A. B. PORTER, DEC'D.
T. PORTER, ADMINISTRATRIX.
IDENTIFIABLE CABLE CONDUCTOR.
APPLICATION FILED JUNE 16, 1906.

951,147. Patented Mar. 8, 1910.

Fig. 1.

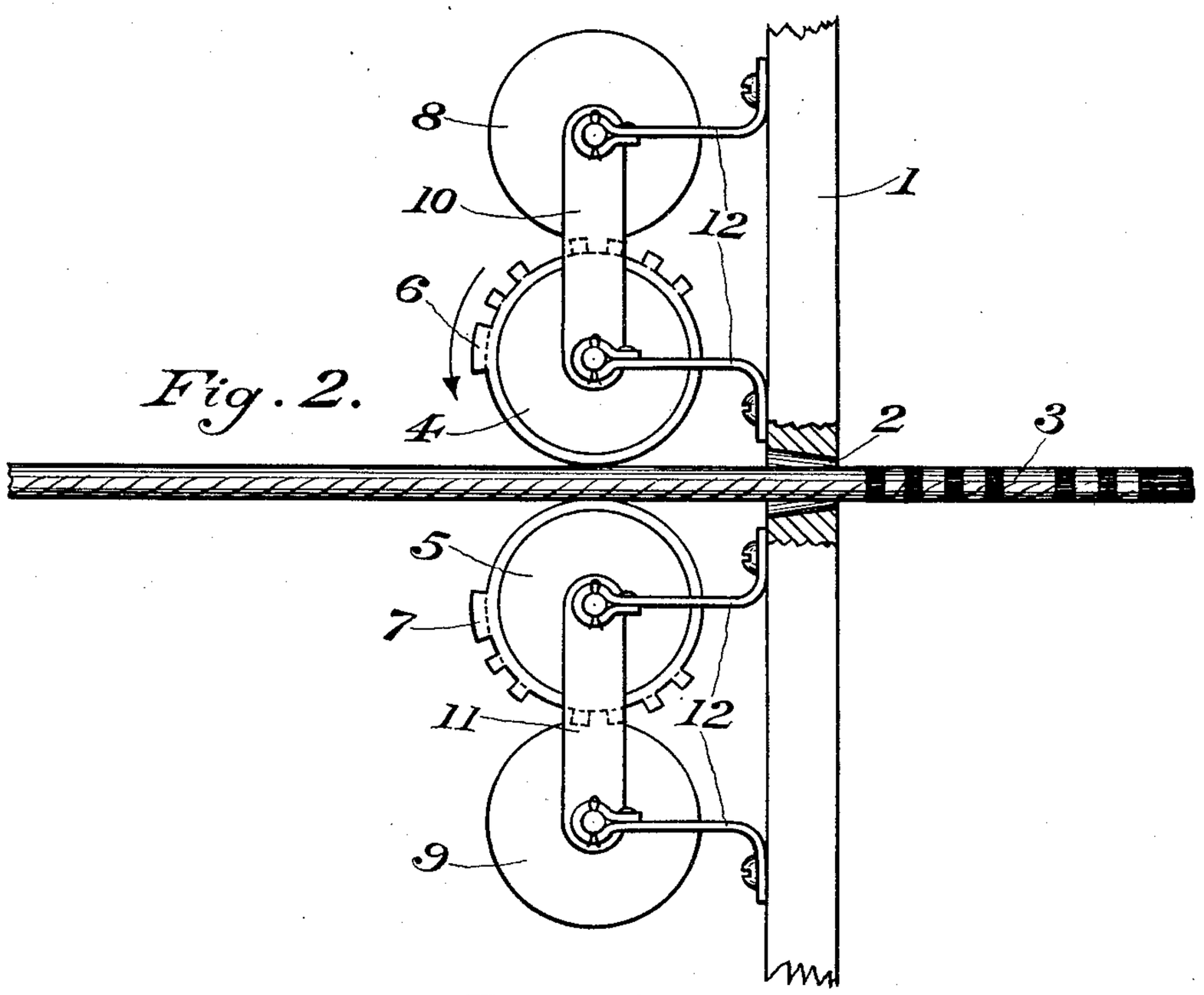


Fig. 2.

Fig. 3.

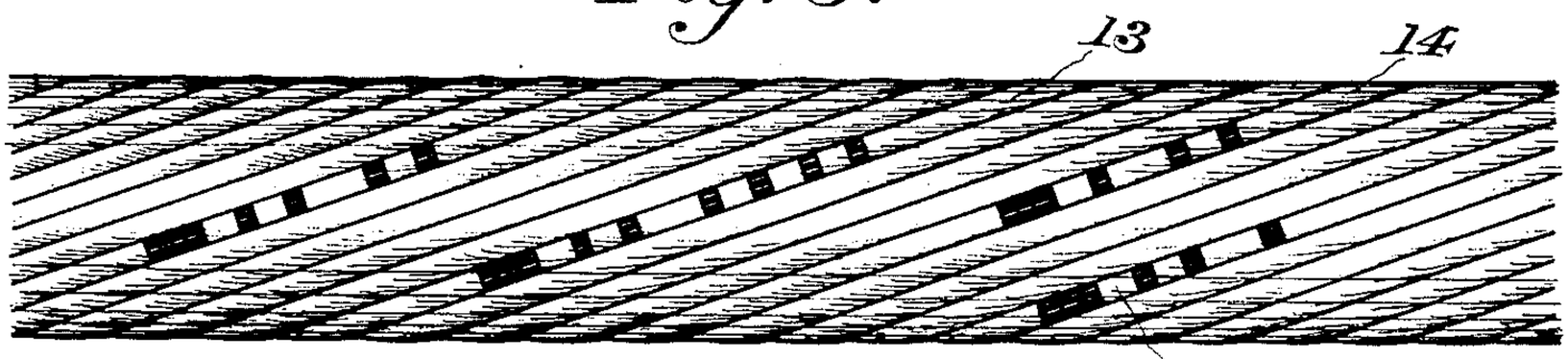
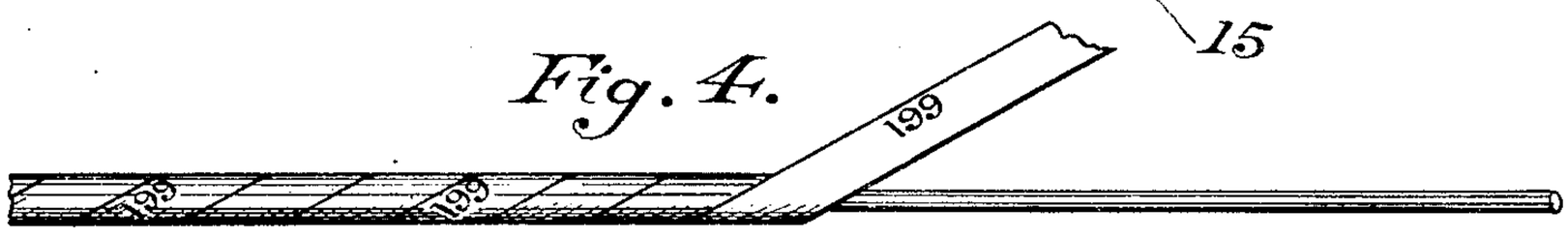


Fig. 4.



Witnesses:
Hurxel C. Prado
David S. Cudfish.

Albert Brown Porter,
Inventor.
by Samuel G. McMeen
Attorney.

UNITED STATES PATENT OFFICE.

ALBERT B. PORTER, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO McMEEN & MILLER, OF CHICAGO, ILLINOIS, A COPARTNERSHIP; THERESA PORTER ADMINISTRATRIX OF ALBERT B. PORTER, DECEASED.

IDENTIFIABLE CABLE CONDUCTOR.

951,147. Specification of Letters Patent. Patented Mar. 8, 1910.

Application filed June 16, 1906. Serial No. 322,060.

To all whom it may concern:

Be it known that I, ALBERT B. PORTER, a citizen of the United States, and a resident of Chicago, county of Cook, and State of Illinois, have invented a new and useful Improvement in Identifiable Cable Conductors, of which the following is a specification.

My invention pertains to the manufacture of cables comprising a plurality of insulated conductors. In cables of this class, it is at times necessary to identify a conductor, or a group of conductors. My invention provides means for making such an identification with the greatest facility.

In the manufacture of a cable made up of conductors insulated with a covering of such a nature as to be susceptible of having identification marks printed upon it, I print such marks upon the insulating covering before making up the conductors into the completed cable core, after which the core may be given a protecting cover, if desired.

Four figures of drawings accompany this description, in which—

Figure 1 shows an insulated conductor with insulating covering marked with identifying symbols, according to my invention, Fig. 2 shows a means for marking the insulation of the conductor, as shown in Fig. 1, Fig. 3 shows a cable core made up of conductors which are marked individually according to the plan of the conductor shown in Fig. 1, and Fig. 4 shows a conductor insulated with a wrapping marked according to my invention, the wrapping being in part removed to show to better advantage the identifying symbols printed thereon.

Referring to Fig. 4, it will be noted that the elements of my invention are combined by combining first the identification symbols and the insulating covering, and then combining the prepared insulating covering and the conductor. Referring to Fig. 1, and observing it in conjunction with Fig. 2, it will be noted that the elements of my invention are combined by combining first the conductor and its insulation and then printing upon the insulation the identifying symbols. In Fig. 4, Arabic numerals are shown as the identifying symbols; in Fig. 1, a series of dots are shown as the identifying symbols, the dash or larger dot being used to indicate the beginning of the group of symbols, to fix the direction of reading the group for the identification of the conductor so marked.

In Fig. 2 is shown a device for marking the conductors according to the plan of Fig. 1. In a plate 1 is an opening at 2 through which an insulated conductor 3 may pass. Adjacent to the opening are two similar printing wheels, 4 and 5, having printing surfaces 6 and 7 adapted to print simultaneously upon opposite sides of the conductor 3. The printing wheel 4 is inked by the inking wheel 8 and the printing wheel 5 is inked by the inking wheel 9, the printing wheels and inking wheels being held at fixed distances by the links 10 and 11, that distance being so adjusted as to ink the printing lugs but not the lower sections of the printing surfaces. The printing lugs of the surfaces 6 and 7 may be soft or concave or both, that together the two of them will practically surround the conductor 3 when printing upon it, thus preferably making the identification dot a circle of ink around the conductor's insulation. The prongs 12, 12, 12, 12, supporting the printing and inking wheels, have such a spring set as to press the printing wheels together, to press the conductor between them. The conductor 3 is drawn toward the right through this printing device, thus revolving the printing wheels frictionally, and printing upon the insulation of the conductor the symbols as shown at the right in Fig. 2. These symbols will be repeated as the wheels revolve, the repetition of the symbols being clearly shown in Fig. 1.

In Fig. 3 is shown a cable core made up of conductors of which some are marked for identification in accordance with plan of Fig. 1.

In the forming of insulated wires into cables, the identification marks on the wires may be printed in Arabic figures, as shown in Fig. 4, and the proper assortment of reels containing such marked wires may be chosen for assembly on the machine which lays up the insulated wires into the cable core. This method is suitable where it is found feasible to prepare in advance the required printed conductors. Where it is desired to place reels of insulated but unmarked conductors on the cabling machine, in order that the insulated wire for the cable may be all of

one kind, the method of marking illustrated in Fig. 2 may be utilized. A marking device, in such a case, is to be associated with each reel, and the full complement of such reels and marking devices will coöperate in the cabling process. As each conductor then is drawn through the die which assists in forming the core, it will be given at intervals its distinguishing mark.

In the plan of marking used for Fig. 1, the dash is used to indicate the beginning of the set of symbols; thus the conductor of Fig. 1 reads from right to left, "34," while in Fig. 3 the conductor 13 reads from left to right "34." Conductor 14 reads "22" while conductor 15 reads "31."

I do not wish to limit myself in all respects to the specific manner of marking herein shown and described, nor to the specific manner of producing those markings, as a wide latitude is permitted in that direction without departing from the spirit or scope of my invention.

Having thus described my invention, what I claim as new and desire to secure by United States Letters Patent is:

1. In an electrical cable, a plurality of conductors, a spiral wrapping of insulating material applied to each of said conductors, said spiral wrappings having printed on them at frequent intervals designating marks for the identification of the corresponding conductor, substantially as described.

2. In an electrical cable, a plurality of conductors, an insulating ribbon wound spirally about each of said conductors, and identification marks printed upon each of said insulating ribbons at frequent intervals, substantially as described.

3. A cable composed of a plurality of wires which are coiled about each other in their length, a covering for each of said wires being wrapped about the same, and numerals placed at intervals apart on the covering for the wires, and the numerals of certain of said wires being different from the numerals of certain other of said wires.

Signed by me at Chicago, county of Cook and State of Illinois in the presence of two witnesses.

ALBERT B. PORTER.

Witnesses:
DAVID S. HULFISH,
GEORGE T. PARKER.