

at the Londonderry Mines, but soon after work had commenced the Acadia Iron Mines to a great extent stopped smelting and there was a cessation of operations all along the line. Now blood and new strength seem of late to have been diffused throughout this Company and in different directions all the available iron areas are being taken up. Last week leases of certain portions of the property of Isaac and John Yuill and Robert Forbes were signed in favor of the Steel Company, and it is the intention of the latter to commence very shortly the development of the extensive and quite valuable iron deposits of this locality. We will be rejoiced to learn that in addition to their fine arable lands our Clifton friends have added thereto the prosperity that must follow the successful development of valuable iron deposits. —*Truro Guardian*.

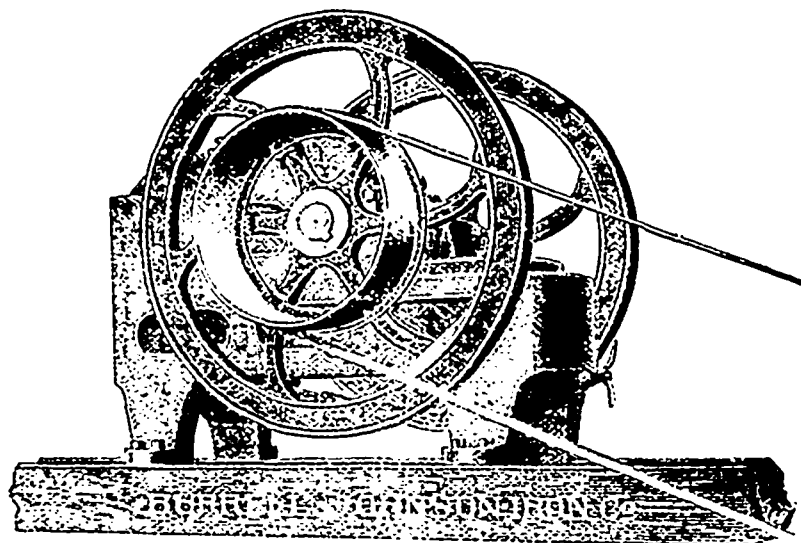
**THE UNIVERSAL FURNACE.**—Dr. J. Bixeres, a well-known metallurgist of Oporto, has recently brought out a remarkable invention, to which he has given the name of the "Universal Furnace." The theory involved in the perfection of this valuable invention has long been familiar to metallurgists, but it has been reserved to Dr. Bixeres to solve a problem which has hitherto baffled the skill even of the most ingenious. This furnace will smelt and refine in a single operation, and by what is known to chemists as the dry process, every description of mineral, no matter what its composition might be—whether complex, silicious or pyritous, and even sulphoarsenurettes, are as effectually reduced by its operation as any other metallic compound. Thus ores of iron, lead, zinc, copper, antimony, nickel, tin, silver, gold, etc., can all be readily fused by this method, which is based upon the chemical affinity of the alkalis and salts of alkaline-earthly metals with the volatile elements and with the metalloids mineralizing the metals, thereby forming definite salts, including oxides, hydroxides, sulphurets, arsenates, antimonates, etc., from which the metal is obtained in a free state, with or without the addition of carbon, or, in other words, completely demineralized. This result is obtained by melting the minerals, after trituration and mixing in different proportions with oxide of salts of potassium, calcium, magnesium or barium, or with their carbonates, nitrates, sulphates, fluorates, borates, chlorides, etc., any one of these substances, alone, or in combination, and with the addition, if necessary, of suitable flux; appropriate to the substance to be treated. The reduction is affected by means of closed crucibles of iron or other refractory material capable of resisting the highest temperatures, and these crucibles, subjected to the action of circular revolving flumes, kept in continuous action, form the chief features of the furnace. \* \* \* We need hardly point out that, as a general rule, a modern blast furnace, with all its gear and necessary machinery, ventilators, motors, generators, etc., will require an outlay of from £15,000 to £25,000, while a Bixeres furnace of the maximum model, including furnace, installation of feeders, mixers, crusher, etc., would not represent an outlay of over £5,000. In a modern blast furnace, on account of the expense of fuel, melting materials, labor, etc., every ton of ingots produced costs on an average 25s; but in a Bixeres furnace the cost, as a rule, rarely exceeds 10s. per ton. A modern blast furnace is bound to be kept continuously at work, through the risk of otherwise imperiling its structure by cooling, contraction, expansion, etc., while the Bixeres furnace can be lighted, worked and extinguished at any time, and without risk of any kind. Moreover, a modern blast furnace can effect at the utmost, three discharges during the 24 hours, which, calculated at a high average of 75 tons at a time, makes a daily total of 200 to 250 tons; while the Bixeres furnace is able to complete fifty discharges in the twenty-four hours, or a round output of 500 tons daily. The quality of the ingot produced by the "Universal furnace" is claimed to be very much superior to that obtained by the modern blast furnace, the former being a chemically pure product, although it may have been effected without the ores being brought in contact with the combustible matter, as happens in the ordinary blast furnace. In the metallurgy of the simple and complex species of silver minerals, the advantages of the "Universal furnace" are of the greatest importance. No preparatory mechanical concentrations, for example, are necessary, the silver standard being sufficiently remunerative. Calcinations for the purpose of volatilizing the mineralizing elements, such as sulphur, arsenic, antimony, etc., are of course obviated also. Amalgamation is, moreover, dispensed with, so that the absolute elimination of quicksilver, which is replaced more rapidly and economically by the lead minerals, impregnated by silver or gold, up to 75 or 80 per cent, is likewise secured. On these grounds, therefore, it is contended that the adaption of the Bixeres furnace to all the mineral products enumerated, and more especially to gold and silver, cannot fail to bring about one of the most important industrial revolutions of the present generation.—*Iron and Coal Trade Review*.

#### "MAKE HENS LAY."

Such is the caption of an advertisement that appears not only in the local, but many leading agricultural papers and which suggests the propriety of a few thoughts upon the subject. It may be laid down as a rule that most farmers indulge in raising poultry not for the pleasure it gives, but for the profit that is realized from the same which must come from young chicks or eggs, the real profit may be traced to egg production, so the advice given in these words is of vital consequence to the ambitious farmer. "The advertisement referred to recommends Sheridan's Condition Powder to make hens lay and so do we," says Mr. Hunter, poultry editor of the N. E. Farmer. "A hen to lay prolifically must be in perfect health, must be in condition, and here is based the true theory of the value of Sheridan's Condition Powder—it promotes the general good health of the fowl, gently quickening digestion, and stimulating all the various organs of the body as well as the ovaries, to perform their functions." At this season of the year the use of Sheridan's Condition Powder is very valuable for incubating hens and young pullets. By its use now they will get into laying earlier when the price for eggs is very high. Any person buying and using Sheridan's Condition Powder now, will get their hens in good laying condition before cold weather, and stand a good chance to win one of the large gold premiums to be offered later by I. S. Johnson & Co., 22 Custom House Street, Boston, Mass. (the only makers of Sheridan's Condition Powder), who will send for 50 cts. two packs of Powder: for \$1.00 five packs; for \$1.20 a large 24 lb. can, postpaid; six cans for \$5, express prepaid. Six cans will pay a good dividend. I. S. Johnson & Co., will also send to any one asking for it, a copy of the best poultry magazine published free. The paper one year and a large can of Powder for \$1.50.

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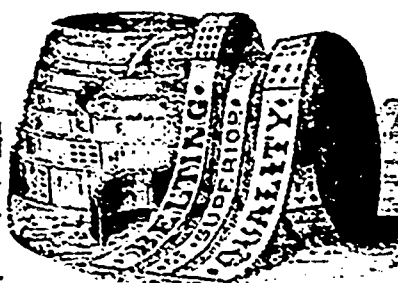
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