manner described, it will be found to work satisfactorily, and not much expense is entailed.

TRANSMISSION OF POWER.

Q.—What are the respective advantages of using compressed air and electricity for transmission of power for colliery purposes?

A.—The transmission of power to a greater or less distance is frequently a subject for the serious consideration of a mining engineer, and thanks to the advances in scientific and mechanical knowledge made during recent years the choice of method is varied and the possible efficiency is considerable.

One of the most useful methods of transmitting power to a distance,and one of the best adopted to the requirements of mining, consists in the employment of compressed air as the medium of transmission. But this agent, like many other things connected with mining, has in certain directions serious competitors, in favour of which there has frequently been urged greater economy in first cost, in working cost, in efficiency, and in applicability. These claims have, however, been keenly contsted by the advocates of compressed air, who, on the other hand, contend that it supplies a means of power transmission at once safe, economical, and efficient for general mining work. The force of this contention has been much increased by the improvements effected during the last 25 years in the methods of generating compressed air and of using it.

Compressed air is well adapted for driving all the various classes of machines used in mining, such as rock-drills, underground haulage and hoisting engines, pumps, ventilating fans, Kortings air-injectors. and coal-cutting machines.

In coal mines which are liable to the dangers arising from explosive gas and dust, compressed air is specially prized as a means of driving coal-cutting machines, &c. Its absolute safety constitutes one great recommendation. Another advantage. which attends to mines of all classes, is that the low temperature of the exhaust helps to cool the mine and assists the ventilation.

The disadvantages attending the use of compressed air are the cost of providing and maintaining the compressing plant, and the low efficiency, probably not exceeding 25 per cent, of the steam pressure applied to the piston, this being due to cooling at the compressor and the friction set up in the pipe range.

Another and very serious objection to the use of compressed air is the liability to ignition and explosion within the receiver adjoining the compressor.

We now come to the most modern, as well as the most important method of power transmission, viz., electricity.

As a competitor with compressed air, electricity occupies the first place. Its use as a means of transmitting power has of recent years been widely extended, and in mines we have it now applied to pumping, haulage for medium of locomotives, and fixed rope haulage engines actuated by electricity, winding below and above ground, to rotary and percussive drilling, and most successfully to coal-cutting machinery.

It is more especially in its application to the driving of underground pumps that the conspicuous advantages in electricity appear. The work is generally continuous for many hours, and there are no sudden variations of load. The apparatus can often be placed in a part of the mine where it can receive proper supervision and attention. Again, economy of power is of great importance in pumping, at least in cases where the quantity of water is considerable.

With electricity energy could be generated at an exceptionally low cost; all boilers, piping, steam engines, &c., now met with so freely in a mine would disappear, all the power needed being provided for by electric motors occupying much less space, wanting no supervision and very efficient.

Therefore, in making a general summary of the advantages of electricity as a motive power applicable to general underground work in mines, we find that in it we have a force that is easily conducted to any point or points required, will do any class of work that it is possible for any other power to do, and gives off an efficiency of from 40 to 60 per cent. of the power transmitted to the dynamo while the first cost and general maintenance would be less than a compressed air installation. Against this we have the risk of sparking (which is a serious objection in a fiery mine) and the liability to persons receiving shocks.

THE END OF THE SPRINGHILL RELIEF FUND.

After a lapse of fourteen years, the last money was paid lately of the big Relief fund, and its administration closed with credit to those having its oversight. During all these years Mr. A. H. McLeod of the Cumb. Ry. & Coal Co's staff was the Sec'y, and to his prudent management is due much of the economical way in which the fund was administered. His work was not light, as the beneficiaries had wandered in the interval to many lands, to Great Britain and Ireland, the United States, Newfoundland, and France, and of course to Pictou, Cape Breton and other counties within the Province. And though cheques were sent to all these places, at intervals, not a penny went missing.

The terrible explosinn occurred in Jan. of 1891. By the accident 57 were made Widows; the orphans and fatherless numbered 142, and dependents on those killed 19. During the administration of the fund twenty-nine of the widows found husbands, three died, and twenty-five remained. Nineteen of the orphans died, and all the children except six are now over the age limit, laid down by the committee, which entitles them to assistance, viz., 14 years for boys and 15 for girls.

When the accident occurred appeals were immediately sent out for aid, and it was truly gratifying the way in which contributions flowed in. And what a blessing the fund has been. It kept families on their feet until through efflux of time their members were able to provide for them. All the money received was expended strictly according to rules laid down. The very best possible was done in the just and economical distribution