

Automatic Compound Fire Annihilator.

The inadequacy of all means thus far used for extinguishing fires, proceeds chiefly from the difficulty of their immediate application, and also that the very means now used to extinguish fires frequently involve great damage to merchandise and other property, by the volume of water used in putting out the fire itself. It is often the case, where fires are actually extinguished, that the damage through this cause exceeds that of the fire loss. Scientific and thinking minds have for years been engaged in solving the problem of subduing fires in their earliest stages by some process that, while it should extinguish the fire, should not involve great loss through the means employed. A Professor of Chemistry at the University of Leipsic, Germany, at last succeeded in filling this long-felt deficiency in the modern means of preventing conflagrations. He produced a dry chemical compound, which, on being ignited evolved volumes of gases antagonistic to fire. His invention was subjected to the severest practical tests, and then adopted, on its merits, by the leading governments of Europe.

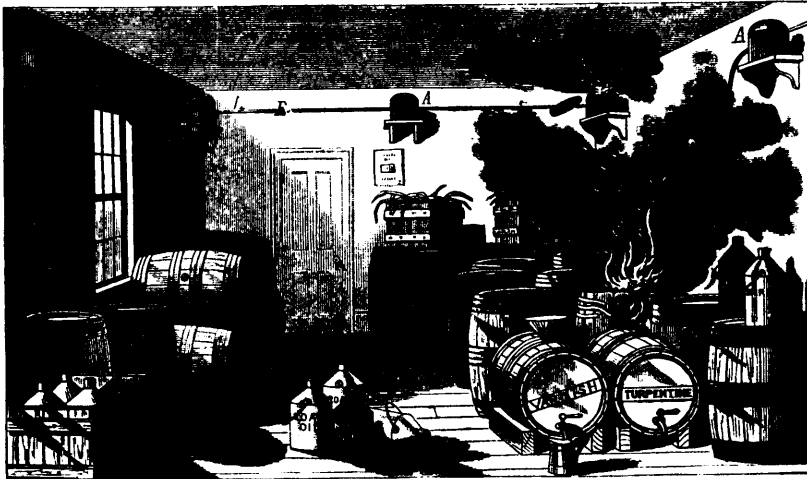
After the success of his process became known, it was introduced into the United States through being patented first and afterward exhibited to the municipal authorities of the leading cities. Its success here is none the less marvelous than attended its introduction in Europe. During the short time it has been known in this country rapid progress has been made in its application to use in manufactories, dwellings, depot warehouses, and shipping. It is put up in strong metallic boxes holding from 5 to 50 pounds each. A slow match or fuse is attached to the box, and in case of fire, is ignited with a match and thrown into the room on fire. The compound then burns slowly,

creating gases that are absolutely antagonistic to fire, thus putting out the fire and damaging nothing else. It cannot explode, and its gases being fumigations and disinfecting in their nature, injure nothing, while they smother effectually all fires, whether from wood, textile fabrics, spirits, kerosene oil, benzine, or any other violent inflammable material. Its cheapness, portability, ease of application, and efficiency make it the most acceptable thing for the purpose known. Without desiring to reflect upon other extinguishers, we are led to suggest that no child or woman can handle and apply for the extinguishing of fire any machine weighing 40 pounds and upwards, or work a force-pump in addition thereto, or in the excitement of a sudden fire have the courage to stand and fight a fire with any of the chemical extinguishers now in general use. With this new compound no skill or strength is required in using it, but is simply to be ignited and thrown into the fire, the doors and windows closed, and it will do its work without further human assistance. Other and important advantages of this compound are, that it will not freeze or deteriorate, and is always ready. Its automatic principle consists in this: Placed upon a shelf or bracket, with the fuse exposed or extended along the room, a fire occurring will ignite it, and it will act itself, suppressing fire without human aid, or this alone it is invaluable. On shipboard it is a want never before supplied. The horrors of a ship on fire have appalled the stoutest hearts, because nothing heretofore invented could reach and extinguish a fire between decks among the cargo. This compound, emitting gases that smother fire, will penetrate to the remotest part and accomplish that which has, up to this time, baffled the ingenuity of man.

We have no doubt that when the merits of this compound are known, no one who has property at stake will longer remain without it, and no ship or steamer will undertake a voyage without a supply.

We adjoin a representation of the inside of a store-room of painters' supplies, containing the most combustible material, and where a barrel of turpentine has taken fire, and where some of the above described packages containing the compound have been arranged along the top of the room in such a way as to cause the incipient fire to ignite the fuse which connects the boxes, and thus to communicate the fire to one or more of them, which then at once will commence to burn slowly and emit so much gas as to completely fill the room with gases, and smother the fire, the only conditions being that the windows and doors of the room must be kept shut when unguarded, so as not to allow the gases evolved to escape or fresh air to enter.

We have before us a number of testimonials which place the effectiveness beyond doubt, and emphatically recommend it to oil refiners, candle-makers, varnish manufacturers, and all others who handle materials which water will not extinguish. For them this is the only reliable thing to use.



PRACTICAL APPLICATION OF THE COMPOUND.

We have seen the experiment tried in a wooden shanty nearly filled with wood saturated with benzine, tar, etc., and then ignited and apparently under full headway, so that no fire-engine could have extinguished it with water; a single box thrown in and the window closed ended the fire in a few minutes, leaving the interior blackened—that was all.

LIGHT IN RAILWAY CARS.—The *Railway Age* pleads for light in our railway cars, and more especially as the season of early darkness has now set in and the need is daily growing more apparent, particularly in those composing the suburban trains whose passengers do not take their daily ride for pleasure, but simply to reach business or home as comfortably as possible. It is now too late to say that railway cars cannot be well lighted. In the modern Pullman cars, and in the ordinary coaches of some roads, lamps suspended from the ceiling, with porcelain shades or burnished reflectors, diffuse throughout a mild, clear light by which the finest type can be read with ease. In cars thus lighted cheerfulness and good humor prevail, and in reading or in animated conversation the trip appears short, and the travellers leave the train with a warm and grateful feeling toward the liberal management that has done so much for their comfort. On the other hand, fifty or sixty people sitting in a car lighted only by the ghastly reflection from three candles—as may be seen on several of our roads—become a silent, discontented crowd, almost dangerous to accost by the dim, irreligious light of the dip.

VIOLET INK FOR RUBBER STAMPS.—Mix and dissolve the following: Aniline violet, two to four drachms; alcohol 15 ozs.; glycerine, 15 ozs. The solution is to be poured on a cushion and rubbed in with a brush.

CONCRETE BRIDGE.—At Seaton, Eng., a three-arch bridge is being built of concrete, on a new principle invented by Mr. Brannon of London. The idea of the inventor is that concrete would, for such work, prove far more enduring than stone. The toll-house at the end of the bridge is being built on arches. Mr. Brannon suggests that by building cottages on arches, instead of on solid ground, all fear of fever caused by exhalations from the soil would be avoided.

The Perils of the Foundry.

Few appreciate the dangers which many mechanics have to face, or give them proper credit for bravery. We read of an accident in Pittsburg, Pa., which happened as follows: A number of men were casting a chilled roll. Nearly two tons of iron were required to make the casting, and the services of twenty men were needed to handle it. While they were pouring the molten metal into the mold there was a sudden and terrific report, which was closely followed by a shower of liquid iron. The red-hot metal flew in every direction, and dropped upon and about the workmen. They ran to escape the shower, in their terror dropping

the ladle which yet contained most of the metal. The ladle was overturned, and immediately great streams shot out in quick pursuit of the flying laborers. Two of the workmen, closely followed by streams of the red-hot iron, fell into adjoining pits and the metal ran in upon them, burning their flesh to a crisp in many places. One man's face was burned to a crisp and his eyes burnt out of his head, and in their places the sockets were filled with chunks of chilled metal. The other man's eyes were also burnt from their sockets, and his face, breast, arms and hands were burnt to a crisp at different places. Here

and there the red-hot metal had actually eaten its way to his bones. The cause of the explosion was attributed to a "damp cave;" in other words, the sand with which the mold had been packed was not properly dried, and perhaps, too, not properly grooved, so that the steam generated could not escape.

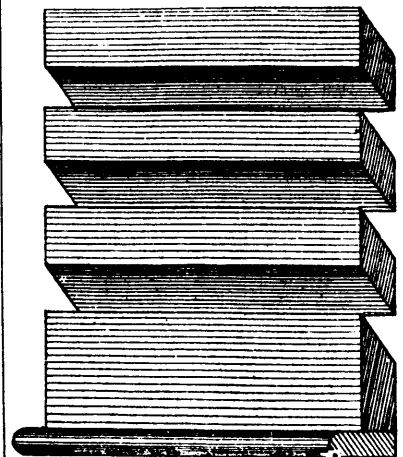


Fig. 2.—Section of Blind.

(SEE PAGE 64.)