



### Patent Office Decorations.

MESSRS. EDITORS:—As your paper ought to keep the world informed about improvements in the fine arts as well as everything pertaining to the useful arts, you will no doubt feel interested in a new style of decoration for stately halls and corridors which has lately been inaugurated at the national capital. The only illustration of its peculiar character yet given, is to be seen in the Exhibition Hall of the Patent Office, which may have been selected because it would there attract the widest observation—for you must know that from 70,000 to 100,000 people annually visit the interesting relics and curiosities in those halls. The decorations of the capital, so gorgeous and profuse, have been sharply criticized, and it may be that the Government connoisseurs propose to test the public taste by means of the contrast now afforded. Whatever may be the hidden motives which caused the selection (as it is in the Patent Office, perhaps I ought to say the invention) of this style of painting, it is very certain that Congress thought that the hall which contained the precious relics of the revered Washington should be decorated, and therefore, at the last session and in the midst of this onerous, money-absorbing war, they voted many thousands of dollars for that purpose. Whether its purposes have been carried out depends upon one's idea of what decoration consists of. That the hall is painted every one—artist, connoisseur, politician, honest or dishonest, male or female—will assent to. The walls are covered with a strong yellow, too strong perhaps for a weak stomach for colors. The arches, which are the awkward, pot-bellied barrel kind, are painted in a composite style, yellow predominating; while the stumpy columns are disguised in blue, a deep blue, deeper than indigo. Perhaps the artists or the Congressional committee (if there is one in this case) call it "blue-black." The square pedestals are done in black—in mourning perhaps for the illustrious Father of his country, whose statue looks mournfully upon the floor of the hall with downcast eyes. It is supposed by some persons that the style of decoration for this hall is entirely original, and is meant to embody the national colors—red, white and blue—in novel contrast with other vivid elements of coloring matter. Others assert that it is Pompeian, and others, again, say that it is Moorish, while some assert that it is from Africa, from Upper Egypt, or from the remains of the painted sepulchers on the Nile; one gentleman, himself an artist, contended with me that it was Indian style, from the Rocky Mountains. Whencesoever it comes, it is a fact that it is new in America, and although it may strike delicate or artistic fancies with dismay at first, yet it is believed they will soon get used to it, and be able to look upon the curiosities and relics around them and forget the paint, although it is related that an eminent author recently, when she had occasion to visit the copy-right office, refused to pass out through that hall because it was "barbarous." X.

Washington, D. C., May 12, 1864.

### The Way the Rebels get Mechanics.

MESSRS. EDITORS:—There is a great deal of wonder expressed, both at home and abroad, as to how the Confederates get workmen to make such formidable rams, as it is well known that all their male population is pressed into the army. I can tell you how it is, and hope that you will call attention to it, as it is of the utmost importance both to the Government and the people. You have heard of the starvation of our men who had the misfortune to be captured and imprisoned by the rebels on Belle Isle and at Richmond. Their sufferings have been intense, in fact they have never been exaggerated in any of the horrible tales which we have all read. Is it any wonder, then, that when the rebel authorities ask for mechanics from the Yankee prisons, with the promise of having plenty to eat with warm clothes and comfortable quarters, the chance is immediately snatched at by the poor wretches who have been suffering so long? They go to work at their various trades; some are good machinists, and others work at shoemaking and every other trade of which the rebels

stand in need of master-workmen. Thus are our Government's own "guns" turned against it.

PAROLED PRISONER.

U. S. Gen. Hospital, Annapolis, Md., May 11th.

### Novel Plan for supplying Gas.

MESSRS. EDITORS:—You did me the kindness some weeks ago to answer through your columns some queries in reference to the friction of gases in passing through tubes. I have made inquiries of the engineer of the Philadelphia gas works, as to experiments made there on the subject, but have not yet learned definitely to what extent their experiments have hitherto been carried. I am however informed that great discrepancies exist between the theoretical result of the problem and its practical workings. The object of my inquiry was this: the gas works in this city consume annually 80,000 tons of bituminous coal, for which has been paid about \$7 50 hitherto. The last engineer's report calculates that it will cost them \$2 more per ton this year on account of the general enhancement of prices. The same coal can be purchased at the mines, about thirty miles this side of Pittsburgh, for \$1 50 a ton. Now if the gas could be manufactured at the mines and conducted to the city, a gross saving of from \$6 to \$8 per ton, or from \$480,000 to \$640,000 per year could be effected. Unless the friction be an inseparable obstacle, a small main, say 12 inches in diameter, would be a sufficient conduit pipe. Such a pipe would cost (say 300 miles) about \$3,000,000. An exhausting engine pumping the gas at the rate of thirty miles an hour (the rate of exhaustion assigned to the Pneumatic Dispatch Company's works in London), would afford an abundant supply of carburetted hydrogen for our city. The friction I take it could be diminished in a number of ways, by lining the main with sheet tin, &c., and by the interposition of station gas holders at various points on the line. A number of exhausters might, and probably would, still be necessary on so long a main, each one emptying the gas into one of these holders. The gas meters here also would have to be increased so as to contain say a week's supply for the city in case of leakage or accident to the main. The main to be laid along the line of the Pennsylvania railroad, over its bridges and through its tunnels, so as to be easy of access in case of accident.

I intend to look into this matter further, and bring it into shape on paper. The idea, if not new in its main features, may be as to some of its details. The gross savings in this proposed change being per year \$640,000. Deduct interest on cost of 12-inch main per year, \$180,000; interest on the cost of laying the main, which I have not estimated; the cost of additional gasometers and exhaust pumps. There would also be additional, but trifling expenses for wages of workmen, &c. The cost of gasometers and exhaust pumps would be counted by tens of thousands of dollars and not by hundreds of thousands. But at first blush there would seem to be an annual saving of some \$200,000—perhaps \$300,000—i. e., the interest on from three to five millions of dollars. The works as they now stand are taxed to their full working power, there will be a necessity for an additional supply of gas soon. The proposed change would not only cheapen the gas used by us but enable us to supply intermediate cities and towns from station gasometers, and would also remove from the heart of a populous city works universally felt to be a tolerated nuisance in their own neighborhoods.

I have heard that some European inventor has learned to manufacture gas mains from bitumen, and I understand that Thurlow Weed is the purchaser of, or agent for the patent right in this country. Do you know whether such is the case and what would be the comparative cost and utility of such pipes?

Though the foregoing ideas are but hastily thrown together, and perhaps but crude at best, they may probably be of interest to you. If the inhabitants of London pay but \$1 or \$1 25 per M. feet for gas, why should it cost us \$2 50 per M? X. Y. Z.

Philadelphia, Pa., May 5, 1864.

[One manifest objection to this plan is that the market for the surplus coke would be lost.—Eds.]

### How to render Leather Vermin-proof.

MESSRS. EDITORS:—By a recent dispatch from California, we notice that some \$200,000 worth of boots and shoes were destroyed by cockroaches on a ves-

sel hence to that place. It may be of use to those interested in shipping boots and shoes, leather in bulk, or manufactured in any of its varieties, to know that an application of castor-oil will render leather vermin-proof, at the same time it is as good a dressing, if not better, to preserve it as there is known. It may be mixed with tallow or other oil if preferred, say half and half. Having resided in Cuba (where roaches, rats, and other vermin abound) and having had care of leather belting, fire-engine hose, horse harness, etc., I have found its application entirely effectual; no vermin will touch it. F. W. B.

New York, May 12, 1864.

### The "Chenango" Boiler Explosion.

MESSRS. EDITORS:—I notice on page 283 of the SCIENTIFIC AMERICAN, current volume, you refer to this case, and I now wish to say a few words in addition. In the Coroner's summing up he says that it was conclusively proved that the iron in the boiler was good. The Coroner of course speaks according to the evidence brought before him; but having seen the plate that gave way, I beg to say that it is very far from good iron. The third rivet from the place where the boiler gave way has cracked the plate more than two inches on each side of it. This crack, bear in mind, was not caused by the explosion, and iron of the quality that ought to be put in these boilers would not have split in that manner, nor should such a boiler ever have been allowed to leave the shops. Bad iron in the plates, and possibly bad iron in the stays, and certainly an insufficient quantity of them, appear to me to be sufficient to cause explosion on any boiler however made. It is simply absurd to say you cannot stay Martin's or any other boilers. If any boiler did happen to be so peculiarly constructed as to require a certain number of stays where they could not possibly be fixed, that boiler ought never to be used; and only a man who did not understand his business would ever design such an one. If Martin's boilers are really good, but have not steam room enough, put a dome on them sufficiently large to make up for the deficiency, and high enough to prevent any water getting near the top by foaming or any other way, and take the steam from thence to the cylinders, through a solid pipe, either in or outside of the boilers. Do not condemn them simply because they are used in the navy, as I see a good deal of feeling exhibited in that way, instead of sticking to the subject in hand and trying to solve it, and perhaps suggesting a remedy. ENGINEER.

New York, May 13, 1864.

[A dome would be an obvious remedy for the trouble spoken of, but in the case of war vessels it is inadmissible. We do not know what our correspondent means by "a solid pipe."—Eds.]

### Will Sudden Relief from Pressure cause a Boiler to Explode?

MESSRS. EDITORS:—In a recent number of the SCIENTIFIC AMERICAN I noticed a statement that a series of experiments were to be conducted to ascertain, if possible, the actual cause of steam boiler explosions. Now I suppose actual occurrences, whether accidental or incidental, are equally valuable. One such accidental experiment lately came under my observation. At the lumber mill of Messrs. A. A. Soule & Co., at Ullin, Ill., a small locomotive, used to stock the mill, haul lumber, &c., while passing over their road, where the same is laid through heavy timber land, encountered a leaning tree which knocked off the smoke stack, safety valve, &c. The steam and water flew out of the opening to a height of forty feet. No explosion, on the principle of flashing into steam, followed on the sudden removal of pressure. The pieces were gathered up, more water obtained, and the "institution" went on its way rejoicing. The usual running pressure is from 75 to 100 pounds; sometimes, without load, as low as 50 pounds; which latter pressure, I think, was about the pressure on this particular occasion. E. R. H.

Bloomington, Ill., April 27th, 1864.

LOSUS NATURÆ.—A mare belonging to S. Whipple, of San Mateo, Cal., gave birth to a colt with a camel's head, on Friday last. Mare and colt both died. She received a fright some months since, from a drove of camels belonging to the Government, while on their way from the lower country. Who shall say that horses are not possessed of imagination?—San Jose Mercury.