

ceiver breaks its circuit when not in use.

The up and down motion of the pencil sets up what mathematicians would call the "ordinate" current, the right and left motion actuates the "abscissa" current.

When the pencil is at the top of the pad the ordinate current is at its strongest, and when the pencil is on the right of the pad the abscissa current is strongest. Ordinary writing is, of course, a combination of up and down and right and left motions. When the pencil is off the paper the current is broken, as the lead slides up and down a short distance, and pressure is needed to complete the circuits.

At the receiving station a small mirror in a dark box is so mounted that it can be rocked in any direction. Two magnets are operated by the two currents, and they rock this mirror to correspond with the motion of the pencil.

A pencil with a lens throws a beam of light on the mirror, and this beam of light, as the mirror is rocked by the magnets, follows the exact motion of the point of the pencil. The light falls upon a roll of sensitized paper and prints upon it a fac-simile of the written message.

When the message is written and the pencil put upon its rest the light of the lamp goes out and a little motor starts up. This operates rollers that draw the part of the paper written upon into a developing bath and out again into a set of drying rolls, so that thirty-five seconds afterward the written message is in the hands of the receiving person.—Boston Globe.

**A Remarkable Village.**

Baron Kodama, the Japanese minister of the interior, recently made a visit of inspection to a remarkable village in the Samby district of Chiba-Ken. The minister's curiosity had been aroused by reports regarding the communal system in the village, and he went there to see for himself how the system worked.

The name of the village is Minamoto. It contains about 300 families, the total number of inhabitants being 1,600. It is to one man, the ex-headman, Namiki, that the credit of having brought the community to its present condition is almost wholly due. Namiki resigned his post last March after having directed the village affairs for nine years. In educational matters Minamoto is ahead of even the most advanced of the Japanese cities. Every one of the 125 boys who have reached school age is attending school. Of the 102 girls 88 attend school, while of the 14 others most are only residing temporarily in the community. The school has a permanent fund amounting to about 12,000 yen, (\$6,000), which yields an income more than sufficient to pay the whole school expenses, although not a cent is asked in the way of fees for the children.

This system of financing the village education is to be extended to other public affairs, and, beginning with this year, the village office has begun the work of creating another permanent fund of 10,000 yen, the interest of which is to be used to meet all the rates and taxes the villagers have to pay. When this fund is complete the villagers will be practically

**A Weak Heart**

neglected means heart disease, the most common cause of sudden death. Dr. Miles' Heart Cure will strengthen, regulate and cure weak hearts. Sold by all druggists on guarantee. Free book on heart disease for postal. DR. MILES MEDICAL CO., Elkhart, Ind.

exempt from the payment of any public taxes.

To Occidental eyes the most remarkable feature of the community is the sumptuary law, which is strictly enforced. No silk garment is tolerated, and the giving of banquets on the enrollment or disbandment of conscripts, customary throughout Japan, is discouraged. No pains are spared to inculcate habits of thrift and diligence among the villagers.

The members of the community are all zealous Buddhists.—New York Times.

**Mountains for Sale.**

The extinct volcano of Popocatepetl is on the market for sale. The price asked is \$5,000,000, and it is estimated to contain untold wealth in sulphur alone and a generous supply of other valuable material. The crater is over 1,500 feet in diameter and about 1,300 feet deep and is one solid mass of sulphur. The deposit has been estimated at over 1,000,000,000 tons. The sulphur is taken in such quantities as to be a source of considerable income to the owner, but the methods followed at present are very crude, and with modern machinery it is said that the profit would be fabulous.

The volcano is the property of General Gaspar S. Ochoa, of the engineering corps of the Mexican army. Years ago, while a student in the National Military academy, his engineering mind was directed toward that now smokeless chimney of the earth. He had read how Cortez detailed a group of his bravest soldiers to ascend the volcano and bring sulphur up out of the crater with which to manufacture gunpowder, needed for the continuation of his war of conquest against the Aztecs.

General Ochoa rendered such good service for the independence of his country during the French invasion that when he asked for a concession of the volcano the Mexican government gave it to him as a reward.

At present the sulphur is mined by men who go down into the crater and shovel it into sacks which are placed on the backs of mules and carried down the mountain-side. It has been figured that it would cost \$800,000 to erect a modern transportation plant to take the sulphur out in great quantities.—Philadelphia Record.

**Heart Wounds not Fatal.**

In wounds of the heart itself the escape of blood is never in large quantity and the lethal consequences are due to the fact that the escape of blood from within its cavity (or cavities) into the surrounding sac of the pericardium mechanically interrupts the alternate contraction and expansion by which its pumping is maintained. Accordingly, the results of wounds of the heart are usually identical with those of gradual suffocation. This fact was strikingly demonstrated in the case of the Empress of Austria. And the diabolic skill and precision with which the wound was inflicted in her case offer a diagrammatic illustration of a necessarily fatal wound of the heart.

The instrument used was too large to form a mere "needle puncture;" it was inflicted too high in the chest to be "non-penetrating;" for it was aimed with truly fiendish ingenuity at the position of one of the thin-walled of the fourth cavities of the heart, and the directness of the penetration, combined with the thinness of wall of the cavity, rendered it physically impossible that the wound could be "valvular." The Israelite warrior of old smote the enemy—when possible—"beneath the fifth rib," because the impulse of the heart is felt there. But he probably did not know that it is in that precise position that wound of the heart is least necessarily fatal. The Italian assassin of recent date

displays incomparably greater skill and knowledge. The science of the present day also proves that the historic account of the death of Admiral Villeneuve is open to skeptical doubt.

And the recent cases of suture of the heart give illustration that modern surgical skill may attempt and with success the seemingly impossible.—American Medicine.

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