THE ANCIENT BREWERS OF NEW YORK.

From the first number of a new publication called the *Brewers' Gazette, Distillers' Journal, and Malt and Hop Trades Review,* published by Curson & Mundy, 195 Fulton street, New York, we extract the following sketch of the early brewers of New York, which is full of interesting historical facts:

Several of the brewers in New Amsterdam were men of considerable note, and filled some of the highest civic offices in the community. Their establishments were chiefly situated in the vicinity of the Fort, within which the first was built. The street occupied by them was, from that circumstance, called the "Brouwer Straat," or the Brewers' street," and corresponded with the present Stone street, between Broad and Whitehall. It was one of the first streets occupied in the future commercial capital, and received its present name from being the first paved with stones, which was done by an ordinance made in the year 1657. One of the principal brewers in this locality was Isaac De Foreest, who came to the country in 1636, and in 1645 received a grant upon the above street, then one of the best in town. He was also the owner of a farm at Harlem, and of the "Old Kirk" or church on Pearl street, and for many years a magistrate. In acknowledgment of his services in improving the town, and in public office, he was privileged with "the great citizenship."

Jacob Wolfertsen Van Couwenhoven erected a large stone brewery on the north side of the same street, on land granted him also in 1645, at the corner of Stone and Broad streets. He was not successful in business, and entailed mortgages upon his property, of which, however, he held possession until his death in 1670. The same premises were occupied as a brewery subsequently by John Van Couwenhoven.

Peter, a younger brother of Jacob, just referred to, was also a prominent person at that day, and carried on business as a brewer and trader. He was six years a "schepen" of the city. He was unpopular, both with the English after they came in possession and with his Dutch neighbors. Having been arraigned on a charge of extortion, he refused to give bail, and was imprisoned and fined. He left the city, and resided awhile at Elizabethtown, New Jersey, of which he was one of the earliest settlers; but in 1665 was still a resident of the city, at the northwest corner of Pearl and Whitehall streets. His brewery at the head of the present Broad street became, in 1670, the property of Isaac Van Vleck, who, for the remainder of his life there, conducted a prosperous business in brewing. He was several years an alderman, and died in 1695.

The Bayards, also, Nicholas and Balthazar, step sons of Governor Stuyvesant, were among the most conspicuous and opulent citizens at that time. They were both engaged in the manufacture of beer. An extensive district of the city, long afterwards, and, to old residents of New York, still known as the "Bayard farm," was the property of their wealthy descendants. It extended along each side of Broadway, north of Canal street, for the distance of many blocks, and from the Bowery to beyond McDougal street, on the west side of the city.

Another wealthy burgomaster, who was one of the early brewers of the rising Dutch metropolis, was Oloff Stevenson Van Cortlandt. He came to the city in 1637, on military service, which he quit the same year for a civil office as commissary of cargoes, at a salary of thirty guilders ($12) per month. He resigned his office to the company in 1648, to engage in the brewing business. His premises were on "De Brouwer straat," now Stone, adjoining those of Isaac De Foreest, where his property was one of the first class, and valued, on the final cession of the city to the English, in 1674, at $30,000. He was an influential politician, and, in 1650, the president of the citizens' representatives, called the "Nine Men," who were opposed to the administration of the last governor, Stuyvesant, and were by him turned out of their pews in church, and their seats torn up. He had a valuable property on the west side of Broadway, adjacent to Cortlandt street, which still perpetuates his name. He held several prominent offices. His son, Stephanus, was the first native born mayor of New York, to which he was appointed at the age of thirty-four. Another son, Jacobus, was, like the last mentioned, a wealthy merchant and a mayor of the city

Jacob Kip, a son of one of the oldest settlers, in 1652 resigned the secretaryship of the city magistracy, to which he was appointed five years before, while quite a youth, on the first organization of the city, and engaged in the brewing business. He afterwards resigned it for mercantile pursuits. His property on Broad street, partly acquired in the business, and partly by marriage with the wealthy widow of Guleyn Verplank, was estimated in 1674, at $8,000. Daniel Verveelen, a brewer, who originally settled at Fort Orange, resided about this time on "De Prince straat," now Beaver, east of Broad. There are many of the name now in the State. On the same street lived also Jan Jansen Van Bresteede, a cooper, who was appointed in 1658 the marker of beer barrels, and in 1667 inspector of pipe staves. Jan Vinje is mentioned as a brewer in the town in 1653. He was one of the heirs to the property between Wall street and Maiden Lane, and extending from river to river, known as the Damen farm. In 1654, Thomas Hall, an Englishman, who had joined the New Englanders some years before in the attack upon the Dutch colony on the Delaware, where he was taken prisoner and sent to Manhattan, became the purchaser of a farm on what is now Beekman street. He there established a brewery, which, after his death, in 1670, with the farm, a large and valuable tract from Pearl street to Park Row, was purchased of his widow, by William Beekman. Beekman, who came to the province in 1647, and was the first of that name, carried on for many years the brewing business at the corner of Beekman and William streets, which conjointly still bear his name. Mr. Beekman was at an early age a schepen of the city, and held other municipal offices at different times. He was sub-director of the colony on the South river from 1658 to 1663, and after that was sheriff of Esopus. He was held in high esteem until his death in 1707, at the age of eighty-five. His property on the present Pearl street, between Franklin Square and Ann street, was in 1674 valued at $10,000. It was long known as Beekman's swamp, and is still spoken of among the leather manufacturers, to whose use it has been for a great while appropriated, as "the Swamp."

OAK GRAINING.

[Condensed from the Builder.]

There are several methods used for imitating oak, with various degrees of success. The most ancient of which we have any knowledge was done by painting the work with a graining color, and then making all the figures or markings with the end of a tallow candle; the result was that the graining color dried hard everywhere, except on those places touched by the tallow, which was then wiped off with a piece of flannel, leaving the marks of the clean ground color. Another plan was to mix a little dark color with sweet oil and beeswax, and put in with a pencil or fitch the color of the various markings, upon the bare ground color. The graining color was then mixed with beer, and spread over the work, and then flagged with a duster, or large flat tool made for the purpose. When this was dry, the marking color was washed off with turpentine. This system is in partial use even at this day.

The next great stride in oak graining seems to have been the natural out-growth from this last process, and is called "spirit-color graining." When well and properly done it is a useful and cleanly process, having this advantage over any other method, *i.e.*, that work done with it may be grained and varnished in the same day, which, under certain circumstances and for certain work, is very valuable, especially where, as in offices, etc., unnecessary interruption of business has to be avoided. This process is carried out as follows: To mix the graining color, grind a quantity of the best washed whiting in turpentine; add such a proportion of either burnt sienna, Oxford ocher, burnt umber, raw umber, or part of one and part of another, according to the color required, as will stain the whiting to the required depth of color; then add sufficient turpentine varnish to bind or fasten the color when thinned to a working consistency with turpentine, which may be best ascertained by trial before commencing any important work. The color is then spread evenly over the surface, and strippled or streaked with a duster or flat brush; it is now combed quickly (in the manner hereinafter described). If this be not done quickly, the color sets or dries, and when once set the combing cannot afterwards be done. The color dries quite dead. When it has stood a short time it may then be figured or marked, in imitation of the marks seen in the real oak, thus:—Dissolve Scotch soda in water—let it be tolerably strong—add a little burnt sienna, ground in water. Now take a flat fitch (hog-hair), dip it into the solution of soda, and thus mark out or put in any figure desirable, taking care not to use it too freely, or else it will run and make marks which are not required; it must be borne in mind that wherever the oda to ches there will be a mark. When the work is all figured, the whole must be well washed with a sponge and plenty of clean water, which will clear off the soda, and wherever it as touched, the graining color will be destroyed, and will wash off, leaving the figures clear and bright. The work must then be brushed over with weak beer and water, in the proportions of half beer and half wa er, and then overgrained in the usual manner. A door may thus be grained and varnished in a couple of hours' time. The solution of soda is sometimes dispensed with, and turpentine is used instead. The veining fitch is dipped into turps, stained so as to show the marks, which are wiped off again before they have had time to dry, using a flannel rag for that purpose. Wherever the turpentine touches the spirit color it immediately softens the turpentine varnish, which may then be wiped off, but only while it is wet; and as it of course dries very soon, the work requires to be quickly done, or else it is labor lost. This is not so cleanly in using as the soda, but good work may be done with it. The heart or sap of oak may be admirably imitated on this system, especially upon molded surfaces. The heart must be marked in with the fitch or a sable pencil and turpentine, as before described, and, while it is wet, must be brushed or softened all one way, that is, in the direction in which the sap runs—the direction of its growth. If this be done well, the light and dark edges of the sap of the real wood may be very closely imitated.

But the most important and best system of graining oak is the oil-color process. It must be understoood that oak has two distinct characteristics. The first is the grain of the wood, which is formed by the pores, and which always runs the length way of the plank, and, in fact, of the tree also, and this is fine or coarse, as the case may be; the other is technically called "the figure"—the dapple, the veining, and the lights of the oak. These markings, almost in every case, run across the grain, and, as a rule, have a silvery reflection, and stand out lighter and brighter than the grain, and sometimes they have a light silvery edge and a dark center. Of course, both the grain and the markings are different in different descriptions of oak. In the English oak the grain and the veining, or figure, are much finer and closer than in the foreign oak. The Dantzic oak, for instance, is exceedingly coarse or open in its grain or pores, and the "lights," or figure, are, as a rule, in broad or thick lumps, without much grace or beauty of form; while the figure in English oak is arranged or flows in graduated curves, having a beauty peculiarly its own. The grain and the markings require different methods of working, and there is no method yet invented which does this so effectively and so well as the oil process.

New work should be well dusted before being primed. After the first coat is dry, it should be rubbed down with sandpaper and stopped with good sound putty. Three coats should then be put on and the work sandpapered between each coat; except this be done, no good work can result. The finishing coat should be mixed with three parts of oil to one of turps. The color for light or new oak, commonly called wainscot, should be a light creamy buff, made with Oxford ocher and white, and a little vermilion or Venetian red. Some grainers like a white ground for this very light oak, but it has a rawness of look which is not at all pleasant to look upon.

For a middle shade of oak the color should be stained with Oxford ocher, Venetian red, and a little burnt umber; and for dark oak, with burnt umber, Venetian red, and a little orange chrome. These may all be modified by admixture with black, in a degree according to whether the oak when finished is to be warm or cool in tone. And here we may note that the color of the ground is of vital importance to the effect of the work when finished. Many persons don't care much about the ground color so that it is light enough, as they depend upon the glazing color to bring it up to the required shade. This we are quite certain is a mistake, for if two panels be grained, one on a white or nearly white ground, and the other on a rich colored ground, the former cannot by any amount of glazing be brought to the same richness of color as the latter; therefore it is the wisest plan to work upon ground colors which are of the same tone of color, or nearly so, as the work is intended to be finished. The contrast also between the graining color and the ground color should never be violent. When it is so, the work has a staring vulgarity about it very undesirable. The "figure" or markings stand out so prominently and so positively that all flatness and repose is destroyed. This is a very common fault with grainers, and one which should be avoided. Grainers of this class are very fond of bright chrome-yellow ground, and of glazing their work with burnt sienna, thus making it "foxy," and, as a matter of course, ugly and vulgar.

DYERS' RECIPES.

From Hascrick's Secrets of Dyeing.

INDIGO BLUE TOPPED, FOR HOSIERY.—100 pounds of wool are colored with 4 pounds of Guatemala or 3 pounds of Bengal indigo, in the woad or soda vat; then boil in a kettle a few minutes 5 pounds of cudbear or 8 pounds of orchil paste; add one pound of soda, or, better, one pail of urine; then cool the dye to about 170° Fah., and enter the wool. Handle well for about twenty minutes; take it out, and cool, rinse, and dry. It is all the same if the cudbear be put in before or after the indigo. Three ounces of aniline purple dissolved in one half pint of alcohol can be used instead of the cudbear. It produces a very pretty shade, but it ought never to be used for mixed goods, which have to be bleached, as it runs into the white; also the cudbear disappears in the sulphur.

DARK BLUE FOR BROADCLOTH IN THE WOOL.—This is colored in a healthy woad vat; the first dip is handled well and slow for one hour in the net, then taken out, aired, and the vat stirred again; in two hours it can be dipped again for half an hour, and so often taken through until it has acquired the right shade. The vat ought to be strong enough in indigo to color it dark enough in three dips. About 10 pounds of good indigo is reckoned to 100 pounds of wool; clear indigo blue does not require anything more, but if taken through a warm bath containing two pounds of blue vitriol, the color stands better in fulling, and is faster; after which it is rinsed, switched, and dried. The dark blue generally found in the market is topped with 15 pounds of camwood or 20 pounds of red sanders; the latter are boiled on the colored wool, as the indigo required for such dark colors would make it very expensive.

DARK BLUE TOPPED WITH LOGWOOD.—Give it a dip first in the blue vat, then rinse: then boil the wool for one hour in a kettle containing 10 pounds of alum, 2 pounds of half refined tartar, and 1½ pounds of blue vitriol; after which take it out, cool, and make fresh water. Add from 5 to 10 pounds of logwood, according to the shade required, and the quality of the logwood; let it boil in a bag or otherwise, cool the kettle to 170° Fah., enter the wool and handle slowly; in one hour it can be cooled, rinsed, and switched for drying. This does not require any alkali in shading the wool, as the soap will do this in fulling. If cloth be colored this blue, some pearlash or urine may be used to accomplish it; but then the kettle ought to be cooled to 136° Fah. The goods require good scouring, otherwise they will crock.

INDIGO BLUE ON CLOTH, PART LOGWOOD.—100 pounds of cloth. Color the cloth first by one or more dips in the vat of indigo blue, and rinse it well; then boil it in a solution of 20 pounds of alum, 2 pounds of half refined tartar, and 5 pounds of mordant for two hours; then take it out and cool. In fresh water boil 10 pounds of good logwood for half an hour in a bag or otherwise; cool off the kettle to 170° Fah. before entering: handle well over a reel; let it boil for half an hour, then take it out, cool, and rinse. This is a very fine blue, but not so permanent for wear.

Improvement in Printers' Quoins.

This quoin, now generally used in France, is rapidly gaining favor in this country. It is really a great improvement, and we are now using it in our office with much satisfaction.

It has the advantages of durability, saving in wear and tear of chases, so often broken and sprung by the use of the old quoins, entire freedom from shrinkage, much greater rapidity in locking up forms, and greater security, as a form once locked may stand any length of time and remain as tight as when first locked.

The pressure is equalized on all parts of the chase, and thus without undue strain all the pieces in the form are securely held without the use of beveled furniture.

The pressure is obtained by means of screws, actuated by triple or quintuple worm gearing, as shown, the central worm being turned by a hand key. The pressure thus obtained is very great. Various sizes are made, adapted to all sorts of newspaper, book, and job work.

This device was patented in the United States August 10, 1869. For further particulars address, F. Dorrity, 240 East Thirty-second st., New York.

Benefits of Science.

The practical view of agriculture cannot be more clearly or profoundly conceived than it was by the North American chief, whose speech on the subject is reported by Crêvecœur. The chief, in recommending agriculture to his tribe, the Mississippian Indians, said: "Do you not see that the whites live on corn, but we on flesh? that the flesh requires more than thirty moons to grow, and is often scarce? that every one of the wonderful seeds which they scatter on the soil returns more than an hundred fold? that the flesh has four legs to run away, and we only two to catch it; that the seeds remain and grow where the white man sows them? that the winter, which for us is the season for laborious hunts, is to them a time of rest?

It is for those reasons that they have so many children, and live longer than we do. I say, then, to every one that hears me, before the trees above our huts shall have died of age; before the maples of the valley cease to yield us sugar, the race of the sowers of corn will have extirpated the race of flesh eaters, unless the hunters re- solve also to sow." In his difficult and laborious life of the chase, the Indian consumes in his limbs a large sum of force; but the effect produced is very trifling, and bears no proportion to the expense. Cultivation is the economy of force.

Science teaches us the simplest means of obtaining the greatest effect with the smallest expenditure of power, and, with given means, to produce a maximum of force. The unprofitable exertion of power, the waste of force in agriculture, in other branches of industry, in science, or in social economy, is characteristic of the want of true civilization.

Breaking of Car Axles.

W. Bridges Adams, in a paper published in the Journal of the Society of Arts, says that the cause of the breakage of railway axles is to be found in the fact that they are strained beyond their powers, not by the load, but by imperfect structure of the vehicle they are attached to—imperfect, possibly, originally, but commonly by violence in use. "The running is wringing the neck of the axle."

With a view to lessen lateral friction of the wheel flanges as much as possible, it has been customary to keep the axles as near as possible together. This, if the bodies be long, involves "hogging," and oscillation, with a bad distribution of the load. Other things being equal, the nearer the axles are to the wagon end, the steadier they will be; but then flange friction increases with the length of wheel base, and a remedy must be provided for this.

Supposing that a train of wagons were built perfectly true at the outset, for a straight line, the multitude of longitudinal shocks would soon set the wheels out of truth, and so the question arises, whether it be possible so to construct them, that diagonal shocks to the frame, giving a permanent set, shall not affect the true running of the wheels; and next, whether wagons may not be so constructed as to dispense with the loose coupling, which is a material source of breakage to couplings, and displacement of the wagon frames? We think it is. Desirable as it is to point out the causes of the defects, it is still more useful to point out the remedy.

Value of Patents on Small Articles.

A good illustration of the value of patents on small articles in universal demand, is found in Miles' patent double-pointed tacks, designed for putting down carpets, oilcloths, matting, etc., and for hanging curtains, etc. Two patents have been obtained upon this improvement, and although recently introduced, the manufacturers are doing a large business. The tacks are made on the principle of the staple. The edge of a carpet nailed by them may be stripped up without the least danger of tearing the fabric. They are easy to extract when driven, as they have no heads to break off. They are a decided improvement on the old style of carpet tacks, and may be found advertised in another column.

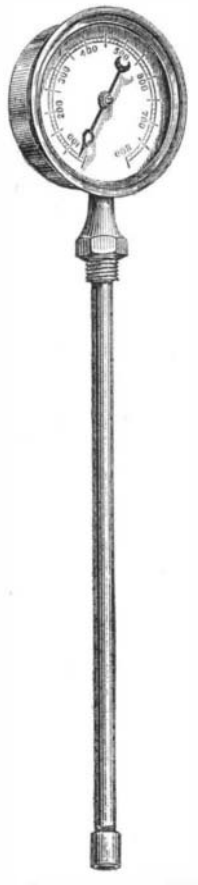
A NOBLE ACT.—Mr. A. T. Stewart, the well-known merchant of this city, is about to send 5,000 barrels of flour, on his own account, to relieve the suffering French. Mr. Stewart's example is a noble one, and will entitle him to rank as a benefactor to the suffering poor.

PYROMETER.

The pyrometer, or "heat measurer," is an instrument for indicating temperatures by the expansion of metals.

While, for many purposes, the mercurial thermometer is undoubtedly useful and indispensable, still, where such an instrument is subject to careless handling, or when, from the nature of things, the indications should be clearly read, and also when temperatures above 500 degrees are to be measured, it is evident that some other arrangement must be adopted.

Advantage being taken of the uniform expansion and contraction of metals, from heat and cold, an instrument is here shown, in which the longitudinal and differential expansion of two metal tubes is, by suitable mechanism, made to register, in degrees of any desired scale, on a dial similar to a steam gage. This pyrometer consists of a seamless drawn brass tube, inclosing a turned iron tube, and both are screwed into a socket at the bottom. The upper end of the iron tube is closed by a rod screwed into its bore, while the brass tube is secured to the case of the instrument. The iron tube being open throughout, and both tubes being in close contact, it follows that when they are immersed in the fluid, gas, or molten metal to be tested, the brass tube expands more than the iron, and carries it down with it, as they are united at their lower ends. This motion, which is uniform, is, by means of a toothed bell-crank sector within the case, and a small pinion on the pointer shaft, greatly multiplied, moving the pointer around the dial in any desired ratio to the motion of the inner tube.



This arrangement of the metals is claimed to insure their becoming uniformly heated, as it is highly important that both tubes should acquire the temperature of the substances tested as speedily as possible.

For showing the temperature of oil stills, gas retorts, steam digesters of all kinds, india-rubber vulcanizers, vats of hot liquids (as in dye works, breweries, etc.), as well as for superheated steam, this pyrometer will be found convenient, as it is not easily damaged (being all of metal) and its indications are as easily read as those of a steam gage.

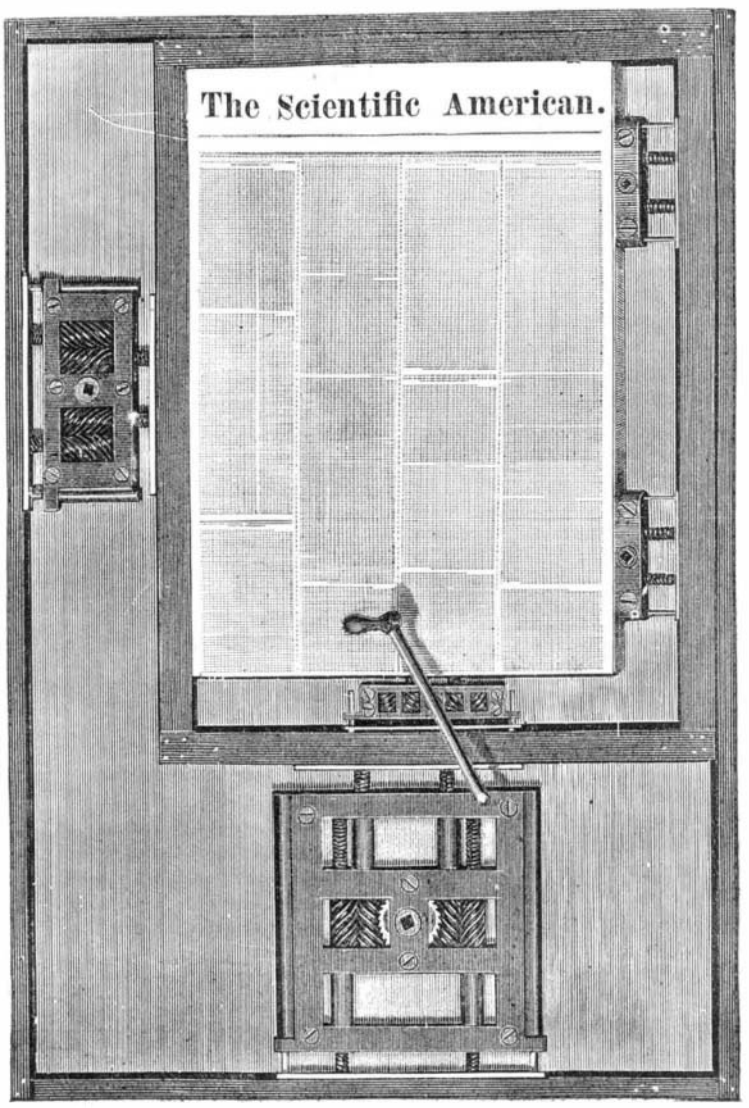
In cases where the tubes cannot be inserted, for want of room, they may be enclosed within a larger one, the end of which is screwed into the vessel containing the substance to be tested.

This pyrometer is used as a steam gage by attaching th tubes to the back, instead of to the bottom, of the case, and screwing the instrument into the head of the boiler, the dial being then vertical. The expansion of the tubes will thus always show the true pressure in the boiler, the dial being in that case graduated in pounds.

These pyrometers are graduated, after the tubes have been thoroughly annealed, by placing each instrument in a freezing mixture, then in boiling water, and lastly in high pressure of steam, from which points the length of the degree is determined.

They are manufactured in several styles, with tubes at the back or bottom of the case, and of any length between one and four feet, as may be desired.

Application has been made for a patent on this improvement, and the instruments are manufactured by the inventor, Henry W. Bulkley, mechanical engineer, 98 Liberty street, New York, who may be addressed for further information.



DORRITY'S PATENT QUOIN.

Exploding Charges by Electricity.

Franklin, in 1751, and Priestly, in 1761, suggested the possibility of applying the electric spark for the ignition of gunpowder charges; but electricity was not practically applied until about thirty years ago, by the French military engineers, since which its use has become general. It was employed to ignite the great blasts that destroyed the Round Cliff at Dover, and to remove the wreck of the Royal George, and has been largely used in heavy blasting with powder and nitro-glycerine in California, and for exploding torpedoes under water.

The variety of contrivances is very great. Many exploders have been devised to act either by heating a piece of thin wire, introduced in the circuit of a battery and placed in the charge, or by the passage of a spark produced by an electromagnetic machine, or Ritchie coil, through a sensitive explosive compound, thus causing a local explosion sufficient to ignite the whole charge.

Among those who have given great attention to this subject, Baron Von Ebner, of the Austrian military engineers, and Mr. Abel, of the British war department, who has devised one of the best exploders known, may be specially mentioned. A spark generated by revolving magnets is made to pass through a mixture of subphosphide and subsulphide of copper and chlorate of potash—materials of high conducting power and extremely sensitive to the spark. One of the great difficulties in the way of making such exploders is the liability of the materials to be merely thrown aside, and not exploded, by the passage of the spark.

In the United States, inventors have been active in devising different forms of apparatus for igniting explosives. They all depend upon either the direct passage of a spark or the heating up of an imperfect conductor, immersed in an explosive mixture. This mixture and the arrangement of wires are inclosed in a small cartridge of paper or wood, which can be readily placed in the midst of the powder, in the hole to be exploded. Mr. Stowell patented, in 1862, a peculiar form of cartridge, containing the ends of the conducting wires and a strip of platina. Beardslee, in 1863 patented a very simple mode of making an imperfect conductor between the ends of two wires, by drawing a pencil mark of graphite upon the surface of a piece of dry wood. Mowbray, in July, 1869, patented an improved electrical fuse for exploding charges of nitro-glycerin. It consists of a small cartridge of powder, in the top of which is placed a small quantity of a composition, like that used by Mr. Abel, made of sulphide of copper, 9 parts; subphosphide of copper, 2 parts; chlorate of potash, 3 parts; the whole intimately mixed. The ends of the wires are immersed in this mixture. It is designed especially to be inserted in cans of nitro-glycerin, to be exploded in oil wells.

The dealers in the new explosive compounds, such as nitro glycerin, dynamite, and dualin, furnish exploders especially designed for the several preparations. These various exploders may be fired either by the voltaic current, or by a spark from a suitable electrical machine, or the Page coil.—*Mining Machinery.*

THE AMERICAN BIRD TRADE.—The bird trade in America seems to be in a flourishing condition. Over 40,000 canaries are brought in every year, and probably 10,000 more are raised in this country for the purpose of sale. The number of bulfinches, goldfinches, thrushes, robins, and larks annually imported rise as high as 500 or 600 for each variety. There are fully 3,000 Java sparrows brought to the United States by vessels from that region, and fully as many parrots are yearly sold in this city alone. Waxbills and other minute varieties are scarce, and seldom arrive in quantities of more than 100 or 200 each year. Parroquets and love birds from Australia follow parrots in their relative importance. In native birds there is no reliable data to go upon. It is roughly estimated that about 10,000 mocking birds find their way from the wild nest to the cage each succeeding year.

RHEEA FIBER.—Notwithstanding the report that a number of machines for clearing rheea fiber had been sent in to the Indian Government in reply to the announcement published last year, none would seem to have been successful, from the fact of the time for competing for the prize of £5,000 having been extended for another year.