Transmitting Power Long Distances.—Prof. Osborne Reynolds, delivered a long and valuable address before the Manchester Scientific and Mechanical Society, on the transmission of power long distances. He analyzed all the means proposed, carefully, and arrived at the following conclusions. Twenty miles appears to be the outside limit to which power may be economically transmitted, even when the power can be had for nothing, and the most enonomical means of doing this, is probably the wire rope. This review, therefore, shows the hopelessness of our ever utilizing the natural sources of power, such as tidal rivers for mechanical purposes, unless we conduct them on the banks of those rivers. But as regards the substitution of a general source of power for the small steam engines now in use in our towns, the case appears more hopeful; and, what is more, this has already been done in some instances. In the most notable instance, that of Schaffhausen, the power is obtained from the Rhine, at a point close to the town, and is conveyed along the banks of the river, which crosses the ends of the streets of the town, by a wire rope, which, as it passes the ends of the streets, gives motion to shafts which are laid in a channel under the pavement, and from which the power can at once be introduced into the various manufactories. In our own country, also, in the town of Hull, I believe that pipes have been laid down to convey the power derived from steam in the form of water, under a pressure of 600 pounds, over some part of the town. It does not appear unreasonable, therefore, to suppose that something of the same sort might be done in our own city. Considering that a very large proportion of the power required in our warehouses is for hydraulic presses, it would appear desirable that, in part at least, the power should be communicated to water pressure. Where rotatory motion is required, the machinery might be driven by pressure engines, but as this would entail considerable waste, and as power may be more cheaply conveyed by compressed air, it might be better to supply both water and air; as regards the mechanical means, ropes and shafts. Although the former appears on the whole to be the most economical means of communicating work, and to a certain extent, their superiority is supported by the instance of Schaffhausen, considering their inconvenience in a town, I think that the pipes would be preferable. With the ability to have either water or air at the most convenient pressure, and at a reasonable cost, I think that but few users of power on any but the largest scale, would care for the trouble, danger, dirt and expense of having steam engines of their own; and if this be so, there would then be a chance of reducing the impurities in the air. Looking at these facts, I cannot help thinking that there is open to the engineer a field of enterprise, in which he may not only find remunerative employment for his talents, but in so doing confer a great benefit on his fellow creatures. This may not be so. The scheme, when closely considered, may be found wanting, but it will have served my principal purpose if it has helped to illustrate and render interesting what would have been otherwise desultory remarks about the transmission of work.—*M. & S. Press*, xxxv.

Imitation Leather.—The latest thing in the shoe and leather trade is "imitation leather," to take the place of skivers, sheepskins, roans, etc., as lining for shoes, carpet-bags and lambrequins. The article is composed of heavy cotton cloth, made especially for the purpose, and covered with a series of coats of chemical substances which give it the appearance of leather; and so much does it resemble the ordinary leather lining used for the same purpose that very few, even old shoe manufacturers, have been able to detect the difference between the real article and the imitation, while it is asserted that the latter possesses several points of superiority over the former from the fact that it is much more durable, can be worked up in an easier and more economical manner, is considerably cheaper, and can be used for all purposes of lining, except in shoes made from leather containing large quantities of oil. Its color, also, (the article is manufactured in every imaginable color that can be desired) is said to be firmer and more uniform than that of kid or sheep linings, and is never affected by heat, cold or moisture.

"Imitation leather" was only introduced three or four months ago, and until the present time the manufacturers have made no especial attempts to advertise it or push it into notoriety, but it is reported to have given great satisfaction wherever it has been used, and attained considerable celebrity upon its own merits in different parts of the country, and the demand for it has now become so large that the manufacturers have been obliged to establish a special factory for its production, with facilities for manufacturing upon a very extensive scale.—*The Manufacturer & Builder*, ix, 263.

In Treating of General Principles of House Draining, Mr. T. M. Reade, C. E., remarks that in the selection of materials for drain there is a choice. The use of glazed fireclay or earthenware pipes is almost universal. The architect should insist upon a strong, well-turned material, accuracy in form, true sockets and a good smooth glaze. Pipes having a rough interior should not be used. The true laying of a pipe is of more importance than its quality. Levels must be accurately taken and sections made cannot be too strongly insisted upon; this trouble will be amply repaid in the quality of the work. A fall of 1 inch in 48, or ½ inch to a piece, is a very good one for a main drain.

Pressed Bricks are made from blast furnace slag and the following materials in Germany. To the powdered slag 42 per cent. silicic acid, 37 per cent. gypsum, 10 per cent. clay, 5 per cent. oxide of iron, 3 per cent. magnesium, 1½ per cent. sulphur, and various other materials mixed with lime are added. The mixture is given the common brick form in a steam press, and after drying in the air for three months are ready for use. The daily production of the presses are about 8000 bricks.—*Engineer*, xliv, 151.

New Use of Sour Milk.—A new industry has been started in Mansfield, Mass. It is no less than the manufacture of jewelry out of sour milk. This seems a strange anomaly, but it is a fact. The milk comes in the shape of curd from butter and cheese-making counties in New York, and looks, upon its arrival a good deal like popped corn; but before it leaves the shop it undergoes a wonderful change, and receives the name of African coral. The secret in making it up is carefully guarded, but it is certain that it has to be heated very hot, during which coloring matter is introduced, followed by a very heavy pressure. Some of it is colored black and called jet, while some appears as celluloid. It makes very handsome jewelry, and is made into all kinds and styles known in the trade.—*Scientific News*

New Tanning Process.—Charles Paesi, an Italian chemist, recently discovered a new mode of tanning, which is stated by the *Journal d'Hygiene* to be much superior in its results, as well as more expeditious, than any mode in which tan bark is used. It consists in macerating the skins in a bath of perchloride of iron and sea salt dissolved in water. The operation lasts for from four to six months. The perchloride is a powerful disiufectant, and is said to render the industry much more healthy than it now is—*Eng.*, lxv, 21.