

come to settle here, whether in good circumstances or otherwise, but we most decidedly protest against any encouragement being given by our agents in Great Britain to the shipment of paupers, and that they should represent truthfully the real state of affairs here. How many have come out, led to do so by false representations or deluded by pamphlets written by unpractical people! These people have frequently sacrificed their little all and have returned broken-hearted and penniless to commence life anew. These are a class of people whom the immigrant agents should have judgment enough to know are entirely unfitted for Canadian life in its rough form. They would do well enough for the Cape, New Zealand or Australia. Canada is the country for the young, robust and hardy. We also protest against Government Agents encouraging mechanics to cross the Atlantic when we have no employment for them. Any time when we require skilled mechanics for any particular industry or manufacture, in which our own mechanics have had no experience, we can in a short time obtain them; but for the ordinary class of trades workmen, for some years to come, we have an ample supply, and when, as we expect in time it will be so, the Government establish schools of technical education, we hope to send forth from them mechanics so well trained in applied mechanics and chemistry in those particular branches of manufacture which they intend to follow, that, in consideration of the benefits they have received, they will endeavour, in whatever place they may be acting as foremen, or in a higher position, to impart their information to those under them.

In closing these remarks on the benefits of agriculture to every country, we hope that those who read them will place the *MAGAZINE* in the hands of mechanics who are suffering from the want of employment; we desire most strongly to impress upon this class, and particularly upon the young, that the day is still far distant when the wheels of the manufactories will all again be moving, and they should make up their minds, as Spring approaches, to become, if possible, agriculturists; by so doing, their trades will often serve them in good stead, and be turned to great advantage. Every mechanic in this country knows something of agricultural pursuits, and the change from one business to the other would be easily effected. A diminution among the trades would, to a certain extent, relieve the incubus that oppresses them, and the others could then obtain more regular work. Let those to whom we offer this advice bear this in mind, that want seldom comes to the farmer's door, for, provided he is industrious and steady, he will always see before him a provision in his old age, and a comfortable home to pass it in, besides having this consoling reflection that, when he dies, his family will be provided for. How few mechanics can, with any degree of certainty, see such a pleasant future in the distance!

URANINE,

A NEW DOUBLE COLORING SUBSTANCE.

We have received, through the courtesy of the publishers of the *Scientific American*, a most remarkable fluorescent substance called Uranine, which is a new product of the coal tar series. So great is the coloring power of this substance, that a single grain is sufficient to give a distinct tint to eleven barrels of water, or almost three hundred and fifty gallons. When a minute portion of the substance is placed in a glass of water, it will send down most beautiful green filaments, resembling the root

of a plant. These filaments will assume spiral and tangled forms, gradually enlarging, until at last the color is completely disseminated through the water.

Examined by reflected light the water will present a magnificent fluorescent green color; examined by transmitted light the general color will be amber or golden; placed in sunlight the water will glow with hues of variable color; the goblet of colored water will retain its brilliancy for many days.

DANGERS FROM THIN ICE.

[For the SCIENTIFIC CANADIAN.]

It might seem strange that in Canada we make so little provision against the dangers arising from breaking through the ice, but that we recollect how little we are troubled with thin ice. It takes so few hours to give a hard setting to the lakes and streams that the trouble arises generally only a few times in each winter, and mainly at the beginning and close of the season. Rapid streams will, however, also render the ice dangerous in places, and scarcely a winter passes but we have some sad record of loss and death from this cause, to remember it by. The latest we call to mind was a lamentable accident on the St. Francis, between Melbourne and Richmond, by the immersion of a sleigh and its passengers. In England, especially in the great cities, the danger is steadily and thoughtfully regarded, and excellent remedies have there been carried out. By the Royal Humane Society the chief expedients in use are poles and ladders, and a light sled for pushing them forward over the ice to the assistance of the immersed skater or pedestrian. There, they have trained men to use them, while in Canada we must train ourselves. Taking a pole, say of birch or tamarac, as the simplest means to adopt, we ought to give a little attention to its proper use. Once get such a pole within the reach of the person who is struggling in the water with head and shoulders emerging through the thin crust of ice, and it will sustain him effectually. It does this by distributing the weight over a larger surface. To this end it should be pushed forward, the person having it in charge approaching no nearer to the broken place, in which his fellow-creature is struggling with the forces of destruction, than he can avoid, so as not to increase the weight by concentration. He may creep on all-fours, pushing forward the pole as he advances. When the body is flatly extended on the ice, the strain is lightest of all; and this might be remembered to advantage when the foot first breaks through.

Then, as to sleighs crossing at certain points of a river, there ought to be separate roads for going and returning, sufficiently wide apart to admit the full length of a pole, and on the shore, in a shanty, should be some one in charge of long and rather stout ice-poles. Two of these to an ordinary sleigh would generally serve for the occupants, and they should hold them across their knees, and, on arrival on the opposite bank, leave the poles with another shantyman, paying a small fee for their use, which use should be made compulsory.

This simple plan would save many a life—even when horse and sleigh might be hopelessly immersed—and such matters are worth the consideration of our municipal bodies, who should also take power to close all river crossings when considered to involve too great risk. The life is more than meat, and the body than raiment—and we do not always remember this. Homo.