Scientific American.

Scientific Congress---Improved Instruments Wante

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In 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 Thanks are, therefore unanimously voted to Mr. be carefully made with regard to it, both at and with a splendid gold watch and chain, last week, 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 explained 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 Government sympathised with the proposal of the English Government, 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 bringing 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 kereign 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 ma rine 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 receive 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 not known, are of little value, and it is therecharts.

is to agree upon a uniform mode of making nau- ; search, whether some plan may not be adopted tical and meteorological observations on board in different countries, for supplying navigators, 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 should be appointed by the Gov

vices which he has rendered, and is still endea-Maury.

Lieut. Maury :

sympathy you have expressed, and the praise in philosophical instruments. you have been pleased to bestow on my humble efforts. On 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 resolution was passed to that effect, in order to call the attention of the public to the importance 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 determinations.

The Conference was of opinion that the mercurial barometer was the most proper instrument to be used at sea for meteorological pur-

With regard to thermometers, the Conference does not hesitate to say that observations made with those instruments, the errors of which are fore recommended, as a matter well worth the The object of our meeting then, gentlemen, attention of co-operators in this system of reas well in merchant-men as men-of-war, with thermometers, the errors of which have been accurately determined.

For the purpose of meteorology, various

President, to express to Lieut. Maury, their admi- | circulation of sea-water depends in some degree ration and their gratitude for the eminent ser- | upon the relative specific gravities of the water in various parts of the ocean, it was judged de- Machine Department, presented Mr. Holmes, below the surface."

GENTLEMEN.-I am extremely grateful for the improvements in navigation, and improvements manner in which he has conducted the affairs

Bridge Over the Mississippi.

thus of the new bridge which is to cross the sonal effort, experience, and skill. 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 alimentary matters may be reduced to three Illinois and Iowa, at this point, is at last located, classes : the saccharine, the oleaginous, and the let out to contract, and to be finished by the first day of December, 1854.

The bridge is to commence in this city, imwhere the upper iron 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 mixed with bread, as a food for children. 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 feetlong, 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 reminiscences-the Island itself abounding in romantic interests, and the busy, thriving and from all points of the world to gaze upon a living panorama, which they may never forget.

Deep Ocean Sounding.

The United States Ocean 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 table-spoonful of powdered mustard in a tummeteorological 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 vellow 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 reachlon, 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 Mechanics' Exhibition at Boston, recently cloobservations, particular attention was paid to the sed, were \$19,000. The number of paying viwidth, depth, and force of the current in diffe- sitors at the halls was seventy-six thousand.

Compliment to Joseph E. Holmes.

Several of the exhibitors and attaches of the voring to render to the science of navigation. sirable to recommend that observations should the Superintendent of the Machine Department, in a very quiet way, as a token of their respect Here is a field standing broad and wide, for and appreciation of the able and considerate of his Department in connection with the interest of exhibitors and those employed under his charge. This is a deserved tribute to one who The "Rock Island (Ill.) Advertiser " speaks has effected so much for the Exhibition by per-

Quality of Milk.

Dr. Prout has shown that all our principal albuminous, represented by butter, sugar, and white of egg. Now, milk consists of all three -the curd, which is chiefly albumen; the butmediately above the depot, at or near the place | 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,

Railroad Houses.

On 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 prairies, and they are put in stalls when the locomotive village moves forward to a new place. This plan has been found to work

Guano for Cotton.

well.

J. M. Dantler, a cotton planter of South Cabeautiful cities of Rock Island and Davenport on rolina, states that in 1852, by way of an expeeither side of the "Father of Waters," will form | riment, he applied 241 pounds of Peruvian a combination of landscrpe so grand that it will Guano, mixed with sand, to an acre of cotton not be the least of attractions to draw travelers plants, and that the additional yield was over 100 percent. 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 bler 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 champaigne, 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, eled, was 3,130 fathoms, in lat. from 41 to 43, der-berries, whiskey, and burnt sugar, and it can with these be easily counterfeited.

The receipts for tickets of admission to the

		and another affahre and all affinite here here.	
			M. Arago, the eminent French savan, died in
of which I have spoken, through whom also the	grometry and solar radiation; and for tempera-	• • • • • • •	
			Paris on the 1st inst. He is well known in
of obtaining them."			America as the author of an excellent cheap
The President:	ment in addition to those generally used at sea	A young nobleman, celebrated for his Hercu-	work on Astronomy, which was edited by Dr.
GENTLEMEN: I think I shall be anticipating	for which the Conference has thought proper	lean strength and rashness, has made a voyage	Lardner.
	to which the contribute has inought proper	from Venice to Trieste alone, standing on two	
proposing to them to pass in the first place a			
		inches thick, fastened by an iron clasp, and	they are only applied for a short time.
	of the wet, the white and black bulb thermome-		
	tors are options, sur mon regard to the ther		The number of admissions to the Crystal Pa-
			lace on Saturday was twenty-three thousand
ful work, which forms the subject of our delibe-	; the introduction on board ship of a regular se-		three hundred and seventy-one.
rations."	ries 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 French Journals record the successful ex-
tire concurrence in the proposal made by the	the whole system of ocean currents and of the	the weather.	periments of a chloroform ship. Bah !
Pro.			
	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 to record our gratitude for the enlightened zeal and earnest- ness he has displayed in the important and use- ful work, which forms the subject of our delibe- rations." All the members in turn intimated their en-	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 to record our gratitude for the enlightened zeal and earnest- ness he has displayed in the important and use- ful work, which forms the subject of our delibe- rations." All the members in turn intimated their en-	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 to record our gratitude for the enlightened zeal and earnest- ness he has displayed in the important and use- ful work, which forms the subject of our delibe- rations." Commercial to the description of the specific gravity of the introduction on board ship of a regular se- reis of observations upon the specific gravity of the introduction on board ship of a regular se- reis of observations upon the specific gravity of

Scientific American.



[Reported Officially for the Scientific American.] LIST OF PATENT CLAIMS

Issued from the United States Patent Office

FOR THE WERK ENDING OCTOBER 9, 1853.

FOR THE WEEK ENDING OCTOBER 9, 1853. PLOWS-BY C. R. Brinckerhoff, of Batavia, N. Y. : I claim, first, combining with the plow beam between the plow and the clevis, two wheels, one on each side of the beam and of different diameters, the one resting in the furrow, and the other on the land, as described. Second, I also claim making the tread of the furrow wheel narrow for the purposes described. I also claim making the said wheels, especially the fur-row wheel, adjustable in the direction of its axis, for the purpose of adapting its position to furrows of different widths. I also claim making the furrow wheel hevelling cut

I also claim making the furrow wheel bevelling out ward on the side which presses against the land, as se forth. I also claim making the small wheel adjustable vertically with reference to the shaft and the large wheel, as described.

described. HULLERS OF GRASS SEED-By H. P. Byram, of Louis-ville, Ky.: I claim, in combination with the rubbing or scouring wheet, the method of feeding up and holding against the said wheel, the seed to be cleaned by a pres-sure which is unvarying, whether the hopper be full or not, as described.

DETACHABLE LINING FOR THE FIRE BOXES OF STEAM BOILRS-By John B. Collan, of Reading, Pa.: I claim a detachable lining for the sides and ends of fire boxes of steam boilers, consisting of one or more tubes con-nected with the adjacent water space by means of hol-ow bolts, or their equivalent, as set forth, so as to ad-ow bolts. mit of the ready removal and replacement of the tubes

AsH PANS FOR LOCOMOTIVE ENGINES—By Gilman Davis, of Roxbury, Mass.: I claim taking in the air in front of the ash-pan, and introducing it into the fire-box in a di-rection opposite to the furnace doors, to protect the fre-man from the back lash of the fire when said doors are opened, by means as described.

OPENING AND CLOSING GATES-By S. G. Dugdale, of Richmond, Ind.: I claim, first, opening, closing, fasten-ing, and unfastening the gate, by moving the bottom of the gate in an oblique direction from and to the post, upon which it is hung, as specified. Second, I also claim the use of the pendulous and ver-tical levers and arms, in combination with the hinges of the gate, as set forth.

COVERING IRON WITH GUTTA PERCHA-By Chas. Good year, of New Haven, Conn.: I claim the art or method of coating articles composed wholly or partly of metal with compounds of caoutchouc or guita percha, and subjecting the same to a high degree of artificial heat or the process of vulcanization, as specified.

HILL SIDE PLOWS-By N. Harrison & J.W.H. Metcalf, or Ridgeville. Va.: We claim curving downward and in Ridgeville, Va.: We Claim curving downward and in-ward the beam in the rearpart, so as to cause it to sup-port the rotary part of the plow, which it performs in combination with the standard, as set forth.

comonation with the standard, as set forth. DRIVING CIRCULAR SAWS-BY JOSEPH HAIRIS, Jr., of Boston, Mass.: I do not claim driving pulleys by their surfaces coming in contact with each other, that me-thod having before been used. I claim. first, the method of hanging the arbor frame on journals, for its axis each side of the driving pulley bringing the axos of the arbor frame within the circum-ference of the driving pulley, or on a line passing through the driving pulley, in such a man mer and at such an angle with a tangent to the driving pulley, as descri-bed. Second, hanging the arbor frame on such an arch

bed. Second, hanging the arbor frame on such an angle that the act of feeding the stuff to the cutter will press the arbor pulley against the driving pulley, in combina-tion with a spiral spiral, or its equivalent, for holding the arbor pulley inmly against the driving pulley, as described.

ATTACHMENT OF A HARROW TO A LAND ROLLER-By Da-niel Hill, of Bartonia, Ind.: I claim the arrangement and mode of attaching the harrow to the forward axle of a roller, as set forth.

COB AND STALK CUTTERS-BYT. B. Jones, of Carloville, Ala.: I claim the combination of the feeding trough, its gauge disc, the tube, and its gaugering, with the knives, whereby the same knife will, at the same time, cut for der coarse and cobs fine, and thereby improve the qua-lity of the product as feed for animals.

WINNOWERS OF GRAIN-By H. M. Keller, of Newark Ohio: I claim the trap door in combination with the screen, arranged and operated as set forth.

STRAW CUTTERS-By J. J. Parker, of Marietta, Ohio: I claim operating both the reciprocating gate and the feeding rate by means of the compound spring pitman, substantially as herein set forth.

ROTARY ROOT-DIGGING CULTIVATORS-By Samuel Snow, of Fayetteville, N. Y., and Alexander Hime, of La Fa-yette, N. Y.: We claim the combination of the two tooth yete, N. Y.: We claim the combination of the fat ed cylinders with the receiving box, all being arranged and suspended on an adjustable frame in the manner set forth.

SHAKING SHOES FOR WINNOWERS—Jacob L. Van Valken-burgh, of Ogdensburgh, N. Y., I do not claim the use of sieves in cleaning grain, but the communication of re-ciprocating rotating motion to the selve or separators, and also the construction of the machine in the manner set forth for separating grain from cockle &c.

Set loful to separating grain from covar ac. TREATING METALS WHILE IN THE MOLTEN STATE—By Ho-race W. Woodruff, of Watertown, N. Y.: I claim treating metals while in the molten state, to exped impurities therefrom, by immersing therein some porous or cellular non-conducting substance or substances containing li-quid matter substantially as specified.

Since the Princeton's return to New York a vet it shows that over two-thirds of the whole Tenn.: I claim the employment of the double-chamber-ed slatted bottom tub in combination with the vibrating or rocking frame constructed with two hinged slatted wash boards, which have cords passing under the bot-toms while washing, the said boards being mademovable or swinging, so that the clothes can be easily laid on the cords, and also being set in such a position that they and the clothes will always be caused to strike parallelly the slotted bottom and the hot suds in the tub. and force the latter through the pores of the clothes, and cause them to be washed clean, the whole being constructed and arranged and operated in the manner described. The "residium" or "offal" then passes from amount is of a valuable nutritive material, sussurvey has been held on her machinery-engithe first bolts to the lower merchant or return ceptible of being made into flour, and more neers Copeland, Martin, and Shock held it .-bolts, which are generally covered in part or than one-half is the very material of which the They report that but slight alterations, which entirely with coarser cloth than is generally superfine flour is composed, to wit, starch and may be made in six weeks at the farthest, will used on the "first bolts," for the purpose of gluten, and that the amount of the latter surbe necessary to render her probably quite as sifting out the particles of flour which is found passes the average of that found in the best good a vessel for the service required of her, as too coarse to pass through the meshes of the quality of superfine flour. Many experiments was originally expected by the Navy Depart-This is a very novelarrangement, and is capable of fine cloth on the first bolts. The flour from in the analysis of wheat, of flour and bran show ment. operating well. GRIDDLES-By Banford Gilbert, of Pittsburgh, Pa.: I claim constructing griddles of two pieces, soparated by flanges furnished with openings to admit of the passage of cool air between the upper and lower pieces of the griddle, which openings may be closed at pleasure, as described these bolts is also sent back or returned to the [The above we copy from our dailypapers.the same general results, only varying in pro-"cooler" or "first bolts," with a view to incorportion according to circumstances, all proving It fully confirms everything we have said about porate it with the superfine flour. The offal is the disgraceful state of our naval steamers. A conclusively that a large proportion of valuable griddle, wi again passed into succeeding bolts, and the flour nutritive matter, which is readily digestible, and reform is certainly demanded in our Navy. OSCILIATING ENGINES-By A. B. Latta, of Cincinnati, Ohio: I claim the mode of arranging the valve cham-bers, outside of the barring or trunsion on which the cylinder oscillates, in such a manner as to allow the wrist pin of the eccentric rod to move equally across the center of the trunnion and moving equally above and below, and hereby giving motion to the valve or valves produced is sent back or returned as above to which contains a large amount of the fat-formthe superfine or first bolts, and this process is ing matter as well as bone and muscle material, The "Argane," a tree, the fruit of which (afcontinued until the offal reaches the bolts with goes off with the bran and offal by imperfect ter furnishing an abundant oil) is excellent suitable coarse cloth or wire adapted to them, manufacturing. food for cattle, is now introduced into France.

I claim these arrangements or their mechanical equi valents.

LIFE BATS-By Lelland Foreman of New York City: I claim constructing the body of my life-boat wholly of metallic tubes, brazed or similarly united throughout, thus affording a water tight and solid metallic connec-tion, and mutual bracingo fevery part. as shown, where-by are attained the objects explained in a compact and generally advantageous manner. I further claim, in combination with such boat, the de-tachable tubular seat, as described.

VALVE MOTION of OSCILATING ENGINES-By Wm. Stephens, of Pittston, Pa.: I claim, first, the combined ar rangement of the slide valve and the guide, which as sits the oscillation of the engine in producing, and di rects the motion of the said valve, as described, to wit the valve being arranged to work transversely to the cylinder, and the guide being in the form of part of a heix or screw, concentric to the axis of the cylinder oscillation, and receiving an armorcross-head, stached directs the mechanism usually employed is dispensed with.

termeatate metaanism areas, see a second, giving the value the necessary or desired lead, by means of the adjustable sliding lining pieces which line the sides of the guide, and are furnished with projecting or rising parts, which will give the necessary lead in working the engine in either direction, as set forth

[A notice of this invention is published on page 372, Sci. Am.]

CUTTING BINDERS' BOARDS-By John A. Elder, of West' rook, Maine, (assignor to John E. Cofin, of Portland, Me.): I claim, first, the arrangement of machinery for utting pasteboard into strips, and those strips a given ength at the same time. Second, the arrangement of the rocker shaft, rolls, and shears, as described. Third, I also claim the series of shears, or its equiva-lent for the nurnes described. Me.): cuttin

lent, for the purpose described.

lent, for the purpose described. CULTIVATING PLOWS-BY L. M. Whitman (assignor to S. G. Wise), of Weedsport, N.Y.: I claim the employment of the long inclined spring wings, secured at their front ends to the share and maan standard, and turning upon the pin, in combination with the mechanical contrivan-ces shown, for expanding and contracting the wings, or setting them more perpendicular and nearer together, for the purpose of throwing more Pulvrized soil against or up to the hills, or setting them less in-clined to the horizontal plane, and further apart for the purpose of allowing the pulverized soil, weeds, &c., to pass over them into the board open spaces in the center, the said wings in either casecutting up the weeds and pulverizing the soil, as set forth. IWe should think this an excellent machine for outting

[We should think this an excellent machine for outting eeds.]

METALLIC COFFINS-By T. J. Gillies, of Williamsburgh N. Y.

CORRECTION .- COOKING RANGES-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 "I do not claim to so combine," there should have been inserted the following:

"I claim the arrangement of the openings, Y Y, and damper, Z, with respect to the arrangement of smoke flues above and below them, as specified, by which com-bined arrangement I am enabled, when desirable, by the direct traft, to cause the heat to pass under the back half of the bottom of the oven up alongside the entire back of the oven, and over the top of the oven into the chimney, instead of carrying it entirely around the oven, as set forth.

Also insert the word, "chamber," between the words boiling" and "is," in the sentence " but the bottom plate of the boiling is also made to impart heat thereto. which occurs near the end of the claim as received and published by us.

Bonnell's Patent Flouring Process.

[As stated by us last week, we commence to publish the full specification of David P. Bonnell's patent process for manufacturing flour. The information contained in it is valuable to every person in our country-miller, farmer, chemist, &c. It will be completed in about three numbers.]

Before describing my improvement, I will briefly explain the process now practiced, which is as follows, to wit: the grain after being cleaned is passed between the surfaces of the mill stones, and by the friction imparted by them. pulverized and sent to the cooler, or "first bolts," for the purpose of separating the flour from the "offal." In ordinary flouring mills it usually passes through two bolts, called "superfine" or first "merchant bolts." The flour produced by this bolting is generally divided by means of conveyors under them, into "superfine flour," and what is termed "returns." That part first produced at the head of the "bolts" s sent to the packing chest or barrel, for packing, the remainder produced, towards the "tail,"

by said eccentric, independently of the oscillating of the cylinder. I also claim the sliding bar or bars to which the eccen-tric is attached and passing up the whole length of the valve chambers to the end or ends, as the case may be, and attached to the valve rods, thereby giving motion to the valves. "shorts," and "bran" or into 2, 3, or more qualities of "stuffs" as may be desired. If separated into two qualities, it is generally denominated "shorts" and bran, or "middlings" and bran. Since the introduction of what is well known as " Patent Dusters," the off-als 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 perfected, 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 at "slack times," or intervals between the regular flouring season, after which, the flour being bolted from them, they 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 for the superfine bolts; Nos. 6, 7, or 8 for the lower merchant or return bolts, and Nos. 3, 4, or 5 for middlings, with such other coarser quality as may be suited for separating the coarse eeds, as ship-stuffs, shorts, or feeds, &c.

> Occasionally, with good machinery and perfeet skill, the flouring process is regarded as finished without re-grinding the middlings, which is then separated with the ship-stuffs and shorts, and regarded as feeds. But in most cases that material which is bolted through Nos. S, 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 machinery now in use, it is regarded as useless for every purpose save feed for cattle, as used occasionally for distilling.

By this mode of flouring, and with the most improved machinery managed with the best skill, the barrel of superfine flour is seldom produced from less than 4 15-60 bushels wheat, and is rated to be, on an average, in first class mills, from 41 to 41 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 23.90, 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 contains much more of the nutritive property of the grain than is found in the superfine flour. Professor Johnston, showing the amount of gluten to be more than double, while by an analysis by Millen, there were shown to be, in 100 pounds of bran as follows, to wit :---

Starch, Sugar c						0		
0		-						14.90 3.60 } 18.50
Fatty m	att	ter	•		•	\sim	•	3.60 5
Woody	n	att	er		÷		÷	9.70
Salts .								
Water							2	13.90
Aromat	ic	pri	nci	ple	s, &	c.		3.40

This analysis was made with 100 pounds of is sent back or "returned" to the "cooler" or pansion of the vessel, which is also of iron. The VEGETABLE CUTTERS-D. H. Whittemore, of Chico-pee Falls, Mass: I claim the combination of the long and short knives on the peiphery of the cylinder with the hopper arranged and described as represented. bran from soft French wheat, which it is well head of the superfine bolts, to be again re-boltknown does not contain the amount of nutri- fissure spread open an inch wide, causing a geed, with the view of mixing and sifting through tive matter that is found in the harder varieties, neral smash of the machinery. WASHING MACHINES-H. G. Robertson, of Greenville, renn. I claim the employment of the double-chamberwith the "superfine flour."

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

(To be Continued.) (For the Scientific American.) Auriferous Discoveries in Maine.

As your paper is a repository of improvements and discoveries, I wish to contribute to its eolumns a few particulars in reference to the recent discovery of gold in this vicinity. The auriferous character of this region was first noticed, or at 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, for 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, which was washed from the sand of their locality 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 smallquantity of this metal. The pieces procured were small, only about the 55th of an inch across. When viewed with the microscope, their surfaces appear 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 gravefly soil contains numerous quartz, and a considerable quantity of black ferruginous 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 is sterile, 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 found in minute grains at several places in this section, 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 ex-

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