NEW YORK, SEPTEMBER 15, 1849.

A Few Words to the Friends of the Scientific American.

This number finishes our fourth volume. In looking back we see that we have made some slips of the pen, and have said some things, though not many, that should have remained unsaid. No person is perfect—"to err is human."

The improvements which have been made, both in the appearance and matter of the Scientific American, since it was first established, are apparent to all. It is acknowledged on all hands, that it is the best, cheapest and most popular paper of the kind in existence. Our object has been to present, in the smallest possible space, a great deal of useful information. It is the spirit of our labors to compress and render clear all the matter on our pages.

The task and tact of selecting and condensing, require much labor, care and study, and we therefore often present as much information, sound and plain, in one of our columns, as can be found in whole pages of scientific books, or other periodicals, and our readers often get rare and important information in a paragraph, that might be sought for in vain through many huge volumes. We select from the best sources, the like of which, we venture to say, no other paper possesses, and our original articles and correspondence, are of a very superier character. We endeavor to get all reasonable information that may be wanted by our subscribers. We have promised at the commencement of every volume to make it superior to its predecessor, and we have faithfully fulfilled our engagement. We make the same promise again, and we ask the influence and countenance of our friends—and the friends of knowledge—to assist us in extending our circulation over a still wider field, just by endeavoring to get acquaintances to subscribe –to every one of whom we warrant ull value for their subscription. Heretofore we have never called upon our friends in vain —they have always responded to our requests —friends, we thank you for it—science is indebted to you for it—the inventors of our country are indebted to you for it; for you have been the means of placing upon a firm and solid basis, a paper which is the friend of industry, an encyclopedia ot useful information, and the sincere advocate of the rights of men, of genius and worth.

We intend to make volume 5 superior to all its predecessors. It will contain more matter, will be printed with new type, and will be embellished with a handsome border: our Poet's column will give place to *useful receipts*, or other useful matter, and we will devote ourselves more assiduously than ever to make our paper still "The Scientific American."

Our columns contain matter that will always be useful, because true standard information, which will be as young a century hence as it is to-day. No inventor can be without it if he studies his own interest, and no man who desires to keep up with the progress of science, will be without it. We present the best receipts ot any other paper, because, from experience, we presume to be able to judge between the correct and incorrect. Our great Republic now contains 20,000,000 of inhabitants, and although we have the largest circulation of any other such paper in the world, still we should have at least ten times as many subscribers. It is no easy matter to conduct and establish such a paper; this has been proven by the failure of many who have tried it since we commenced. The public always judge best about these things; they prefer to support the best.

We do not wish to make our sermon any longer; we have said enough to induce our subscribers, lovers of American science and art, inventors, and their friends, and all those who desire to see useful information more generally diffused among our people, to give us their countenance and future support.

Cheap Postage.

A Bill for a uniform system of Postage, will no doubt be presented to the next Congress. Some propose to insert a clause to carry all newspapers free; others, to carry them free, as in 1845, within a circuit of 30 miles from the office of publication. We do not wish this law revived, and we do not think the people are prepared for the other. If they were, and were agreeable to pay the newspaper postage tax out of some other fund, it would no doubt be a public benefit. We like the present system of newspaper postage very well, and the plan proposed by the Boston Cheap Postage Association, *being favorably regarded by several persons whose judgment is worthy of reliance*, shows that the knowledge and judgment of such persons on the subject, should not be trusted, for assuredly it would make matters worse, and every publisher should at once know what it is. If carried into effect, it will exclude all publishers from sending extra papers, without paying for the same themselves beforehand. Letters should be reduced from five to two cents, paid in advance, to any distance. This reduction, we believe, would not injure the Post Office revenue, and it certainly would be a general benefit.

Blake's Fire-proof Paint.

On our advertising columns of last week, there was one relating to this singular substance. It is a substance which was discovered a few years ago, in Ohio, by Mr. Blake, to whom a patent was granted for the same, and he has now removed to this city, No. 3 Broad street, as a centre for its sale. It is composed, as analyzed by Dr. Chilton, of this city, of silica, alumina, protoxide of iron, and magnesia, with a small admixture of lime and iron. When it is mixed with oil it can be spread on like paint, and forms a most enduring cement as a substitute for stone. It makes good slates, and shingles painted with it are made like slate in appearance, and rendered incombustible. It is capable of taking a fine polish, and it has one quality (the best in our view) of adhering to wood, incapable of scaling off. As we have had a number of enquiries respecting it, this will inform our readers where it can be found.

A Pension to the Wrong Man.

A pension of £200 per annum, from the Royal Bounty Fund, has been granted to Lieut. Thomas Waghorn, the projector of the overland route to India. Lieut. Waghorn receives also a pension of £100 per annum from the East India Company.

[We believe that the original projector of this route was Henry Bell, the first successful British inventor of the steamboat. In a letter published in the Manchester Guardian (an English paper) in 1825, he says: "I have no doubt of the practicability of steam communication with the East Indies. Their course ought to be straight up the Mediterranean, then cross the narrowest neck of land to the Red Sea, to meet other steam vessels, and then proceed to Madras. The voyage could be performed in 35 days, allowing 4 days to take in water and fresh provisions." It was the bad fortune of Mr. Bell to be nothing but a mechanic. Had he been a Captain, some Don or Duke, his just pension would not have been conferred on another, and in all likelihood he would have had a monument in Westminster Abbey.

Send in your Subscriptions Early.

As there are are about 9,000 subscriptions which should be renewed at present, we request our subscribers to forward their names early. It keeps all things square up to the mark. We like precision in business—it is the oil of it, to lucubrate its joints and prevent unnecessary friction. Volume 5 will be the most splendid Scientific paper in the world, unrivalled by its predecessors, which of themselves stand alone

Precations Against Poison.

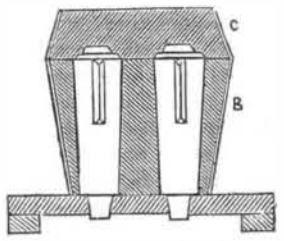
In Germany, to prevent poison being obtained for evil purposes, none is allowed to be sold without a written order or certificate from a physician. To prevent rat poison being made a bad use of, or taken by mistake, the arsenic is mixed with tallow or lampblack, which makes a compound that no human being could partake of. None is allowed to be sold in a pure state.

Worcester Mechanics' Fair.

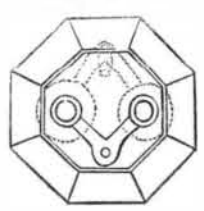
The second Fair of the Worcester County (Mass.) Mechanics Association, for the encouragement of Manufactures, the Mechanic Arts and Inventive Genius, will be opened on the 18th day of this month. Silver medals and diplomas will be awarded for new inventions, improvements in machinery and superior workmanship in every branch of industry. We commend this Fair to the attention of all who have a desire to exhibit the works of their genius and the products of their skill. The committee appointed by this association will do justice without favor, and award the prizes without partiality. All communications addressed (post-paid) to the Superintendant, Mr. Putnam W. Taft, will meet with polite and prompt attention.

Iron Moulding.

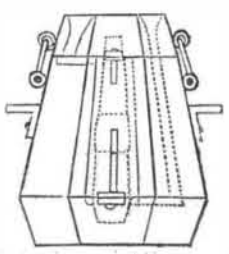
Concluded from page 408.



This first cut is a vertical section of the moulding boxes when rammed with sand. The accompanying cuts show the operation in different stages. When the two boxes are inverted and set down, the top box, A, is fixed on the second, and it is rammed flush with sand. Two holes are then made downwards in the sand by the rammer—one to each side of the patterns. One of them extends through the top box; the other reaches down to the lower box, then the upper and middle ones are lifted off the lower one and turned over, the patterns are then loosened by tapping, and drawn out, and the top and middle boxes are then separated. Two prepared core pins are next set as vertical as possible into the recesses left by the prints of the sand in the lowest box. On the surface of



the sand at each end of the box, B, channels are cut joining the git noles made by the rammer to the two mouldings, in such a manner that the short gate will be connected with the upper end, and the long gate with the under end of the mould. B is then lowered over the cores and fixed to the box C, being directed by the long guide pins at the side. The top box is then replaced, guided by the pin and fixed to the box B, (which must be done with great care) and thus the cores are secured between the top and bottom boxes. The last cut shows the moulding as finished, with the interior arrangement in dotted lines. The middle cut is a view of the upper and under ends of the middle box, showing the gits (gates) and channels.



The iron is poured into the long git, falling against the bottom of it when its force is broken and it runs gently into the mouldings, rising within them till they are filled, when it passes into the flow gate, carrying off the refuse which it may have gathered in its passage. Blacking need not be applied to these moulds, as their roughness outside is of consideration.

The whaling property of New Bedford, Mass., amounts in sperm and whale oil, and whalebone, to $3,122,962, a pretty good sum. There are 236 whaling vessels belonging to that port. The English whaling trade is destroyed by Yankee enterprise.

Marble Cement.

VALUABLE RECEIPT.—Take plaster of Paris and soak in a saturated solution of alum, then bake the two in an oven, the same as gypsum is baked, to make the plaster of Paris, after which they are ground to powder. It is then used as wanted, being mixed up with water like plaster and applied. It sets into a very hard composition capable of taking a very high polish. It may be mixed with various coloring minerals to produce a cement of any color capable of imitating marble. This is a very rare receipt, and is worth twenty dollars to many of our subscribers.

Cement for Stone Steps, &c.

Take clean river sand 20 parts, litharage 2 parts, and quick lime 1 part, and mix them with oil sufficient to form a thin paste. This composition has been used to coat brick walls; it becomes very hard.

Boiler Cement.

Iron filings 50 parts (pounded and sifted) and one part of salammoniac When it is to be used, it should be mixed with as much water as will give it a pasty consistency.

Cement for Pipe Joints.

Mix equal parts of white and red lead with as much linseed oil as will make it into a paste.

Cement for Mending Marble.

Mix the white of an egg with finely powdered quick lime.

Common Blacking.

Ivory black, 12 parts; molasses, 6 parts sperm oil, 1 part; oil of vitriol, 2 parts; vinegar, 2 pints. Mix these well together.

The above receipts are valuable to many; in making them up any quantity can be made, as we have directed only for *parts*; let each part be one of weight, not measure; an ounce or a pound for a part—for the *parts* mean the proportions.

Paste Blacking.

Ivory black, 60 parts; vinegar, 12 parts, and the oil of vitriol 12 parts. Mix them together for 30 minutes and then add 9 parts of India rubber oil. This is a patent blacking, and is of no small value as a receipt.

To Smooth Wrinkled Papers.

We presume that about 9000 of our subscribers intend to get this volume of the Scientific American bound. As all those numbers that have been conveyed by mail are more or less wrinkled, the following is the plan to follow in taking them out and making them smooth:—Take each number of the paper separately and fold it neatly into its binding form; then take a sponge with some clean water and moisten it, (no more), only the worst wrinkles make more damp than the other parts; then take a warm iron at a good heat and iron the number until all the moisture is expelled. If any person has a press—tobacco, cotton or cloth lapper's—the quickest way is to put each number between a sheet of pasteboard, and submit the whole volume, neatly laid down, to a good pressure, and let it stay in for 10 or 12 hours. Many who are living far from a book-bindery, may stitch their numbers, (after being pressed with the iron) between two stout pasteboard sides—a large sheet, which will answer every purpose of binding until an opportunity occurs to get it bound in a superior style.

Sick Wheat.

As we expected, one of our exchanges, the St. Louis Union, suggests that there is a mistake in the statement going abroad, that rust wheat "is poisonous." Rust wheat ordinarily makes good bread; and the wheat that is poisonous is in a different state, viz.: the berry always remaining soft, and is known among farmers as "sick wheat." The cause of sickness is not accounted for—it is a subject that should be investigated.

Currents at the Gates of Hercules.

Some curious investigations have been for some time carried on in the Gut of Gibraltar, by M. Coupvent-des Bois. He has discovered the existence of a superficial current, flowing from the Atlantic into the Mediterranean; and of a deep under-current, flowing from the Mediterranean into the ocean. He has also ascertained that between these two currents there exists a bed of water which is in perfect repose.