## Scientific Congress---lnapror Wanted.

On the 23rd of August last, a congress was held in the city of Brussels; it was a convention of scientific gentlemen who were appointed by different civilized nations, to confer together upon the best means of carrying out a universal system of sea and land meteorological observations. Lieut. Maury, appointed by the American Government, was requested to direct the proceedings of the Convention, but he declined the honor, and M. Quetelet, of Brussels, was elected President. The proceedings of this Convention were very interesting. Lieut. Maury explaine the objects for which the different representatives met. He said, "the proposal which induced the American government to invite this meeting, originated with the English Government, in which the United States Government was invited to co-operate, in respect to land meteorological operations.
Nineteen stations have been formed by the English authorities upon a uniform system, and the directions of the observations confided to the immediate supervision of the officers in command of the respective stations.
In the United States, meteorological observations had been made since the year 1816.
The American Goverument sympathised with the proposal of the English Goverument, but: said: Include the sea, and make the plan universal, and we will go for it. I was then directed to place myself in communication with the shipowners and commanders of the Navy and Mercantile Marine, in furtherance of the plan.
It is from the information extracted from more than a thousand logs that I have, been able to prepare the charts which have been published up to this time, showing the sailing routes and the direction of the winds and currents.
With a view, however, of extending still farther these nautical observations, the Government of the United States decided upon bring. ing the subject under the consideration of every maritime nation, with the hope of inducing all to adopt a uniform model of log book.
In order to place the captains navigating under a doreign flag in a position to co-operate in this undertaking, Mr. Dobbin, Secretary of the Marine Department at Washington, has instructed me to make known that the mercantile marine of all friendly powers might, with respect to the charts of the winds and currents, be placed on the same footing as those of the American marine; that is to say, that every captain without distinction of flag, who will engage to keep his log during the voyage, upon a plan laid down, and afterwards communicate the same to the American Government, shall re. ceive gratis, the 'Sailing Directions' and the charts published.
It has consequently been suggested to the captains that they should provide themselves with at least one good chronometer, one good sextant, two good compasses, one marine barometer, and three thermometers for air and water. I make use of the expression 'at least,' because the above is the smallest number of instruments with which a captain can fulfill the engagement he contracts upon receiving the charts.
The object of our meeting then, gentlemen, is to agree upon a uniform mode of making nautical and meteorological observations on board vessels of war. In order to regulate the distribution of charts, which the American Government offers gratuitously to captains, it would, in my opinion, be desirable, that in each country a person should be appointed by the Government, to collect and classify the abstract of the logs, of which I have spoken, through whom also the charts should be supplied to the parties desirous of obtaining them.'
The President:
Gentlemen : I think I shall be anticipating the wishes of the members of this meeting, by proposing to them to pass, in the first place, a vote of thanks to Lieut. Maury, and bo record our gratitude for the enlightened zeal and earnestness he has displayed in the important and useful work, which forms the subject of our delibe-
rations." rations."
All the members in turn intimated their en-
tire concurrence in the proposal made by the

President, to express to Lieut. Maury, their udruiration and their gratitude tor the eminent services which he has rendered, and is still endeavoring to render to the science of navigation. Thanks are, therefore unanimously voted to Mr Maury.
Lieut. Maury
Gentlemen.-I am extremely grateful for the sympathy you have expressed, and the praise you have been pleased to bestow on my humble efforts. -n my part, I beg to thank you for the kind assistance that you have afforded me. Allow me to add, that we are taking part in a proceeding to which we should vainly seek for a parallel in history. Heretofore, when naval officers of different nations met in such numbers, it was to deliberate at the cannons' mouth upon the most efficacious means of destroying the human species. To-day, on the contrary, we see assembled the delegates of almost every maritime nation, for the noble purpose of serving humanity by seeking to render navigation more and more secure. I think, gentlemen, we may congratulate ourselves with pride upon the opening of this new era."
[We could not think of abridging the above; it is so honorable to our country. Belgium has been called the "cock pit of Europe," because its soil has been wet with the blood of all the nations of Europe; there the fate of empires has been decided. How much pleasanter is such a convention; how much more creditable to humanity than all the red glories of Waterloo or Quatre Bras. Surely nations are growing wiser; science at least is lending her powerful and generous aid in making them more brotherly. The imperfection of good instruments, to carry out the objects of the Congress, was a prominent subject of discussion.
The Report of the Representatives states:-
"The imperfection of instruments in use at sea is notorious. The barometer having hitherto been used principally as a monitor to the mariner, to warn him by its fluctuations of the changes in prospect, its absolute indication of pressure has been but little regarded; and makers seldom, if ever, determined the real errors of these instruments, or, if known, still more rarely ever furnish the corrections with the instruments themselves.
It was the opinion of the Conference that it would not be impossible, considering the spirit of invention and improvement that is now abroad in the world, to contrive a marine barometer which might be sold at a moderate price, that would fulfill all the conditions necessary to make it a good and reliable instrument; and a esolution was passed to that effect, in order to call the attention of the public to the imporance of an invention which would furnish the navigator with a marine barometer that at all times, and in all weathers at sea, would afford the means of absolute and accurate determinaThe
The Conference was of opinion that the mercurial barometer was the most proper instrument to be used at sea for meteorological purposes.
With
With regard to thermometers, the Cenference does not hesitate to say that observations made with those instruments, the errors of which are not known, are of little value, and it is there fore recommended, as a matter well worth the attention of co-operators in this system of research, whether some plan may not be adoptod in different countries, for supplying navigators, as well in merchant-men as men-of-war, with thermometers, the errors of which have been ac curately determined.
For the purpose of meteorology, various adaptations of the thermometer have been recommended, such as those which refer to hygrometry and solar radiation; and for temperaure by thermometers with dry, wet and colored bulbs. With these exceptions, the only instrument, in addition to those generally used at sea, or which the Conference has thought prope to recommend, is that for specific gravity.
The reasons for recommending the use at sat of the wet, the white and black bulb thermome ters are obvious; but with regard to the ther mometer with a bulb the color of sea-water, and the introduction on board ship of a regular series of observations upon the specific gravity of sea-water, it may be proper to remark that, as there is no connection between the moon and the whole system of ocean currents and of the the weather
circulation of sea-water depends in some degree upon the relative specific gravities of the water in various parts of the ocean, it was judged desirable to recommend that observations should be carefully made with regard to it, both at and below the surface."
Here is a field standing broad and wide, for mprovements in navigation, and improvement in philosophical instruments.

## Bridge Over the Mississippi.

The " Rock Island (III.) Advertiser" speaks thus of the new bridge which is to cross the Mississippi from Rock Island to Davenport, in Iowa:-
"The bridge that is to span the mighty Mississippi. to unite with its iron band the shores of Illinois and Iowa, at this point, is at last located, let out to contract, and to be finished by the first day of December, 1854.
The bridge is to commence in this city, immediately above the depot, at or near the place where the upper iren foundry now stands, and is to cross the "slough," or east branch of the river, on a curve up stream, by three spans or arches, each 150 feet in length, and will strike the Island above the old fort ground. The curve will be continued regularly across the Island to the banks of the main channel, which will be crossed by five straight spans each 250 feet long, and a draw for the passage of vessels. The length of the main bridge will be about 1,600 feet from the Island to the Iowa shore, and when completed will be a wonder of magnitude, strength and beauty. Indeed, together with the natural magnificent scenery of the country hereabouts-the old fort with its remi-niscences-the Island itself abounding in romantic interests, and the busy, thriving and beautiful cities of Rock Island and Davenport on either side of the "Father of Waters," will form a combination of landscrpe so grand that it will not be the least of attractions to draw travelers from all points of the world to gaze upon a living panorama, which they may never forget.

## Deep Ocean Sounding.

The United States ©cean Surveying brig, Dolphin, left the Chesapeake Bay on the 31st of last May, for the purpose of sounding the Atlantic Ocean to Scotland, and making a series meteorological observations. The last we heard of her was, that she had completed a perfect line of soundings across the Atlantic to "Rockule," and was lying in the harbor of Southampton.
The distances between each place of sounding averaged about 100 miles. A line was run to the Azores, to the North of which, about a parallel of 45 miles in a south-west direction, an elevation was discovered on the bottom of the ocean of about 6,000 feet, the soil indicating a fine yellow chalky substance, mixed with a small portion of the finest sand. After leaving the Azores, the Dolphin took a westerly direction, still succeeding in discovering the bottom. Steering north, she made a direct line to the "three chimneys," where, at the depth of 1900 fathoms, bottom was also discovered. At this point, Lieutenant Barroman, in charge of the ship, finding the position of the weather unfavorable to a continuation of their research, made sail, and came into Southampton. The greatest depth at which bottom was reached, was 3,130 fathoms, in lat. from 41 to 43 , on. 51 to 56.
The temperature of the water was also tested at various depths, specimens of which have also been preserved. During the whole of the observations, particular attention was paid to the width, depth, and force of the current in different parts of the ocean, all of which have been carefully noted, for the purpose of being fully discussed and explained.

A young nobleman, celebrated for his Hercu ean strength and rashness, has made a voyage from Venice to Trieste alone, standing on two planks four feet long, by one foot wide and four inches thick, fastened by an iron clasp, and without any other help than a pole. He arrived at Trieste, seventy miles from Venice, safe and ound, having gained his wager.

Dr. Ick, a meteorologist, has decided that he weather.

Compliment to Joseph E. Holmes. Several of the exhibitors and attaches of the Machine Department, presented Mr. Holunes, the Superintendent of the Machine Department, with a splendid gold watch and chain, last week, in a very quiet way, as a token of their respec and appreciation of the able and considerate manner in which he has conducted the affair of his Department in connection with the inte rest of exhibitors and those employed under his charge. This is a deserved tribute to one who has effected so much for the Exhibition by per sonal effort, experience, and skill.

## Quality of Milk.

Dr. Preut has shown that all our principal alimentary matters may be reduced to three classes: the saccharine, the oleaginous, and the albuminous, represented by butter, sugar, and white of egg. Now, milk consists of all three -the curd, which is chiefly albumen; the but ter, chiefly oil ; and a portion of sugar. Milk is the only substance prepared by nature so completely perfect as to be a compound of these three principles, and therefore its perfection, mixed with bread, as a food for children.

## Railroad Houses.

-n the Chicago railroad, the laborers live in cars, which are fitted up for the purpose of boarding them. They have the necessary conveniences for cooking, eating, and sleeping. They carry the cows along, which graze alongside on the praiices, and they are put in stalls when the locomotive village moves forward to a new place. This plan has been found to work well.

Guano for Cotton
J. M. Dantler, a cotton planter of South Ca rolina, states that in 1852, by way of an experiment, he applied 241 pounds of Peruvian Guano, mixed with sand, to an acre of cotton plants, and that the additional yield was over 100 per cent. on the amount expended for the guano. An acre without guano yielded 135 pounds of seed cotton, while an acre to which it"was applied produced 518 pounds.

Treatment of Cholera.
A new mode of treating cholera is to give a table-spoonful of powdered mustard in a tumbler of cold water as an emetic. After it has produced vomiting, a wine glass of brandy, with ten grains of cayenne pepper (powdered capsicum) stirred up in it, is given. If the patient survives such a dose, he must be proof against any disease.

Prize Paper upon the Vine Disease.
The "Society of Encouragement," of France, offers a prize of 3,000 francs to the author of the best paper upon the disease of the vine; a prize of 3,000 francs for the discovery of the most efficacious preventive against it.
A new beverage is introduced into France, called the Creaming Hop Champagne, said to be equal to the finest kinds of this wine by those who sell it, but it is made from rhubarb, and is a deception. This wine will be sold for the genuine champaigue, here, next year.
The vines in Portugal have been attacked with disease; port wine will be scarce next year; but then there is plenty of logwood, el-der-berries, whiskey, and burnt sugar, and it can with these be easily counterfeited.
The receipts for tick
The receipts for tickets of admission to the Mechanics' Exhibition at Boston, recently cloced, were $\$ 19,000$. The number of paying visitors at the halls was seventy-six thousand.
M. Arago, the eminent French savan, died in Paris on the 1st inst. He is well known in America as the author of an excellent cheap work on Astronomy, which was edited by Dr. Lardner.
The fumes of chlorine will clean alabaster, if hey are only applied for a short time.
The number of admissions to the Crystal $\mathrm{Pa}_{\mathrm{a}}$ lace on Saturday was twenty-three thousand three hundred and seventy-one.

The French Journals record the successful experiments of a chloroform ship. Bah!

[Reported Officillly for the Scientific American
List of patent claims Issued from the United States Patent oflce FOR tHe werr endng october 9, 185.








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[We sho s.]

Conrecriov.-Coorrisg Rangess-In our list of patents last week, a mistake inadvertently occurred in the claim
of Geo. S. G. Spence, as sent to us. Before the words "" orted cliam to som ombiome," there should have been in "I claim the arr



Also insert the word, "chamber"" between the words
"boiling" and "is," in the sentence "but the bottom late of the boiling is also made to impart heat thereto," which occurs near
publishea by us.

## Bonnell's Patent Flouring Process.

[As stated by us last week, we commence to publish the full specification of David P. Bon nell's patent process for manufacturing flour. The information contained in it is valuable to every person in our country-miller, farmer, chemist, \&c. It
Before describing my improvement, I will briefly explain the process now practiced, which is as follows, to wit : the grain after being clean$d$ is passed between the surfaces of the mil tones, and by the friction imparted them pulverized and sent to the cooler, or "first
bolts," for the purpose of separating the flour bolts," for the purpose of separating the flour
from the "offal." In ordinary flouring mills it usually passes through two bolts, called "super fine" or first "merchant bolts." The flour produced by this bolting is generally divided by means of conveyors under them, into "superine flour," and what is termed "returns." That part first produced at the head of the "bolts" is sent to the packing chest or barrel, for packing, the remainder produced, towards the "tail", is sent back or "returned" to the "cooler" or head of the superfine bolts, to be again re-bolted, with the view of mixing and sifting through with the "superine flour."
The "residium" or "offal" then passes from the first bolts to the lower merchant or return bolts, which are generally covered in part or ntirely with coarser cloth than is generally used on the "first bolts," for the purpose of sifting out the particles of flour which is found too coarse to pass through the meshes of the gine cloth on the first bolts. The flour from these bolts is also sent back or returned to the "cooler" or "first bolts," witha view to incor porate it with the superfine flour. The offal is again passed into succeeding bolts, and the flour produced is sent back or returned as above to the superfine or first bolts, and this process is suitable coarse cloth or wire adapted to them,
or separating it into " middlings," " ship stuffs," "shorts," and "bran"" or into 2,3, or more qualities of "stuffs" as may be desired. If se parated into two qualities, it is generally deno minated "shorts" and bran, or "middlings" and bran. Since the introduction of what is well known as "Patent Dusters," the offals are submitted to the action of them, generally after having passed through all the ordinary bolts in the mill, when the work is regarded as perfect ed, with the exception of the middlings, which, it will be seen by their title, are not regarded as offal feeds or residium until after being re-ground, which is usually done át "slack times,", or in ervals between the regular flouring season, af er which, the flour being bolted from them, hey are denominated "finished middlings," offal," or "feeds."
By this process of flouring, the quality of bolting cloth used on the various bolts, though often differing in quality, and the relative proportion of each, is usually about No. 9 or 10 or the superfine bolts; Nos. 6, 7, or 8 for the ower merchant or return bolts, and Nos. 3, 4 or 5 for middlings, with such other coarser quality as may be suited for separating the coars eeds, as ship-stuffs, shorts, or feeds, \&c.
Occasionally, with good machinery and perfeet skill, the flouring process is regarded a finished without re-grinding the middlings, which is then separated with the ship-stuffeand shorts, and regarded as feeds. But in most ca ses that material which is bolted through Nos. 3,4 , and sometimes 5 cloth, being a coarse partially ground flour, is submitted to a second grinding after being carefully separated from the ship-stuffs, shorts, and bran.
The ship-stuffs were formerly used for navy or ship bread, but with the improved machine ry now in use, it is regarded as useless for every purpose save feed for cattle, as used occasional y for distilling.
By this mode of flouring, and with the most mproved machinery managed with the best kill, the barrel of superfine flour is seldom pro duced from less than $415-60$ bushels wheat and is rated to be, on an average, in first clas mills, from $4 \frac{1}{3}$ to $4 \frac{1}{2}$ bushels to the barrel, and by a chemical analysis of various samples of wheat flour it appears to contain about from 10 to 12 per cent. of gluten, the amount of which is generally regarded as a good indication of the nutritive value of flour.
According to Davy's Agricultural Chemistry English Middlesex wheat contained 19 per cent of gluten, Silician wheat $23 \cdot 90$, Poland 20 , and North American 22.50 per cent.-or about double the amount found in the American flour It is also shown by chemical analysis of that part of wheat, which we term bran, that it con tains much more of the nutritive property of Professor Johnston, showing the amount of gluen to be more than double, while by an analy is by Millen, there were shown to be, in 100 pounds of bran as follows, to wit:-

## Starch, dextrine and sugar 53,00

Sugar of liquorice . . . 1,00
Gluten ...... 14.90$\left.\}_{3.60}\right\}_{18}$
Fatty matter $\}^{18 \cdot 50}$
Woody matter 9.70
$50 \cdot 00$

Salts 50.00

Water $3 \cdot 90$
Aromatic principles, \&c. $\quad 3.40$
This analysis was made with 100 pounds of ran from soft F'rench wheat, which it is well known does not contain the amount of nutriive matter that is found in the harder varieties, yet it shows that over two-thirds of the whole amount is of a valuable nutritive material, susceptible of being made into flour, and more than one-half is the very material of which the superfine flour is composed, to wit, starch and gluten, and that the amount of the latter surpasses the average of that found in the best quality of superfine flour. Many experiments in the analysis of wheat, of flour and bran show the same general results, only varying in proportion according to circumstances, all proving conclusively that a large proportion of valuable nutritive matter, which is readily digestible, and which contains a large amount of the fat-forming matter as well as bone and muscle material, goes off with the bran and offal by imperfect

There seems to be considerable contrariety o opinion among chemists as to bran being a nuritive matter; analysis, however, clearly shows that what the miller puts into bag, and calls ban, is highly nutritive, the only question to e settled is whether what custom has designa ted as bran may not have associated with it material that is not bran proper, and which conains the nutritive matter found in tran as it is. This might be decided by an analysis of 100 bs., of the outer coating of wheat, or bran, tasen off by Bentz's process, which, if done, it would undoubtedly show that it is not, of itself, very highly nutritious, as an indispensable art cle for the sustenance of human life.

## (To be Continued.)

(For the Scientific American.]
As your paper is a repository of improvements and discoveries, I wish to contribute to its eoumns a few particulars in reference to the recent discovery of gold in this vicinity. The aurifeous character of this region was first noticed, or t least made known, by returned Californian miners. One of these, Mr. Hankerson, with his party, have been digging and washing for the metal at Madrid, on Sandy River, in this county, or some time; but of the results of their labors we have not been authentically informed. I have seen about twenty-five small pieces of gold, and had an opportunity of testing some of it, wich was washed from the sand of their localiy by gentlemen visiting the place. Many who have visited their "diggings" think that the gold is not found in sufficient quantities for profitable working.
A few days since I visited, (in company with two friends,) a saw-mill in the south-western part of "Phillips," and washed out a smallquanity of this metal. The pieces procured were small, only about the 55th of an inch across. When viewed with the microscope, their surfaces ppear very uneven; numerous indentations peculiarly mark them, which are evidently the marks of the matrix in which they were consolidated. It was found in coarse gravel and sand which had been washed from the wheel-pit of the mill. The gravelly soil contains numerous uartz, and a considerablequantity of black feruginous sand. The black sand is slightly magnetic. The gold must have been carried from its primitive position by water, and lodged in the diluvial deposits. The land is very uneven in the vicinity, rising into little eminences or mounds, and characterized by a profusion of eratic boulders. The soil issterile, and in places strewed with fragments of quartz rocks.
We cannot judge, at present, to what extent the metal may be found; but it is very improbable that it can be obtained soas to compensate, reasonably, the miner for his labor. That it is ound in minute grains at several places in this ection, I cannot doubt.
The principal advantage which will arise from its discovery, I think, will be in the determining of the mineralogical character of the country. Stillman Masterman.
Weld, Me., Oct. 4, 1853.

## Our Navy Steamers.

The U. S. Steamship Allegheny has returned from her trial trip disabled, and the engineer pronounces her unfit for service, not having been able to get more than four and a half knots per hour with the aid of sails. The engine trame, being of cast iron, was split by the expansion of the vessel, which is also of iron. The issure spread open an inch wide, causing a general smash of the machinery.
Since the Princeton's return to New York a urvey has been held on her machinery-engineers Copeland, Martin, and Shock held it.They report that but slight alterations, which may be made in six weeks at the farthest, will be necessary to render her probably quite as good a vessel for the service required of her, as was or
[The above we copy from our dailypapers.It fully confirms everything we have said about the disgraceful state of our naval steamers. m is certainly demanded in our Navy

The "Argane," a tree, the fruit of which (affurnishing an abundant oil) is excellent food for cattle, is now introduced into France.

