the construction period the expenditure for operation was $12,629, and the revenue from sale of light $12,243.

In December the revenue amounted to $3,468, and in January over $3,800, and it is estimated that during 1907 it will total about $53,850, while fixed charges and operation cost will not much exceed $50,179. The plant is consequently on a paying basis, better lighting is being given at a considerably decreased cost, and when it is decided to double the capacity of the plant the additional cost will amount to only $70,000, for engine, generator and house transformers and meters.

Summary of Results.

1st. The total operating expenses and revenue for the construction period of six months have balanced.

2nd. From the beginning of this year the plant is on a paying basis, covering costs, interest 4 per cent., sinking fund 1 per cent., and depreciation varying from 10 per cent. on meters and lamps to 2 per cent. on buildings, and is expected to show in addition a very fair profit at the end of the year.

3rd. It is one of the most modern and interesting plants in existence, which can be doubled in capacity with very little expenditure.

Growth of the Service.

Month Ending	Signed Contracts.	Customers Connected.	Meters Installed.	Total Lamps Connected.	Total Arc Lamps.	Power Load.
July 4 . .	398	312	314	7,131	1	16.1
Dec. 31 . .	708	634	594	15,198	155	159.2

1906.

Growth of Revenue.

Month Ending.	Inc. Lighting and Meter Renewal.	Power.	Arc Lighting.	Sundries.	Total Revenue.
July 31 .	$ 504.55	$129.50	.....	$11.60	$ 645.65
Dec. 31 .	2,421.30	515.53	$456.25	75.07	3,468.45

WHITE BRASS.

White brass, as it is known in commerce, is a Babbitt metal which contains zinc. In toughness, color, and antifrictional qualities it closely resembles genuine Babbitt metal, but it has the advantage of greater cheapness.

The uses of white brass are limited to marine work or similar appliances in which large bearings are used. As the majority of such large bearings, however, are found in marine construction, it may be said that the principal use of white brass is in this class of work.

White brass has been used for a long time, and its composition varies with different makers. The best white brasses, however, are those in which tin predominates, as the alloys which contain an excess of zinc are too brittle for many uses. An analysis of a common brand of white brass is herewith given.

Analysis of Parsons' White Brass.

Tin	65.12	per cent.
Zinc	31.71	"
Copper	2.87	"
Iron	0.13	"
Antimony	none.	
Lead	0.17	"

The lead and iron present in this analysis are impurities from the zinc, and were not intentionally introduced. The mixture consists of tin, zinc, and copper. The increase of the copper hardens the mixture. The increase of the zinc likewise hardens it, but at the same time the melting point is increased, and the melted metal does not run freely.

To make such a mixture of white brass take the following:

Straits tin	10 lb.
Common spelter	5 "
Copper	6 oz.

The copper is melted in a crucible in the usual manner, and then the zinc is added. When this has been thoroughly melted and stirred to incorporate the copper with the zinc, the tin is added, and the whole is again stirred. The mixture is then poured into ingots. Care must be exercised to avoid overheating the mixture.

The drossy nature of white brass renders the making of ingots of good appearance a troublesome matter. It is customary to pour it into large ingots to avoid splashing. The metal is poured at the lowest possible temperature at which it will run. Some makers cast the metal in a mould closed on all sides, and containing a series of ingots. The mould is placed on end, like a mould for casting brass billets for rolling. In this manner the dross floats to the top, and ingots of better appearance are produced. With care, however, an ingot of good appearance may be made in the usual ingot molds. Aluminium is frequently introduced into the mixture in the amount of about 1 oz. to 100 lb. of mixture to purify it, but when good metals are used it is not considered necessary.

Straits tin	10 lb.
Common spelter	4 lb. 13 oz.
Yellow brass	9 oz.

The tin which is used in the manufacture of white brass should be of good quality. Any of the Straits brands are good for the purpose. The zinc should be a good commercial brand. If, however, the very best results are desired, Bertha or Horsehead should be used. The copper may be either ingot or wire, as the amount which is added is so small that it is unnecessary to use Lake copper. If scrap brass is used for making the mixture instead of copper, it should be free from lead. As it is rather difficult to obtain scrap brass free from lead, and the amount of copper that is used is so small, the use of metallic copper itself is preferable to scrap brass.

As far as anti-frictional qualities are concerned, white brass is fully the equal of genuine Babbitt metal. The one great fault of white brass, however, is the large amount of dross which forms when the metal is poured. That which forms when the metal is melted may be skimmed off, but when the metal is poured more forms and runs into the casting. For this reason, and also on account of the fact that white brass has a higher melting point than genuine Babbitt metal, its use is limited to large bearings that may be readily filled. The majority of such bearings are filled with the white brass, the metal pened down, and then the whole is bored out to fit the shaft. In this manner a very serviceable bearing is produced. In fact, it is really the only manner in which a really good bearing may be made of small brass. This metal is not suitable for small or thin bearings, and is not used at all for such a purpose.

The drossy nature of white brass is so manifest when it is used that now and then one may see a bearing poured in in which the metal is spread almost like mortar on the bearing surface. Even under such unfavourable conditions a good bearing is produced provided the pening and boring are carried out. Marine engineers seem to like white brass, and it is extensively used by them. They say that the odour which is given off from it when a bearing runs hot is so characteristic that a hot box may easily be detected. This statement, however, lacks complete verification, and is given only as a popular belief.—"Brass World."

THE BELL TELEPHONE COMPANY'S ANNUAL REPORT.

At the recent annual meeting the report for 1906 showed that 16,950 subscribers had been added to the company's list during the year; 95,145 instruments are now rented. The company owns and operates 571 exchanges and 1,160 agencies. The Long Distance System was increased by 6,318 miles of wire during last year, making a total of long distance lines of 43,400 miles of wire, with 9,391 miles of poles. During the year $1,038,000 of five per cent. bonds were sold. The premium on which $51,900 being carried to contingent account. Ten thousand shares of New York stock were offered to shareholders at 25 per cent. premium, bringing the paid-up capital to $9,980,800.

The receipts for the year from long distance and private lines were $1,098,114.08.