

High-Pressure boilers and setting.....	\$25.00
Houses and chimney.....	11.00
Triple engines and setting.....	18.75
Compressors.....	10.00
Mains.....	6.62
Total.....	<u>\$71.37</u>

Allowing 5 per cent. more on this, or \$3.57, we have a total of \$23.90; which is the price at which the Central Station Company can supply air for one horse power and secure at the same time 10 per cent. interest on their capital outlay.

The easy inference from this is that 500 consumers in this city, of an average of four horse power each, would, by forming themselves into a Central Power Supply Company, reduce their power bill by from 45 per cent. to 75 per cent. ! It ought to be mentioned that the lower limit of saving just mentioned, assumes that the consumers' steam engines, which, without alteration, will serve equally as air motors, have a present value of \$33.00 per horse power.

Regarding the question of heating in winter, there seems every possibility, in view of the successful system of steam distribution in New York, of being able to supply heat by laying mains to the city from the Central Power Station, and leading the exhaust from the steam engines in the same to be delivered to the workshops and houses in turn; and this at an enormous saving of fuel and expense to all concerned.

This would also be a most desirable scheme from the point of view of the elimination of smoke from our large cities.

The great benefit to small producers by such a great reduction in cost of power is obvious and need not at present employ our further attention.

Reference ought here to be made to many advantages apart from the question of cost which attend the adoption of the pneumatic system of power supply.

In the first rank we may place the elimination of 95 per cent. of the smoke which now renders manufacturing centres so obnoxious from an aesthetic point of view, and of the dangers and responsibility attending the use of steam boilers by unskilled persons, these being done away with or removed from the more crowded parts of the city. The possibility of running air motors in the centre of the city, where a supply of water for condensing or even feed is extremely expensive, is an obvious advantage.

The extreme handiness of the working medium and its suitability for use by technically unskilled attendants has already been adverted to. In this respect the air motor bears away the palm from the electric motor, the gas engine, and even the much enduring steam engine; all of which require a certain modicum of knowledge or experience. The repairs also of such a machine require only a knowledge of perfectly well understood mechanical details.

The use of the exhaust for either refrigeration, ventilation, or even heating renders the rejected air a beneficial by-product, instead of a nuisance, as the exhaust from a steam engine certainly is in summer.

The suitability of compressed air for the working of lifts ought not to escape mention; a cheapening of the first cost of at least 10 per cent. and of running expenses at the rate of 75 per cent. over other systems can be easily attained.

Tram cars worked by compressed air are now in use in Nantes, Brussels, Chester, and other places; they have there proved both serviceable and economical in spite of the fact that the power they use is generated in small compressing stations. A reservoir capacity with air at a perfectly safe pressure can be obtained with an ordinary sized car to do a return journey of 5 miles without any intermediate charging station; and the consequent removal of a dangerous overhead wire, such as is used on the electric trolley system, is not to be despised in a populous city such as this. The difficulty of snow could be overcome by having a car devoted to clearing the tracks alone; but this will be preferably effected by having a light overhead railroad, as the ruts in the streets caused by keeping a clean tramroad in winter are extremely unpleasant, not to say dangerous, to occupants of vehicles.

The convenience with which compressed air as a working agent could replace steam in a city already supplied with power by a number