# Gicientific American. 

THE ADVOCATE OF INDUSTRY, AND JOURNAL OF SCIENTIFIC, MECHANICAL AND OTHER IMPROVEMBNTS. tool. 3. Now Dork, Iamany 29, 185s.

No. 19.

## SCIENTIFIC ${ }^{\text {THE }}$ <br> AMERICAN

pUblished weekly
At 128 Fulton Street, New York (Suu Building, ) and 13 Court Street, Boston, Mass.
By Munn \& Company
The Principal Ofice being at New York
TGRMS---\$2 a year- $\$ 1$ in advance, and the remainder in 6 months. ger See advertisement on last page.

## ploctry.

## THE PRESS.

by ebenezer elliot, the corn-laf Rhymer.
" God said-" Let there be light ?" Grim darkness felt his might, And fled away ;
Then startied seas, and mountains cold,
Shone forth, all bright in blue and gold. And cried-" 'Tis day ! 'tis day,"
"Hail holy light!" exciaim'd
The thundrous cloud that flam'd O'er daisies white;
And lo; the rose in crimson dress'd Lean'd sweetly on the lilly's breast; And blushing, murwared-" Light!' Then was the sky-lark born, Then rose the embattled corn; Then floods of praise
Flowed o'er the sunny hills of noon ; And then, in stillest night, the moon, Poured forth her pensive lays,
Lo, heaven's bright brow is glad !
Lo, trees and flowers all clad In glory bloom !
And shall the mortal sons of God Be senseless as the trodelen clod, And darker than the tomb?
No, by the mind of man,
By the swart artizan? By God, our sire,
Our souls have holy light within,
And every form of grief and sin Shall see and feel its fire, By earth, and hell, anc heaven, The shroud of souls is riven! Mind, mind alone,
Is light, and hope, and life and power ! Earth's deepest night from this blest hour The night of minds is gone !
"The Press !" all lands shall sing,
" The Press, the Press we bring, All land's to bless :
O, pallid want! 0 , labor stark;
Behold, we bring the second ark!
The Press! Thee Press! The Press!"

## LEND A HAND.

by r. chilton.
Heed the words, thou man of wealth ! Bring back the fading hue of health In the poor man's sunken cheek Thou art strong, and he is weak, He hath neither gold nor land: Help to raise him -' lend a hand.'

Heed the words, thou poor man?-thou Who livest by thy sweating brow; If a sinking brother need Thy assistance, give him heed; Thou may'st better understand, What his woes are; 'lend a hand.'

Hear the words, 0 thou in whom The softer virtues live and bloom, If an erring sister claim
Aid and pity in her shame,
Spurn her not, but take thy stand On higher ground, and 'iend a hand."

## swearing.

The statute law of England has made pro fane swearing a fineable offence, to the am ount of one shilling for the first, two shillings for the second rlass, and fire shillings for gentlemen.

## AGRICULTURAL POTTERY MACHINE.--.Figure 1.



It is well known that draining is a most important improvement in modern agricul. ture, but there is much difficulty experienced in regard to the price and suitableness of ma terials adapted for this purpose. Bricks and pipes of clay material, are undoubtedly the best and most convenient for building drains, but in the cold winters of our Northern States it has been found that they are much affected by frost expanding the seams which are necessarily moist, and not only the seams but the bricks, which thereby crumble and moulde and soon choke up the drain
But if this is a just objection to the use of tiles, clay pipes and curved bricks for drains in the Northern States, it cannot be an objection to their use in the Southern and Middle States, and it is to call the attertion of ou Southern agriculturists to the importance of this subject, that we have taken the pairs and been at the expense of getting up these en gravings

Figure 2.


On the left is an end view of the machine and the figures on the right are the die plates The handle $W$ communicates motion to the pis. tons which are propelled backwards and forwards in the chambers. The clay or other material is forced through the die plates represented by $M$, having openings the shape of the articles required, which when forced through these dies are received on carrying rollers seen at the end figure 1, where they are cut off the proper length by the cutter $W$, in the cutting frame $N$, moving in vertical slides K K , when it is then removed to make way for the material projected at the next stroke of the machine. $L$, is the frame for the carrying rollers and is attached to the frame work and can be either elevated or depressed so as to suit the lever of the openings of the die plates $M$, four different shapes

## An Old Book.

A gentleman in New Orleans has in his possession a manuscript copy of an old Roman missal written in Latin on vellum, by a monk, about the year A. D. 300. The book is, consequently one thousand five hundred and forty-seven years old at least.
The Cambridge Chronicle Mass. doubts its authenticity.

of which we have here presented. The ma chine is mounted on rollers and can be moved from place to place
If there is any virtue in Draining, the means to construct drains quick, permanent, neat and economical, can only be the result of mechanical invention and certainly this machine promises to be the very thing desired. We have no doubt but many of our ingenious mechanics will be able to construct a machine by the above engravings, or upon the zame principle somewhat varied in some of its parts.
On another page will be found an account of an improvement in Kilns for the purpose of going hand in hand with this machine, in order that the most minute information possibly to be derived may be presented to our readers at once upon the subject.

American China.
A Mr. Woltord in Washington county, Missouri, has succeeded in manufacturing as beautiful china and granite ware from the raw materials in that region as has ever been produced in England.
The population of Egypt is estimated at five millions, who hold their lives at the pleasure of a despot

## RAIL ROAD NEWS

## Double Lines.

By the Americen Railroad Journal wa leara that Mr. Wallace, who has been long and favorably known as the indefatigable superinten: dent of the Buffalo and Attica Railroad, has invented a method to obviate the inconveniences arising crom the different widths of the railroads to meet at Attica, and consequently of the carriages which it is requisite should run over this road. The width of the N. Y. and Erie Railroad is 6 feet. The Attica and Hornellsville track will be of the same width. That of the Buffalo and Attica track is only 4 feet $8 \frac{1}{2}$ inches. How, without the troublesome and expensive removal of freight from one car to another, can its transportation to Buffalo from either of the two first mentioned routes be accomplished? The invention of Mr. Wallace comsists merely in having an inner and an outer line of rails, adapted for carriages of each size, so that on the same road cars of various sizes may travel in the same tran-or cars of the greater width be drawn by an engine of the narrower size-or the reverse.
The citizens of Indiana on the proposed route of the St. Louis and Cincinnatti Railroad are taking active measures to forward the project. It is supposed that the counties through which the road will pass, when completed, will subscribe enough to do the grading, bridging, construct cuiverts, and lay the mooden rails.

A Queer Passenger.
Recently the Birmingham and Gloucester Railway mail train Eughat, which leaves Gloucester for Birmingham at nine o'clock at night, had first passed the Spetchy station, travelling at the rate of forty miles an hour, a singular looking bird alighted on the steam dome of the engine, and remained there as if transfixed. The driver, after recovering from his astonishment, succeeded in capturing it, when it was found to be a beautiful yellow owl.

## Iron Horses.

A branch of the celebrated locomotive establishment of Norris of Philadelphia, is about to locate at Buffalo. It these iron horses are brought along by our western railroads as plenty as they were purchased by them last summer, one establishment will be unable to fill all orders.

Niagara Suspension Bridge.
Operations have been commenced on the Canadian side for laying the abutments of the great bridge. A number of men have been employed in blasting and quarrying the rocks fur this purpose.

Extensive Brick Yara.
Mr. Peter Hubbel, of Charlestown Mass., manufactures yearly from fifteen to twents millions of bricks for the Boston Market. He has thirty machines in operation for moulding and with each machine makes from 10 to 12 housand bricks per dav. This is said to be the largest brick-yard in the world.
The brig Saltillo which cleared last week from Boston for St. Thomas, had on board a sugar mill, with a complete steam apparatus all valued at ten thousand dollars. It has ao doubt been ordered by some shrewd planter, who wishes to reap some of the benefits of Yankee ingenuity.
In consequence of the destruction of houses and other buildings caused by the late floods, there is an immense demand for laborers in Ohio. In one village alone (Marietta) three hundred hands are wanted at present.
The human hatr is composed of carbonate of ammonia, water, gas, silver, coal, sulphur, oil, iron, lime and manganese, but the brain is richer than gold.

