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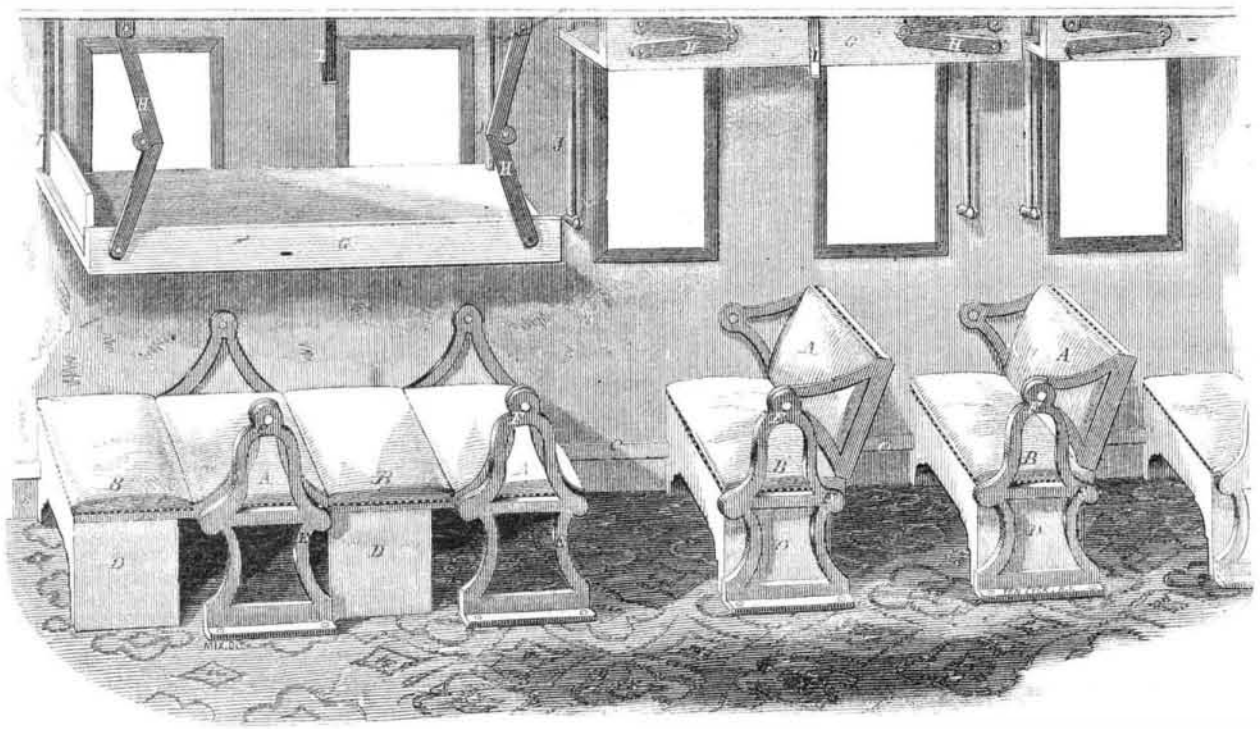
Transmundane Telegraph.

A bill has passed the Canadian Parliament for the establishment of a company to connect Europe with America by telegraph lines running to the North-west of our continent, thence through Behring's straits by a short submarine cable, and then through the Russian territories down to Northern Europe. While the bill was under discussion Mr. McMicken, one of the members, who is a practical electrician, asserted that a long submarine cable through the Atlantic never could be made to operate, and the reason which he advanced in support of this assertion is certainly novel. He said "he was perfectly satisfied that the Atlantic Telegraph could never work with a single wire. He was fully convinced that there was not a breech in that cable. The difficulty in the matter was this, that the magnetic pole which was the natural battery of the earth was nearer to one end of the cable than the other, and a cable of the length of the Atlantic Cable could not be made to work without a return line of wire. This might be a new idea, but he was satisfied it was a correct one. The way in which to make the Atlantic Telegraph work was to lay another cable alongside the one already laid down."

Our opinion differs entirely from that of the Hon. member. We are confident that the whole difficulty in telegraphing through a long submarine cable is that it becomes charged with *inductive* electricity which resists the passage of the main current. As "facts are sturdy things which cannot be refuted," it is only necessary to state in proof of our assertion that the same obstruction in degree, though not in quantity, has been experienced on all submarine cables, as in the case of the Atlantic. The cable of 300 miles long in the Mediterranean has often ceased to operate owing to inductive electricity, while no such obstruction has been found in land-lines of the same length.

A LARGE ORGAN.—The great organ in St. George's Hall, Liverpool, is one of the marvels of musical mechanism. It has four rows of keys comprising sixty-three notes; and two octaves and a half of pedals, comprising thirty notes. There are one hundred and eight stops, and eight thousand pipes varying in length from thirty-two feet to three-eighths of an inch. The grand source of wind is two immense bellows, each having three feeders placed in a vault below the floor of the hall. These are blown by two cylinder-oscillating steam-engines. There are, besides, twelve other bellows or reservoirs, each giving its own appropriate pressure of air to those stops or pipes which it supplies.

JACKSON'S SLEEPING CAR.



Do any of our readers recollect the vexation and ill nature which had possession of them when prevented by time, circumstances, or individuals, from taking a nap at the very moment when Morpheus, in a gentle and insinuating manner is trying his best to "steep your senses in forgetfulness." If they do, that vexation and expression of disgust should, slightly intensified, be poured forth on those railroad companies who do not provide their passengers with sleeping cars, for they have no excuse, as there are plenty to choose from to suit every taste and all emergencies, and should any company say they have not seen the one they should like to adopt, we take great pleasure in introducing them and the public to the arrangement invented by W. R. Jackson, of Baltimore, Md.

Our illustration shows the inside of a car arranged for day and night, the backs, A, which are reversible, swinging on pivots, one in the side of the car and the other in the rail, F. The seat, B, is mounted in a frame, D, which can slide on the way, C, on the side of the car, and they can be secured as seats by small bolts and catches. Two seats accommodate two persons sleeping, and a bed, G, is suspended from the roof by hinged rods, H, so that it can be placed out of the way, and this holds two other persons lying down.

The change from seats to sleeping berths is quickly effected, the bottoms, B, and frames, D, being drawn out, the backs, A, are allowed to swing down between them, and the spring catch, I, being released, the berth, G, descends, being guided at the back and supported by rods, J, passing through it. By placing this seat in a line parallel to the side of the cabin, or saloon, it will answer remarkably well for a vessel, obviating the necessity of building berths and giving much more room in the day-time, a great desideratum on board ship.

The inventor of this simple and ingenious method of changing day-seats into sleeping-couches and berths will give any further information upon being addressed as above. The patent is dated April 12, 1859.

Remedies Against the Curculio.

There is no more destructive pest to our fruit than the insect known as the curculio. To the delicious plum, nectarine and apricot, they are deadly enemies, and destroy these fruits before they are half grown. Its ravages on the peach are almost as great, though not as entire, from the fact that it ripens with the worm in it, which eats away the inside, leaving the outside looking perfectly sound, and thus deceiving the purchaser. The *Cincinnatus* gives the following as the best remedies for it, and which our agricultural readers may like to try:—

To one pound of whale oil soap, add four ounces of flour of sulphur. Mix thoroughly and dissolve in twelve gallons of water. To one half-peck of quick lime add four gallons of water, and stir well together. When fully settled pour off the transparent lime water, and add the soap and sulphur mixture. Add to the same, also, say four gallons of tolerably strong tobacco water. Apply this mixture, when thus incorporated, with a garden syringe, to your plum or other fruit trees, so that the foliage shall be well drenched. If no rains succeed for three weeks, one application will be sufficient. Should frequent rains occur, the mixture should be again applied till the stone of the fruit becomes hardened, when the season of the curculio's ravages is past.

Another: To six pounds of the flour of sulphur take a peck of unslaked lime, slake together in a barrel, pouring upon these ingredients enough hot water to cover them. Then fill the barrel, stirring the mixture. This solution apply to the tree with a syringe. When washed off by heavy rains, renew while the curculio continues its ravages.

Another method has been adopted with success, which is to make your plum-orchard your poultry yard or piggery. Shaking the trees daily upon a canvas thrown on the ground, and destroying what you can, has proved successful; but this is too tedious and expensive to be practicable.

Sulphur in Coal.

The presence of sulphur in fuel is not only deleterious in a mechanical, but in a chemical point of view, for while the unequal expansion of the pyrites (in which form sulphur usually appears in coal) and carbon causes the latter to split and crack and fly into small pieces, the combinations which sulphur makes with oxygen are very destructive to boilers or any metal that may be in contact with them. It is therefore of the utmost importance to manufacturers who use large quantities of coal, to have a quick and easy method of discovering the presence of this destructive agent. To enable them to perform this analysis for themselves we give the following directions:—The coal must be finely powdered and fused in a crucible, with three times its weight of nitre and four times its weight of carbonate of soda. The fused mass must then be dissolved in water and a few drops of a solution of chloride of barium added, when, if there is a little sulphur, the whole will appear milky; but if there is a great quantity—too much, in fact, to use—a heavy white precipitate will fall down and show that the coals are not fit for use.

INSECT MACHINERY.—A correspondent suggests that inventors might learn much and get many ideas by studying the mechanism with which insects perform their work, for example the spinning of a thread by the caterpillar and the boring-fly, which by means of two slender looking hair-like projections bores into wood to deposit its eggs. There is much to be done in the imitation of animal machinery which is the most economically constructed of any, there never being a muscle or bone or tendon too much, or out of place, but the whole always works perfectly and with ease.

IRON POWDER.—In Austria, iron is reduced by grinding to a very fine powder and used as a medicine, it being found superior to the carbonates or oxyds of iron, which are much used by our physicians.