

AUSTRIAN INDUSTRIAL EXHIBITION.

The Austrian Imperial Agricultural Society, under the patronage of the Archduke Charles Ludwig, proposes opening, at Vienna, in the month of May, of this year, an exhibition of agricultural products of the empire; also, of machinery and implements for agricultural purposes from all parts of the world. We call the attention of American manufacturers to this exhibition, as the great and daily-increasing demand for agricultural machines in Austria would, doubtless, open to them a valuable market for their products. In 1857, a similar exhibition took place in Vienna, in which English machines were largely represented. The consequence was, that England has, since then, enjoyed almost a monopoly of the Austrian market for such machines.

Considering the superiority of construction, as regards solidity and simplicity, of the American agricultural machines, we do not doubt that the manufacturers of this country would derive great benefit by sending samples to the exhibition at Vienna.

The Austrian Committee is in correspondence with Messrs. Austin, Baldwin & Co., who will, therefore, be able to furnish all information that may be desired. The Austrian Legation, in Washington, and the Consul-General, in New York, are also in possession of all the particulars of the programme. It is, therefore, very desirable that immediate application should be made to Messrs. Austin, Baldwin & Co., 72 Broadway, New York, by those who anticipate availing themselves of the inducements offered by this exhibition, that the committee at Vienna who will take charge of American contributions may have time to make their arrangements accordingly.

COMFORTABLE SKATING.

A great drawback to the pleasure of skating are the cold noses and toes, which must be endured in participating in this sport upon ice. Mr. J. L. Plympton has, after devoting years and a vast expenditure of money, overcome all the discomfort usually attending skating, by inventing a roller skate so constructed that all the intricate movements made by an expert skater upon ice may be accomplished upon a smooth floor, and, to a considerable extent, upon a carpeted parlor. At Mr. Plympton's rooms No. 145 Tenth street, near Fourth avenue, we have seen some of the most dexterous movements we have ever witnessed upon ice, performed on his flexible roller skates, by himself and others, in a warm, well-lighted hall, which he has fitted up very neatly for the amusement and exercise of his own family and friends.

Skating, in a well-lighted, comfortable room, with one's friends sitting around admiring the grace and skill exhibited by the skater, is quite another thing from going miles on a cold night to reach a pond of ice, and then almost freeze while engaged in the sport, if lucky enough to find the ice in a condition for use. In using Mr. Plympton's patent skate, one season is the same as another, and they never require resharpening.

Mr. Plympton is very modest about bringing his invention before the public, but we have been acquainted with its merits for some time, and we know whereof we speak when we say it is the *ne plus ultra* among parlor skates.

Mrs. Z. R. PLUMB gave an exhibition of her youngest class in physical exercise, at her Academy, No. 59 West Fourteenth street, last Monday afternoon, Jan. 15th. The little ones went through their various drills to the evident admiration of their parents.

Mrs. Plumb's system of drilling and exercise is not only exceedingly beneficial in imparting healthful vigor and strength to the muscles, but her pupils seem to attain a grace of motion not unlike that acquired of the dancing master. Her exercises are all timed by music, and are quite fascinating and beneficial to both adults and children.

ATMOSPHERIC air, on being condensed thirty times, has its capacity for heat reduced to one-half, and if suddenly compressed to twenty times its ordinary density, will disengage heat enough to show an elevation of temperature equal to 900 degrees Fal.

PROF. BLOT'S COOKING ACADEMY.

Among the great variety of business carried on in New York City one of the last established is an institution for teaching the art of cooking.

Prof. Blot, author of "What to Eat and How to Cook It," has established an Academy for teaching the art of cooking at No. 896 Broadway, near 20th street. He has daily classes for cooks, and others for ladies who wish to acquire a knowledge of the art of cooking. He introduces a new bill of fare, complete, from soup to dessert, which he not only explains the mode of making, but produces before his learners—having all the facilities at hand for boiling, roasting, baking, stewing, broiling, etc. His institution is becoming very popular among the ladies of this metropolis, and it promises to be a successful enterprise in every sense.

SPECIAL NOTICES.

Samuel T. Thomas, of Laconia, N. H., and Eliza A. Adams, administratrix of the estate of Edward Everett, of Townsend, Mass., have petitioned for the extension of a patent granted to the said Edward Everett on the 16th day of March, 1852, for an improvement in pattern cards for Jacquard looms.

Parties wishing to oppose the above extension must appear and show cause on the 26th day of February next, at 12 o'clock, M., when the petition will be heard.

Daniel Shaw, of Elkhart, Ind., has petitioned for the extension of a patent granted to him on the 6th day of April, 1852, and reissued on the 3d day of November, 1863, for an improvement in smut mill and grain separator.

Parties wishing to oppose the above extension must appear and show cause on the 19th day of March next, at 12 o'clock, M., when the petition will be heard.

William Baker, of Utica, N. Y., has petitioned for the extension of a patent granted to him on the 13th day of April, 1852, for an improvement in hinges.

Parties wishing to oppose the above extension must appear and show cause on the 26th day of March next, at 12 o'clock, M., when the petition will be heard.

Joel Whitney, of Winchester, Mass., has petitioned for the extension of a patent granted to him on the 13th day of April, 1852, for an improvement in feed apparatus for planing machines.

Parties wishing to oppose the above extension must appear and show cause on the 26th day of March, next, at 12 o'clock, M., when the petition will be heard.

Charles T. Grilley, of New Haven, Conn., has petitioned for the extension of a patent granted to him on the 20th day of April, 1852, for an improvement in capping screws.

Parties wishing to oppose the above extension must appear and show cause on the 2d day of April next, at 12 o'clock, M., when the petition will be heard.

PATENT-OFFICE DECISIONS.

Interference between the respective applications of C. P., C. M., E. R., J. B., and A. B., for patents for a mode of increasing the flow of oil from oil wells.

The Board, by Elisha Foote.—The process for which these patents are claimed consist in exploding a heavy charge of powder at the bottom of oil wells. The great height of the column of water above the charge prevents its action upward, and the gases consequently enter the seams and crevices of the rock and open passages to the hidden fountains of oil. The idea seems to have occurred to several different persons at about or nearly the same time, and the somewhat difficult question arises as to whom the patent for it belongs.

The construction of cartridges to be exploded at great depths under water, and the mode of firing them by means of electricity and by percussion, present nothing new, and the effects upon the rocks of explosions under deep waters are well known. Blasting under such circumstances and by the same means has long been practiced.

The inquiry is not, therefore, which of the several parties in this case first devised the torpedoes and other means used to produce the explosion, for in that all of them have been anticipated, and none would be entitled to a patent. What, then, is there novel for which a patent may be claimed? It is the discovery of effects resulting from such explosions—that thereby wells may be made productive from which no oil had previously been obtained, and that the flow in others might be thereby renewed which before had been exhausted.

Our laws give a patent to one who has discovered, as well as to one who has invented, any new and useful art. But there is a manifest difference between the

two in respect to the application of such laws. An invention is an operation of the mind. It may be completed, described, or illustrated without a trial. But a discovery can be made only by experiment or observation. It must be made manifest to the senses. Theories and conjectures lead to experiments, but not until the trial is made can it be said that the truth is made known. Many conjectured before Franklin that lightning was electricity, but the discovery was not made until the kite was raised and the spark was obtained. The effects of vaccination were not known until the trial. Previously there were conjectures, theories, plausible speculations, but no discovery. In inventions the inquiry sometimes arises, who first conceived the idea—for that may be an invention. But in discoveries, the inquiry is less important, for the idea is but a conjecture. The successful experiment is the discovery.

Of all the parties to this interference, E. R. is the only one who carried his ideas into practical results. He had six torpedoes constructed, and in January last took them to Titusville, exploded them in wells, and found out the results and the value of the process.

It is probable that C. P. was before him in the conception of the idea. As early as January, 1861, he explained to a witness his views and plans upon the subject, and from time to time since he has made drawings of the apparatus and urged upon others the probable success of the process. But he does not seem to have done anything to test the correctness of his views, and they would perhaps have remained forever but theories and speculations had it not been for the labors of E. R.

A. B. came very near being the first discoverer. He made a journey from Rochester to Titusville in September, 1863, for the express purpose of testing the process. But he was taken sick on his arrival and obliged to return without effecting anything. And again in August, 1864, he employed a person to go to Titusville and prosecute the inquiry. But it does not appear that any successful result was obtained by him.

Both J. B. and C. M. were subsequent to other parties in the conception of the idea, and neither of them attempted to put it in practice.

The importance we attach to the first successful experiment renders it unnecessary for us to inquire more particularly into the priority of conceptions. It is probable that the idea has recurred to many persons that some beneficial results might be obtained by such subterranean explosions. But it was a conjecture merely. No one could tell without experiment what the effect would be, whether good or bad, or indeed whether there would be any action upon the flow of oil. The whole subject of these strange and unaccountable deposits is a mystery, and all the knowledge we have in regard to them has been obtained by experiment. Speculations of the closet, however valuable, are not the subjects of patents. But he who has expended his time and money in experiments, who has produced practical results, and created pecuniary values, he it is that is entitled to the reward.

We concur with the Examiner in awarding the patent to E. R., and accordingly affirm his decision.

Washington, January, 1866.

CORDING INSTRUMENT.

Appeal No. 1,793.—Application of John N. Wilkins for a patent for Improved Cording Instrument.

S. C. Fessenden for the Board.—A patent is claimed for this instrument as a new article of manufacture—the Hand-Cord Guide, herein described—the same consisting of a handle, rod, and tube, adapted for the purposes explained.

The novelty in this invention, it is alleged, consists in making a cording guide, which is adapted for use by the hands, instead of having to be fixed in a sewing machine, and controlled thereby. The Examiner rejects this claim for invention as having been anticipated—citing, as references, Rankin's, Taylor's, Benedict's, and Kollman's patent.

On examining these patents, it appears that they severally deliver the cords through a short tube at the point, so as to admit of turning sharp angles, and each is susceptible of being used as a hand implement, detached from the machine, and each has guides for the thread in or near the part, which, in such case, would serve as a handle. As these cording guides can be used as a hand instrument, disconnected from the machines, we do not find that Wilkin's claim presents, in its main feature, any patentable invention; nor does it offer, in any of its features, so far as we can perceive, what has not been substantially anticipated in the references adduced.

Washington, December 29, 1865.

THE BEST IN THE WORLD.—The N. Y. Business

Mirror published in this city says:—

The SCIENTIFIC AMERICAN completed its twentieth year with the number for Dec. 23, and enters upon the new year with all its excellent features retained, and with renewed efforts to maintain the high position of usefulness which it has always occupied. It is hardly necessary for us to say that it is the leading scientific paper in this country or in the world; the fact is pretty generally understood.

By an explosion of fire damp in an English colliery, recently, thirty persons were killed outright, and many more injured. After the accident four safety lamps were found unlocked, and in the pockets of some of the men were matches, pipes and tobacco, etc., all of which were contraband in mining operations.

The cost of the silver plates of the batteries constructed for the old Atlantic telegraph reached £2,520. A set of graphite plates, equal in number and size, were substituted for £210 at the suggestion of Mr. Walker.