# Scientific American.

# Scientific American

NEW YORK, NOVEMBER 30, 1850.

Commissioner of Patents' Report.

Having briefly reviewed the Reports of three Chief Examiners, the fourth is that of Chief Examiner L. D. Gale : it is the best and most elaborate and interesting. He does not seem to have grudged his labors, nor does he com. plain of hard work, like Examiners Fitzgerald and Renwick. His field of examination embraces five classes-1st, Agriculture; 2nd, Chemistry; 3rd, Leather; 4th, Household Furniture; 5th, Wearing apparel. He examined 599 cases; passed 245, and rejected 354-[the report is not correct, here]-a great number, but not quite so many in proportion, as the two Examiners named.

The most important and valuable inventions presented in 1849, he states, are to be found in the class of chemistry, especially three of | that no adequate room nor provision is made them : one was for an improvement in sugar manufacture [Melsen's process,] the other, Dr. Hare's process for converting animal matters into agricultural fertilizers, and the next was for the use of resin oil in making printers' ink. It is stated that neither of these inventions were patented, but there was a probability that they would be, after a prolonged correspondence was terminated, and Mr. Gale thought it was right to notice them. Beehives, washing machines, plows, churns, and bedstead fastenings, the Report states, have arrived at that point where the limits for improvement are very narrow. We understand that the Patent Office has decided that atmespheric churns are not patentable-that air has nothing to do with the churning to produce butter. It is no doubt true that butter can be produced by agitation in an air-tight bottlewe have seen this done frequently, with sweet milk, to produce a fine salve for burns. Six patents were granted for small improvements on Cultivators, and twenty for Seed Planters. Twelve Harvesting Machines were patentedone was for a rake to move the grain to the back of the platform, to deposit it in bunches on the ground. One patent was granted for a machine to harvest cotton and abolish handpicking. The Report speaks doubtfully of its At is not possible for a poor inventor to secure (Mr. Ward) had experienced these difficulties; application to picking, as all the bolls do not a patent in England. The patent laws of he had had to proceed in Chancery, and had ripen at the same time on the plant. If such a machine were practicable, it would be, perhaps, the most important invention of the day. Nine patents were granted for Hulling Machines, and nine for Grain Separators. Five patents were granted for Bee-hives : we shall publish the whole of the remarks about bees and their hives, next week,-new ideas are thrown out, which must be interesting to our apiarians. Three patents were granted for Distilling Apparatus; one was for elevating the head of the still into a cylinder, and having perforated pan-shaped vessels therein, containing charcoal, which purifies the spirits at one operation. Especial mention is made of the process for coating iron with copper-the invention described by us two weeks ago, a sample of which we have in our office. A process for making Water-gas was patented, and Prof. Gale states that an English patent was granted to Michael Donovan, (Prof. Donovan, of Dublin, we suppose,) 40 years ago, for mingling spirits of turpentine, at the burner, with gases derived from water,-the remarks about water-gas are judicious and conclusive, presenting a great smount of new information. He states that money and brains. The "Chaff Wax !"are too highly al ored with eas

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It is not possible to dwell particularly on all the inventions spoken of in this Reportwe have noticed a few. We like the Report, Office.

The Report of the Machinist, Mr. A. B. Stoughton, informs us that there are 15,117 models in the Patent Office, and only 7,529 for which patents were granted. He says that no adequate provision is at present made for is 500 francs (about \$100) for five years, 500f. the proper exhibition of models pertaining to more for the next five years, and 500f. more rejected applications. He says that many are rejected as machines invented in foreign countries, and only described in books not accessible to inventors. If he could have added for the Government acts as public prosecutor, that "many were rejected because they were supposed to be like some described in foreign In our country the Patent Office often acts like books." he would have struck the nail on the head at once. The number of models, he supposes, cost \$500,000, and he justly complains for their exhibition, so as to benefit inventors. We subscribe to this sentiment, in part; we say that the Patent Laws should be so altered. that rejected applicants might have their models returned. Here we are informed that the Patent Office has locked up in its Black Room, more than \$250,000 of the property of our inventors-property for which no adequate return has ever been made. There is one wretched mode of action in the Patent Office, viz., to reject applications and give reference to some rejected application ; this is a nonsensical mode of doing business. There are eight rooms devoted to models, and they are still accumulating with great rapidity. It is suggested that, for designs on stove plates, a drawing, and no model, be sent to secure a patent this is a good suggestion. The Report of Mr. Stoughton is short, but very good for all that; the suggestions made by him evince good judgment and good sense.

# Patent Laws of all Nations.

Many of the inventors, in Great Britain, threaten not to exhibit at the World's Fair, formed by Parliament at the Winter Session. The Attorney General has a fee of four guineas for making a report upon the inventor's as costs, though he gained his cause triumph-

of £5. It is again sent to the Queen, and re- | ly ruined. turned with £7 13s. 6d. additional cost. The per, the Deputy Sealer, and the "Chaff Wax," -all have their pickings out of the inventor's their action and decision by the English law. What office to exi t in the middle of th

one. The effect of this is shown by 23 paso as to resemble those of France.

for the fifteen years. These sums are paid in law is superior to the American Patent Law, and holds the inventor harmless of expense. a prosecutor of the inventor, and our law courts are more troublesome and expensive to inventors than those of any other nation.

In Belgium patents are granted for five or ten years, and the government tax may remain unpaid for two years after the grant. In Holland the patent fees are about \$750 for fifteen years. In Prussia and Russia the government exercises a discretionary power in granting or refusing patents. In Russia the patent is granted for ten years, and costs about \$250 : in Prussia for eight years, almost nothing-not half as much as in the United States. The other countries of Europe are scarcely worth while mentioning.

We hope that the inventors of England will be able to get their PatentLawsreformed with all despatch, by Parliament: we also hope that the Great Seal will be modified from the size of a turnip to a decent sized crown-piece.

To show how the English Patent Laws work, at the meeting referred to, Mr. Ward, an inventor, moved a resolution declaratory of the defects of the existing patent laws, and of the delays and expenses which were engendered by the legal tribunals. He chiefly dwelt on the latter point, observing that if a patent cost only 5s., the expense of maintaining it through the present legal processes would of itself be and to do all they can to prevent others from ruinous. Patentees were constantly exposed exhibiting, unless the Patent Laws are re- to infringements, and the first step in defence cost the poor patentee 2001. (Hear.) He that country were made for the rich, and af- been occupied five months in examining witford ample means for robbing the poor. To nesses in the court, owing to the system secure a patent in England, every step is at- pursued of daily hours and half-hours. He tended with expense-money, not paid into had had to go through all this though the the national exchequer, but absorbed by the party proceeded against made no defence. great officers of state and their underlings. | (" Shame !") The case occupied five, yes, and nine months, and he had to pay 1,400l. declaration-a subject about which he is as antly, and though there was not a shadow of innocent as the hippopotamus is of astronomy. | pretence for the opposition-the case being at The Home-office pockets seven guiness and | last decided in an hour. (Hear, hear.) He a half for what is called a warrant. This believed his opponent, who was an enormously warrant is sent to the Queen, and sent back | rich man, would never have given in but that with additional expenses; for even royalty, his health had suffered from the vexation it seems, has some nice pickings out of the in- caused by the suit. (Hear, hear.) At preventor's pocket. When the instrument comes sent, a patent simply gave a right to go to back, the Attorney General has another slice law; and hence a poor patentee was frequent-

This is a black enough picture in the work-Signet-office, the Lord Keeper of the Privy | ing of the law, but let no one suppose that Seal, the Lord Chancellor, the Lord Chancel- the evil is one belonging exclusively to the lor's Deputy, the Purse-bearer, the Clerk of other side of the water, the same evil exists the Hanaper, the Deputy Clerk of the Hana- here, our patents are granted upon the same principle, and our U. S. Courts are guided in

manent U.S. District Court in New

process. Particular mention is made of the and, for Ireland, \$675 more-altogether about tedious openings and closings of the terms, is Apple-paring Machine, illustrated on page 84, \$1,625-a most scandalous charge; and the a standard monument of its inadequate procuriosity of all this is, the great price of an visions to fulfil the claims of justice-the end Irish patent: it is not worth so much as a and aim of all courts of law. There is as Scotch one, yet it is dearer than an English much business to be done in New York as would keep both Judge Nelson and Judge Judit is able, useful, and does honor to the Patent tents having been secured for Scotland, last son sitting all the time; in fact, we believe September, and only 5 for Ireland. The Bri- that their time might all be nearly occupied in tish inventors want their Patent Laws altered the trials of patent cases alone. The present term has been taken up with the trial of only In France patents are granted to the people two cases, and while there is a great number of all nations, for ten or fifteen years : the tax still on the docket, Judge Nelson had to set off and away. We know a witness who has come and gone back to his home, a distance of 190 miles, and his case was never brought up, and instalments of 100f. per year. The French at last he had to go away altogether. It is wrong to have cases hanging on in suspense. Our courts are celebrated for "masterly inactivity." It is time that some reform was instituted, and one means to that end would be an open U. S. District Court in this city, for there are not adequate court provisions made for this city, in comparison with other Districts, when we take the number of inhabitants into account-for patents, we mean.

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Improvement in the Manufacture of Sugar. Three weeks ago we noticed an improvement in the manufacture of sugar, by the centrifugal machinery constructed by Mr. Hartson, No. 58 Vesey street, this city. Since that time we have heard some doubt thrown upon the subject-unbelief manifested. Well, we have now samples of the sugar before it undergoes the mechanical process, and after it has been submitted to it, the one is like red sand, the other like pure white. We saw the brown sugar mixed with molasses, and watched the whole process until it was completed. Mr. Hartson is now making two of these machines. every week, for the South. We believe it to be one of the greatest inventions of the age. The process of the sugar manufacture has been greatly simplified within the past few years, and it has yet to be made more simple still. We shall be enabled to present engravings of this machine as soon as patents are secured for the improvements of Mr. Hartson at home and abroad. The improvements relate to the mechanical arrangement and construction of the machinery, and are truly valuable and important.

## California News.

The last news from California announced the breaking out of the cholera there. It had only appeared in a mild form, and the season was not favorable to its propagation. The gold was still abundant, but the Indians, in some parts, were getting troublesome, and a band of robbers were committing great depredations in the valley of the Sacramento. The wet diggings have been unfortunately subject to great freshets, and the dry diggings alone offered inducements.

## A Present.

We have received a present of a draught of a Card Making Machine, made by Mr. J. E. Earle, a young man of Leicester, Mass., who presents it to us as among his first efforts at Mechanical Drawing: it is well done. Mr. E. is a young man, enthusiastic to be a first rate mechanical draughtsman; he no doubt will attain to this distinction, as he possesses the very qualities which will make him so distinguished.

## Patents and Engravings.

Four out of the number of patents in our list of Patent Claims, this week, were secured through this Office. It is a matter of no small on to feel at the

			<u>.</u>	
	use of acids to open the pores of the skin, then at once submitting the same to the tanning		Court-the number of cases which have been dragging their way, snail-like, through all the	
ᆔ			York City. The law business now before this	Two hundred glaziers are employed on the
	tanning, consists in unhairing the hides by a		permanent open U. S. District Court in New	cation with the South and West.
- :		without the tortuous system of extracting hard-earned money from the struggling sons of	,	above Fort Lee, which gives a free communi-
Ľ.			question—it is one for the consideration of our	wires on the bed of the Hudson river a little
:		• •	Patent Laws. We now touch upon another	The Morse line of telegraph have laid their
!			he is, should have some acquaintance with	
i			rest in them. Every man, we don't care who	
:			interest in them—will find something of inte-	, , ,
	ter-gas processes. The process for making ar-		interested in patents, and those who have no	, , , , , , , , , , , , , , , , , , , ,
- '			week, with matters relating to patents. We believe that every class of our readers—those	
i		nineteenth century, and how characteristical-		cured are not trifling, but really useful. Along
			A Fermanent U.S. Distinct Court in New Fork.	satisfaction to icel that the improvements se-

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PReported expressly for the Scientific Ameri can, from the Patent Office Records.

## LIST OF PATENT CLAIMS

Issued from the United States Patent Office FOR THE WEEK ENDING NOVEMBER 20, 1850.

To Wm. Albertson, of New London, Conn., for Hinged Gun-Harpoons

I claim making the shank of harpoons, and other whale irons, to fold by a hinge or joint at any convenient point in their length, in the manner and for the purpose substantially as herein described.

[See engraving in No. 2, this Vol. Sci. Am.] To Hoses Ball, of Philadelphia, Pa., for improvement in Bake Ovens

I claim the combination and arrangement of an endless chain platform with the oven, by which arrangement the unbaked bread, or other articles, being put in at one end, are discharged at the opposite end, completely baked ; and, in combination therewith, I claim the self-opening and closing door, arranged substantially as herein set forth.

To Jarvis Chase, of Selma, Ohio, for improvement in working the doors of a Bee Hive

I claim the arrangement of the bee boxes and moth chambers, in combination with the sliding screen doors, pulleys and levers, as described, so that the doors may be worked by a single movement of the lever, in the manner and for the purpose set forth.

To Gardiner Chilson, of Boston, Mass., for improvement in Air-heating Furnaces

I claim, first, the annular chamber, constructed and arranged substantially in the manner and for the purpose set forth, with or without the cross-pipe.

I also claim the mode of conducting off the products of combustion from the fire through ascending pipes, into an annular chamber, and thence into a central descending pipe to their exit, and the surfaces being all so constructed of a curved figure as to allow a diverting influence, and free circulation to the exterior air in the air-chamber, to be warmed without over-heating it; while it is, by the arrangement of parts, forced to impingedirectly against the heated surface.

I also claim the method of setting the furnace, consisting of a double walled chamber, the inner wall of which encloses a cold air trench, supplied from without, that surrounds the seh-pit, with openings at its top for the proper admission of air into the air-chamber. around the furnace, and with lateral openings into the spaces between the walls, and causes an upward current, which is connected with the warmer pipes leading to the apartments, by means of which a constant and pure supply of sir is insured, and the heat greatly economised.

To David Eldridge, of Philadelphia, Pa., for im-

then reversing its motion so as to draw back were published in all our papers, and copied countries of the world will be represented upon notched, or smooth, being made to rotate, and the bucket, to be emptied in the manner as into European journals, and after all, it has the inner, and not upon the outer surface, and having, within it, any number of crushers herein described. oozed out into darkness; and his late discove- the interior will be fitted up with galleries formed as described, for the purpose of pound-Secondly, I claim the manner, substantially ry of perpetual motion will go the same road. and staircases, so as to enable visitors to make rinding, or ny as herein described, of closing the bottom or It is so easy for Mr. Paine to disabuse the puba tour of the World, and visit each of the crushers either running singly, or, for the purtrap of the bucket, by means of the spring, or lic mind, if he has discovered anything, which countries whose industry or productions will pose of working different substances, simultaincline, over which it passes in its forward I don't believe, and will not believe until I be displayed in the Great Exhibition. neously one within another, the jumping bar or passage. see it and know all about it-that he has no pin. in combination with the arrangement sub-The Chinese Doctors. To J. H. Robinson, of Charlestown, Mass., for imbusiness to complain if he is looked upon as a The Chinese doctors are not paid for the stantially the same. provementin Pessaries. chimerist. It is a great pity that he was not number of doses they give their patients and I claim the solid connection, with connect-[This machine is constructed upon a new more careful, prudent, and cautious in making ing contrivance, or its equivalent, and joint in the length of their sickness, but are paid to principle, and is a good one for crushing and his first announcement, but his last caps the combination with the supporting stem, the keep their subjects from heing sick :- the sick grinding ores, paints, &c. It is owned conclimax of all. Let the first be demonstrated, days of the subject are deducted from the docwhole being substantially in the manner and jointly by Mr. A. G. Bagley, the gold-pen maand then the public will be able to believe and tor's yearly salary. The Chinese may well for the purposes hereinbefore specified. nufacturer, this city.] digest the last-not before. To E. T. Shoenberger, of Pittsburgh, Ps., for imlaugh at our barbarism, in the way of paying To John Garvey, of New York, N. Y., for impro-CARBURETTED HYDROGEN. provement in Extension Tables. our doctors,-but if we were to adopt the Chived Annunciator or Bell Telegraph. ANNOTATION .- By a letter dated Worcesnese rule, our doctors would be very scarce, un-I claim the combination and arrangement of I claim the construction of extension in such ter, Nov. 29, 1848, Mr. Paine publicly assert- less they had perfect command over our diet, the spring lever, suspended bar or striker, with a manner as that the sliding parts, when exthe spring lever, suspended bar or striker, with a manner as that the sliding parts, when ex-the pendulums and bells, for simultaneously tended, shall constitute a table complete, with ed that he would expose his light one year and labor, and exercise.

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indicating the number of the room, and calling the attention thereto, by giving the alarm, there being a secondary or intermediate fulcrum bar, against which the spring lever impinges ir. its descent, increased by the spring, by which the rear end is made to descend, and with it the suspended striker, upon the bells, and at the same time suddenly elevating the front end of the lever, and imparting a vibratory movement to its pendulum, said spring levers being provided with oblong openings or slots, through which the fulcrum bar passes, for producing the aforesaid action of the spring lever, on its descent upon the intermediate fulcrum bar, as described and represented.

To Frederick Langenheim, of Philadelphia, Pa. for improvement in Protographic Pictures on Glass,

I claim the combination of the ground or frosted glass, or other semi-transparent substance interposed in connection with the picture, between the source of light and the spectator, substantially as described.

To John E. Larkin, of Ballston Spa, N. Y., for method of attacking augers to their handles

I claim the handle made in two parts, one of which fits in a socket on the other, and carries a bolt secured at its end, the said bolt passing through a hole in the auger shank, and screwing into a female screw or nut, in the part A, for the purpose of clasping or firmly holding the auger shank between the ends of the parts A and D of the handle or stock. substantially in the manner herein described.

[See engraving, page 388, Vol. 5, Sci. Am.] To Elijah C. Middleton & Edwards Nevers, of Cincinnati, and Robt. Neale, of Mount Carmel, Ohio, for improvement in Copper and Steel Plate Printing

We claim, first, the arrangement of a tooth or catch, projecting from the roller, and operating upon a tooth or projection upon the platen, for the purpose of starting the platen, and causing the commencement of the convexity of the roller to impinge upon any required point of the length of the platen, for the purpose described.

Second, the combination of the racks, with the cog-wheel attached to the connecting rod of a gang of rollers, together with the beads and the grooves in the rollers for security, uniformity of action, and a proper relative position between the platen and the supporting rollers upon which it traverses, thus preventing lateral and longitudinal aberation.

Third, The method of heating and retaining at a suitable temperature, the plate from which the impressions are to be taken by means of lamps or of vessels contai ing inflammable material, placed under the upper plate of the platen, or traversing bed, within the recess formed between that and the plate resting immediately upon the gang of rollers.

Fourth, The arrangement of a stationary and sliding clamp, adjustable longitudinally to the platen, for securing the plate in position, substantially in the manner described.

Fifthly, We claim, in combination with the roller, the method of retracting the platen by the weighted cord, adjusted by making an inclined plane of the bed on which the rollers traverse.

ing motion to the band or chain, and to the drum, in one direction, to fill the bucket, and

out any replacing of pannels to form the leaf, then make it public. On this week Friday, substantially in the manner herein set forth. To Samuel Swett, of New York, N. Y., for improvement in Spark Arresters.

I claim combining in the manner substantially as described, with the chimney, the surrounding jacket and the cap, a valve for governing an apperture in the top plate of the cap, so balanced or weighted that it shall open by gravity when the furnace is working under a draft due to the rarefication of the column, and be closed by the force of the current when increased by the exhaust steam in the chimney, for the purpose and in the manner substantially as described.

I also claim, in combination with the valve and the wire gauze, or the equivalent thereof, and the deflector over the chimney, all arranged substantially as herein specified, and for the purposes set forth.

To Wm. Zaizer, of Cincinnati, Ohio, for improvement in Bedateada.

I claim the combination of the slats, clasps, and hooks, athwart the length of the outside slats, in combination with the rails and latches on the posts, the whole combining to form a strong and portable bedstead.

### DESIGNS.

To John S. Royce, of Cuyleville, N. Y., for design for carriage plates. To C. P. & G. B. Gordon, of Boston, Mass., for de-

ign for Spoon Handles.

# Paine and his Electric Light.

MESSRS. EDITORS-What has become of " Paine's Electric Light ?" Alas, for us New Yorkers, after being raised up to the skies, in anticipation of beholding the great light, which was to eclipse all our murky looking candles, oil, camphene, and gas lights, we are still compelled to grope on in the old fashioned way. I early took the opportunity, page 61, Vol. 5, Sci. Am., to expose the absurdity of Mr. Paine's alleged discovery, and in a number of letters published at various times since, in the same volume, left him no room to shirk his first announcement, made two years ago, on the 29th of the month of December, and which he has never yet fulfilled. In a letter, by referring to my Vol. 4, page 101, Sci. Am., Mr. Paine there anneunces that he would expose his light for one year to the public, "and the different scientific bodies of America and Europe, to allow any person to establish a prior claim to the invention, if they could, and afterwards he was to make public the mechanism of his Generator." This he stated in his circular. He has not fulfilled his promise to the public, and the reason, no doubt, is a good one-he cannot. Two years have expired since he published his first letter, but the public have yet to know how Mr. Paine produces his cheap light-4,000 lights of which, burning for 5 hours every day for one year, were to cost less than twe dollars.

Mr. Paine has announced a new discovery beside his first light, viz., his letter in No. 3, this volume of your paper. His alleged discovery there about his whirl-go-round electric discovery, to propel vessels, is more ridiculous than his light. Before he announces any more discoveries I hope he will fulfil his first promise, and give us something more than mere

shelling corn, as herein described. I claim, first, operating the bucket by giv. by playing upon the marvellous—it cannot be ting a huge globe, of 56 feet in diameter, To Wm. Frost, of New York, N. Y., for improve done with impunity. After all the excitement which will be provided with a convenient ment in Mills for Grinding and Crushing. about this light-it is no where. His letters mode of ingress and egress; the different I claim the use of the cylinder grooved or

two years will have expired, and the promise not be fulfilled.

#### Interesting Patent Cases.

Before Judge Nelson, in the U.S. Circuit Court, this city, after a long and tedious trial, the famous Lead-pipe Case was terminated on Thursday last week, the 21st inst. The suit was for the recovery of damages for the alleged infringement of a patent to Mr. Benjamin Tatham, in 1841, for an improvement in machinery for making lead-pipe, Samuel G. Cornell & Co. being the alleged infringers. The defence was, that Messrs. Cornell & Co. did not use Tatham's improvements, but a different combination, also secured by patent to Mr. C., in 1847.

The Court, in its charge, said if the Jury believe that the defendants used the same combination, substantially, that was found in plaintiff's patent, they infringed his patentbut if the changes were substantially different, then they did not infringe-also that if the changes in the mechanical construction of the machine made by defendants were apparently of a similar form, yet if they produced a new and useful effect, different from that of plaintiff, in the manufacture, then they did not infringe.

The Jury returned a verdict that plaintiffs were the original inventors of the machine patented by them-and that the patent had been infringed by defendants. They found damages in favor of plaintiffs for \$2,245. For plaintiffs, Messrs. Staples, Goddard, Cutting and O'Connor; for defendants, Messrs. Stoughton & Harrington, and Wm. C. Noyce.

Good Properties and Virtues of Milk.

An experienced physiologist and chemist, declares milk to be a most perfect diet. There is probably nothing better adapted to our sustenance, containing curd casein, which is necessary for the development and formation of muscle-butter for the production of an adequate supply of fat-sugar to feed the respiration, and thereby add warmth to the body, the phosphates of lime and magnesia, the peroxide of iron, the chlorides of potassium and soda, with the free soda, required to give solidity and strength to the bone-together with the saline particles so essentially necessary for other parts of the body. It contains lactic acid, or the acid of milk, which chemists inform us is the acid of gastric juice, so requisit for the proper dissolving of our food in the stomach It is, therefore, obvious that milk should be chemically correct in all its constituents, and that its beneficial effects on the constitution should not be neutralized by adulteration, "it is," Dr. Prout properly states. "the true type of all food." How necessary, therefore, is it that it should be pure; otherwise, this wonderful and wise provision of Providence will be a curse rather than a blessing.

In the city of New York however, it is almost impossible to get pure milk. It cannot at least be purchased but in few groceries; the most of it is composed of disgusting and injurious compounds.

### A Mammoth Globs.

A curious exhibition is in course of prepara-To Martin Newman, 2nd, of Lancaster, Pa., forim-provements in Excavating Machines. provement in Corn Shellers. bombastic assertions about his i ventions. tion for the World's Fair, by Mr. Wyld, M. P., I claim the combination of the wheels for It is very wrong to abuse public confidence the eminent map engraver. He is construc-