

ble degrees of heat, and its indestructible nature gives it great permanence.

Besides the above, there are numerous other productions in the exhibit into which asbestos enters more or less largely, and a great variety of specimens of the natural asbestos, but it is difficult to make the common run of visitors believe these goods are manufactured from such a natural product. A great deal of attention is given to a little illustration in the exhibit showing the indestructibility of asbestos by heat, an Argand gas jet being kept constantly burning, over which is fixed a handful of asbestos fiber, but the hot flame is seen to have no effect whatever on it, a result which surprises not a few of those who take these fine textured shreds to be of silk or some such fiber.

Mr. Johns is the inventor and patentee of the methods and processes by which all the products here exhibited are manufactured, being the originator in the application of asbestos for these modern uses, and for its combination and employment in every way heretofore found practicable. The New York office of the company is at No. 87 Maiden Lane, where illustrated catalogues, descriptive of their inventions, can be obtained, and their goods are sold by dealers in all the principal cities and towns in this country and abroad.

THE ALMOND COUPLING,

an interesting mechanical device, which attracts much attention, is shown in one of the small views. It furnishes a substitute for bevel gears and the quarter turn belt to allow of shafting to be run in any desired direction.

GAS STOVES

are shown in great variety at the exhibition, by manufacturers of stoves, meters, and heating apparatus generally, and our artist gives a sketch of one of the most noticeable of these, showing how to "put the kettle on," etc.

STEAM BOILER NOTES.

The London *Iron Trade Exchange* has the prospectus of a new steam boiler insurance company, incorporated under the name of the Scottish Boiler Insurance and Engine Inspection Company. The liability of shareholders is limited to the number of shares held by them. Their principal office is to be at Glasgow; their capital, £50,000, in 10,000 shares. Subscribers are required to pay five shillings per share on application, five on allotment, and ten shillings at the expiration of three months from the registration of the company. The other £4 are not to be called for, but remain a reserve fund for the security of insurers. It shows that steam boiler insurance is profitable, by quoting from the "Stock Exchange Year Book," the business of three other stock companies in England, none of which have ever been called on for their reserve, which is about the same percentage of the par value as that proposed by the new company, while their dividends have been from ten to twenty per cent per annum, with occasional bonuses varying from two to five shillings per share. It claims that there are in Scotland about 25,000 boilers, and only 9,000 to 11,000 of them insured. The *Trade Exchange* says:

"The business of the company is to insure boilers against explosion or collapse, and the periodical inspection of both engines and boilers, the testing of new boilers by hydraulic pressure, the superintendence of the erection of new engines, and the repairs of those in use, also to advise policyholders generally in matters relating to their engines and boilers. The system of boiler insurance and inspection inaugurated by a Manchester company, eight years since, has been eminently successful. It met the need of steam-power users of competent periodical inspection of their boilers without entailing great expense. By the system of boiler insurance the steam-power user is relieved of all anxiety as to the condition of his boilers; he could not effect a policy unless the plant was in safe working order, and the policy once effected, the insurance company will, by careful and periodical inspection, see that the condition of the boilers is kept up. The destruction of life is rightly the most dreaded calamity in connection with a boiler explosion, and we feel satisfied that the Manchester Boiler Insurance Company, the Wolverhampton Company, and others have been the means of saving many lives by their insurance inspections. The Scottish Boiler Insurance and Engine Inspection Company is founded to insure and inspect boilers in Scotland, and, looking at the immense number of steam-power users north of the Tweed, there is certainly a wide and useful field for its business."

The boiler of a train on the Hastings and Dakota division on the M. and St. Paul Railway exploded, September 26, near Prior Lake, while running fifteen miles an hour. The engine was thrown 150 feet forward and off the track, two cars being derailed. Engineer Grove Bradbury was thrown a considerable distance and died soon after. The fireman and conductor Jones were slightly injured. No passengers were hurt, and they were sent to their destination on a special train.

Under the provisions of the new boiler inspection ordinance of Detroit, Mich., which has already gone into effect, all persons desiring a license must file an application with the inspector, William Wray, stating their experience and qualifications, and having the indorsement of at least two well-known citizens as to their temperate habits and good character. The inspector will then examine the applicants as to their qualifications, and report the names of such persons as he deems competent to the mayor, who will issue the license when the necessary bond is executed and the stipulated fees paid into the city treasury.

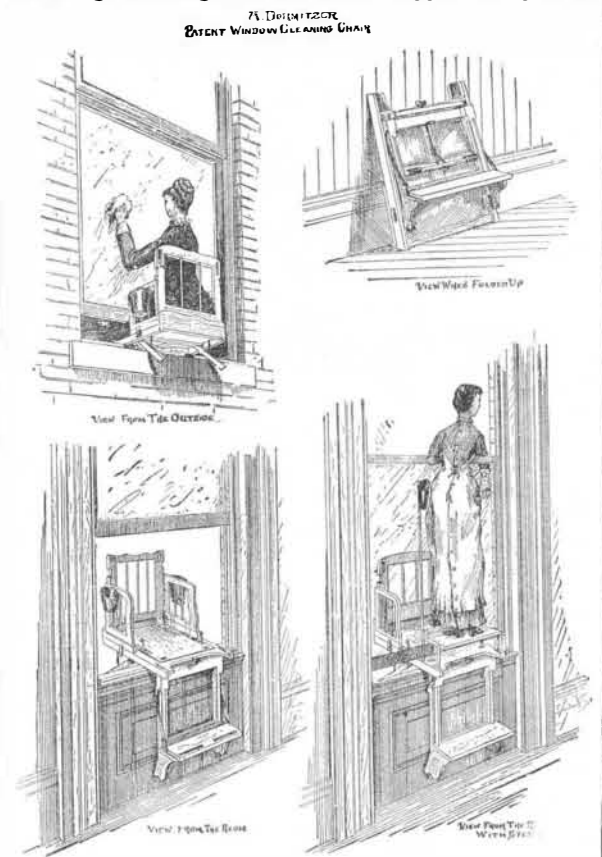
By the explosion of a boiler, late in September, near Uniontown, Pa., James McDonough was fatally scalded and four others injured. The cause was the use of sulphur water during the drought. This cause of boiler explosions has been before alleged, and was commented on in these notes under date of October 1. It is probable sulphur had less to do with the explosion than the announcement of its use seems to indicate.

The *St. Louis Age of Steel* says: "A Canadian mechanical engineer named Arnoldi has invented a device designed to give a partial security against boiler explosions. The invention consists of an electric adjustable attachment to the ordinary steam gauge now in use, to give an instant and continuous alarm, at any distance from the boilers or other pressure generators, of any excess of pressure over that at which the alarm has been set, and where there is more than one generator in operation, an ordinary 'tell-tale' can be attached to signify which generator is at fault. The invention possesses a great many valuable features, prominent among which may be noticed that it is extremely simple and inexpensive, and can be attached to existing arrangements at no expense beyond that of the alarm itself, and without in any way affecting the present adjustment of the gauge."

This apparatus might be made very useful if placed beyond the reach of the boiler attendant, and connected by wire with the residence of the superintendent or owner of the boiler. It would, at night especially, tend to keep a watchman on the alert who might otherwise coal up the fires for a good rest, go to take a smoke or a nap when he should be attending to his duties. It would be an easy matter, however, for a rogue to disconnect the wire and thus defeat the object of the device.

IMPROVED WINDOW CHAIR.

The many accidents to life and limb of persons engaged in window cleaning or doing other work about the windows of our high dwellings calls for a safe support for persons



NEW WINDOW CHAIR.

doing such work. The patent window-cleaning chair, shown in the engraving, is designed to supply this want. It not only affords a safe and comfortable seat for females who are often obliged to risk their necks at this work, but it is also a strong and safe platform for men to stand on to paint, glaze, put up awnings or decorations, or do other work about windows. It holds cups for the necessary water and cloths to clean with. It is provided with supports for paint and brushes, and it will be found very desirable to those who wish to work quickly and safely, as well as a protection and safeguard to those who are timid and nervous while working in elevated places. The window chair is fastened and detached in less than a minute, and, in addition to the uses already mentioned, it will be found very agreeable to sit upon when it is desirable to obtain a breath of fresh outside air; sitting on it comfortably the cool breeze can be enjoyed without leaving the room. The construction of the chair is very simple, and so light that a child can carry it. It folds up like a book and stores away in a very small space. It will fit any ordinary sized window, and is provided with a step which permits of reaching the highest parts of the window, and the work of cleaning can be done without the aid of a step ladder. The window-cleaning chair can be seen at the Inventors' Institute, corner of Third and Fourth Avenues, Seventh and Eighth streets.

Oysters in New Orleans.

The coast of Louisiana abounds in oyster banks, and a considerable oyster trade has been developed at New Orleans, giving employment to about 200 luggers, each manned by from three to six men. The owner is usually

captain, and receives two shares of the net proceeds of the sale of the oysters, one being claimed by the boat and one for himself. Every man on board then receives a share each in payment for his services, from which he has to pay his board or for his share of the expense incurred in the purchase of provisions. A trip usually consumes from four to seven days.

The oysters are taken by tonging. During the summer and early fall the supply is for the most part the small and watery "raccoon" or basin oysters, from Saline Bay, Grand Isle, and Barataria Bay. The price ranges from \$1.25 to \$3.00 a barrel. A better quality is received later from Bayou Cook. These oysters have been transplanted during the summer from Saline Bay and natural beds elsewhere, and are fatter and better flavored than the natives. Bayou Cook oysters fetch from \$2.50 to \$4.00 a barrel. Owing to the shortness of the orange crop this year a large number of fruit luggers will be transferred to the oyster traffic. The wholesale oyster houses in New Orleans give employment to upwards of 500 hands.

Gold in New York.

The Albany correspondent of the *World* finds that 757 persons have filed claims for 597 localities in the State of New York said to contain gold and silver. Some of these claims are explained by the fact that, to forestall other possible claimants, the owners of lands have filed claims for mineral veins, or suspected veins, without much regard for their intrinsic value. Most of the claimants, however, appear to believe that their discoveries are important; and it would also seem that, to a considerable extent, the claimants are not very well qualified to judge of the probable character and value of mineral deposits.

The correspondent cites a number of claims to illustrate the extraordinary ignorance of metallurgy shown by some of the would be miners. One locator claims the possession of a ledge yielding gold, silver, platinum, iron, tin, lead, and graphite—truly a curious, not to say wonderful, conglomeration. Another says that his claim is one-fourth pure silver—rich ore, as any Western man would tell him. And yet another locator states that his ledges, of which he has thirteen, contain gold as good as that placed upon Solomon's temple. He says, however, with exceeding naiveté, "I have not found any yet."

The position of the claims shows four well defined gold fields. The first begins somewhat about Plattsburg, and runs in a southerly direction into the counties of Hamilton, Fulton, and Saratoga. It then divides into two branches, going west into Herkimer and east into Washington County. The second is south of this, in the neighborhood of Dutchess County. The third is still further, south in Westchester and Rockland counties. The fourth is in the western part of the State, in Erie and Allegany counties. From the fact that the Geological Survey has not yet made any examination of these alleged gold fields, it can only be said in a general way that quartz is known to exist in the neighborhoods where these gold and silver veins are said to be. It is therefore impossible, without examination, to say how much basis there is for the faith shown by the locators. In a few instances the notices filed in the office of the Secretary of State contain statements of assays made and work done, but these are not enough to found a judgment upon as to whether these gold fields will commercially pay. They simply indicate that the locators have, in some instances, proved their faith by their works. One of them records the discovery of a blind lead, or lead of which there were no surface indications of gold, while sinking a shaft on a silver vein. As the gold lead was discovered at a depth of fifty odd feet, the notice shows some considerable work done.

The Largest Elevator in the World.

The new elevator built by David Dows & Co., in Brooklyn, is said to be the largest in the country, and probably the largest in the world. It has 100 feet front upon Columbia street, and extends thence 1,200 feet to the river, 600 feet being occupied by the main building, which is of brick, and 600 feet by a frame extension, which is sheathed with tin. The frame building is 45 feet high, and has a tower in its center 100 feet high from the wharf level. The brick building is 85 feet high, and has an elevator tower in the northeast portion 120 feet high. Three towers rise from the center line of the main building, about 100 feet from each other. Each tower is 175 feet high. Solid brick walls divide the main building into nine apartments, closed to each other, except where there are openings for the belting to pass through. These walls form a bulwark against fire, as the holes can be closed by dropping a cast iron door over them, and if the fire should be so fierce as to cut off access to these doors they are so arranged that the ropes may be burned quickly, thus permitting them to drop of their own weight. An electric fire and burglar alarm is furnished for the building.

The machinery in the elevator can take grain at the rate of 8,000 bushels an hour from the barges or vessels at the pier. The grain is elevated, sifted and fanned, weighed, stored, put in bins, and then transferred to vessels at the pier. There is nearly a mile of wire cable used to transfer the steam power, and about five miles of belting, called conveyers, carry the grain up with railroad speed. These conveyers travel at the rate of 600 feet a minute, and carry to its destination $2\frac{1}{2}$ bushels of grain a minute. No shoveling is necessary.