mass of coral of a circular shape. The shrubs and trees which hung over the margin of the precipice presented the most extraordinary appearance. A great stalk of pure, coral-like frozen spray, as thick as a man's arm, would, if the frost-work were knocked off, disclose the most tiny branch of a shrub. The spruce trees, covered with this frozen spray, were magnificent objects—every branch being completely enveloped in the most brilliant frost-work, compared with which the best art of the worker in silver would appear tame and poor.

BANK-NOTE ENGRAVING.

I visited the establishment of the British-American Bank-Note Engraving Company, and, through the kindness of the artists employed in it, saw the various interesting processes of making bank notes, of which I will give a brief description.

Designs have first to be drawn, and in them there is room for the highest class of art. These are reduced by photography to the required size, and then engraved on steel in a manner, so far as I could judge, equal to the best engraving of American bank-notes. A note is printed from a number of different plates, and it has to be dried and damped again for each impression, so that it may require a week to put through one sheet of notes. The fine circular and curved line-work which forms part of every note, generally round the margin and denomination, is printed from plates made by a very peculiar process. There is a long machine called a geometric-lathe, with a vast variety of little wheels, any combination of which may be set in motion, and no two combinations of which will make the same figures. A number of these combinations are tried until something very beautiful is obtained, and then that design is traced on a plate by a needle, which moves in every kind of curve that the said combination of wheels will produce. When the delicately-interlaced pattern is cut by this needle—a process which requires going over it thirteen times—it is transferred to a die, which is raised where the other was sunk. Sometimes a conical section is cut out of the soft plate, and the pattern so obtained transferred to as many dies as are needed to form a circle or a semicircle, when they are put together in the required form, and used. This machine—which makes an unlimited number of patterns in the way of fine tracery-work—is enormously costly; and when a pattern has once been made, and the combination of wheels altered, it is difficult to get exactly the same thing again—nor is it necessary, for the same pattern can be multiplied at will.

A remarkably fine part of the work is the stamping of patterns or pictures on steel plates. The raised figures are formed on the circumference of a small roller of steel, which is placed over the plate to be engraved, in a machine. A powerful lever produces the necessary pressure — which should not, however, be too great—and the small roller of steel is worked gently backwards and forwards over the plate beneath, and every time it passes over this plate the lines are deepened, without any inaccuracy or blurring. This rolling is necessary, because the heavy pressure that would be necessary to stamp the impression at once would expand the steel plate on which it was being made. In transferring an impression from one steel plate to another, that which is to make the impression is always hard, and that which is to receive it soft—to be hardened afterwards by union with carbon, in a close mould very highly heated.

TELEGRAPHY BY SOUND AND LIGHT.

An ingenious printer of Montreal, Mr. Wm. Boyd, who was long in Mr. Lovell's establishment in this city, but who some years ago emigrated to Boston, communicated from thence to the Montreal *Witness*, in April, 1866, a system of telegraphing by sound or light, which was, obviously, well adapted for extensive usefulness. Some notice was taken in other countries of the article setting forth his invention, with, however, so far as we know, no practical result hitherto. Mr. Boyd now sends the