## Sicentific American

## NEW YORK，NOVEMBER 30， 1850.

## Commissioner of Patents＇Report．

Having briefiy 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 Fitzger－ ald and Renwick．His field of examination embraces five classes－1 st，Agriculture；2nd， Chemistry；3rd，Leather ；4th，Household Fur－ niture ；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 andvaluable invention presented in 1849，he states，are to be found in the class of chemistry，especially three of them ：one was for an improvement in sugar manufacture［Melsen＇s process，］the other， Dr．Hare＇s process for converting animal mat－ ters into agricultural fertilizers，and the next was for the use of resin oil in making print－ ers＇ink．It is stated that neither of these in－ ventions were patented，but there was a pro－ bability that they would be，after a prolonged correspondence was terminated，and Mr．Gale thought it was right to notice them．Bee－ hives，washing machines，plows，churns，and bedstead fastenings，the Report states，have arrived at that point where the limits for im－ provement are very narrow．We understand that the Patent Office has decided that atmes－ pheric 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 bottle－ we have seen this done frequently，with sweet milk，to produce a fine salve for burns．Six patents were granted for amall improvemento on Cultivators，and twenty for Seed Planters． Twelve Harvesting Machines were patented－ one wae 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 hand－ picking．The Report speake doubtfully of its application to picking，as all the bolls do not ripen at the same time on the plant．If such a machine were practicable，it would be，per－ haps，the most important invention of the day． Nine patents were granted for Hulling Ma－ chines，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 weel，－new ideas are thrown out，which must be interesting to our apiarians．Three patents were granted for Dis－ tilling Apparatus ；one was for elevating the head of the still into a cylinder，and having perforated pan－shaped vessels therein，contain－ ing charcoal，which purifies the spirits at one operation．Especial mention is made of the process for coating iron with copper－the in vention described by us two weeks ago，a sam－ ple of which we have in our office．A process for making Water－gas was patented，and Prof．Gale tates that an English patent was granted to Michael Donovan，（Prof．Donovan，of Dublin， we supposs，） 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 amount of new information．He states that when gases are too highly charged with ear bon，iron heated to redness will take up th axcess of carbon，and produce a fine illumina ting gas，－he dees not think much of the wa ter－gas processes．The process for making ar tificial manure，as a good substitute for guano consists in submitting animal matters to the action of mineral acide－one part of sulphu－ ric acid to five of animal substance．Coppe ras will also answer ：as a
copperas has lung been known．
A patent granted for an in
A patent granted for an improvement in tanning，consists in unhairing the hides by a composition of lime，potash，and salt，and the use of acids to open the pores of the skin，then nt once submitting the same to the tanning的最田
$\left\lvert\, \begin{aligned} & \text { process．Particular mention is made of the }\end{aligned}\right.$ Apple－paring Machine，illuatrated on page 84， Vol．5，Sci．Am．
It is not possible to dwell particularly on all the inventions spoken of in this Report－ we have noticed a few．We like the Report， it is able，useful，and does honor to the Paten
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 fo the proper exhibition of models pertaining to rejected applications．He says that many are rejected as machines invented in foreign countries，and only described in books not ac－ cessible to inventors．If he could have added that＂many were rejected because they were supposed to be like some described in foreign books，＂he would have struck the nail on the head at once．The numberof models，he sup． poses，cost $\$ 500,000$ ，and he justly complains that no adequate room nor provision is made for their axhibition，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 mo－ dels 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 whish 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 rejectod application ；this is a nonsen－ sical mode of doing business．There are eight accumulating with great rapidity．It is sug－ gested that，for designs on stove plates，a draw－ ing，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 judg－ ment and good sense．

## Patent Laws of all Nations．

Many of the inventors，in Great Britain， threaten not to exhibit at the World＇s Fair， and to do all they ean to prevent others from exhibiting，unless the Patent Laws are re－ Cormed by Parliament at the Winter Session． It is not posible for a poor inventor to secure
a patent in England．The patent laws of that country were made for the rich，and af－ ford ample means for robbing the poor．To secure a patent in England，every step is at－ tended with expense－money，not paid into the national exchequer，but absorbed by the great officers of state and their underlings． The Attorney General has a fee of four gui－ neas for making a report upon the inventor＇s declaration－a subject about which he is as innocent as the hippopotamus is of astronomy． The Home－office pockets seven guineas and half for what is called a warrant．This warrant is sent to the Queen，and sent back with additional expences ；for even royalty， it seems，has some nice pickings out of the in－ ventor＇s pocket．When the instrument comes back，the Attorney General has another slice of $£ 5$ ．It is again sent to the Queen，and re－ Signed with $£ 7$ 13s．6d．additional cost．The Seal，the Lord Chancellor，the Lord Chancel－ lor＇s Depury，the Purse－bearer，the Clerik of the Hanaper，the Deputy Clerk of the Hana－ per，the Deputy Sealer，and the＂Chaff Wax，＂ －all have their pickings out of the inventor＇s money and brains．The＂Chaff Wax ！＂一 What an office to exist in the middle of the nineteenth century，and how characteristical－ ly the title describes the whole process！The fees，including the stamp duty，amomat to the m of $£ 96$ ，or about $\$ 500$－
The system of paying for public services by eees is one of the remnants which ought not to have survived the times of Castlereagh and Sidmouth．The public officers of England are handsomely，even extravagantly paid， without the tortuous system of extracting hard－earned money from the struggling sons of toil．
The cost of obtaining a patent，not including fees for agency－if unopposed－is，for Eng－
land，about $\$ 550$ ；for Scotland，$\$ 400$ more
and，for Ireland，$\$ 675$ more－altogether about
$\$ 1,625-$ most scandalous charge ；and the curiosity of all this is，the great price of an Irish patent：it is not worth so much as a Scotch one，yet it is dearer than an English one．The effect of this is shown by 23 pa － tents having been secured for Scotland，last September，and only 5 for Ireland．The Bri－ tish inventors want their Patent Laws altered so as to resemble those of France．
In France patents are granted to the people of all nations，for ten or fifteen years：the tax is 500 francs（about $\$ 100$ ）for five years， 500 f． more for the next five years，and 500f．more for the fifteen years．These sums are paid in instalments of 100f．per year．The French aw is superior to the Ameriean Patent Law， for the Government acts as public prosecutor and holds the inventor harmless of expense． In our country the Patent Office often acts like a prosecutor of the inventor，and our law courts are more troublesome and expensive to inventors than those of any other nation．
In Eelgium patents are granted for five or ten years，and the government tax may re－ main unpaid for two years after the grant．In Holland the patent fees are about $\$ 750$ for fif teen years．In Prussia and Russia the gov－ ernment exercises a discretionary power in granting or refusing patents．In Russia the patent is granted for ten years，and costa about $\$ 250$ ：in Prussia for eight years，al most 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 PatentLaws reformed with all despatch，by Parliament ：wę 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 Engligh 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 pstent cost only 5s．，the expense of maintaining it through the present legal processes would of itself be ruinous．Patentees were constantly exposed to infringements，and the first step in defence
cost the poor patentee 2001 ．（Hear．）He （Mr．Ward）had experienced these difficulties； he had had to proceed in Chancery，and had been occupied five months in examining wit－ nesses in the court，owing to the system pursued of daily hours and half－hours．He had had to go through all this though the party proceeded against made no defence．
（＂Shame！＂）The case occupied flve，yes， and nine months，and he had to pay 1,4001 ． as coste，though he gained his cause triumph－ antly，and though there was not a shadow of
 ast decided in an hour．（Hear，hear．）He believed his opponent，who was an enormously rich man，would never have given in but that caused by the suit．（Hear，hear．）At pre－ ent，a patent simply gave a right to go to law ；and hence a poor patentee was frequent－ ruined．
This is a black enough picture in the work－ ing of the law，but let no one suppose that the evil is one belonging exclusively to the other side of the water，the same evil exista here，our patents are granted upon the same principle，and our U．S．Courts are guided in their action and decision by the English law．

Permanent U．S．District Courtin New York
Our editorial page is mostly taken up，this week，with matters relating to patents．We believe that every class of our readers－those interested in patents，and those who have no interest in them－will find something of inte－ rest in them．Every man，we don＇t care who he is，should have some acquaintance with Patent Lawa．We now touch upon another question－it is one for the consideration of our Government ；we allude fo that which is in－ dicated in the caption of this article，viz，a permanent open U．S．District Court in New York City．The law business now before this Court－the number of cases which have been
todious oponinge and closings of the terma， a standard monument of its inadequate pro－ and aim of all court of law．There is as much business to be done in New York as would keep both Judge Nelson and Judge Jud． on sitting all the time ；in fect we believe that their time might all be nearly occupied in the trials of patent cases alone．The prosent term has been taken up with the trial of only two cases，and while there is a great number 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 at last he had to go away altogether．It is wrong to have cases hanging on in suspense． Our courts are celebrated for＂masterly inac． tivity．＂It is time that some reform was in－ stituted，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 Dis－ tricts，when we take the number of inhabi tants into account－for patents，we mean．
mprovement in the Manufacture of Sugar． Three weeks ago we noticed an improve． trifuga the manufacture of sugar，by the cen trifugal machinery constructod by Mr．Hart－
son，No． 58 Vesey street，this city．Since that time we have heard some doubt thrownupon 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 molasess，and watched the whole process until it was completed．Mr． Hartson is now making two of these machines， every weel，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 engra－ Angs of this machine as soon as patents are secured for the improverients of Mr．Harteon at home and abroad．The improvements re－ late to the mechanical arrangement and con－ struction of the machinery，and are truly va－ luable and important．

Calliornia News．
The last news from California announced the breaking out of the cholera there．It had only appeared in a mild form，and the seasen 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 depre－ dations in the valley of the Sacramento．The wet diggings have been unfortunately subject to great freshets，and the dry diggings alone offered inducements．

A Prevent．
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 offorts at Mechanical Drawing ：it is well done．Mr． E．is a young man，enthusiastic to be a first rate mechanical draughteman；he no doubt will attain to this distinction，as he possesses the very qualities which will make him so dis－ tinguished．

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 satisfaction to feel that the improvements se－ cured are not trifing，but really useful．Along with publiehing the claims，which are adver－ tisements，it may be said，for the benefit of in－ ventors，and of great moment to others inte－ reuted in inventions－patentees would find it or theirinterest to get engravings of their in． ventions published in the Scientific American．
The Morse line of telegraph have laid their wires on the bed of the Hudson river a little bove Fort Lee，which gives a froe communi－ cation with the South and West．
Two hundred glaziers are employed on the Exhibition Building in Hyde Park．Each
 Brientific $\mathfrak{A m}_{\text {merican. }}$
$1 P$ Reported expressly for the Scientifa Ameri oan, from the Patent Office Reoords.

LIST OF PATENT CLAIMS
LIST OF PATENT CLAIMS
Isoued from the United States Patont Office for the week ending november 20,1850 To Wm. Albertson,
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 describod.
[See engraving in No. 2, this Vol. Sci. Am.] To Hoces Ball, of Philadelphis, 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 desliding screen doors, pulleys and levers, as de-
scribed, 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 imAret the annular
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. without the cross-pipe
I also claim the mode of conducting off the products of combustion from the fire through ascending pipes, intoan 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 mothod of setting the furnace, consisting of a double walled chamber, the inner wall of which encloses a cold air trench, aupplied from withoat, that surrounds the aeh-pit, with opeaings 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 air is insured, and the heat greatly economisor.
To David Eldridge, of Philadelphia, Pa., for imI claim the combination
the combination of the wheels for ohelling corn, as heroin described.
To Wm. Frost, of Now York, N. Y., for improve ment in Mills for Grinding and Crushing.
I claim the use of the cylinder
I claim the use of the cylinder grooved or notched, or smooth, being made to rotate, and having, within it, any number of crushers formed as described, for the purpose of pounding, grinding, or mixing any substance, the crushers either running singly, or, for the purpose of working different substances, simultaneously one within another, the jamping bar or pin, in combination with the arrangement sub. stantially the same.
[This rachine is constructed upor a new principle, and is a good one for crushing and grinding ores, paints, \&c. It is owned conjointly by Mr. A. G. Bagley, the gold-pen manufacturer, this city.]
To John Garvey, of Nem York, N. Y., for impro-
ved Annunoiator or Bell ved Annunoistor or Bell Telegraph.
I claim the combination and arrangement of the spring lever, suspended bar or striker, with the pendulums and bells, for simultaneously
indicating the number of the room, and calling the attention thereto, by giving the alarm there being a secondary or intermediate ful crum bar, against which the spring lever im pinges 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 vibra tory 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 intermediat fulcrum bar, as described and represented. To Frederick Langenheim, of Philadelphia, Pa. for im
$\& \mathrm{c}$.
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I claim the combination of the ground or frosted glass, or other semi-transparent substance interposed in counection with the picture, between the source of light and the spec tator, substantially as described.
To John E.Larkin, of Ballston Spa, N. Y., for method of attaching augers to their handies.
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 purpese of clasping or firmly holding the auger shank between the ends o 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 ElijahC.Middleton \& Edwards Nevers, of Cinimprovement in Copper and Steel Plate Printing Prosses.
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.
To Martin Newman, 2nd, of Lancaster, Pa., forim-

## To Martin Newman, 2nd, of Lancas provements in Exoavating Machines.

I claim, first, operating the bucket by giving motion to the band or chain, and to the drum, in one direction, to fill the bucket, and then reversing its motion so as to draw back
the bucket, to be emptied iu the manner as herein described.
Secondly, I claim the manner, substantially as herein described, of closing the bottom or trap of the bucket, by means of the spring, or incline, over which it passes in its forward passage.
To J. H. Robinson, of Charlestown, Mass., for improvementin Pesbaries.
I claim the solid connection, with connecting contrivance, or its equivalent, and joint in combination with the supporting stem, the whole being substantially in the manner and for the purposes hereinbefore specified.
To E. T. 8hoonberger, of Pittsburgh, Pa., for im-
I claim
I claim the construction of extension in such a manner as that the sliding parts, when ex-
tended, shall constitute a table complete, with-
out any replacing of pannels to form the leaf
substantially in the manner herein set forth substantially in the manner herein set forth. To Samuel Swett, of Nem
provement in Spark Arresters.
I claim combining in the manner rubstantially as described, with the chimney, the surrounding jacket and the cap, a valve for governing an apperture in the top plate of the cap, oo 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 chim ney, 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 improve ment in Bedateads.
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., furdesign or carriage plates
io C. P. \& G. B. Gordon, of Boston, Muss., for de
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, wo 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 volune, 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 reforring 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 inake public the mechan ism 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, burn ing for 5 hours every day for one year, were to cost less than two 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. Beforehe announces any more discoveries I hope he will fulfil his firat promise, and give us something more than mere bombastic assertions about his i ventions.
It is very wrong to abuse public confiden by playing upon the marvellous-it cannot be done with impunity. After all the excitement about this light-it is no where. His letters were published in all our papers, and copied into European journals, and after all, it has oozed out into darkness; and his late discovery of perpetual motion will go the same road. It is so easy for Mr. Paine to disabuse the public mind, if he has discovered anything, which I don't believe, and will not believe until I see it and know all about it-that he has no business to complain if he is looked upon as a chimerist. It is a great pity that he was not more careful, prudent, and cautious in making tis first announcement, but his last caps the climax of all. Let the first be demonstrated, and then the pablic will be able to believe and digeat the last-not before.

Carburetted Hydrogen.
Annotation.-By a letter dated Worcester, Nov. 29, 1848, Mr. Paine publicly asserted that he would expose his light one year and
then make it public. On this week Friday two years will have expired, and the promis
not be fulfilled.
C. H. not be fulfilled.
Before Judge Nelson, in the U. S. Circuit Court, this city, after a long and tedious trial he famous Lead-pipe Case was terminated on Thursday last week, the 21 st inst. The suit was for the recovery of damages for the alleg ed infringement of a patei.t 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 plain. tiff, 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 $0^{\prime}$ Connor ; for defendants, Messrs. Stough. ton \& Harrington, and Wm. C. Noyce.

Good Properties and Virtues of Milk.
An experienced physiologist and chemist, declares milk to be a most perfectdiet. There is probably nothing eetter 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 oflime 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-togethor 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 disnolving 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 Globe.

A curious exhibition is in course of preparation for the World's Fair, by Mr. Wyld, M. P., the eminent map engraver. He is constructing a huge globe, of 56 feet in diameter, which will be provided with a convenient mode of ingress and egress; the different mode of ingress and egress; the different
countries of the world will be represented upon the inner, and not upon the outer surface, and the interior will be fitted up with galleries and staircases, so as to enable visitors to make a tour of the World, and visit each of the countries whose industry or productions will be displayed in the Great Exhibition.

## The Chinese Doctors.

The Chinese doctors are not paid for the number of doses they give their patients and the length of their sickness, but are paid to keep their subjects from heing sick:-the sick days of the subject are deducted from thedoctor's yearly salary. The Chinese may well laugh at our barbarism, in the way of paying laugh at our barbarism, in the way of paying
our doctors, -but if we were to adopt the Chinese rule, our doctors would be very scarce, unless they had perfect command over our diet, labor, and exercise.

