## THE SONG OF STEAM.

TThe following fine poem, which Blackwood's Hagasine has pronounced to be

Harness me down with your iron bands, Be sure of your curb and rein,
For I scorn the strength of your puny hands
As a tempest scorvs a chain.
How I laughed as I lay conceal
For many a countless hour,
At the childish boasts of human might,
And the pride of human power
hen I saw an army upon the land,
A navy upon the seas,
Creeping along, a snail-lite band,
Or waiting a wasward
Or waiting a wayward breez With the toil that he faintly bore, S he turned at the tardy wheel
Or toiled at the weary car

When I measured the panting courser's speed,
The fight of the carrier dove,
s they bore a law, a king decreed, could but think how the world As these were outstripped afar, When I should be bound to the rushing keel Or chained to the flying car.
Ha! ha! ha! they found me at last, They invited me forth at length, and I rushed to my throne with a thunder blast, And laughed in my iron strength. On then ye saw a wondrous chang On the earth and ocean wide, Nor wait for wind nor tide.
Hurrah! hurrah! the waters o'er The mountains steep decline; The world! the world is mine! The rivers the sun hath earliest blest Or those where his beams decline, The giant streams of the queenly West, Or the Orient floods divine.

The ocean Dales wherever I sweep To hear my strength rejoice, And monsters of the briny deep Cower trembling at my voice. I carry the wealth and ore of earth,
The thought of God-like mind ; The wind lags after my going forth The lightning is left behind.
In the darksome depths of the fathomless mine, My the the rocks net play, Or the dawn of the grorious dan's decline bring earth's glittering jewels up From the hidden caves below, And I make the fountain's granite cup With a crystal gush o'erflow.

I blow the bellows, I forge the steel, In all the shops of trade;
hammer the ore and turn the wheel Where my arms of strength are made; I manage the furnace, the mill, the mint, 1 cary, 1 spin, 1 weave, On every Saturday eve.
I've no muscles to weary, no breath to decay, No bones to be laid on the shelf, No bones to be laid on the shelf,
And soon I intend you may go and play While I manage the world myself. But harness me down with your iron bands, Be sure of your curb and rein For I scorn the strength of your puny hands As the tempest scorns the chain.

## Great Eastern Rallway Company's New station,

 ondon.The terminus of the Great Eastern Railway Company a Liverpool street, if not partaking altogether of the palatial will be unmistakably a great improvement upon many of the Lowdon termini, and will be one of the largest; the area com prised within the retaining walls-this being a low level sta tion-is more than ten acres in extent, and is some 2,000 fee in its entire length. The general character of the design is cothie, broadly treated in the several elevations.
The area occupied by the various lines of platform is cov ored by a roof in four spans, the two central ones being 109 foet each, and the side spans 46 feet and 44 feet The whol width corered in is 314 feet
The roof trusses are principally comprised of wrough tron with ornamental details of cast iron, and the effect is oxtremoly pleasing. The columns are double in the center, and have also to act as down pipes for the conveyance of water from the roof. The covering is chiely glass, with a emall proportion of boarding and slates. The length of the soof over the main line on the east side is 730 feet, and that over the local platforms 450 feet long and 76 feet above plat form level. The platforms are arranged so that the advan tages of the end-on system, as at Charing Cross, as well as those of the sidelong, as at King's Cross, are retained The main line platforms are 1,000 feet long and 32 feet in width, while the local platforms are 550 feet in length, and vary in width from 10 feet to 21 feet. Lamp rooms are pro vided below the platform, connected with each by a subway and hydraulie lift
The arrangements for traversing carriages across and alon the main line, and the whole of the turntables, eleven in number, are worked by hydraulic porver
Communication is also obtained with the Metropolitan sysvom by a junction with the railways, besides subways from the platforms under Liverpool street for passengers. The whole of the signaling and multifarious working of the
contains more than 100 levers for the purpose of interlocking and other arrangements.
The whole of the worlss have been designed by Mr. Edward Wilson, C. E., the company's engineer, and executed by the well known firm of Messrs. Lucas Brothers.-The Engineer.

## THE IRISH-AMERICAN RIFLE CONTEST

The international contest, between the American team o six of our best known crack shots and an equal number of skilled Irish riflemen, has resulted in a victory for the Americans, gained by 38 points. Three ranges, respectively of 800 , 900, and 1,000 yards, were fired over, fifteen shots at each distance being allowed to each competitor. The targets were six feet in hight by twelve feet in breadth, and were divided off, with a center six by six feet, ins1de of which a bull's eye three feet square was painted. A shot, by striking the bull's eye, counted four, on the center, three, and, if hitting outside the latter, two. From this it will be seen that sistywas the highest aggregate possible for any set of fifteen shots, one hundred and eighty for any competitor's entire score of
forty-five shots, and one thousand and eighty for the shots of forty-five shots, and one thousand and eighty for the shots of
the whole team. Out of the last mentioned total, the Americans made 967, and the Irish 929. The annexed diagrams show the best shooting at each range.
Fig. 1 was made by Mr. Pollock, of the Irish team, at 800 yards, and counted 59, every shot, with one exception, striking the bull's eye. Fig. 2 is Colonel Bodine's (American team) target, which also counted 59. Fig. 3 is Mr. James Wilson's (Irish team) target, which indicates 05.

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Fig. 1.-4-4-4-4-4-4-4-3-4-4-4-4-4-4-4-50.


Fig. 2.-4-4-4-4-4-4-4-4-4-3-4-4-4-4-4-59.

great heat, its tenacity is impaired or destroyed. Whiting is simply chalk freed from impurities, and reduced to a fine powder, and, is also known under the names of Paris and
Spanish white,though the latter is really a whiteearth found Spanish
in Spain.
There is a great difference in whitewash brushes; and the beauty of the work, as well as the ease of performing it, depends very much on a good brush, making it well worth while to pay the difference between a good one and a cheap one. For the inexperienced, it is more difficult to lay on tints evenly than pure white.
For those who have not had experience in using or dissolving glue, it is well to say that the dry glue should be spread in a broad flat basin, like a shallow milk pan, and cold water enough poured on it to fairly cover it; then let it lie over night, or for a day, when, if the water be not all absorbed in the swelling glue, the excess should be poured off, when fresh water will be added, in which you boil the glue, to be mixed with whiting.-D. S. C., in the Maryland Farmer.

Centennial Notes.
A definite project for a huge hotel, to accommodate five thousand of the people who will flock to Philadelphia during the Centennial, has been agreed upon. A number of citizens have taken steps to erect a gigantic wooden building, ten stories in hight and containing a thousand double-bedded rooms. It is proposed to complete the work in five months, an undertaking, the magnitude of which will be realized when it is considered that there will be thirty miles of wal to plaster. The structure will be about four times as large in capacity as the Continental Hotel in Philadel phia.
A correspondent, Mr. John L. Geissler, of West Chester, Pa., writes us that he has invented a remarkable clock, which, with a single pair of hands, indicates simultaneously, on one dial ten feet in diameter, the time not only of the place where located, but of the principal cities of the world. He has offered to place the clock on the wall of the Centennial structure for $\$ 500$, this being the actual cost of its construction ; and he says such a timepiece would doubtless meet with much approbation from foreign visitors, as it would en able them to learn their home time to a fraction of a minute. While it probably might be of interest for the average Briton to note the fact that 2 in the afternoon at Philadelphia corresponds to about the hour at which he would begin his daily onslaught on underdone joints and Bass' ale, we fear that the Italians, who count up to twenty-four o'clock and mark their dials accordingly and the Chinese, the hands of whose timepieces trave backwards, would not gain much useful information from Mr. Geissler's huge clock. How ever, the idea is a good one, because the Centennial should certainly have a timepiece connected electrically with clocks in all the principal cities in the United States, so that, at 12 o'clock Centennial time on the momentous 4th of July, the entire country might join in unanimous cele bration. Mr. Geissler offers a curious clock for a smal cost, and the Centennial authorities would perhaps do well in adopting his suggestion.
It is proposed by the managers of the Centennial to appoint an electrician who shall have the supervision and direction of the electrical department. This is very important and responsible position, and should be filled by no person save one whose talents and qua lifications are of the highest order
We notice that the Telegrapher suggests the name of Mr. David Brooks, in which nomination we hear tilyconcur. Mr. Brooks has had valuable experience in the foreign expositions, is a thorough expert in al matters electrical, and enjoys a wide acquaintanc among the electricians and telegraphic engineers of Europe. We trust that the Centennial managers will see the wisdom of appointing Mr. Brooks.
$4-3-4-4-4-4-3-2$
It is difficult to appreciate fully the magnificent marksman Which these scores prove, especially with regard to th housand ards is the Americans qained large locks in his city, including the widths of the streets; and hitting a hree-feet square target at that distance amounts to abou the same as (if the buildings were out of the way) standing t Trinity church and sending a ball into a window of the Scientific American office. The bull's eye would appea f about the same size as a dot half an inch square held at a distance of some three yards from the eye.

## To Kalsomine a Wall.

Buy the best bleached glue if the walls are to be white or some light tint (if dark, it is immaterial, so the glue is lean), and use it in the proportion of a quarter of a pound of glue to eight pounds of whiting. Soak the glue over night in the morning pour of the water, as the glue simply swells set that in a kettle of boiling water. When dissolved, stir into it the whiting, adding enough water to make it, after mixing, of the same consistence as common whitewash. It may be tinted to any color desired, and is applied with a whitewash brush. If the color is rubbed smooth in a little water first, and then mixed with the wash, it will be more oven. If the walis have been previously whitewashed, scrape way all that will come off, and wash with a solution of white vitriol, two ounces in a pail of water. The vitriol will be decomposed, forming zinc white,and plaster of Paris, to which the kalsomining easily adheres. It is important to diseelve the glue in a hot water bath; forif soorchod by too

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## Improved Spring Bed Bottom.

Joseph Fowler, New York city.- Springs are attached to the bedtead and to the cross bars by means of the contracted coils of spring downward. The head of a rivet rests on the lower contracted coil of the spring. The bed is suspended on the springs in this man ner, and the bolts or rivets form a substantial connection. The devices improve another invention, patented to same inventor Jan uary 26, 1875.

## Improved Shirt

John C. Dunham, Buffalo, N. Y.-This invention consist of a shirt front detached from the body, except at the top and for a oertrin distance downward, sufficiently to keep it in place, by which the sists of the upper end of the front narrowed by rounding the cor bers to diminish the breadth of the connection with the yoke, by whioh wrinkling of the front is prevented when the arms are raised.

Improved Toy Gun.
Itudiam H. Martin, Mobile, Ala.-This invention consists of a lonitudinal slotted barrel, with ball or arrow propeling slide piece ollar at the muzzle of the means of springs attached to a cushioned art of the slide is locked by spring jaws, and released by a trigge and slide piece.

## Improved sliding Gate.

John P. MoMurray, Oregon, Mo.-The gate rests outside of the cate post, so that it may be readily moved longitudinally about one half its length, and then it may be swung round on a bracket to
open the full gateway. It also can be moved on the rolls longttudinally, and may be elevated to bwink clear of snow in the winter seasoa

