THE ADVOCATE OF INDUSTRY，AND JOURNAL OF SCIENTIFIC，MECHANICAL AND OTHER IMPROVEMENTS．
VOLUME 5．］
NEW YORK JANUARY 12， 1850.

Scientific American
the
best mechanical paper in the world． CLRCULATION 14，000．
At 128 Fulton Street，New York，（Sun Building，）and 13 Court Strcet，Boston，Mass．
BY MUNN \＆COMPANY． The Principal Office being ant New York．
Barlow \＆Payne，Agents， 89 Chancery Lane，Londo TARRMS－\＄2 a yenz－ix in advance，and tiae remainder in 6 months．

## 

## Distressing fccident on the Central，Pa．，

 Rall road．On Thursday，the 3rd inst．，the passenger train of cars on the Central Railroad，while coming from the West，came in collision with a burden train above Petersburg，Perry coun－ ty．Mr．Hurtz Heisley，an assistant engineer on the road，was so severely injured that he died in a short time．Mr．Hall，engineer of the locomotive and Mr．Hand，conductor，were also badly hurt．

## Rallroad Robbery．

On the night of the 3rd inst．，as Mr．War－ den the depot master at West Townsends，on the Fitchburgh Railroad，was sitting in the office，two men，disguised，entered，g̀agged him，and robbed him of $\$ 400$ ．They then bound him hand and foot，put him inside of a íreight car，hung him doy the l．eels：lc hed the car－door and decamped．When found about an hour afterwards，Mr．W．was nearly dead．

## Tearing up a Ralluoad．

A few weeks ago，a companyof some seven－ ty－five residents on the line of the Pontiac Railroad，in Detroit，turned out and tore up portion of the rails，for the purpose of prevent ing the cars from passing into the city．Sev eral were arrested，aud gave as a reason that the road is a

## Rise of Rallroad Fares．

A number of the Massachusetts Railroads have raised their fares．They must have test－ ed the utility of high and low prices．The Boston and Worcester Railroad，after the 1 s inst．，commenced to charge $2 \frac{1}{2}$ cents per mile and 3 cents between way stations．The Old Colony Road has also raised its fare to 3 cents per mile．This is at the rate of $\$ 3$ per hun－ dred miles．

Mohawk and Schenectady Rallroad． The Mohawk and Schenectady Railroad made $3 \frac{1}{2}$ per cent．dividend，payable on the 20th January This result of skillful and eco nomical management must be gratifying to the stockholders．Not long since this stock was selling at 30 per cent．，now it is worth 90 ．

## Our Own City．

New York City has a larger population than either of the States of New Hampshire，Con－ neticut，Vermont，or Michigan．It has fully the population of New Jersey．It has more than the three States of Arkansas，Florida， and Texas，together．It also has more popu lation than the States of Rhode Island，Iowa， and Deleware，added with that of Oregon ter itory．

The Jews have obtained a firman from the Turkish Government to admit of their build－ ing a temple on Mount Zion，which they pray may equal in splendor that built by King So lomon
$\square$ The Steamship Crescent City，while on her recent voyage to Chagres，broke the cross rai Im of her engine．

## NEW SMUT MACHINE．

Figures 1.


This machine is the invention of Mr．C．D Gordon，of West Martinsburg，and Mr．S．S Gouldthrite，of Lowville，Lewis Co．，N．Y，who have taken measures to secure a patent．The machine is very neat and beautiful in its con－ struction，and combines good principles for ef fective operation．
Figure 1 is a perspective view．Figure 2 is vertical section，showing the inside；and gure 3 is a top view of the corrugated scour ing surface．The same letters refer to lik parts．A is an outside circular screen（with perforations，S S）which may be made of tin or sheet iron ；C and D are top and bottom metal plates，with a groove in each，around， into which the edge of the screen，$A$ ，is set and they are secured together by screw rods， $B$ ，fastened by nuts in the flanges of the two circular plates．The top plate， C ，is the cover． Figure 3 shows its interior form；$Q$ is a hop－ per into which the grain is carried by a spout from any situation．This hopper is like a cup in the centre of the machine，and it revolves． It is therefore secured on the top of an upright shaft，$P$ ，to which is connected an air cham－ ber，R，（fig．2，）which is made with fans on its outside，indicated by W W，fig．3．These fans revolve between the outside screen，$A$ ，and

Fig． 3.

inside revolving chamber，$h$ ，to act the art of a blower．The inside revolving cham er has slits，$U \mathbb{U}$ ，in it to allow the wind to drive it through the perforations in the screen，

## Dress in Japan

The Island of Japan is said to be the only country where a change in the fashion of dress has not occurred during a period of 2,500 rears．All individuals，from the highest to he lowest，wear the bata，a species of wide rock，or gown，and the only difference is in the material and number worn－some of the rich－ er class wear as many as twenty－five，of va． rious colors，and of exceedingly light texture． We have very little knowledge concerning the resources，manners and customs of the Japan－ resour
ese．

S．also through the large slits，$F$ ，and th smaller slits，E E，in the cover．There are openings at the sides in the bottom of the hop－ per，$Q$ ，and through these openings the un－ cleaned grain passes into the rubbing or scour－ ing chamber，which is formed between thecov－ er，A，and the metal top of the revolving cham－ ber（fig．2．）The inside of the cover and the top of the revolving chamber are formed alike， of a stair form，as represented by HH ，fig．1， and V V ，figures 2 and 3 ，are scouring grooves， which direct the grain from the hopper，out－ wards，between the stair formed chamber， wherein the grain is scoured round and round， breaking the balls，before the grain is directed into the annular chamber，between the outer screen，and the revolving air chamber，R．where it falls down into a receptacle below，meeting a strong current of air，when all the smut is entirely driven out through the perforated screen，and the wheat beautifully cleaned．By observing the form of the inside of the cover， and the form of the top of the revolving air chamber，in figures 2 and 3，a good idea of the scouring and cleaning operation of the ma－ chine will be obtained．The arrows indicate the direction of the blast．The air enters through holes in the bottom plate of the re－ volving chamber，which chamber being secured on the spindle， P ，is driven by a band（from any power）passing around the pulley， T ，（fig． d．）The spindle，$P$ ，runs in a proper screw step bearing， K ，with an oil cup on its top，and L is a nut． J is a collar，and from it two arms，I（one not seen）support the bottom fix－ ed plate，D．On the top is a steadying collar， M ，around the revolving hopper．It is secured on the top of the cover，C；by vertical screws， and has side setting screws， 00 ，fig． 1 ，pass ing into an armed plumbing socket， N N ，（fig 2．）The larger impurities are driven throug the larger slits at the top，and the finer impu－ rities through the screen．
By the foregoing a very correct knowledge of the construction and operation of this ex－ cellent machine will be obtained－and further information about business matters，may be obtained by letter（ $p . p$ ．）addressed to the in

By the late Report of the U．S．Treasurer our exports for the last year amounted to $\$ 145,755,820$ ，and out of this Great Britain and her dependancies took $\$ 84,000,000$ ．Our com－ mercial interests are stronger with one nation than all the world beside．

There is a rumor that the British Ministers intend，in the coming session，to prove thei sincerity in the matter of sanatory reform and in that of education，by abolishing the health－ destroying window tax，and the mind duties on paper．

## CXespiul 解rtrints．

## The Chlorides of Gold．

Great difficulty has hitherto occurred in pre－ paring the chloride of gold，of the yellow and red colours，perfectly soluble in water，and without suffering reduction．The following process are recommended for this purpose ：－ 1st．In order to prepare the yellow salt of geld，take aqua regia prepared with three parts of hydrocloric acid，one part of nitric acid，and one of distilled water．Then put one part of pure gold into a porcelain capsule with a plate of glass and heat it in a salt－water bath， the heat being continued till red vapours cease；the cover is then to be removed，and if the gold is not entirely dissolved some aqua regiais to be added to it，the capsule being again covered，the heat is to be continued till vapour ceases to appear ；the glass plate must be removed and replaced by folds of blotting paper，the heat being continued in the bath， until a glass rod，upon being immersed in the capsule，becomes covered with yellow solid chloride of gold．
The capsule is then to be removed from the salt－water bath，and the chloride of gold soon chrystalizes in small prismatic crystals，of a fine yellow colour，with an orange tint．The chloride thus obtained is perfectly soluble in water withoutreduction ；it is successfully em－ ployed in daguerreotype and like operations． The red ehloride of gold（res－chloride）is pre－ pared in the same manner，except that th quaregia employed is prepared with two parts of hydro－chloric，and one part of nitric acid． The operation is commenced by acting upon alt with excess of aqua regia on a sand bath， the salt water bath not being used until the gold is entirely dissolved ；the remainder of the peration is conducted in the same manner a that for the yellow chloride．

## Cochin China Fowls．

The most remarkable specimen of barn－yard fowl，in this country，are undoubtedly the ＂Cochin China．＂Not long since we saw some of them grown by B．Tiffany，Esq．，of Southbridge，Mass．a gentleman of peculiar taste and experience in all that relates to good farms， stock，and general farming appendages．He re presents them as possessing excellent proper－ ties for the table，prolific layers，and uncom－ mon in the＇r attention to the young．They have another and quite important advantage over the common barn－yard fowl，and that is nature，in bestowing upon them their physical capacities，（which in all other respects they stand pre－eminent）saw fit to clip their wings， thus saving the poulterer the trouble of per－ forming the operation．A common picket－ fence is good against their encroachments．
It has been stated that one egg of the pure Cochin China Fowl，of the Baylie＇s importa－ tion，contains nearly as much nutritious mat ter as two eggs of the Black Poland or Gol－ den Pheasant Fowl，and is consequently much richer，better flavored and more valuable． Something depends probably upon the way in which they are kept．

## Parsneps．

This is a most valuable root for feeding ani－ mals，and should be cultivated more extensive $y$ than it is．It stands severe frost well，and is easy of cultivation

A Salt Spring， 3 inches in diameter， 600 feet deep，and yielding 300 bushels of salt per day，has been discovered in Mercer county， Va．，about six miles from the Red Sulphur Springs．
This present Congress is going to reform the Patent Laws，it is supposed．

