[For the 8cientifc American.]
Parker's Water Wheel.
As you are frequently asked by many of your correspondents which is the best iron waterwheel, it may be some advantage to your inquiring friends to have a statement of the performance of a set of Parker Turbines (if you choose to call them so), that have been in successful operation for two years in the paper mill of Mr. C. Van Reed, residing in Reading, Berks Co., Pa. There are four of these wheels working on vertical shafts, all geared by bevel cog-wheels to one line shaft, from which the power is taken to three rag-engines by belts. The water-wheels are four feet diameter, each wheel issuing 350 square inches, or the four wheels jointly 1400 square inches of water, and make at work 65 revolutions per minute. The whole head or pressure of water on the wheels when at work is but two feet three inches.
Mr. Van Reed gives as a statement that his mill is regularly started on Monday mornings, at 3 o'clock, and runs steadily till Saturday night at 12 o'clock, making 141 working hours per week, and that their regular week's work is to turn out 4,000 pounds of paper, from coarse hard stock, suitable for books or newspaper. Previous to getting the Parker Wheels he used for his motive power an undershot wheel, the gate orifice of which was 2200 square inches, the power of the wheel was only sufficient to drive two of the rag-engines at a time; and he had a steam engine to drive the paper machine, and to assist the water wheel when there was back water, or a scarcity, to make up the deficiency of the power required. Since he has adopted the Parker wheels above described, with an addditional one to drive the machine, he has dispensed with the use of the steamengine entirely, finding he has abundant power without it. The amount of water discharged per minute by the four wheels is 5,248 cubic feet; and the estimated power at 70 per cent. of effect is $15 \cdot 65$ horse-power. The amount of work performed is usually estimated to require 20 to 24 horse-power, which would indicate a very high percentage of power for these particular wheels. And we think the world might be safely challenged to produce as high a performance with the same amount of water and formance with the same the same head. $\quad 0 . \mathrm{H}$. P. Parker. under the same head. 0.18.
Philadelphia, Feb. 9, 1854.

Governor's of Engines.
Messrs. Editors.—In vol. 9, No. 18, of your paper, Mr. Mascher says:-"All governors that I ever saw applied to steam engines are not governors, properly speaking. I might call them ameliorators inasmuch as they govern the variations only partially." This defect I have spent a great deal of time and money to remedy. In examining the principles of action of the old fly ball governor, I found there was much more motion in the balls than in the hub that actuates the valve, in consequence of the balls depending on centrifugal force for their action, and the more speed, the less power is there to act on the throttle valve. To remedy this $I$ found that the weights or ballsshould run parallel with the spindle, and move the valve an equal distance with the weights so as not to have any lost motion. I have attached four disks, (two will do) with flat surfaces to four arms cast solid in the hub. To the hub is attached a spiral, so that a spindle passes through both freely. The spindle has a pin and roller for the spiral to rest upon. When the and roller for the spiral to rest upon. When the
spindleis putin motion, the weights or disks will not inmediately partake of the same motion as the spindle, consequently the roller will be driven under the spiral and raise the disks, arms, and hub, together with the valve attachment equal hights-the atmosphere assisting to keep it up by retarding the weights or fans, to keep it up by retarding the weights or fans,
-and will hold them there. But if the spindle -and will hold them there. But if the spindle
slacks its motion in the least, the weights by their momentum will continue to move on and drive them down in proportion as the spindle is changed, and so on alternately, acting on the principle of a fiy wheel loose on the crank shaft. Mr. M. says, "the action of the governor depends on two forces, centrifugal and gravity," and "the balls should move in a certain curve."You will see that this spiral governor has no "centrifugal" force to actuate it, neither do
the balls "move in a curve," the curve being
in the spiral near the centre of action, this curve usually being semicycloid or any other curve to suit the work, and the goveror may be driven at any speed and can be varied to suit any requirement. Mr. M. hopes these glaring defects will be obviated before the next World's Fair. The defects were removed before there was a Worlds Fair-in this country at least. I had it on exhibition at the Crystal Palace but found it difficult to attract the attention of the knowing ones. Not an editor to my knowledge noticed it as any thing novel or useful, neither did the jury apparantly see in it anything worthy of more than honorable mention, an article that I have plenty of, from those that qualities unlimited in its mode of construction and ac unlim
tion.

John Tremper.
[This governor was illustrated on page 244, vol. 8, Scientific American. Mr. T. must excuse the editors and reporters of our daily papers for theiroversight: they cannot be expected to possess an accurate knowledge of what is new, good or bad in engineering apparatus. The same apology may be made for the awarding Juries at the Crytal Palace, if we may be permitted to take their decisions for a criterion to judge from.

Putrifaction of Fish by Moonlight.
Messrs. Editors:-It is a very general tradition that fish and meat decompose most rapidly during moonlight nights. I have recently had my attention directed to an explanation of it, which I copy verbatim from page 143 of "Familiar Science," by R. E. Peterson, of Philadelphia. He says:-Ques. "Why is meat very subject to taint on a moonlight night? -Ans.:-Because it radiates heat very freely on a bright moonlight night; in consequence of which it is soon covered with dew, which produces rapid decomposition."
Now, dew may produce decomposition, but is moonlight essential to the deposition of dew? Will not a deposite take place on a moonless night, when the other conditions of clearness, calmness, \&c., are present, as effectually as on a moonlight night? I was not aware that radiation was more rapid on a moonlight night than any other, if the latter were equally clear and still.
Another explanation I have heard, viz., that he chemical ray predominates in the light of he moon, and hence chemical action is prodused more rapidly in it than in sun-light, in which he calorific aud colorific rays predominate.
At any rate, be the explanation what it may, all the old housekeepers say it is a fact, and on that account they never hang out their beef in moonlight, when curing it. T. R. J., Jr.
Accomac, Va., Feb. 9, 1854.
[The last explanation of the phenomena appears to be philosophical; but we are not yet positive that fish putrifies more rapidly in a moonlight than any other night: we know it is not so during frosty weather. The question of frozen fish coming alive again, was settled for ever, last year, through the columns of the "Scientific American." Who will settle the question of the effect of moonlight upon meats and fish.-Ed.

## To Detect Cotton in Woolen or silken

 Fabrics.Messrs. Editors-I have just read an article in your excellent paper of this week, headed with the above title, in which Dr. Pohl is shown to employ a certain chemical preparation for the detection of "cotton in woolen or silk tabrics," to which you add your more simple yet more readily practiced by every one.
It appears evident that your aim and object is to benefit the whole human family, "both great and small." ThereforeI conclude to give another means to test the above, still more simple than yours, or at least more readily attained, inasmuch as the majority of purchasers in retail stores would not feel free to apply a lightd match to ascertain the material of which the cloth is composed, however important it might be to know the fact. My plan, long since adopted, is to draw out a thread and put it between the teeth, by which the material is easily detected ; silk, wool, and cotton, each has
its own peculiar feeling to the teeth, which, with very little practice, can readıly be detected by any one, not only without expense but without attracting particular attention.
Oakendale Farm, Feb. 10, 1854.

## Trial of Reapers.

Messrs. Editors:-As a manufacturer, I desire to enter my protest against any more petty trials of reapers. They cost a great deal and amount to nothing. The decision at one trial is reversed the next week at another, perhaps with the same machines, and often the competitors can show their defeat was owing to some extraneous circumstance, as not having a suitable team, bad driving, or unfortunate manage ment in some way.
A reaper trial is not like a horse-race, where the sole object is to beat, regardless or everything except the coming out ahead; it is, or ought to be, to ascertain surely which is the
best machine, and not so much to benefit the best machine, and not so much to benefit the kind to buy.
How absurd isit for any set of men-I care not how great their experience and judgement-to take from three to a dozen reapers, perhaps all of acknowledged merit, and by the cutting of two acres each, as was done at the Wooster, Ohio trial where mine was defeated; or even by cutting five or six acres as at the Richmond, Ind. trial where mine was victor, deside positively and absolutely that one reaper is better than all others.
Such a trial might show whether a reaper would work or not, but to judge between rival reapers, of which there are over twenty of established reputation, each having its points of excellence; a long and thorough trial must be requisite, to see how they work in different kinds of grain, and under varied circumstances, and how they wear. A trial to be decisive should go through an entire harvest. One, too, that
was thorough and reliable, would be equally available in one State as another. They are also expensive to all concerned. I would therefore propose a general trial on something like the following plan:
Let several State Agricultural Societies unite, each appropriating $\$ 200$ to $\$ 500$, and appointing one or two committee-men, in whose experience, judgement and fairness, entire confidence could be placed. Let the committee make their arrangements early as possible, adopt their rules, and appoint time and place of first meeting. They might begin South and proceeding North continue the trial for weeks if necessary, leaving out one machine after another as its inferiority became manifest.
The committee should have all their expenses paid, and perhaps compensation besides; and the cost of removing reapers from place to place might also be borne by the committee, in order to enable every builder to come into the trial ; and for this reason I would not require any entrance fee, though some of the larger builders would doubtless be willing to contribute to the general fund. If five or more societies can be got to unite in such a trial, I will contribute $\$ 200$ to $\$ 500$, or as much as any other builder.
The surplus funds should be divided to the best machines, say half to the first, one-third to the second, and one-sixth to the third, to be paid in plate or money as might be desired by the winner.
To save time and expedite arrangements, I would suggest to parties interested to correspond with Col. B. P. Johnson, Secretary N. Y. State Agricultural Society, Albany, N. Y. I have not communicated with him, but am quite sure his interest in agricultural matters will cause him to bear the labors with cheerfulness. ${ }_{\text {Chicago Ill }}$ Feb. 7 th, 1854.

## Electricity as Motor.

Prof. Lovering, in his eighth lecture on Elecricity, before the Boston "Lowell Institute," said: - Electricity would never be used generally for the purposes of mechanics or locomotion because of its expensive character, twentyfive cents expended in steam being as productive of power as two dollars expended in electricity. It is true that it is used in producing
some of the very finest portions of astronomical instruments, in operations where extreme delicacy of motion is requisite, yet electro-magnetism can supercede gunpowder. Each has its peculiar sphere."
[This is also our view of the subject as it re ates to expense, but there is a morefatal objection stili to the use of galvanism as a motive power,-we allude to the delicate nature of electro-magnetic conductors in machines, and he sensitiveness of the current to atmospheric influences. Steam is perfectly under the con rol of machinery, but the electric current is not, at least by any known appliances. An electro-magnetic engine of 10 horse power, by the simple disarrangement of one wire (not easily discovered) will not give out over 1 horse-power. The management of the batteies, also, is difficult and troublesome, and not to be compared in simplicity to the furnaces and boile rs of a steam engine.

## Spinning Zinc

John Newell, of New York City, has inventd an improved mode of spinning zinc. Owing to the brittleness of this metal, the production of forms having deep depressions or high proections, by the process termed spinning, has been very difficalt, and this improved mode is intended to overcome this diffieulty and render he metal ductile. This is accomplished by he application of coup oil to the zinc before and during the process of spinning, the action of which, upon the metal, tends to increase its tenacity. By this process, lamps and all artiles now made of Britannia metal can be produced cheaper than by its use. The inventor has applied for a patent.

Immense Steamshlp.
A new and powerful steamship called the Himalaya has been built in England for the Peninsular and Oriental Steam Navigation Company. From the Thames to Southampton, he verage progress during thirteeen hours that she was under way, notwithstanding unfavorable weather during part of the time, was $13 \frac{1}{2}$ nots per hour.
The Himalaya is said to be thelargest steamship in the world. She is 3,550 tons register, and equal to over 4,000 tons burden. She is 372 feet 9 inches in length, exceeding the length of the Boston clipper, Great Republic, lately burned at New York, by 47 feet, but not of equal tonnage. The Himalaya is a screw steamer built of iron, and has engines of 700 horse power. She has accommodation for 200 first and second class passengers-stowage for 1000 tons of measurement goods on freight, and can take 1200 tons of coal.

## The Steamer Wm. Norris

We have seen it stated in one paper that this teamer which is now building, and which Mr. Norris declared would cross the ocean in six days, has been sold to the Czar of Russia, and by another paper to the Sultan of all the Turks.Both of these reports are no doubt untrue.These Royal:persons-Bear and Turkey, what do theyknow about the $W m$. Norris. Neither the builder nor the engineer can for a moment be accused, of being afraid to stand before the world in endeavoring to fulfil their promise of crossing the ocean in six days.

## Half Bricks.

We believe that a benefit would be conferred upon masons, if brickmakers would mould half-sized as well as whole bricks. Half bricks are often wanted for beginning and finishing rows, so as to have every alternate row break joint. To obtain these, the masons have to break whole or trim broken bricks. This occupies considerable time which would all be saved by half mould bricks, of which a certain number might be made for every thousand of whole bricks of the common kind.

Another American Yacht Victory
A very exciting and agreeable aquatic race lately took place at Melbourne, between the "Pride of the Seas," an American schooner of 240 tuns burthen, by G. W. Steers, of this city, the designer of the "America," and a yacht named the "Lelia," recently built in England, and of a beautiful model. The latter was fairly of a beautiful model. The latter
beaten in a race of about 30 miles.

[Reported Ofificially for the Scientifc American.]
List of patent claims Isaued from the United States Patent Offe por the week ending february 14, 1854 ,

 ween them substontially as speci fed, with acurrentor
urrentsof airto acton the pickersduring the operation
f combing, and with the rotating brush acting.on the

 pipes with a vertical central passage of large section
and surrounding passageo of smiliar section, said cen-
tral pipe and isimiar passages being open above and be
low as described.

 Nor do I wish to 1 imit myself to the use of a rotating
brushor orpesenting orfeding the fbers ot the ribs and
picker teeth, as this makes no part of my invention.
 Hirh picker teeth for catching and drawing the fiber slatat terminating in an enlargement or hole to receive
the fers and guide them away literall from the pick-
er teeth to prevent them from being chated or cui be-

 teeth st or near the portion of that length of the ribs
Hhere the Abers begin to be drawn through, s. speci.
fled, whereby 1 effectually avoid the cutting of the fi-
bers.
bers.
Ialso claim uniting the contiguous barbs of any two
ribs and cxtending them doon below the point of the
סickerteeth, as specifled. to prevent iners from passing


 ble casing, for fre-proor safes are at present construct-
edin that manner
Illailine the use of glass orslag in a pitrified state. for
filing the space between the two casing of a safo or fuling the sapace between the two casings of a safo or
Vaut door, the glaso or vitrifed silug beang pured mol
ten in to the space, or inserted in plates which may be ten int the space, or casing in any proper mann may be and
secured to tel
an air space left around the inner casing, as set forth.







 with much of the tedious m
heretofore practiced. while a.
of the product is improved.
 inders for the purpose of making paper of increased
thickness, as clinders have been thus used before. I claim the combination of the twof ormingcylinders,
the two endess felts, and the squeeze rollers, ar
ranged and operating as described.

 charge into the conveyor by power independent of gra-
vity, and to force the hole oon
der, as described and this I claicating itht the whether the pewd ring be combined with a screw exteriorly placed or with-
in the interior of the clutter of tubes, or whether the
same ffect be produced by or in any manner analo.
gous.

 vesor, whenever and as often as a charge has been
tranfferred tot the barrel,
This describibed. clain the folower in combination with the
cavity of the conveyor and the lever for ejecting the cavitg of the conveyor and the lever for ejecting the
chargeinto therrel as descibed.
Fourthi Ilaim the cam grove in combination with
the finger levers, and the cap case to regulate the feed, Fourth, I cever
the fnger leseribed.
as descrin
 dish (assignorto John Standish \& H. A. Miller), of Cuy-
ihoga Falls, ohiol clain, ifrt, the vibrating guides,
in combination with the peg.ffeding rack and driver, as in combibedion with the peg-feeding rack and ariver, as
describe the arrangement for feeding up the boot or
second the
shoe tobe pegged ; that is to say, the combina tion of the
 as described.
Third the method of reenulating the feed.
pa wis, and weight or spring, as described.
Dring CLorr-Robert Preston, of North Pownal. Vt.
I Claim he hrangement for bringing the bottomlayer
of the cloth within the drying chamer to
on
 ing of the rollers, which are ad justable by racks and and
pinions ortheir mechanical equivalents, substantially
as described.

SHIPs' VENTLALTRRS-Warren Robinson, of New Haven,
Conn. Idonot claim any part claimed by Enoch Hid-
den, of New York' in his patent. Iclaim the combination of the movable part, with the
twoinclined planes, when the whole is arranged and
combined as described.
 fore plate of a rolling mill on centers, plataced either
aboveor below thel level of the rolls, byadding airs to
the fore plate, working on a bar or on pivots, for the
$\left\lvert\, \begin{aligned} & \text { purpose of remo ving the fore plate out of the way when } \\ & \text { the erolls are to be be soured without detaching it fram the } \\ & \text { frame of the mill, as described. }\end{aligned}\right.$ rame of the mill, as described.
$\mathrm{p}_{\text {LANTING }}$ Hoss-W. . Sterli



 ther doI claim causing an alarm to be so foded whe
the suplg ceases or mben the pump isnot running
throughthe agency of a float and steam cylinderg comthrought the agency of a foat and steam cylinders com-
tined.
thelaim opening the water cock of the steam boiler for
the urpose ofletting on water for reducing the temper-




 boiler, when the pump is running, but allows of the
steambeing aditited the the steam chest when the pump
in not runnagm, as set forth.
 construction of a a bridge or draw, which may be d dopped
below the surface of the water god asto madmit the pas-
sage of vessels over the same, as described.

 pose of bending the the
 Axing or applying to a gas burner an obiong or ellipti-
Gxal shapod tube so constructed and arranged as ot de.
fect a portion of the gas escapin from the burner into

SADDLE-TRERSG. B. B. Ambler, of Trumbull, Conn.: With the water hook, for the purposeof securring piece
int their respective poititons without the aid of screws or
other appendaye other a penpacagest than those herein set forth, and to be
used as describec.
WATER Closers-F. H. Bartholomew, of New York Ci





 tinuation of the valve stem, through which the cock is
operated and one of the ways is place betwen the
principal chamber and the stem chamber. as descri-
bed
 by a tube with a chamber, for the reception and dis
char re of water underprexare.
Third, I claim in combination with a double valve an Third, I Ilaim in combin nation with a double valve an
eduction way employable for the double purpose of
Fastin out the water remainin in the pipe above the
cock when not in actual use, and through means of Which, or whereby a communication is provided wist a
chamber for the purpose of bepeping it charge with air
by means of a valve or otherwise at the same time that hy means of a valve or otherwise, at the same time tha
hat aid way is closed by a vave against the escape
waterfrom the chamber, while the seat is depressed. Horse Bels BeJason Barton, of Middle Haddam, Ct.
do not claim the employment or use of two clappers balls in each bell, forthey have been prevo cusly used.
IClaim hangin or suppendiug the tongues within th bells, as described, viz. . having the tongues placed ove
curred holders which are attached to the pad adidnold-
Crs being within the beill and and so arranged that the tongues may be placed over them at different points,
and thereby be tuspended in the centers of the belis,
irsenpetive of the positions which the pand and bell
may have when attached to the body of the animal. MACHINER FOR PA GING BLa NK Boors-J. L. Burdick,
of New York City iclaim frst, the type holders, an get
orth, in combination with the vertical type cylinder,

 ratint the printing hammers, or substantially the same
device, forthe purposes entotorthand aliso thecombina
tion of the rack with the lever and rod fordrang out
the type holders, or their equivalent devices, sunstan-
 holding lever or their equivalent devices. as set forth.
Ionth I claim the useo the vertical siliding rod or Frame, having a rod attached thereto, in combination
whit the lever for oparating the type inking rollers or
Thir heir equivalent devices.
Fift, I. laim the use o
rame, having an arme rame, having an arm attached tortheal sap piding rod or
rame in oombination the the stiding pate and lever
and pawl, or their equivalent devices for the pal
 MACBiNES FOR STUFPING Horse Collars-J. W. How-
ell. of New Paris, Ohio Iclaim the construction of the hopper with an adjustable grate or crib bottom, in com
bination with the iniston, funnel, clamps, and lever, act-
ing thereon, as set forth.
Firg-ARMs-Horace Smith \& D, B. Wesson, of Norwich,
Conn. side for transferring the cartrioge from the armarier or ore
to the barrel nor the empoyment in combination here
with of a piston or slid to


 produced by the percussion or b
the other end of tit as pecified.
But we claim the arr
 ved and set to full cock by the pressure or back action
of the sid eindinced by the action of the trigger guard
lever, as specified. We also claim the improvement of making the front
end of the piston 1 llde with a dove-tailed recess, or $i$ ts


Macirine for Scraping and Toorging Vevers-A
Goodman \& Lyman Wheeler, of Danan Mass. : We
a machine for soraping and toothing ven eer. Which has
a large feeding bed rol around
veneer is bontand held, and a revortion on of whioh the

BALL VALVES FPR PUMPS-J. R. Bassett. (assignor to C. aiding and ensuring the operation of the ball valve by
mean of an intervening or diving ridge pacee be-
ween the openiugs, and forming part of the semi-an. tular chamber, as described, by bhich the valve ii made
nula seak apd occup is approprate seat when acted on
by the discharge water in one or the other direction.
 claim making the slotted openings in the eoncave borl
zontal ingintad
patent, as described. satent, as described.
Second, the arrangementand combinationof myma.
chine in a close cover, together with the spouts in the chine in, close cover.
manner, as set forth.

##    

## DEsigus

Coosing STovss-(Three patents)-Samuel D. Vose, of
Albany, N. Y. Ante-dated Dec. 30,1853 . Parlor STore-Saml. D. Vose, of Albany, N. Y. Ante-
dated Dec. PaRlor STove - N. S. Vedder (assignor to A.T. Dun-
ham $\dot{d}$ Co.), of Troy, N. Y.
Crystal Palace-Report of the Directors.
The Directors of the Crystal Palace havejust published a Report, containing a statement of their affairs. This document is not calculated to raise the stock greatly above par. The Company comes out minus $\$ 125,000$; that is, instead of having made any profits, they have run in debt to that amount-for a part of which they have mortgaged the building. The capital stock is $\$ 500,000$, and the total receipts were $\$ 891,070$ 72. The amount received for tickets was $\$ 330,702$ 90. The Report states:-"It is apparent, from the foregoing statement, that the disappointment in regard to the financial result of the enterprise is due mainly to the fact of the building not being completed at the time which it was intended, viz.: the first of May, 1853." This was owing to causes over which the Directors had no control. The Exhibition was, with great effort and difficulty, got ready for opening on the 14th of July, and then in a very incomplete state.
"Instead of a period of exhibition of seven months, the Association had in fact but about three; during that three months the sum received, from the sale of daily tickets, was \$245399 90." This is not a satisfactory apology. The largest amount of receipts was taken in tha month of October, viz., $\$ 108,13901$; since then they have gradually fallen off:
The expenditures have been excessive. The persons who have come off best in the affair are the conspicuous, enterprising, know-how.to-make-money Edward Riddle, the American Commissioner to the London Exhibition. Mr. Riddle and the officers of the Association obtained a lease from our City Fathers of Reservoir Square, for five years, at the nominal rent of $\$ 1$ per annum, and with their fush way of paying out the stockholder's money, the Directors paid him $\$ 10,000$ for this lease. This was cool and bright, was it not? No less than $\$ 15,41297$ were paid to Chas. Buschek, Gen. Agent, and Col. Hughes, Special European Agents. The Company purchased the bronze statue of Kiss's Amazon, from the former gentleman, for $\$ 10,000$. The cost of erecting the building, independent of decorations was over $\$ 500,000$, an enormous sum. It is a beautiful building, but it would have been well if the Association had taken our advice, and adopted the plan of Mr. Bogardus, as it would have; ${ }^{\text {been }}$ quite as imposing, and could have been taken apart afterwards, and erected into a number of beau tiful iron houses, in any part of the world. The adopted building cannot be used for any other purpose than the one for which it was erected, An election be taken apart and re-erected month. We hope that good ones will be cho sen,-men who will infuse a new spirit into the affairs of the Association for the benefit of ex hibitors and stockholders. It is intended to make the Exhibition permanent; this we think is not an unwise conclusion,-perhaps the only really wise one the present Directors ever made. Such an Exhibition, in New York City, under proper management, we
and render a great benefit to the public at large. The present Directors have misman aged all but their own affairs, badly; this is very evident. How much stock they now own we cannot tell-probably they sold out when the shares were 100 per cent., higher than they are at present, and they no doubt had much to do with their temporary inflation. We are quite positive that the Exhibition would have paid well this year, had it been properly ma naged; let able Directors now be chosen, and it will rise, Phœenix-like, into prosperity.

## Steamships Beaten by Clippers.

The clipper ship Red Jacket made a recent voyage from this city to Liverpool in 13 days, 1 hour, and 25 minutes, which is something re markable considering the extremely boisterous weather she encountered throughout the passage. On one day she ran 413 miles.
She had the wind from the S. E. to W. S. W., the whole passage with very stormy weath er, either snow, rain or hail the entire voyage, bnt she received no damage, and arrived in port without the loss of a single rope yarn.She run 15 knots on the wind, and 18 with the wind abeam.
The Red Jacket is a beautiful clipper ship of 2400 tons burden, and was built in Rockland, Me., by George Thomas.
Not one of the Collins or Cunard steamers have ever run 413 miles in one day, so that we may safely conclude, that our marine Steamships, have not yet attained to their maximum speed.

## India Rubber Patent Case.

On the 16th inst. by Judge Betts, U. S. Circuit Court, this city, an injunction was granted against the New England Car Spring Co., on the petition of Horace H. Day, for infringement of the Chaffee patent. The injunc tion was ordered to issue unless security to abide the decrees of the Court is put in by the defendants in the sum of $\$ 25,000$. Horace is now turning the table on his former pursuers such is the mutability of human affairs; india rubber is a tough subject.

## Zinc Applied to Ship-Building

A sloop built of zinc, with iron framing and wooden decks, called the "Comte Ldhon," has been constructed at Nantes, France, by Mr. Gulbert, and named after one of the directors of the Vieille Montagne Company. She is ele gant in form, draws but little water, and is considered in every respect a first-rate vessel The command was given to Capt. Jouanno, of Lorient, and her firstvoyage was to Rio Janeiro, from which place she has just returned. The captain reports that the experiment has been highly satisfactory; she has proved an excellent sea-boat in repeated gales, which she had to encounter; and one fact is stated of much importance-that her compasses had nev er been in the slightest degree affected, a circumstance which often happens on iron ships, by which serious casualties have occurred.

## Guano from sea Weed.

A new patent substitute for guano, consisting of decomposed and concentrated sea weed, is bout to be introduced in England, by a Mr. Longmaid, with the purpose of claiming the prize of $\$ 5000$ offered by the Royal Agricultural Society. The material is reduced to powder so as to be applicable by the drill. A large number of experiments to test its fertilizing roperties have been made dmring the past ear. An analysis has been published by Pro fessor Way. The process is stated to be very simple, and the price estimated at $\$ 25$ per ton or under, and it is proposed starting manufac tories at various points on the coast.

Another © Gas IExplosion.:
An explosion of gas took place at Nashua N. H., one evening last week by which a nüm ber of persons were injured and a house shattered to pieces. It was caused by introducing a light into a cellar, where there was a strong odor of gas, caused by its escape from a leaky pipe.The person who introduced the light was nota reader of the Scientific American, or he would not have acted so unwisely, after what we hav not have acted so unwisely, afte
said in reference to such cases.

