

Improved Lightning-Rod.

This form of lightning-rod is of the non-insulated class, and is constructed of pure cold-rolled Lake Superior copper. The conductor itself is of a flat form as shown in the engraving, and is fastened in close contact with the building it is intended to protect. It is continuous in length, and is supported at various intervals by straps of the same material nailed to the house, the ends of the straps being turned over as in Fig. 3, to make a neat appearance. The upper portion of the rod may be coiled up in a tubular form, as shown in Fig. 2, to compose the tip and

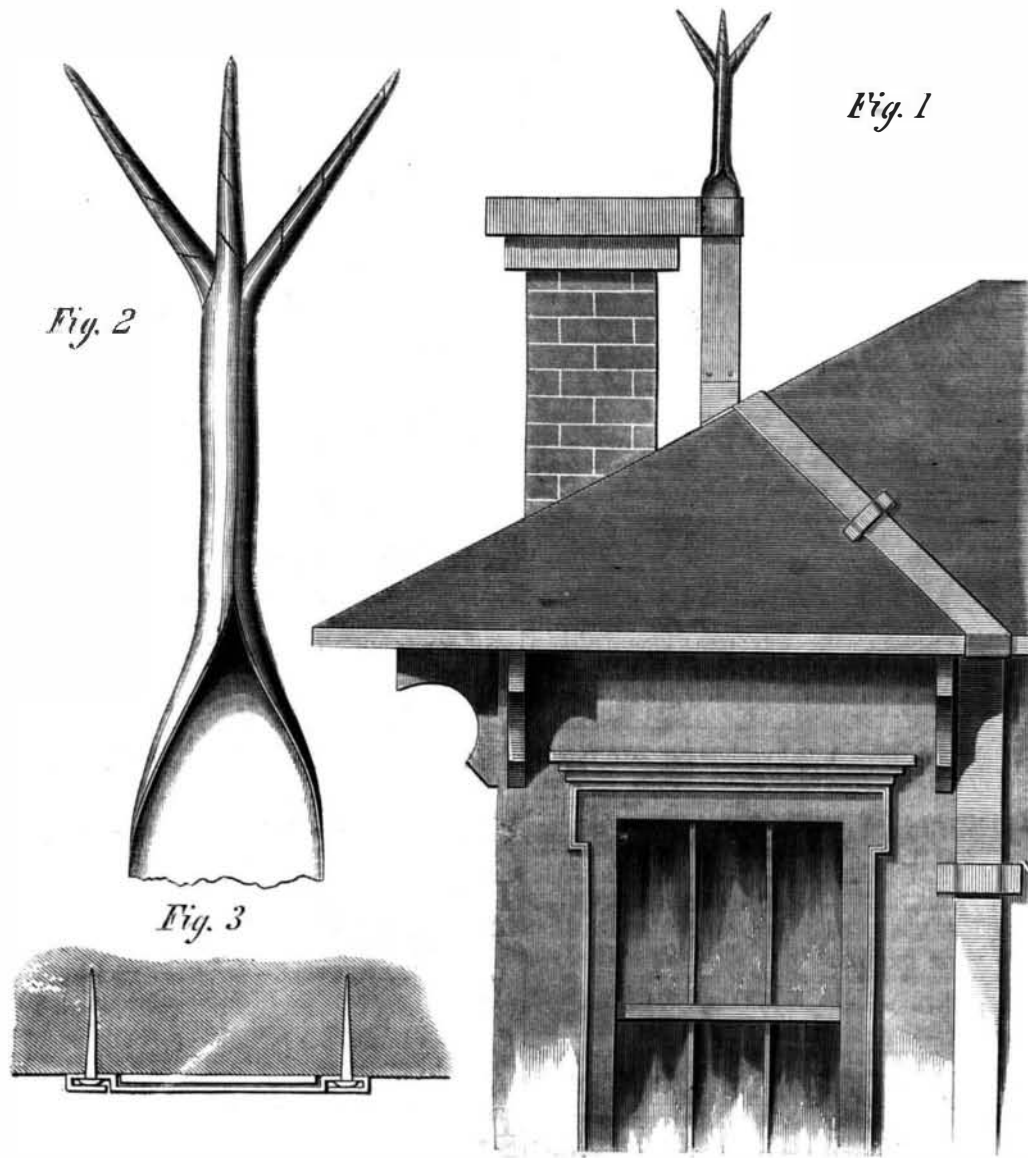
diseases the most prolonged, the most fatal. The suns of our best men go down at noon, and so accustomed are we to the phenomenon that we cease to regard it as either strange or out of place. It is through the mind now that the body is destroyed by overwork; at all events, it is so mainly. The men of intense thought—men of letters, men of business who think and speculate, men of the state who are ambitious to rule, these men are sacrifices. With them the brain has not merely to act on its own muscles, bidding them perform their necessary duties, but the one brain must needs guide a hundred other

disliked, and if they attempt to be joyous, they lapse into shame at having dissembled, and fall again into gloom.—*Social Science Review.*

The Ailanthus Silk-worm in France.

The *Moniteur des Brevets d'Invention*, of Paris, says, that the cultivation of the ailanthus, and of the silk-worm that feeds upon it, is yearly extending in France. Several proprietors in the Department of Vaucluse are making preparations to plant, in the coming spring, some thousands of ailanthus trees, destined to nourish, the following year, their hosts of the new bombyx. It is found that the ailanthus flourishes very well in sandy lands which are worthless for other purposes. Having noticed the success of the ailanthus silk-worm in France some time ago, we wrote to our agent in Paris to forward us some of the cocoons. They recently arrived; and, if we find the subject a hopeful one, the readers of the SCIENTIFIC AMERICAN will be fully advised.

A TRAVELING office-wagon, for the Adjutant General's department of the Department of the Cumberland, has just been completed at the Government shops. It is a new invention, and accommodates seven clerks and a driver, is drawn by four horses, and can be taken apart and put together in a short time.



BRITTAN'S IMPROVED LIGHTNING-ROD.

point; the flat shape also permits the conductor to be easily rolled up for transportation. The fact of this conductor being continuous throughout its entire length, without a joint, is a valuable feature, as electricity passes over a smooth surface much more readily than where joints or breaks occur. The close connection between the conductor and the building, the inventor states, is a safeguard against ascending as well as descending currents, and it is claimed that the general arrangement of this continuous non-insulated conductor is safer, much more convenient for adjustment and transportation, than those ordinarily in use. A patent is now pending on this invention through the Scientific American Patent Agency. For further information address the inventor, N. Brittan, Chicago, Ill.

Diseases of Over-worked Men.

Time was when the very phrase, diseases of over-worked men, would have been considered foolish, and out of the question; now, it conveys a truth of national importance, which the nation must consider. From being a comparatively idle word, we have of late become an insane world on the subject of labor. So long as the muscles merely were employed, so long little harm was done; we remained men; now we aspire to be gods, and we pay the forfeit of our ambition. From overwork we now get a class of

brains, and all the muscles thereto appended. An electric battery works a single wire from the City to Brighton, and does its work well, and goes on for some months before it is dead or worn out. Can it do the work of a hundred wires? Oh yes, it can, but it must have more acid, must wear faster, and will ultimately die sooner. We may protect the plates, make the battery to an extent self-regenerative as the body is; but, in the main, the waste is in excess of the supply, and the wear is as certain as the day. Men of letters, men of business who do their business through other hands and do great business, and men immersed in politics, suffer much the same kind of effects from overwork. They induce in themselves, usually, when they suffer from this cause, one or other of the following maladies:—Cardiac melancholy, or broken heart; dyspepsia, accompanied with great loss of phosphorus from the body; diabetes, consumption, paralysis, local and general; apoplexy, insanity, premature old age. They also suffer more than other men from the effects of ordinary disorders. They bear pain indifferently, can tolerate no lowering measures, are left long prostrated by simple depressing maladies, and acquire in some instances a morbid sensibility which is reflected in every direction; so that briskness of action becomes irritability; and quiet, seclusion and moroseness. They dislike themselves, and feel that they must be

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