

NUMBERING AND RECORDING ARC LAMPS AND LOOPS.

By W. H. MARKLAND.

SOME time ago I inaugurated a system of numbering and recording arc lamps which has worked well in practice and may be of assistance to others.

My plan briefly is as follows. The dynamos are lettered "A," "B," "C," &c., and the loops, or lamp circuits, are numbered 1, 2, 3, &c.

In numbering the position of lamps, be they hanger board or

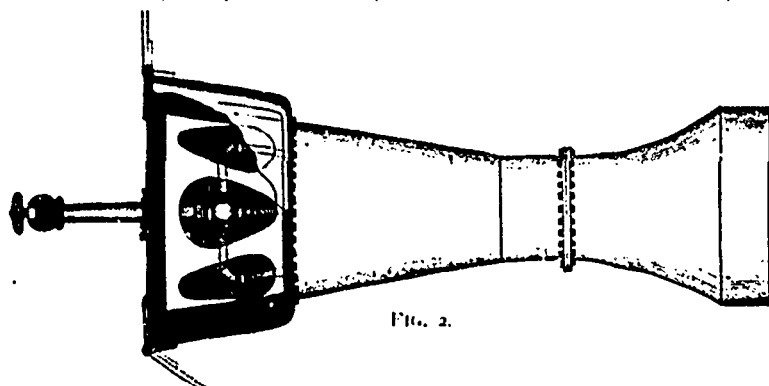


FIG. 2.

pole inside or out, the number of loop or circuit is indicated by numbers to the left of a decimal point, and the number of lamps starting out on the positive wire by numbers to the right of the decimal point, thus: the first lamp on loop one would be marked 1.01, the next 1.02, &c. The first lamp on loop 2 would be marked 2.01, the tenth lamp 2.10, the twentieth 2.20, &c. On loop 12, the first lamp is marked 12.01, the tenth lamp, 12.10, &c.

As before mentioned the number to the left of the decimal point indicates the number of the loop, and that to the right the number of the lamp. This plan, as can readily be seen, is easily remembered. A person familiar with the loops can tell the number of any particular position of a lamp by simply counting the lamps on the loops.

If additional lamps are put up they can be given a higher number than those on the loop; or, if only a few intermediate lamps are added they can be numbered with a third number to the right of the decimal; thus, if two lamps are put on loop one between 1.01 and 1.02, they could be numbered 1.011 and 1.012. The men would readily remember these numbers as they are different from the regular run. When a loop gets too badly mixed up it is a short job to renumber.

A tin tag having a number painted on it is nailed to the lamp board or the pole. Where the poles or hanger boards are numbered from one up, without reference to loops, it is difficult to remember on which loop the lamps are run, the number not indicating the loops. By this plan the loop number is always known. Trimmers notice the numbers while trimming and become familiar with them very readily.

I consider it is very much better to number loops than to name them, it being much easier to tell the dynamo man to put on loop 1 at 6 p. m., than to say "Put on Jersey Swamp loop at 6 p. m."

In the dynamo room a sign is posted, giving the number of the loops, where they go, and the number of lamps on each.

The trimmers and inspectors in making out reports of lamps

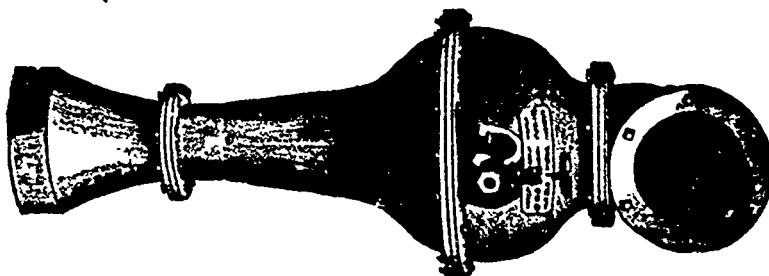


FIG. 3.

simply report lamps of such a number as giving trouble. The blanks for inspector's reports are made out as follows:

- "S" Started Lamp No. —
- "U" Unable to Start Lamp No.
- "A"—Adjusted or Repaired Lamp No. —
- "R"—Renewed Lamp No. —
- "G" Globe put on Lamp No.

In the log book, which need be nothing but a common blank book or ledger, a line is used for each lamp. When anything goes wrong a record of it is made thus. Suppose on March 14, 1891, the inspector reports it necessary to start lamp 1.08. On the line for that number would appear "1.08 S, 3/14/91," the letter "S" indicating what was wrong and followed by the date. If three days later the lamp would not burn, the record would appear thus: "1.08 S, 3/14/91. U. 3/17/91;" if afterward the lamp was adjusted or repaired the entry would read: "1.08 S, 3/14/91. U. 3/17/91. A. 3/17/91." If it is necessary to replace it with a new or repaired lamp, this would be the record: "1.08 S, 3/14/91. U. 3/17/91. A. 3/21/91. R. 3/24/91;" or if a globe was put on, a "G" before the date would be used to indicate what was done to that lamp.

In the same book a record of each lamp should be kept giving the number, position, kind of lamp, how hung, and the date put in service; also a route diagram giving the run of the wires, their position on the poles and to which lamps they go. A trouble report of dynamos, &c., should also be kept. One very important point is to date everything entered.

This plan, as can readily be seen, takes but little space in a book, and gives clear and accurate information. At a glance it is possible to tell where the difficult places to maintain arc lamps are.

This plan can be further extended if desired, by putting the maker's number of the lamp under the year. A lamp when repaired should be as good as new.

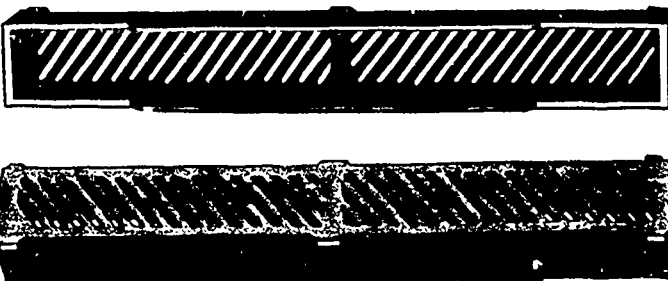


FIG. 4.

A very simple manner of telling the cost of running arc lamps is as follows:

HOURLY RECORD OF ARC LAMPS, MARCH, 1891.

Loops	Dates	1	2	3	4	5	6	7	8	9	10 etc.	Total Hours for Loop	Lamps	Total Lamp Hours
1														
2														
3														
4														

By entering every day the number of hours a loop was in use, and at the end of the month adding these hours together and multiplying by the number of lamps on the loop, total hours for one lamp is obtained. By adding together the total or lamp hours for all the loops, and dividing that into the cost of running the plant, the cost an hour per lamp is readily obtained. This gives one of the very best of records. *Electrical Age.*

The first electrical power in the province of Wurtemberg has just been put into operation in Konigshbronn, where steam power has been replaced by electric power in the Royal Foundry. The installation has been carried out by the Esslingen Engineering Works. Until recently the strong source of the Brenztopf was used only in connection with a forge situated in dilapidated buildings. These have now been demolished and a small house built in their place at the side of the source. It contains a turbine which drives a dynamo at 600 revolutions per minute, and which gives 40 electrical horse power. The current from this dynamo is transmitted by means of overhead conductors across the town to the Royal Foundry, where 25 turning lathes and polishing machines are actuated by electro-motors. Suitable regulating appliances have been provided, so that should variations take place in the quantity of water of the Brenztopf, the power transmitted shall remain constant.