# Exientific American. 

THE
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## poetry.

SABBATH Stillivess round me. bY P. A. JORDON.
With this Sabbath stillness 'round me, With its echoes deep and clear, With its mystic murmurs ever Sounding sweetly on my ear : With its heaving, wave-like motion, As the living air goes by, And the birds, like flitting shadows, Sweep across the clear, blue sky.

I turn me back in silence, To the days leng gone before, To the many kind and lovely, That our souls shall see no more To the happy scenes of childhood With their warm and rosy airsTo the smiles and looks of gladness, That our former homestead wears.

0 , the summer's long and lovely, And the meadows broad and clear, And the brook that sparkledgaily, With the violets blooming near : And the deêp woo Where the shadows heavy lie, From our happy home they've 'partedHow we miss them-how we sigh !
Fading alwass, fading ever, In this broad bright world of ours; Ever changing in its aspects, Ever gladsome with its flowers: Soon to us its holy murmurs, Soon to us its echoes dim, Shall have lost their soul-felt motionO'er our hearts shall cease to swim

## MORAL POWERS.

by the rev. edward e. jones.
Eagle of the toilless pinion,
Upward to thine eyrie hie,
Mid the crags where sounds the thunder With its hoarsest melody.
Emblem of the daring spirit, When it wakes its latent might, And for action doubly harnessed, Battles sternly for the right.

Where the craven-hearted linger, And desponds the gloomy soul, There the brave at once join issue, And relentless fate control.

Who would warble out existence, Like a song-bird in the bower, Heedless that he has within him, Elements of moral power?

Breaking on the shore of being, Who would as the wavelet die ? When he could have won distinction, With the sirgle heart to try ?

Then be up, and dream no longer, Manly purposes avow,
And with great designs accomplished, Bind the chaplet to thy brow.
The amount of land heretofore granted to States by the General Government is 20,625 , 006 acres-of which $10,807,958$ acres were for common schools.


This is an improved car coupling, invented by Mr. Joshua O. Lewis of Worcester, Mass. and it is a good one. This is a lon, itudinal section showing the inside of the coupling boxes, C C. A A, are two weighted levers that are made to vibrate on pins B B. D D, is a catch bar which unites the cars by hooking on the iron pins EE. The weighted levers A A, holds the catch bar firmly down and it cannot be raised without lifting up $A$, as

JAMES KNOX GLENN'S DREDGING AND GOLD WASH ING MACHINE.


This apparatus is the invention of Mr. James Knox Glenn, recent Commissioner of the State of Otio for deepening the Sandusky river, and who has made application for a patent for the same. It is invented for raising deposits of gold from the bottom of streams or rivers in Californa-a floating gold-washing establishment. It is simple and most effectual; and it
is well known that the greatest quantities of gold are to be found in the bends of streams, but the difficulty has been heretofore, in the absence of an apparatus to lift and wash it.
This engraving is a perspective view of the apparatus. A is a scow or float, to support and float the machinery alone. $B$ is a circular trough, about 5 feet wide and 18 inches deep, and it extends around the width of the scow. C is a tow-path where the horse or other power is applied to drive the shafts $F$ $F$, which are radial levers bolted to a strong central vertical shaft E. This central shaft is secured by a vertical axis to the vessel below, and a vertical axis in the stationary frame of upright and transverse beams above. The soil to be washed, to separate the gold from it, is dumped by the dredge scoop 0 , into a hopper, and finds its way through a screen into the large trough $B$, where it is agitated by raker G, fixed on the radial levers. The trough is supplied with water by pumps HH , which extend down into the water, and the plungers are operated by suspended cam rods J , which are attached to the plungers of the pumps by chains T, I, passing over pulleys above the |pumps. When the radial levers are moved
round by the horses, the suspended cam rods are pushed forward and the plungers of the pumps lifted up, but they fall down by their own gravity. The rakes or drags $\mathbf{G}$, are moved round and agitate the deposits in the large trough. The lighter particles are suspended in the water and washed over bye-washes at the sides, which are gates somewhat lower than the upper edge of the outside trough When the gold is thoroughly washed, it is re moved into the mercury trough D , and agitated with water the same way as the outside troug is operated, so as to produce amalgamation be tween the two metals, when they are after wards separated by the well known methods. L is the hopper, with the screen underneath and below it. It receives a shaking motion by being attached to a toggle lever C , which is struck alternately by the radial levers moving round, and thus shakes the deposit soil down into the trough C. The coarse partrcles, small stones, \&c. are thrown out of the screen at the side and do not get into the trough. O, the dredge or lever scoop, is suspended and operated by a swinging frame composed of two angular levers N , working on axles on the end of the scow $A$, and is elevated and lowered by chains or ropes passing over pulleys which will be observed at the right hand of the figure. $P$ is a rope or chain tached to the scoop passing over a grooved sheave between the ends of the angular levers and passes along around a capstan drum $M$, on the main vertical shaft. This drum canbe thrown in and out of gear with a clutch on the
lower part of it, operated by a lever, seas to let the scoop $O$, when full, be raised by the horse power, or steam or other power, that morse power, or steam or other power, that may be applied to the radial levers. The scoop
can be made to dredge at any angle, and it can can be made to dredge at any angle, and it can
be drawn in and thrust out from the side of the be drawn in and thrust out from the side of the
vessel to take a logg sweep by a double rope vessel to take a logg sweep by a double rope
R, passing over a sheave between the ends of R , passing over a sheave between the ends of
the angular levers and operated by the windlass seen at this side. On the other side is a windlass which lifts up the trame by chains, secured to the end of the frame and passing from the windlass up over a pulley above for the greater lever power.

At the end of the scow are two vertical anchor stakes, to be driven into the bottom of the stream, and they can be elevated by the rope $P$, passing around the capstan drum. For further information see the inventor's Card of reference on the ad vertising page.

## RAILROAD NEWS.

## Ohto, Mississippi, St. Louls and Lake Erle

 Rallroads.Two great railroad routes are nogy dividing the favor of the people of the northweatern States, one from Cincinnati to St. Louis, thro Lawrenceburgh and Vincennes, the other, ta king a more northerly course, from St. Louis through Terre Haute and Indianopolis to Lake Erie. The citizens of Cincinnati are most earnest to secure a preference for the southorn route. As surveyed between St. Louis and Cincinnati, it is 360 miles in length.
The citizens of Cinconnati are in favor of the road and the city corporation will subscribe $\$ 500,000$; St. Loulis has given a pledge to take the same sum. The counties along the line are petitioning their legislatures for permissionta subscribe as coünties for suct a mounts of stock as the voters shall decide on by election.

Baltimore and Ohio Rallroad.
The Baltimore and Ohio Railroad Company is about to make a strenuous effort to push its road through from Cumberland to Wheeling. The trade upon its finished road has been unusually great this winter; Maryland State bonds, of which the Company holds $\$ 3,-$ 000,000 , have improved ; and, in the Balti000,000 , have improved ; and, in the Balti-
more Patroit of the 14 th instant, is an adver. more Patroit of the 14 th instant, is an adver-
tisement, signed by the President, setting forth that the Company are about to put under contract one hundred miles of their road west of Cumberland.

## mississippi River Railiroad

If a railrgad (says the Augusta Chronicle) can be made from Mobile to the mouth of the Ohio river, and not be more than 550 miles in length, it will command an immense trade and travel. [The measured distance from this city to Cairo is 470 miles.] It is to be hoped that the commendable efforts of Alabamians to tap the business of the Upper Mississippi, may be successful. The exchanges that can be made between the products of the South and those of the North will be highly advan. tageous to the people of both sections. It is expected that railroads will soon be constructed from Cairo in Illinois, to Galena and Chicago.
The South Carol ina Railroad frona_Charleston to Hamburg, is said to be in a bad condition : and its affairs much embarrassed. It is a part of the great line of travel between New Orleans and the North. As an effort to remedy the condition of things, the company have resolved to effect a total change in the administration of affairs.
The Buffalonians have started the proposition of carrying out some plan for the pur. pose of supplying the city with water. A meeting was lately held to discuss the point as to wheather this should be carried into ef. lect by the corporation, or by a chartered com. pany.

