

CURRENT DIRECT FROM COAL

Electric Battery Designed to Dispense with Steam Power.

PROBLEM OF DIRECT ENERGY SOLVED

Interesting Details of the Invention of a Chicago Chemist, Which Promises Another Revolution in Electricity.

Hugo Jones, assistant city chemist of Chicago, claims to have made substantial progress in solving the problem of procuring electricity direct from coal.

According to Chicago papers the claim is made for Mr. Jones' battery that it will yield 35 per cent of the energy that is stored up in coal, or four times as much as the present combination of boiler, steam engine and dynamo.

If Mr. Jones' invention can reduce the loss from 80 and 90 per cent to 65 per cent the result would be further improvements and a revolution in manufacture such as has not been experienced since the invention of the steam engine.

Combustion of Elements.

All this time the battery can be kept running, while an ordinary battery stops as soon as the acid liquid has taken up too much metal.

Another advantage in the use of lead sulphate is the fact that this sulphate is decomposed by coal at a lower temperature and more easily.

Expert Opinion.

Commenting on the invention of Mr. Jones the Western Electrician said recently:

"If the sulphur dioxide were wasted, as it has hitherto been in the reduction of sulphates, over half of the available energy would be lost, for the potential energy of the sulphur dioxide is greater than that of the lead.

"The battery promises to be economical, therefore, and its yield is high. Its net efficiency is said to be about 35 per cent, or about four times as high as that of boiler, steam engine and dynamo combined, while it is less expensive and occupies less space than those machines.

Besides the utilization of the sulphur dioxide, there are other economical devices which account for the high yield claimed."

Chicago city officials are keenly interested in the invention and will conduct a practical test of the apparatus at an early day.

While practical men have pronounced their verdict, the modest chemist refrains from exultation and insists that many improvements must be introduced before he will subject the operation of his battery to a public test.

Big Bill for Coal.

The biggest single bill that the city of Chicago must meet regularly is for coal. Last year \$600,000 made up this fund and the total amount will not be far short of that figure when the comptroller figures up the books for the annual statement to the city council.

A general adoption of the new dynamo at the water-pumping stations as

well as in the generating of electric light for the streets would reduce this total from 25 to 35 per cent. This is the saving now effected even on a small scale through the direct reduction of coal by mixing with lead sulphate.

"I don't want anyone to think that the problem is solved and that no work remains to perfect my invention," said Mr. Jones to a Chronicle reporter.

"I regard my work as preliminary. I believe that my battery presents the adaptation of the idea so long sought, but in its present form it would hardly be adaptable everywhere or expected to supply it with several improvements within the next few weeks that will make the problem much more simple.

"Through the use of the lead sulphate we secure continuous action. With zinc sulphate, which has been so often tried, the battery stops as soon as the acid liquid has

Coolness in Summer

Entirely new methods of cooling the atmosphere of dwelling houses and places of business in summer are likely to be devised in the future.

But the great advances to be made in the art of keeping cool will unquestionably come from the use of some such refrigerating apparatus as is now employed in cold storage warehouses.

Another way to deal with the question is that already in use at the St. Nicholas rink. There, nearly two feet below the floor, is a sheet of ice.

Liquid air may eventually offer the simplest and cheapest means of chilling the atmosphere in summer. A man so prominent

in the world of science as Alexander Graham Bell recently expressed much confidence in this possibility. He has not worked out the scheme at all in detail, but he makes two fundamental suggestions.

Even were it not reduced to liquid form, compressed air would still be an excellent agent for cooling purposes, in the judgment of Mr. Bell.

Which ever expedient be found the simplest and cheapest in the end there can be no doubt about the correctness of Mr. Bell's opinion that "it should certainly be possible for man to control the internal climate of his residence."

Regulating Temperature in Dwelling Houses.

is much humidity in the air the difference will scarcely exceed 4 or 5 degrees, but "every little counts" in a hot weather.

Which ever expedient be found the simplest and cheapest in the end there can be no doubt about the correctness of Mr. Bell's opinion that "it should certainly be possible for man to control the internal climate of his residence."

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Iron Workers and Strikes

(Copyright, 1901, by Collier's Weekly.) I regret exceedingly my inability to properly convey satisfactory ideas of the Amalgamated association's organic autonomy.

The Amalgamated association was organized August 4, 1875, in the city of Pittsburg, Pa. Its purpose was to render uniform the work conditions and earnings of those who became its members.

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The national president appoints a wage committee, which examines the suggestions, and selecting those deemed fair, reports a scale to the delegates of the succeeding convention.

In 1901 discovery was made of their affiliation with us seven men removed from positions which most had held for periods ranging from eight to twenty-one years.

In June, 1900, the men of Wood's mill, McKeesport, Pa., owned by the Sheet Steel trust, requested admittance to our society. They were received and just treatment was made to secure improvement of mill surroundings, which were deplorable, or to increase their wages, which were far below those paid to our people in other mills run by the same firm.

While much of the above was transpiring the seven trusts with which we dealt were reorganized into what is well known as the United States Steel company. It has never expressed hostility to organized labor—at least not officially.

The Amalgamated association cannot afford to be wrong, neither will its officials precipitate troubles which may bring suffering to thousands and dishonor to the institutions and laws of our country, but we shall endeavor to protect the weak, deprive of their dealing and elevate trade unionism by such a display of business method as shall gain for it the assistance and encouragement of the church, the state and the investor of capital.

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President Shafter on His Association's Aims.

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Mid-Summer Special Sale—on merchandise of the most desirable sorts, that which is best suited to the hot season—things to make home cool and pleasant.

Linoleum—Two carloads of new fall patterns just received. Initials at \$1.25, \$1.50 and \$1.65 per yard.

China and Japan Matting Our assortment covers all the desirable grades from both countries, imported direct by us.



Carpet Special A few patterns to close out.

Velvets—\$1.25 goods to close at 90c Tapestry—95c goods to close at 70c Tapestry—85c goods to close at 58c

Floor Shine—A clear transparent enamel finish, made for great durability in re-finishng hardwood floors and interior woodwork.

Continued Sale Summer Furniture—Never before have we shown such an assortment of novel summer furniture pieces—in chairs, divans, rockers, seats, etc.



\$2.50 Rattan Porch Chair, special 1.95 \$7.00 Pretty Rattan Rocker, special 4.50 \$5.25 Rocker, with arms, special 3.65 \$9.00 Rattan Chair, shellac finish 5.50 \$4.00 Rocker, roll arms 2.95 \$12.00 Weathered finish Sum. Chairs 8.75

These are but a few mentioning, there are hundreds of other pieces that space forbids mentioning, then again you will be more impressed with the extra special values when you see the goods.

HAMMOCKS—All kinds, all sizes, all colors, 50c to \$6.00 each—all go at one-fourth off regular prices.

REFRIGERATORS—You surely need a refrigerator this kind of weather, they are going fast at 20 per cent off regular. \$200 will furnish a five-room cottage. See us.

Orchard & Wilhelm Carpet Co. 1414-1416-1418 Douglas

PAN-AMERICAN LIMITED TO CHICAGO VIA Great Rock Island Route CHEAP EXCURSION RATES ALL SEASON ONLY ONE NIGHT OUT TO BUFFALO, NEW YORK AND PHILADELPHIA. CITY TICKET OFFICE: 1323 FARNAM STREET.

DON'T WORRY. Worry is caused by the expectation of trouble. THE EQUITABLE ASSURANCE SOCIETY Strongest in the world. \$66,000,000 SURPLUS

Twelve Western Girls The Bee has a treat in store for twelve western girls who earn their own living. It intends to send them on the twelve best trips which can be planned and pay all of their expenses, including everything.

Vacation Contest Dept. The Omaha Bee, Omaha, Neb.

KILL RATS Stearns' Electric Rat and Roach Paste

SANTAL MIDY Cures in 48 Hours all URINARY DISCHARGES

Every Woman is interested and should know about the wonderful MARVELL Whirling Spray

HEALTH The general health of a woman is inseparably related to the local womanly health. When the delicate womanly organism is diseased, the body loses plumpness, the cheeks lose their roses, and a nervous and fretful condition becomes habitual.