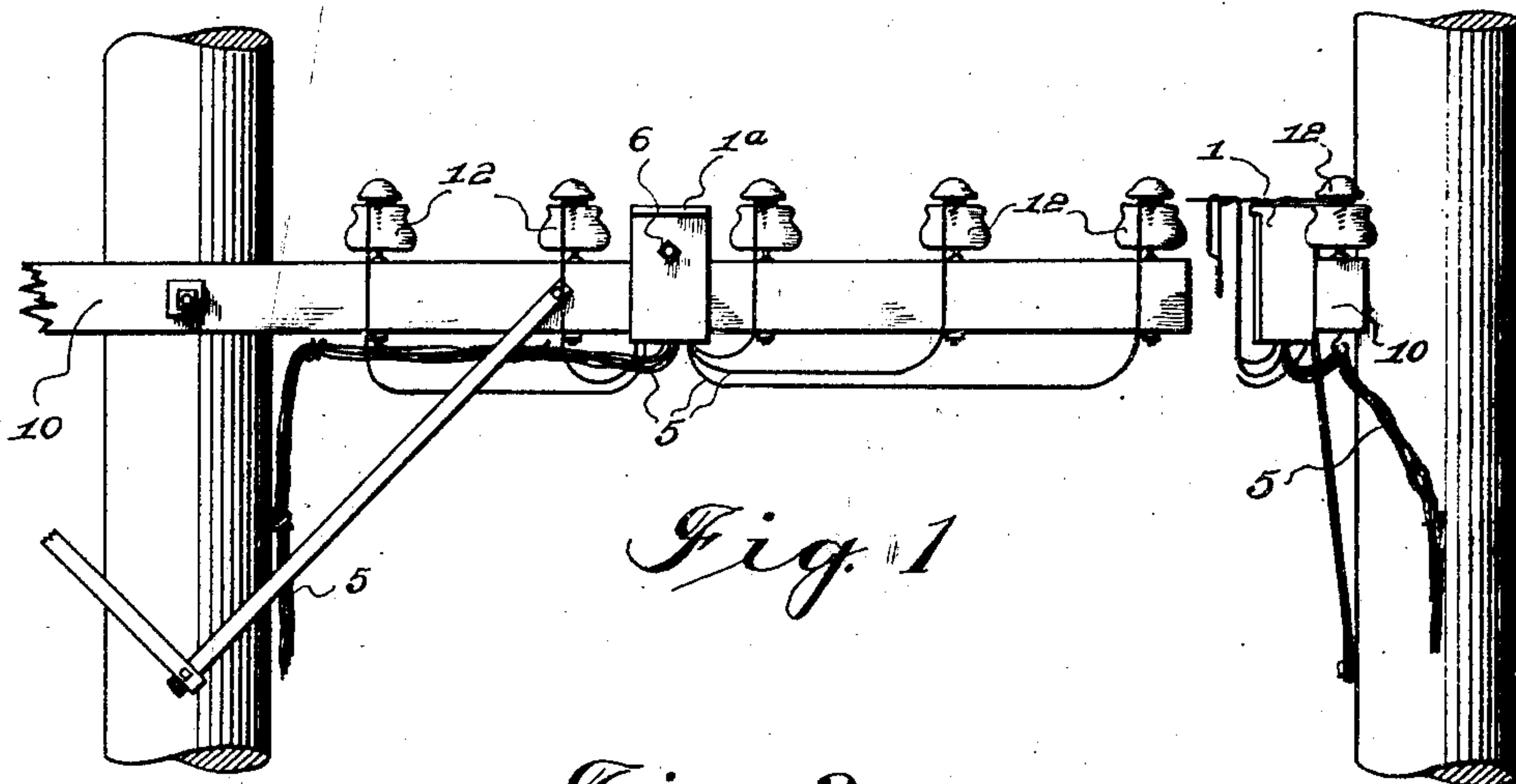


Fig. 1

Fig. 2

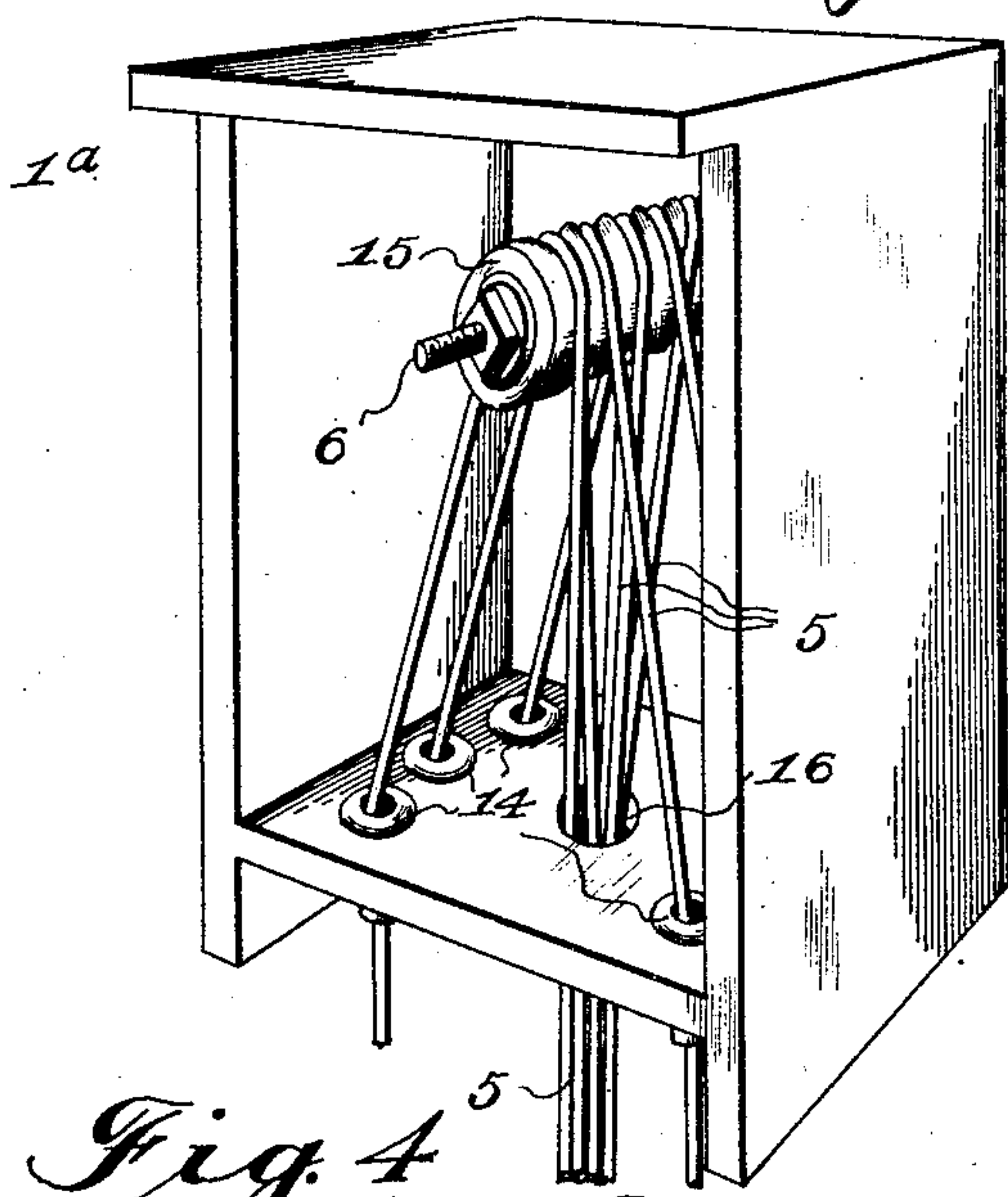


Fig. 4

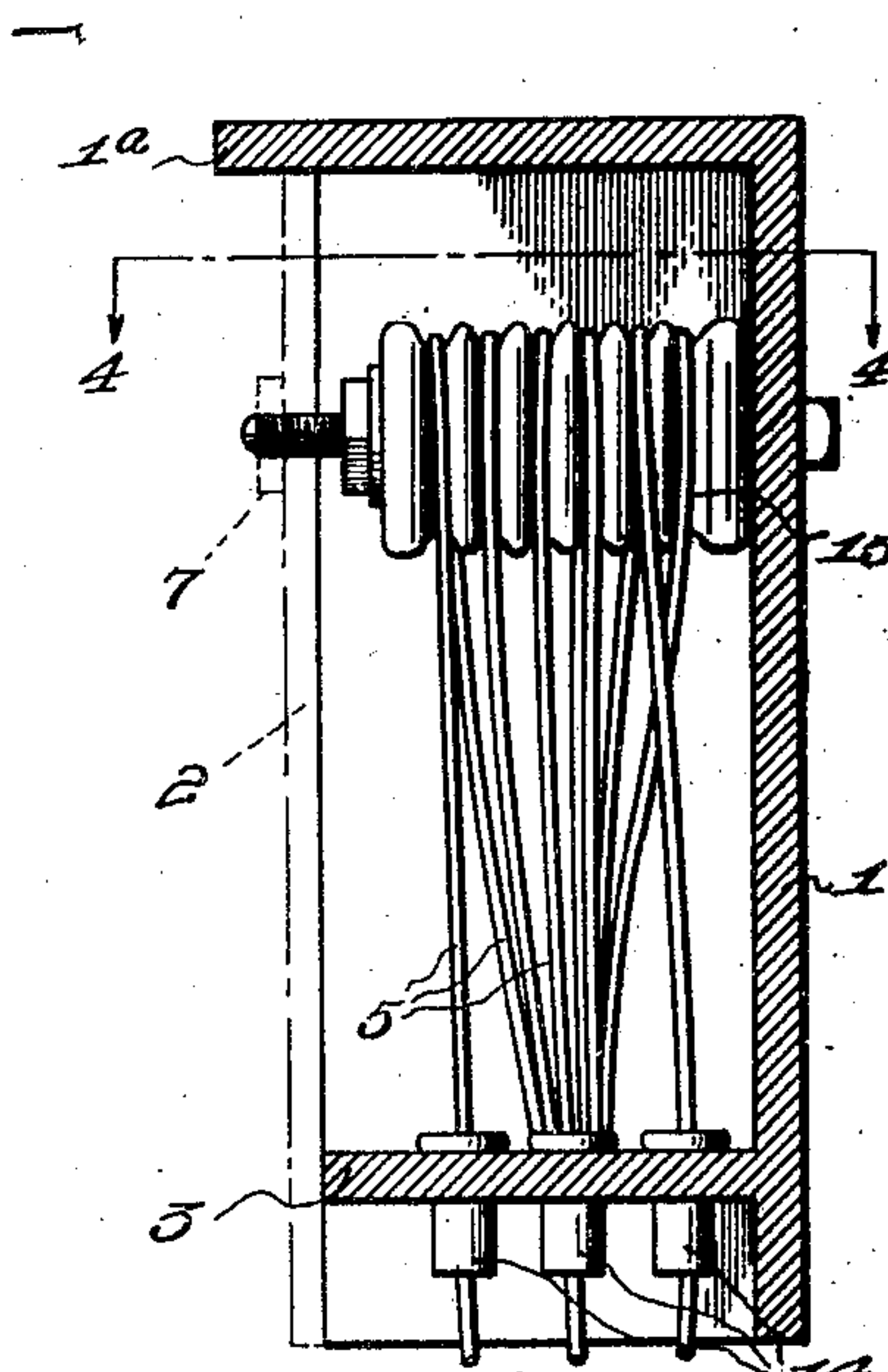
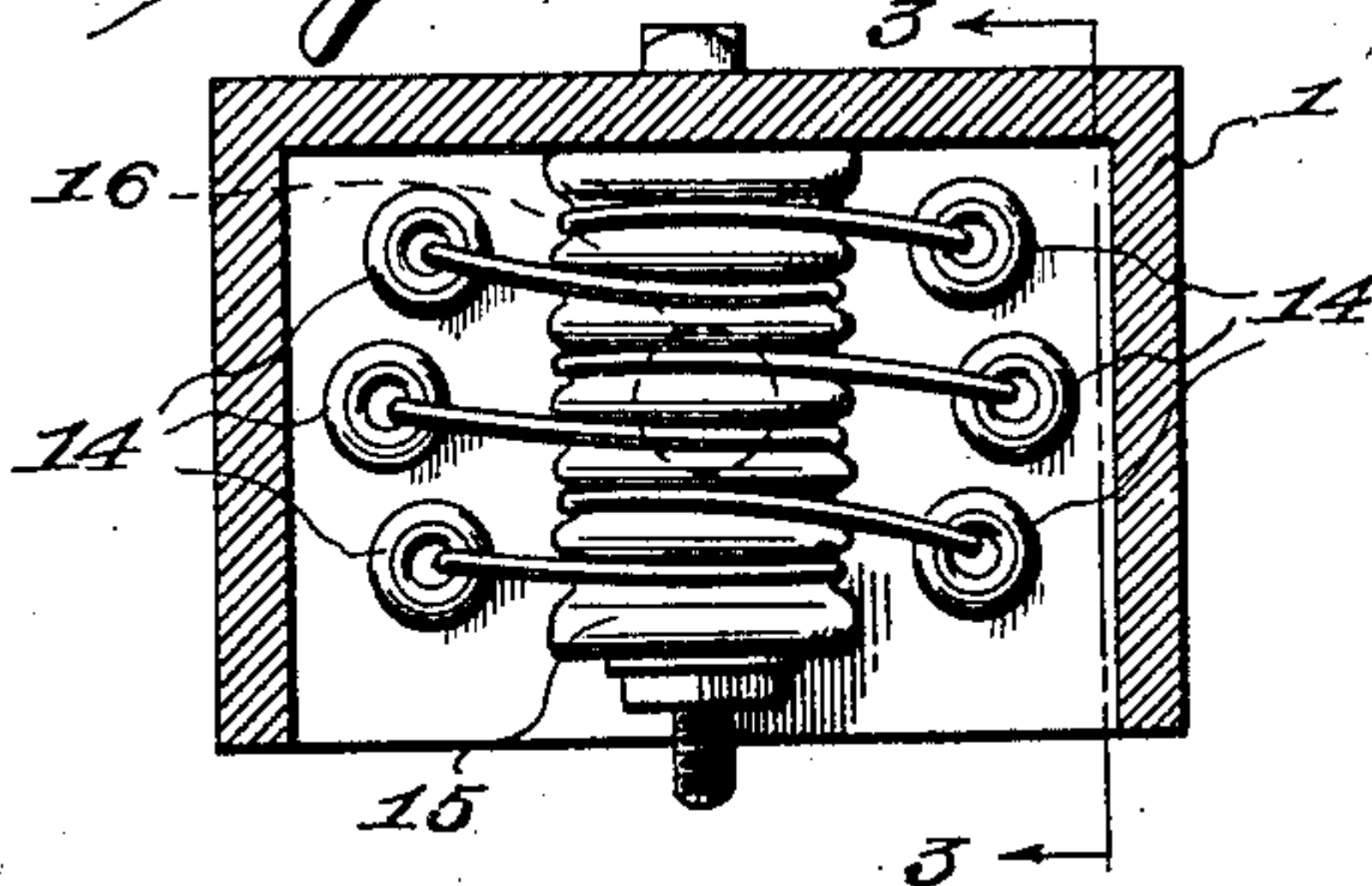


Fig. 3

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DRY-SPOT CROSS-ARM TERMINAL BOX.

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This invention relates to a method of preventing leakage of current from telegraph and telephone lines at a terminal or branch station.

5 In the construction of open lines for the transmission of electrical signals, it is a common practice to connect the bare line conductors, which terminate at a station and are "dead ended" on the insulators of the
10 last cross-arm, by means of depending conductors, termed "bridle wires" which are led into the station office or to a cable passing down along the pole. During damp and wet weather the surfaces of the pole and
15 the bridle wires become wet and form a leakage path between the line wires and the ground in spite of the fact that the bare line wires are supported upon insulators and the bridle wires are covered with rubber insulation. To prevent this it has been
20 proposed to prevent access of moisture to a continuous ring about the circumference of each bridle wire by embedding a short portion of the wire in the body of an insulator, the insulator being usually suspended from
25 the line wire by the bridle wire. Dry spot insulators of this type are quite expensive and, if the bridle wire is to be an unbroken continuous insulated wire, it must be molded
30 within the insulator.

The object of my invention is to provide an inexpensive device which may be easily secured to the cross-arm which will maintain an extended dry surface on a plurality
35 of bridle wires, protecting them from rain, snow and moisture and which will support the wires in spaced relation at the same time permitting ready access for inspection or for the purpose of changing the bridle wires
40 from one line wire to another. The protected part of the bridle wire becomes in effect, a dry spot or length in the superficial surface of the wire which effectually prevents any leakage between wires and
45 ground.

In the following detailed description, I shall refer to the accompanying drawings in which:—

50 Figure 1 is a fragmentary side elevation of a cross-arm showing the manner of leading the bridle wires from the bare line wires to my bridle-wire dry spot terminal box;

Figure 2 is a perspective view of the box with the lid or side cover removed;

Figure 3 is a vertical sectional view of the same; and

Figure 4 is a transverse sectional view on the line 4—4 of Figure 3.

The case or box 1 forming the housing or protective enclosure may be rectangular or
60 any other suitable shape and is preferably constructed of stamped or cast metal. The front edge of the top wall 1^a projects beyond the box to overhang the cover or lid 2. The side walls depend below the floor 3 to provide a protected outer recess for the wires
65 as they emerge from the box. The cover is fastened in any suitable manner to make a tight fit against the front edges of the walls and may be provided with an aperture to fit
70 over the bolt 6 and be secured by a nut 7.

The bridle wire dry spot box is bolted or otherwise secured to the cross-arm 10 and so positioned that the runs of the bridle wires
75 5 leading from the line wires on the insulators 12 shall be as short as possible. The bridle wires must not touch any other wire or object between the line wire and the box. Each bridle wire is led into the box
80 through a porcelain insulating bushing 14 which passes through the bottom of the box, and is bent over the bridle wire insulating support 15, passing downwardly and out through the common opening 16 in the floor
85 of the box. The insulator 15 is preferably made of porcelain or glass, supported upon a bolt 6 and is provided with grooves to receive the bridle wires and maintain them in spaced relation.

Inasmuch as the wires enter and leave the
90 box through the floor, practically no moisture will follow or creep along the wires into the box enclosure. Hence the surface along substantially the entire length or section of
95 each wire within the box or housing will be maintained in a dry condition regardless of weather conditions. There is thus provided a sufficient length of dry braid and insulation along the wires within the box to
100 insure against surface leakage under practically all conditions. The use of a single multi-groove insulator provides a simple and economical construction and one which is
105 also fool-proof. By leading all of the wires to a single central exit opening it is possible to splice all of the wires to a cable within the box if this is desirable. On the other hand, if the bridle wires are to be carried

to the station or office, each bridle wire may be a single length extending from the line wire to the office without a break.

I claim:

- 5 1. Means for preventing leakage of current from overhead terminal wires carried by the insulators on telegraph or telephone poles, comprising a housing completely closed to prevent the entrance of moisture
10 and provided with means whereby it may be secured to a telegraph pole closely adjacent to the insulators, a plurality of openings in the floor or bottom wall of the housing, an insulating support mounted within
15 said housing and provided with spacing means, and a plurality of continuous bridle wires adapted to be connected to overhead wires, said bridle wires passing in at sep-

arate openings in the bottom wall, over said support and out through another opening 20 in the bottom wall, whereby they will be held in spaced relation and free from moisture within the housing.

2. In an organization as set forth in claim 1, said support comprising a multi-grooved 25 insulator.

3. In an organization as set forth in claim 1, said openings being provided with insulating bushings.

4. In an organization as set forth in claim 30 1, the side walls of the housing depending below the floor to provide protection for the wires as they emerge from the housing.

In testimony whereof I affix my signature.

DOUGLAS P. DICKIE.