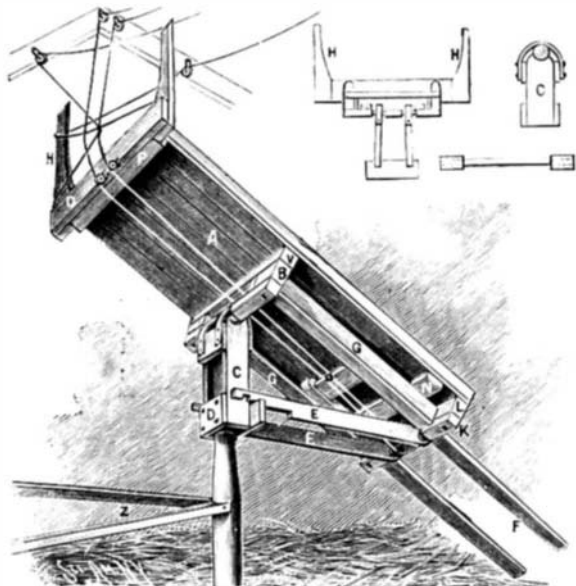


AN IMPROVED HAY STACKER.

The construction shown in the illustration is designed to be erected in a mow or shed, or in a barn, or wherever hay or straw is to be stacked, the device receiving the hay or straw directly from the fork, and being manipulated from the wagon to distribute the load to any side of the stack as desired. The improvement has been patented by Mr. Thomas Collins, of Overton, Bradford County, Pa. At the center of the space to receive the stack is erected a post, on the upper end of which is swiveled a platform, A, upon ears, B, pivoted



COLLINS' HAY STACKER.

to a frame, C, D representing detachable portion of the frame to facilitate the erection of the stacker where space is limited. The platform and its extension frame, F, are held at any desired inclination by rack or toothed arms, E, pivoted one to each side of the platform at its front end to a crossbar, K. The platform has slideways, G, on its under surface, L, N, O, P representing connecting pieces, and Z braces for the main post. The sectional figures illustrate details of construction. The extension frame of the platform is adapted to be manipulated by two ropes or cables, by which the frame is extended or withdrawn, other cables being provided by which the frame and platform are rotated upon the central post to deposit the hay or straw delivered by the fork directly to any side of the stack. All the cables lead to the wagon when it is in position to discharge its hay. The device is designed to symmetrically build up a stack without the assistance of additional laborers in distributing the hay or straw as placed.

EXPLOSION OF A LOCOMOTIVE.

The explosion of which our engraving shows the curious results occurred on the 14th of January, at Soosmezo, in Hungary, on the railway from Buda-Pesth to Bucharest.

Locomotive No. 4, whose boiler exploded, had just pulled a freight train into the station and was standing upon the track, when a terrific detonation occurred that shook the earth and air with such force that all the windows of the neighboring village were broken. The greater part of the cylindrical body of the boiler, as well as the smokestack, had been projected into the air, and pieces weighing 1,500 pounds had been thrown to a distance of two hundred yards. The frame of the engine, broken under the stress, was bent in two near the earth, while the boiler tubes, remaining adherent to the fire-box, were exposed to view like the entrails of an open cadaver.

Strange to say, the accident caused no loss of life, the engineer having left the platform, while the fireman, engaged in oiling the mechanism, escaped with a few non-fatal wounds.

The inquest that was immediately held gave no precise results, but appears to have demonstrated that the boiler plates had been weakened through oxidation.—*L'Illustration*.

The total number of newspapers published in the world at present is estimated at about 47,000.

Learn a Trade, Boys.

A correspondent in the *Sewing Machine News*, quoting from the *Ladies' Home Journal* an article on the value of a trade, makes some remarks of his own which are practical and pertinent to the subject.

I remember years ago, when I was a very young man, writes John Coates in the *Journal*, meeting John Roach, the great ship builder, in his shipyard at Chester, Pennsylvania. I remember, too, what he said then about the value of a trade to the average boy.

"Young man," he said, laying his great, broad hand on my shoulder, and looking at me earnestly with his keen, steel-blue Irish eyes, "next to a clear conscience, a trade is as good a thing as any young man can have in this country. You can carry it with you all your life long; you have to pay neither rent nor taxes upon it, and it will help you around a sharp corner when most other things will fail."

I have never forgotten that utterance from a man who started in life—after landing in New York from Ireland—as helper to a machinist, who became the leading ship builder of his time, and who, up to the hour that he was stricken with a fatal illness, could take the place of any of his workmen, whether it was a man driving rivets or an expert putting together the most delicate parts of a steamship's machinery.

Something very like what John Roach said I heard another great man, who is now dead, say. This was Peter Cooper, a man of whom American boys cannot know too much, and whom they certainly cannot too much admire.

"If I had my way," said the venerable philanthropist, on the occasion to which I refer, "I would give every boy a trade. Then I would have him stick to it, love it, and be good to it. If he does, it will be good to him."

To which the writer in the *Sewing Machine News* adds:

To an observing and interested person how sad is the spectacle, and how forcible is the fact, which ought to be food for serious reflection to every American citizen, that very few of our American boys ever learn a trade, and as a result almost everywhere the leading mechanical positions are filled by men of foreign birth.

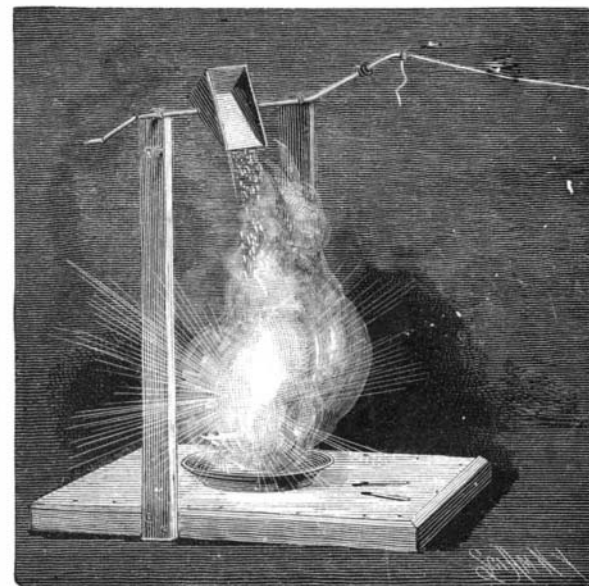
Why is this? Is it because our boys are less able? Is it because there are no facilities for learning trades in this country? To the last question the argument may be advanced that the trade unions lay too many and too heavy restrictions regarding the number of apprentices which will be employed or allowed. Argument admitted and the point taken granted. But the bottom cause is Young America's "don't want to." He would rather stand behind a counter in some store, or canvass for some agency, or work in some factory at piece work, where he can earn more money, at first, per week than if put to learning a trade.

This would all be very well provided he could be sure that such employment would last as long as he needed to work for a living. We all know that no substantial building exists, or can exist, without a good founda-

Encourage them to learn trades and afterward to rise in them. Having a good common school education for a starter, their native smartness will enable them to master their trades, and by avoiding all unclean or unsteady habits, they need have no fear for the future, for their services will always be in demand.

NEW FLASH LAMP.

To a block of wood about six inches wide, I nailed on either side uprights about 12 inches high and an inch wide. Across the top of these uprights, and held



WILLIAMS' FLASH LIGHT.

in position by small staples, is a stout iron wire. At the center of this wire is fastened a tin dish, shovel-shaped, for holding the flash powder. One end of the wire is bent at right angles up, and the other end down. To the upper arm is attached the string or thread by which the lamp is operated. On the outside of the upright, next to the lower arm, is driven a nail, against which this arm of the wire bears, and thus prevents the powder dish from turning backward. Directly below this dish, on the block between the uprights, is placed a dish containing a piece of asbestos soaked in alcohol. When all is ready powder is placed in the upper dish, the asbestos lit and the string pulled. The cup containing the powder is suddenly turned over, precipitating its contents into the flame below.

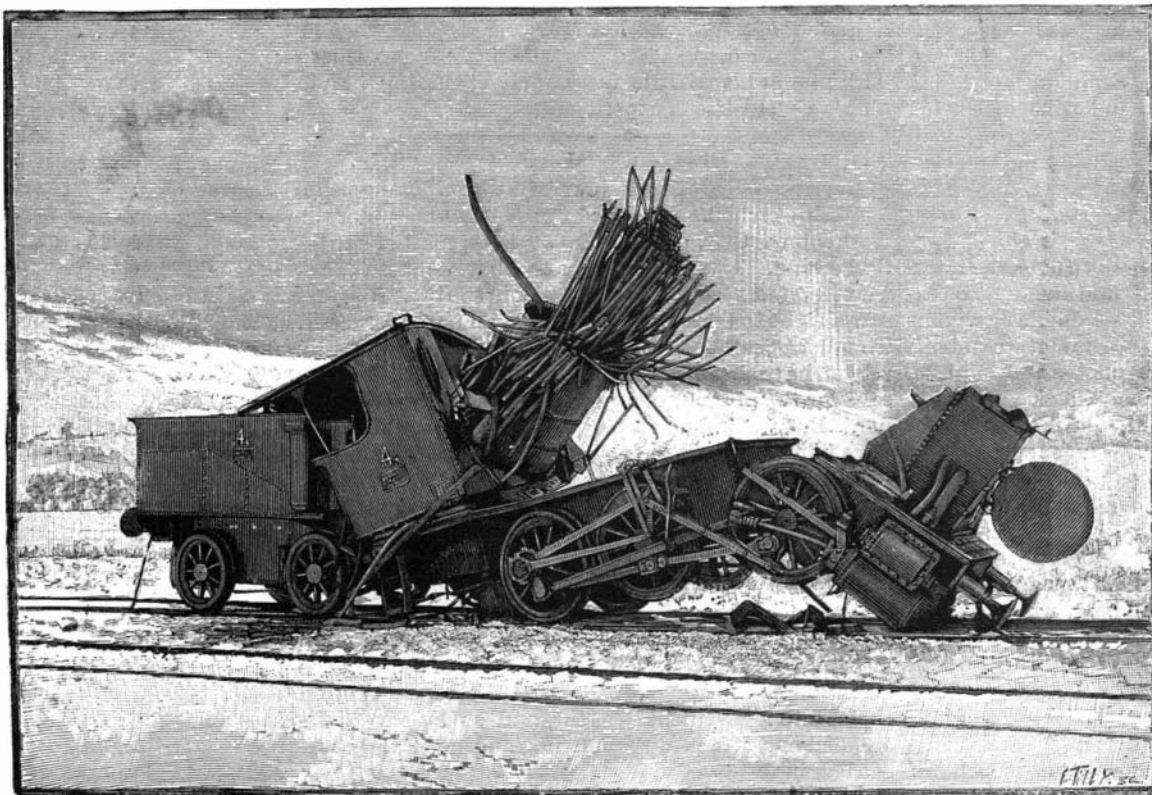
By this means the powder is thrown into the flame, which I find gives a better result than with other lamps. Another advantage is that pure magnesium powder can be used. DE WITT B. WILLIAMS.

World's Fair Notes.

A communication has been received from the British Commission asking for space to exhibit the rifle caliber guns manufactured by the Maxim-Nordenfolt Gun Company. The company wants to erect a building 30 by 15 feet to exhibit its guns in practice. One end of the building will be filled with sand bags, into which the projectiles of the guns will be fired. It is claimed that the arrangements are such as will insure perfect safety, and will be reproductions of a similar exhibit recently given at the Royal Naval Exposition in London. The request was referred to Chief Willard Smith, of the Transportation Department, as the exhibit, if allowed, will come under the head of naval and marine display.

A very complete and doubtless an eye-opening diamond exhibit will be made by Cape Colony, South Africa. The exhibit will include 10,000 carats of uncut stones, a large quantity of very fine cut and polished ones, together with all that is necessary to show the process of mining and washing. For this it will be necessary

to transport to Chicago 100 tons of pulverized blue earth, 50 tons of unpulverized earth, and a complete washing machine, which will be operated by natives. The exhibit will also include a unique collection of crocidolite, special diamondiferous products ostrich feathers, fleeces, etc. It is reported that a Bushman and Hottentot in native dress will accompany the exhibit.



EXPLOSION OF A LOCOMOTIVE BOILER AT SOOSMEZO, TRANSYLVANIA.

tion, therefore let us encourage our boys to learn trades. Where there are trade schools, take advantage of them, and every city should have one or more. Teach them that work is honorable. That it is no disgrace to lay brick. That it is not unmanly to be seen on the street carrying a kit of plumber's tools with a clear conscience. Though the work be dirty, the money is as clean as that gained in any other way.