## §rientific Amertian．

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bist mechanical paper in the worlo． CIRCULATION 12，000． PUBLISHED WEEELY． At 128 Fulton Street，New York，（Sun Building，）and 13 Court Street，Boston，Mass． BY MUNN \＆COMPANY．
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Honor and English Rallroads． The scoundrelism and swindling that has been carried on by large stockholders in the British railways，surpass in villany the acts of the Buccaneers．Hudson should be sent to Pandemonium as soon as possible，and so should all those who were leagued with him in his disreputable speculations．It is well in his disreputable speculations．It is well known that hundreds of the best class of the
British working people，servants and mechan－ ics，who，by economy and dint of industry had laid up a few pounds against sickness and old age，were induced three years ago，by the al： luring prospect of adding to their small gains， to invest their little fortune in railway stocks． At the right moment－known well to Hudson and his base companions，the price of shares and his base companions，the price of shares
fell，and thousands upon tens of thousands of the invested earnings of these honest simple working people，were swept into the coffers of the most profligate of all classes，viz．，the mo－ nied speculators．At the present moment we see that a determination exists among the British people，to probe all the affairs of the dif－ ferent railway companies to the very bottom． We hope that the awards of punishment will be ample．The best way to do justice to Hud－ son，would be to condemn him to be rode up－ on a rail for 21 years，the punishment to be in－ flicted on a chesnut one full of slivers，and managed by a committee of his victims．

The Hudson River Rallroad．
The arrangements made by the Hudson Riv－ er Railroad Co．，for the accommodation of their cars at Thirty－first street，are very com－ plete and extensive．In the first place they have erected a long brick building of sufficient width to admit three cars at once；then，a short distance off，on the west side of the road near the curve，where the track enters Tenth avenue，is a large round constellated looking engine house，containing the appropriate ap－ paratus for turning the locomotives，\＆c．Most paratus for turning the locomotives，\＆c．
of the cars themselves are elegant looking ar－ of the cars themselves are elegant looking ar－
ticles，furnished and finished，inside and out，in the latest and most improved style．Even in the second class cars，more attention than usu－ al is bestowed upon the＇Emigrants．＇This company are laying down rails to come into the heart of our city．
The travel on our Western Railroads is very great at present．The receipts on the New York and Erie Road for last month，were $\$ 77,000$ ．The Railroad connecting the beau－ tiful village of Elmira，with the Genessee Lake will be finished this month．
The Hudson River Railroad is now carrying about nine hundred passengers per day．
Though years bring with them wisdom，yet there is one lesson the aged seldom learn，viz the management of youthful feelings．Age is $\square$ all head，youth all heart；age acts under the dominion of hape．

DAY＇S SUB－MARINE TELESCOPIC EXAMINER． Figure 1.
 Figure 2.


This is an instrument for examining the hulls of vessels that may spring a leak at sea，and
for examining the bottom of rivers and seas Fig． 1 is a front elevation，showing the tube in sections as it may be made of any length Fig． 2 is a transverse vertical section of fig． 1 ， and fig． 3 ，is an interior section，showing the way the lamps are supplied with air and how the smoke escapes．The same lettera refer to like parts，on all the figures．A $A$ is a metal
box containing the lamps and the mirror ； E $E$ is the main tube，which may be made of any length by sections，coupled firmly together． The box，A，is made perfectly tight，with a glass door in front to keep out the water，and it contains a mirror to receive the impression Fig． 3.

of objects in the water．It also contains lamps to throw a brilliant light around the appara－ tus in any depth of water，and it therefore can be used in the darkest night as well as in the clearest daylight．B is the mirror；it is fixed on a joint at its lower end in front，and to a cord，F，at the top．This cord passes up through the main tube around a screw key or pirn，G，above，so that the mirror can be raised

## Campbell＇s Monument

The admirers of Campbell，the author oi the Pennsylvania Cottage，have raised a little up－ wards of $£ 400$ to erect a monument to his memory in Westminster Abbey，but the plan has been seriously embarrassed by the extor－ tionate demands of the Dean and Chapter，a company of elergymen who have sinecure sta－
o a vertical position，or be retained at any angle in 90 degrees，as represented in fig． 2. $K \cdot K$ are the ${ }^{2}$ tmp chambers，and $C$ the lamps． The lamp chambers are divided completely from the mirror chamber by partitions，but the air to the lamp passes down the main tube be－ hind the mirror，by a small passage，as indica－ ted by the arrows，then down under the mirror chamber and through side rectangular slits below the lamps，as seen in fig．3．The smoke escapes up through a small tube soldered to the main tube，as indicated by the arrows． There is a glass light， Z ，on the floor of the mirror chamber，so that objects may be seen on the bottom，when the mirror is vertical． The sides，front plate，and back，make a re－ cess below this light．so that when the instru－ ment is pushed down into the water，a portion of air is confined between the water and glass， and this keeps it（the glass）always clean．L L are side flanges，to receive a slide to pro－ tect the glass door in front of the mirror and lamps，when the instrument is not used． lamps，when the instrument is not used．
H ，at the top，is a spy glass，that may be used sometimes in combination with the main tube． When it is used，the opening through which the screw key is seen，supplies the lamps with air．The lamps throw light freelyout through the glass door in front，and objects in the wa－ ter are reflecting on the mirror， B ，which re－ presents those objects to the examiner，who is looking through the tube．This instrument may be hung over a ship＇s bulwarks，and her whole bottom examined from deck．（We know of the difficulties in the rigging，（\＆c．，to do this．）An instrument of fifty feet in length will not weigh more than 50 lbs．
Mr．Willard Day，of Brooklyn，is the in－ ventor，and a patent for it will soon be issued． It is now being exhibited by Mr．Day，at the Fair of the American Institute，and it attracts a great deal of attention．
tions connected with this cathedral church．－ These greeds demand a fee of $£ 210$ for permis sion to occupy 12 square feet of wall with a statue of the author of＂The Pleasures of Hope ；＂＇and what remains is not sufficient to procure the work．The same unconscionable hierarchy demand $£ 150$ for permission to place a bas－relief medallion of Cowper．

## NXitul 解ereints．

the Purple Powder of
Dissolve 300 grains of gold in five times their weight of aqua regia，prepared from four parts of hydrochloric acid，and one part of ni－ tric acid；evaporate the solution almost to dryness；this evaporation is requisite to get rid of the acid．The chloride of gold being re－ dissolved in water，and filtered，the solution is to be diluted till it measuires 26 ounces．Frag－ to be diluted till it measures 26 ounces．Frag－
ments of granulated tin are then to be put in－ to it，which becomes turbid and brown in a few minutes；its tint gradually becomes deeper， and，at the end of a quarter of an hour，it as－ sumes a fine purple colour ；the precipitate is deposited，and it remains only to collect it on a filter．

It sometimes happens，and especially when large quanties are operated on，that the preci－ pitate does not separate，but remains in the li－ quid，to which it gives a deep purple coleur ； in this case，it is merely requisite to heat the liquid slightly，and to add a little common salt， the product then immediately separates．
When the liquid holding the purple powder in suspension is decanted，to separate the ex－ cess of metallic tin which remains at the bot－ tom of the metallic vessel，in the state of a black powder，are poured off with it ；it is proper to allow the liquor to settle for some time，and afs terwards to decant it．This operation should be repeated three or four times．

To Take a speck from the wye
We lately learned a very clever and safe mode of extracting any little speck of dirt or dust from the eyes，when it cannot be easily removed by the hand．It consists in licking it out with the tongue．The person affected lays his head down with his face uppermost， and the operator，desiring that the eye shall be kept open，comes across it gently with his ton－ gue so as effectually to wipe it clear of the ex－ traneous body．This we find，has been a com－ mon practice among some classes of stone－cut－ ters，on getting what is called a fire in the eye and we doubt if the whole of the resources of he medical art could afford a better remedy． ［The above is from one of our contempora－ ries，it reminds us that we have had the ope－ ation a number of times performed upon our－ selves and we must commend it，but there are few who like to perform it．］

Freaks of a French Chemist．
M．Boutigny，the author of the experiment of making ice in a red－hot crucible，divides or cuts with his hand a jet of melted metal，or plunges his hand into a pot filled with incan－ descent metal．No precautions are necessary o preserve it from the disorganizing action of the incandescent ；only have no fear，especial－ ly if the skin be humid，and pass the hand rapidly，but not too rapidly，through the met－ al in full fusion．There is no contact between the hand and the metal ；the hand becomes in－ sulated；the humidity which covers it passes into the spheroidal state，reflects the radiating aloric，and does not become heated enough to boil．M．Bontigny has often repeated the ap－ parently dangerous experiment in lead，bronze， etc．，and always with success．

The most inquisitive are generally the most loquacious；and where an individual talses great pains to make himself acquainted with our circumstances，we should suspect his mo－ tive，especially if he is lavish in his promises of secrecy．
The flavor of tea can only be preserved，by keeping it secluded from the air．

