nia poisoning, the spasms will be at once arrested on breaking up the spinal cord by a wire thrust into the spinal canal. If instead of destroying the spinal cord in this manner, it be subjected to electrization, the spasms will be averted, or arrested if already present. The rabbit dies, but without the characteristic spasms (a). Is a powerful electric current needed here? Not at all. Quite a moderate current will suffice ; because the strychnia poison is causing general contraction of the arterioles (b), filling the veins and deoxygenizing the blood. Asphyxia is also setting in from the same cause, joined with fixation of the chest by spasm of its muscles, whose motor nerves are being paralyzed (c). Electrization produces parallel effects and intensifies the fatal processes already in operation. A weak current suffices to complete the arterial emptiness, the venous engorgement and the non-oxydization of the blood. The spasms cease probably because such blood as is now present is inimical to the life of the muscle, and destroys its contractile energy more rapidly than no blood at all (d).

If the theory of the day were true, the rabbit ought not to have died! With the stimulating and vitalizing action of an electric current, added to the previous exhilaration of strychnia stimulation, the rabbit should have lived and flourished, in the interests of the theory, which alas ! as usual, is found to be out of harmony with the facts. Why does Dr. J. Russell Reynolds say that "it would be very unwise to use any form of electricity during the period of shock "? (e) Why do eminent authorities discourage its employment in cases of suspended animation, as in apparent death from drowning !(f) Why does Dr. B. W. Richardson, F.R.S., of London, write : "I feel it too unreasonable to recommend galvanic action as a means of resuscitation in threatened death from chloroform." fearing least under the semblance of restoring life he should clench death !(q). These are precisely the conditions under which a "stimulant, tonic and vitalizer" should be eagerly sought

for and diligently employed ! It is evident that

electrization is none of these, and therefore it is forbidden "in any form."

I think I am justified in claiming for the foregoing facts that they prove, as fully as any doctrine in physiology can be proved, that electrization as ordinarily employed is a paralyzing process.

BENEFICIAL EFFECTS OF ELECTRICITY.

Electricity is no doubt a valuable therapeutic agent, and like other paralyzing agents, does good in appropriate cases. But its beneficial effects may all be accounted for in strict accordance with its role as a paralyzer of nerve activity. Thus, it eases pain in a perturbed nerve by temporarily paralyzing it. It lowers the activity of the vaso motor nerves, and by thus setting free the contractile energy of the muscle it reduces the calibre of the arterioles, lessening or curing congestion, and consequently starving the hypertrophic growths. In other cases, by a momentary arrest of nerve action in the motor trunks, it induces prompt spasmodic contractions in the muscles, thus exercising them, and by attracting blood and pabulum to wasted muscles or tissues in the same way, it improves their nutrition. In chronic indurations and hyperplastic growths the purely chemical effects of the opposite poles, or electrodes, so modifies the nutritive activities of the tissues as to prove beneficial in restoring a more normal condition. Thus the curative effects of electrical treatment are all accounted for in strict accordance with its role as a paralyzing agent. To proclaim it, therefore, as "nature's own tonic," or to laud it as a "vitalizer," or extol it as the ally of nerve force, may be pardonable in the instrument makers, but is to be condemned on the part of scientific medicine.

HOW THERAPEUTICS HAS SUFFERED.

It has sometimes been remarked that the department of therapeutics lags behind other branches of the medical art. Perhaps it will be pardoned if I venture to suggest that therapeutics has suffered greatly from the adoption of the dictum that electricity is a stimulus to nerve function. How much of a huge and hypothetical inhibitory system has found, perhaps, its chief support in this very error. When electricity stopped the heart, some mechanism had to be found for the arrest of its action by a stimulus. On what must the excitation expend itself? Not on the proper motor ganglia of the heart, which a stimulus would drive faster. То

⁽a) Matteucci, Periera, Radcliffe. (b) Fothergill.
(c) Ringer. (d) Foster, Phys., pp. 126, \$33.
(e) Lect. on Clin. Uses, p. 84.
(f) Dr. Ringer, Ther., p. 792.
(g) Med. Times and Gazette, 1861; Braithwaite, Jan., \$256 1873, p. 256.