

Scientific American.

ESTABLISHED 1845.

MUNN & CO., Editors and Proprietors PUBLISHED WEEKLY AT No. 361 BROADWAY, NEW YORK.

O. D. MUNN. A. E. BEACH.

TERMS FOR THE SCIENTIFIC AMERICAN.

One copy, one year, for the U. S., Canada or Mexico. \$3 00 One copy, six months, for the U. S., Canada or Mexico. 1 50 One copy, one year, to any foreign country belonging to Postal Union. 4 00 Remit by postal or express money order, or by bank draft or check. MUNN & CO., 361 Broadway, corner of Franklin Street, New York.

The Scientific American Supplement

is a distinct paper from the SCIENTIFIC AMERICAN. THE SUPPLEMENT is issued weekly. Every number contains 16 octavo pages, uniform in size with SCIENTIFIC AMERICAN. Terms of subscription for SUPPLEMENT, \$5.00 a year, for the U. S., Canada or Mexico. \$6.00 a year to foreign countries belonging to the Postal Union. Single copies, 10 cents. Sold by all newsdealers throughout the country. See prospectus, last page. Combined Rates.—The SCIENTIFIC AMERICAN and SUPPLEMENT will be sent for one year, to any address in U. S., Canada or Mexico, on receipt of seven dollars. To foreign countries within Postal Union, nine dollars a year.

Building Edition.

THE ARCHITECTS AND BUILDERS EDITION OF THE SCIENTIFIC AMERICAN is a large and splendid illustrated periodical, issued monthly, containing floor plans, perspective views, and sheets of constructive details, pertaining to every branch of architecture. Each number is illustrated with beautiful plates, showing desirable dwellings, public buildings and architectural work in great variety. To builders and all who contemplate building this work is invaluable. Has the largest circulation of any architectural publication in the world.

Single copies 25 cents. By mail, to any part of the United States, Canada or Mexico, \$2.50 a year. To foreign Postal Union countries, \$3.00 a year. Combined rate for BUILDING EDITION with SCIENTIFIC AMERICAN, \$5.00 a year; combined rate for BUILDING EDITION, SCIENTIFIC AMERICAN and SUPPLEMENT, \$9.00 a year. To foreign countries, \$11.50 a year.

Spanish Edition of the Scientific American.

LA AMERICA CIENTIFICA E INDUSTRIAL (Spanish trade edition of the SCIENTIFIC AMERICAN) is published monthly, uniform in size and typography with the SCIENTIFIC AMERICAN. Every number of La America is profusely illustrated. It is the finest scientific, industrial trade paper printed in the Spanish language. It circulates throughout Cuba, the West Indies, Mexico Central and South America, Spain and Spanish possessions—wherever the Spanish language is spoken. \$5.00 a year, post paid to any part of the world. Single copies 25 cents. See prospectus.

MUNN & CO., Publishers, 361 Broadway, New York.

The safest way to remit is by postal order, express money order, draft or bank check. Make all remittances payable to order of MUNN & CO.

Readers are specially requested to notify the publishers in case of any failure, delay, or irregularity in receipt of papers.

NEW YORK, SATURDAY, JANUARY 30, 1892.

Contents.

(Illustrated articles are marked with an asterisk.)

Table listing various articles such as Agricultural inventions, Alloy, Aluminum light, Am. Soc. Civ. Eng., Antiseptic adhesive pomade, Bananas, Bleaching, Books and publications, Bridge, Brooklyn, Car coupling, Clay, Electric lamp test, Electric light for houses, Electric motors, Electric rock drilling, Engineering appliances, Engineers' Club, Enlistment of boys, Flying machine, Gas engine, Gauge glasses, Guns, Hydraulic works, Inventions, Inventor, Inventors, Iron, Kid glove manufacture, Kites, Locomotives, Lower Bow Park, Mastodon, Museum, Mechanical appliances, Meigs, Mexico City, Mineral production, Mobile, Naval service, Niagara Falls, Occupation, Oils, Patent tricks, Patents granted, Pavements, Photographic developers, Pipe wrench, Planets, Rheumatism, Rice, Rock drilling, Sewer, Steam exhaust, Sugar cane crystals, Telegraph instrument, Tempering, Thomson.

TABLE OF CONTENTS OF SCIENTIFIC AMERICAN SUPPLEMENT

No. 839.

For the Week Ending January 30, 1892.

Price 10 cents. For sale by all newsdealers.

Table listing contents of the supplement by category: I. AGRICULTURE, II. CHEMISTRY, III. CIVIL ENGINEERING, IV. ELECTRICITY, V. GEOGRAPHY, VI. MECHANICAL ENGINEERING, VII. METALLURGY, VIII. MISCELLANEOUS, IX. NAVAL ENGINEERING, X. RAILROAD ENGINEERING, XI. PHYSICS, XII. PHYSIOLOGY, XIII. PHOTOGRAPHY, XIV. SOCIAL SCIENCE, XV. TECHNOLOGY.

NIAGARA FALLS AND BUFFALO.

After the completion of the great tunnel works now in progress at Niagara Falls, there will be nothing to hinder the rapid rise and growth of that interesting town into a great and wonderful city. Its dwellings and factories will be supplied with light, heat, and motive power at an extremely low cost, and useful industries of every kind ought there to flourish with unwonted vigor. Domestic life will be attended with many comforts and conveniences. The cook will only need to touch a button, and presto, her electrical stove will be in full operation, the pot will boil, the oven bake, the turkey roast, the pump move, the washing machine turn; while the electric refrigerator will freeze the water, preserve the meats, vegetables, milk, butter, eggs, and other supplies. No coal, no wood, no dust, no dirt, no oil, no gas. The lady of the house will be relieved of care. She presses a button, and every nook and corner of her dwelling glows with cheerful light. Touch another, and the electric fire glimmers in every room, diffusing genial warmth. The electric lift takes her up or down stairs in a jiffy. The telephone conveys her orders to market, and distributes her social commands among friends and neighbors. Niagara is in a fair way to become famous as the great electrical city of the world. At any rate it will possess, in a great degree, the means for economic electric generation and supply.

Near to Niagara, only twenty-five miles distant, is Buffalo, already a large and prosperous city, the head center of lake navigation. The simple extension of conductors over the short distance above mentioned will bring to the people of Buffalo a direct share in the economic and other advantages of the new and great enterprise. Light, heat and motive power for streets, vehicles, works, shops, factories, stores, churches, dwellings, can be supplied from the dynamos at Niagara, more economically, probably, than by any other means. Local steam engines may be dismissed; their occupation, for Buffalo, will be gone. Even the steam fire engines may retire. The electric pump will beat them out of sight.

We look toward Niagara and Buffalo with hopeful interest, expecting soon to witness there many novel applications of electricity for industrial, domestic and municipal purposes. In the latter category the promotion of the public health and the expulsion of diseases by electrical agencies seem to be among the reasonable possibilities of the near future.

PATENT TRICKS—OLD AND NEW.

Some time ago, under this heading, we briefly explained some of the methods practiced by sharpers upon unsuspecting patentees, for whose benefit we will now repeat our remarks and make a few additions.

When an inventor receives a patent, his name is immortalized in the Official Gazette, and he immediately becomes the object of attack from a horde of hungry aspirants for money, among whom are ex-clerks, patent brokers, and pretended legal lights of varying degrees. The patentee is deluged with circulars and letters from this class of gentry. Some write to inform him confidentially that his patent is good for nothing; but on receipt of a certain fee they will set it right and make it sound as a silver dollar. Others pleasantly inform the new-fledged inventor they have read his patent with great pleasure, consider it to be a very valuable invention. If properly introduced, much money can be soon realized. The State of Iowa, they say, is worth \$50,000, Ohio \$45,000, Pennsylvania \$65,000, and so on. All that is necessary is to print some circulars and do a little blowing, which the broker generously offers to do on receipt from the inventor of ten to fifty dollars cash in advance. Another writes to say he has an actual offer of \$10,000 for the patent for Canada, provided the patent is at once taken, which he will procure on receipt of the necessary money. It is almost needless to suggest these schemes are designed to fleece the inventor. The so-called patent sellers rarely effect a bona fide sale. They depend upon the advance fees obtained as above for a livelihood. Some of them have thus grown rich and prosperous.

These pretended sellers try to make it appear they are reliable by giving respectable references, and cite names of patentees for whom they purport to have sold patents. One mode of procuring these references is as follows: They write the patentee they have a customer who will buy a county right in Minnesota for \$500, and pay by deeding 25 acres of land in Arkansas, really worth \$1,000, but the parties are so anxious to obtain the patent right they are willing to let the land go, and take the right, in settlement, provided \$50 cash is paid and a mortgage is given for \$500. This done, the patent broker closes the transaction, receives the \$50 cash, which is the full value of the land, also receives a mortgage for \$500, together with the patent deed. At the same time the broker is careful to obtain a written certificate from the inventor stating, "I take pleasure in saying that X. Y. Z. & Co. have sold a patent right for me, at my price, and on terms satisfactory, and I recommend them," etc. In this way references are secured which make quite an impressive show on circulars, while the inventor is so ashamed of having been so easily duped, he keeps mum.

One of the latest tricks is the following: The patentee receives a letter from A. & B. asking for how much he will sell his patent for such and such a State. He replies, giving a price, say \$5,000. The patentee soon after receives another letter from X. Y. Z., saying that A. & B. write they have corresponded with you, and now say they have decided to purchase the patent on the terms named, provided the title and claims are found to be correct. To ascertain this, they require that X. Y. Z. shall examine and report upon the patent, otherwise A. & B. will not purchase; that if the patentee wishes to complete the sale, he must remit fifty dollars to pay for the examination, which is a work independent of the sale, and must be independently paid. The inventor sends the money; a report is made adverse to the patentee, no purchase is made, none was ever intended.

A new edition of the same class of swindles is worked by a gang of confederates as follows:

One of the swindlers writes to the patentee asking if the patent has been disposed of. If not, he would like to correspond with a view to purchase or manufacture. Reply is made that the patent is for sale. Then comes another letter from the swindler, saying substantially, "We have examined the invention very carefully, and if you will furnish us with an opinion or report as to the scope and validity of your patent we will, if same is satisfactory, make you an offer either for purchase or license on royalty. Our proposition will be based entirely on the nature of the opinion or report. If you have not already a reliable opinion, we recommend D. & Co. (Diddlem), as moderate in charges for this class of work. Such patent rights as we buy must be bought at once, and it will therefore pay you to furnish the report without delay." The inventor then writes to the other members of the gang, Diddlem & Co., by whom the inventor is requested to send \$50 or \$100 cash and the desired report will be furnished. Unsuspecting inventors easily fall victims to this trick; the money is paid, and the tricksters, who never had any idea of buying the patent, divide the plunder.

The patent insurance dodge is another scheme for relieving inventors of their cash. This purport to be a corporation for insuring inventors against infringements. By paying eight dollars cash within 30 days of the issuance of the patent, the concern undertakes to insure the patentee for one year against any infringement of his patent by other people, besides giving advice and services for which other lawyers charge anywhere from \$250 to \$10,000. There is less chance of infringement during this period than that the inventor will be struck by lightning in winter. This is simply a scheme to do the inventor out of \$8.

A French trick played with much success on American inventors is the following: The new patentee receives by mail, from Paris, a flaming ornamental document of provisional membership, which looks as if it came officially from the president of the famous Academy of Sciences, with a letter informing Monsieur le John Smith, of Snuffkinsville, Arkansas, Republique des Etats Unis, that the Academy has observed with pleasure his invention for planting seeds, so important for agriculture; in view of which they have voted to confer upon M. le Smith the honorable distinction of membership in the Academy. M. le Smith will have the goodness to remit to the treasurer the nominal sum of fifty francs—ten dollars—to defray the cost of the parchment, framing, boxing, and transportation of the diploma. These tricksters are said to draw considerable money from the United States.

Such are a few of the adroit schemes now in vogue for swindling "innocent" inventors.

Bills have been introduced in Congress to protect innocent purchasers of patents, i. e., infringers. Might it not also be well for somebody to formulate a law to protect innocent inventors?

Annual Meeting of the American Society of Civil Engineers.

The American Society of Civil Engineers held its annual meeting on Wednesday and Thursday, January 20 and 21. The afternoon was devoted to the general business of the society. In the evening valuable papers on the Elevated Railroads of St. Louis, the great Weehawken passenger elevator, and other subjects were read.

On Thursday an excursion was made to the above elevator and viaduct. The reservoir and high service tower of the Hackensack Water Company were also visited and examined. The party then proceeded by steamer to the Brooklyn Navy Yard. Here by the courtesy of Captain Henry Erben, U. S. N., the engineers were permitted to examine the cruisers Maine and Cincinnati, and the armored ship Miantonomoh, as well as the large engines being built for the Cincinnati and Raleigh. The docks were also examined. In the evening a reception was given at the house of the society, 127 East 23d Street, New York, where at 21:30 o'clock by the society's timepiece an elegant collation was served, followed by a number of speeches, which were enthusiastically applauded. The sessions of the society were largely attended by members and guests.