

The present system of charges for the use of telephones by annual subscription is by many considered unjust, inasmuch as some subscribers speak often and much, whereas others use the telephone only occasionally. In some German telephone offices an electrically driven clock is attached to each telephone, which will work as long as the telephone is off the hook, and stops directly it is replaced. The service is charged for according to the time recorded. It is claimed for this system that unnecessary conversations are prevented, that those that take place are limited to reasonable length, and the useful efficiency of the whole installation is increased.—*Electricity*.

The hardest steel at present successfully worked by the electric welding process is that used for band saws. Besides the regular work of making the joint in continuous band saws, it has been ingeniously adopted for replacing broken teeth in finished saws. Formerly it was necessary to cut down to a smaller size any saw from which one or two teeth had been broken, thus losing not only the difference in price between the two saws, but also the entire cost of labor in cutting the original saw. Now, when a tooth is broken out, they simply fit in a new tooth, which is electrically welded in place, and a drop of oil applied as the completion effectually restores the temper of the saw to a serviceable point.

W. B. MOORE, Esq., of New Glasgow, late manager of Vale Colliery, has invented a card holder for use on railway freight cars. It is a most ingenious device, made of coiled spring wire, under which the address card is placed, where it is securely held by the pressure of the springs. We are sure station masters and railway officials generally will welcome the holder, as the old inconvenient way that hitherto prevailed of attaching the card to the car by use of tacks was a humbug. Its merits are, the rapidity with which cards can now be attached to a whole train of cars, and the firmness with which they are held there. It is especially useful on coal cars, from the fact that hundreds of them have to be ticketed daily. The holders are being manufactured by Munro Bros., wire-workers of New Glasgow, for use on the Government railways.—*Halifax Critic*.

LONDON IRON says, "the increased demand for platinum for use as poles in electro-chemical batteries, crucibles, etc., has raised the price of that metal to a point never before reached, its present value being nearly three-fourths that of gold. Three years ago platinum cost approximately £16 per pound. To-day it is worth double this price, and is eleven times dearer than silver. The metal, which is indispensable in the manufacture of numerous scientific instruments, is only found in small quantities, namely, in the form of platinum ore in Peru, Columbia and Brazil, and in small steel-gray grains in the Ural mountains, in California, the Oregon hills, and in Borneo. The principal source of production is in the Urals. The yearly output has never amounted to more than four tons, and at present it does not exceed three tons. Should not new and more fruitful deposits be discovered, and this is scarcely probable, platinum will soon be literally 'worth its weight in gold.'"

THOMAS A. EDISON has perfected and patented another wonderful electrical invention. It is one that is intended not only to fur-

ther the interests of commerce, but to protect human life at sea. It is, in substance, a system by which telegraphic communication can be carried on between ships at sea and shore and between the distant points on land. The most remarkable part of all is that this intercommunication can be maintained absolutely without the use of wires or cables. In his specifications filed at the patent office in Washington, Mr. Edison says: "I have discovered that if sufficient elevation be obtained to overcome the curvature to the earth's surface and reduce to the minimum the earth's absorption, electric telegraphing or signaling between distant points can be carried on by induction without the use of wires connecting such distant points." By this method ships can telegraph to each other at sea, one vessel being able to communicate with another far away and out of sight. If a balloon in New York should be sent up to a great height, equipped with a condenser, and held to the earth by a rope cable, in which there was a strand of wire, and another similarly equipped should be sent up from London, a circuit would be formed through earth and air without the aid of wires for transmission, through which messages could be flashed at a greater speed than has ever been attained by any other system.

It seems to be demonstrated that the new method of riveting by electricity is a remarkable success and will take its place among the most important improvements in the industrial arts. The apparatus comprises a transformer, the primary of which is formed of a heavy copper bar, laid parallel to a coil of fine wire, and over the two are clamped two angular segments of iron, forming, when united, a complete iron shell, which is claimed to increase the efficiency of conversion. The structure creates a current of great volume in the copper bar. In the end of this bar is mounted an anvil, provided with a regulating screw for moving it up or down, and a follower provided with a screw. In the circuit of a primary is placed a choke coil provided with a regulating switch for cutting in more or less of the coil by which the strength of the current induced in the secondary may be controlled. The bars or pieces of metal are placed upon the anvil and the rivet dropped in place, the

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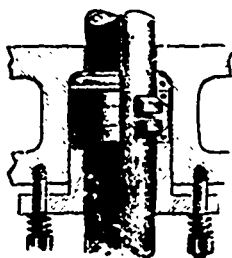
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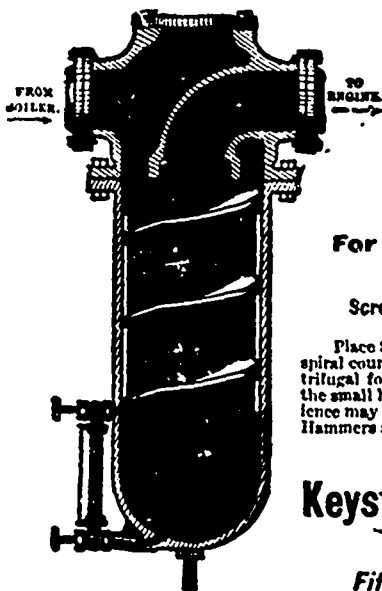
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