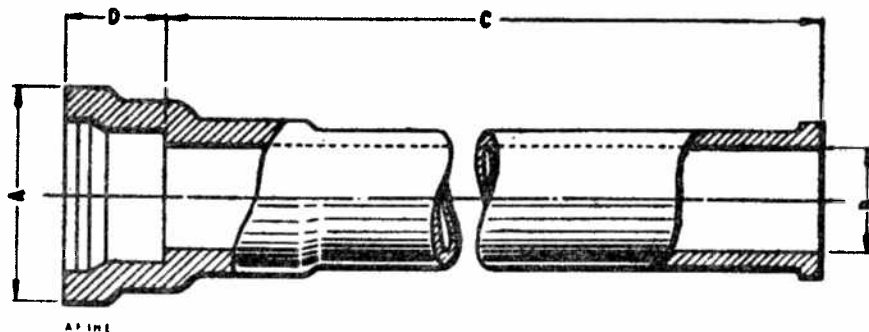


DUCTS

Cast-iron Ducts

1. General.—Cast-iron ducts are employed on underground cabling work on the precedent principally for protecting the lead pipe used in authority of the Eng. Dept. (Cn1). Details of the ducts pneumatic tube work. They should only be used are given in Fig. 1 and Table 1.



Duct No.	A (in.)	B (in.)	C (ft.)	D (in.)
42	7½	3	9 or 12	3½
44	7¾	4	9	„
48	—	3	„	„

★FIG. 1. DETAILS OF CAST-IRON DUCTS

TABLE 1—CAST-IRON DUCTS—STANDARD SIZES AND WEIGHTS

Duct No.	Minimum internal diameter (in.)	Type of ends	Lay length, exclusive of socket (ft.)	Minimum weight (lb.)	Maximum diameter of cable that can be drawn in (in.)
42	27/8	Spigot and socket	9 or 12	144 or 173	2.75
44	37/8	Spigot and socket	9	191	3.75
48	27/8	Double spigot	9	121	2.75

Note:—The internal diameter is usually made 1/8-inch larger than the specified minimum.

2. Cast-iron bends.—It is not always possible to obtain a straight run between two jointing points. If the deflexion from the straight line is very slight, a set may be given to the ducts. If the deflexion is too great to be satisfactorily negotiated by means of a set in the joints, split bends should be employed. As it is not safe to attempt to draw cables through split bends, the ground over the bend has to be opened whenever cabling operations have to be undertaken over a section of which the bend forms a part. The excavation and reinstatement involved in this operation entail considerable expense, and it is therefore desirable to restrict the use of split bends as far as possible. On new routes, the jointing points will be

so arranged as to render the use of split bends infrequent. Bends are provided with sockets and spigots.

3. Table 2 shows the standard sizes of C.I. split bends. The length of the socket is not included in the quoted length of the bend.

4. It will be noticed that the bends are of different radii. The figures in the fourth column of Table 2 represent the relation which the curved portion of the bend bears to the circumference of the circle of which it is a part. The socket and a short length of pipe near the spigot are straight. A typical Split bend, with Cotter and Pin, is illustrated in Fig. 2.

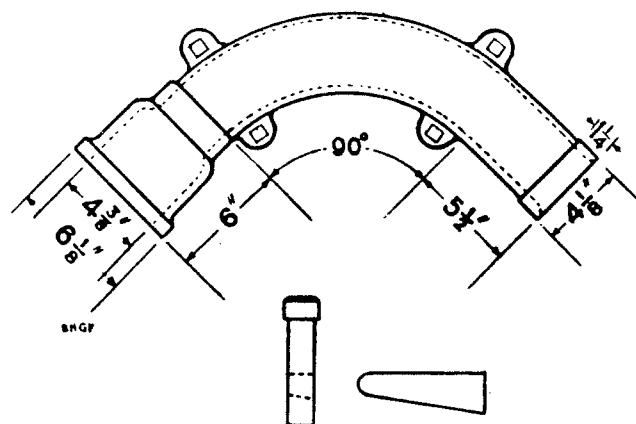


FIG. 2.— $\frac{1}{4}$ SPLIT BEND. 3 IN.

TABLE 2

Bend, C.I. Split, No.	For use with	Length (excluding socket) (ft. in.)		Fraction of circle	Radius of circle (ft. in.)	
5	2-in. ducts	2	0	$\frac{1}{4}$	0	$10\frac{1}{2}$
8	3-in. C.I. ducts and Ducts No. 11	4	0	$\frac{1}{16}$	8	6
10	3-in. C.I. ducts and Ducts No. 11	2	0	$\frac{1}{4}$	0	$10\frac{1}{2}$
11	3-in. C.I. ducts	5	0	$\frac{1}{4}$	2	6
20	4-in. C.I. ducts	4	0	$\frac{1}{16}$	8	6
26	3-in. C.I. ducts and Ducts Nos. 5, 11 and 33	1	9	$\frac{1}{4}$	0	$10\frac{1}{2}$

Reference:—None
(Cn1)

END