

Ozone.

Prof. Faraday has gone far to demonstrate that Schoenbein's ozone is not a peroxide of hydrogen but merely an allotropic form of oxygen. It is best obtained by placing a piece of phosphorous half covered with water in a two quart bottle loosely stopped. In five or six hours the process is complete, when the phosphorous and water may be removed and the ozone left for experiments. The test for ozone is a mixture of one part iodide potassium, 10 of starch, 200 of water boiled together for a few minutes and then spread upon paper. In an ozonized atmosphere it instantly turns blue from the liberation of iodine.—Ozone differs from oxygen in the ordinary state by its far higher power, acting rapidly upon lead and even silver and discharging vegetable colors.

To Remove Stains from Mourning Dresses.

Boil a handful of fig leaves in two quarts of water until reduced to a pint. Bombazines, crape, cloth, &c., need only be rubbed with a sponge dipped in this liquor, and the effect will be instantaneously produced.—[Exchange.]

Beware of using the above, for it cannot remove a single stain, and those who rub crape with a sponge, will find to their cost, that they have spoiled its dress and finish completely.

There are two kinds of stains on mourning dresses, and black colored goods which are entirely different, the one is dirt such as grease, &c., the other is the discharge of color. The latter is easily distinguished because it presents a yellow burned look. Sometimes a little ammonia will restore the color, that is, if it has been discharged by a weak acid, but generally, nothing will do but *re-dye*. Grease and dirt can only be removed by washing, a little alcohol will remove a faint grease spot, and this is a very safe remedy.

Inverted Locomotion.

Some interest has been excited in Pittsburg by the performance of a Mr. McCormick, who walks head downwards, on (or rather under) a slab of polished marble, to which his feet attach themselves, as he asserts by atmospheric pressure. He made some six or seven steps, the slab being only nine feet long. This experiment is said to be the result of many years of research and labor, and involving philosophical principles.—[Ex.]

[This is a tough story, and the philosophical principles involved, must be of that sort denominated philosophy *falsely so called*.

American Yachts.

The yacht America has beat all the yachts of the Royal Squadron and every other squadron in England with the greatest ease. This must mortify the pride of that nautical nation.

Fire Annihilator.

We shall publish engravings and a full specification of this invention next week. It is now in the hands of some of the richest capitalists in our country, and will soon be before the public for general introduction. Our remarks will be freely and impartially given. If it is all that is said about it, insurance companies will not be long in existence, and

fire companies will soon be disbanded. If not, it is one of the greatest schemes ever got up in our country to make money out of the public. We shall give it our attention.

"Behold They Come."

Since the new prospectus for volume 7 was first published in the Scientific American, (two weeks ago) over 6,000 new and old subscribers have manifested their wish to become patrons to the next volume, (commencing next week) and remitted their money in advance, according to the advertised terms.

Taking the success we have been favored with for the last two weeks, for a criterion, we may confidently expect over 20,000 patrons to our new volume, which will encourage us to bestow far greater expense in the editorial and engraving department of the paper than we have ever before been able to do.

Come, Inventors and Mechanics, send in your names, and get your fellow mechanics and neighbors to remit with you. The more we have to feed, the better fare we will serve you.

Scientific American for Binding.

As this number closes volume 6, we would suggest to those that desire to have their numbers bound to send them to this office and have them executed in our usual manner, for the low price of 75 cents.

You can depend upon having your volumes well bound by sending them to this office, as they will be executed to conform in style with hundreds that we have bound for ourselves and the trade.

Notice.

We present a title page with this number, and our readers will know how to use it in binding their volumes. The Scientific American is held to be one of the best standard works for binding that is published.

Subscribers and Regularity of Mails.

Every subscriber would do well to try and get one or more in the same place, for the larger the package of papers, the greater is the chance of its regularity. A single paper is often mislaid, but it is not so with a larger package.

TO CORRESPONDENTS.

S. J. W., of Mich.—Your engine though somewhat ingenious would not, we are convinced, be worth much in practice, nor so far as we construe your invention, are there any new principles developed there in. Compressed air has been used with and without exposure to heat more than a century and a half ago, also alcohol and ether have been applied as media for boiling at a low temperature, we should advise you not to prosecute your invention, as the arrangement though probably new, embraces nothing but old and exploded theories.

J. D. L., of N. H.—As to the practicability of your invention, we cannot speak without the aid of experiment, but we incline to the opinion that it will work. That the plan is new we have no doubt so far as we understand it.

P. L. S., of Troy.—We approve of your arrangement, and think it may work well. You had better send us a small model, neatly made to represent the invention, and on its receipt we will advise you more fully in regard to its patentability.

A. M., of Canada.—There are several excellent brick machines now in use in this country, but we are wholly unable to state where they are manufactured.

A. C. C., of Mass.—Your apparatus is believed to possess novelty sufficient to warrant an application for a patent. The engraving would cost six dollars.

D. H., of Ala.—We answered your letter on the 3d inst.

J. E. M., of Boston.—We are unable to give such information as you desire, not knowing of any such concern.

S. M., of Ohio.—We do not discover any patentable difference between your brake and the one illustrated in 41, Vol. 4, and you are advised not to spend money upon an application.

H. M., of O.—Several different contrivances have been exhibited to us for a self-acting gate to be used on railroads, and to be operated by the passing train of cars, but we are not aware that any have been adopted on any of the roads. We secured a patent on one of the devices for Mr. R. Coffin, of West Haverhill, Mass.

M. G. P., of Del.—Mr. Morse, the patentee for burning tan, saw-dust, etc., resides at Athol, Mass.

G. C. B., of Mass.—The application of Mr. G. is still pending at the Patent Office.

E. P. G., of Mass.—We consider your invention patentable, but could judge better upon that point if you would send us a model.

E. M., of Ind.—The Builder is published in London at a high price. We do not know that a specimen number could be obtained here, without destroying a file of the work. We thank you for the compliment to the Scientific American.

W. A. C. of N. Y.—There seems to be novelty and utility in your contrivance for mortising machines, and we would think it best for you to bring us a model when you come on in October.

H. M., of Vt.—Your kind offices have been duly appreciated. We hope you may be able to procure the additional subscribers you speak of. You may send a model of the bevel plane and we will have an engraving made of it.

D. S. M., of ————Your device for balancing mill stones is believed to be new and patentable. We do not see anything about the oiler upon which a patent could be obtained. \$1 credited for six months subscription.

L. R., of N. Y.—To disturb forces is not to come in contact with a power any more than to wake a person from sleep. You peruse a good explanation of this in Mr. Conger's article on Water Wheels, Nos. 51-2, Vol. 6.

S. C., of N. Y.—Yours will meet with attention.

D. L., of N. Y.—We know of no good feed for bees except the sugar syrup. Honey is somewhat different from cane sugar, as it contains glucose and an uncrystallizable sugar, but we do not know its quantitative analysis. The honey from sugar should granulate faster than other honey.

S. F., of N. Y.—Use a cylinder of 6 inches diameter, and 12 inches stroke. It will work more than two horse power, but so much the better. The power depends on the steam pressure.

Money received on account of Patent Office business for the week ending September 6:

B. & W. of Conn., \$10. D. T., of N. Y., \$20. T. N. B., of ———— \$30. B. O. B., of N. Y., \$25. J. H. B., of Conn., \$15. J. S., of O., \$30. J. B. S. H., of Mass., \$50. A. K., of N. Y., \$10. J. M. T., of N. Y., \$60. G. & M., of Mich., \$15. E. L. H., of N. Y., \$50. P. M. & Co., of N. H., \$8. W. B. L., of N. Y., \$30. C. J. G., of N. Y., \$57. B. B., of Conn., \$50. J. J. A., of N. Y., \$10. R. Bro., & Co., of N. Y., \$40.

Specifications and drawings of inventions belonging to parties with the following initials, have been forwarded to the Patent Office during the week ending September 6:—

B. & W. of Conn. W. S., of R. I. R. V. D. G. O. N. Y. T. M., of Pa. W. W. L., of Conn. B. O. B., of N. Y. M. & G., of Mich. F. C. G., of N. Y. R. Bro. & Co., of N. Y. J. J. A., of N. Y. D. B., of Conn. P. M. & H., of N. H.

New Edition of the Patent Laws.

We have just issued another edition of the American Patent Laws, which was delayed until after the adjournment of the last Congress, on account of an expected modification in them. The pamphlet contains not only the laws but all information touching the rules and regulations of the Patent Office. We shall continue to furnish them for 12 1-2 cents per copy.

Postage on Books.

Subscribers ordering books or pamphlets through us are particularly requested to remit sufficient to pay postage, or we cannot attend to their orders. We are obliged to pay from 10 to 50 cents every time a pamphlet or book is sent by us through the post, and the justice of our demand is made apparent.

Back Numbers and Volumes.

In reply to many interrogatories as to what back numbers and volumes of the Scientific American can be furnished, we make the following statement:

Of Volumes 1, 2, and 3—none.  
Of Volume 4, about 20 Nos., price 50 cts.  
Of Volume 5, all, price, in sheets, \$2; bound, \$2.75.  
Of Volume 6, all back Nos., at subscription price.

Patent Claims.

Persons desiring the claims of any invention which has been patented within fourteen years can obtain a copy by addressing a letter to this office; stating the name of the patentee, and enclosing one dollar as fee for copying.

NEW PROSPECTUS TO MECHANICS, INVENTORS, AND MANUFACTURERS.

SEVENTH VOLUME OF THE SCIENTIFIC AMERICAN.

MESSRS. MUNN & CO., AMERICAN & FOREIGN PATENT AGENTS, And Publishers of the SCIENTIFIC AMERICAN, respectfully announce to the public that the first number of VOLUME SEVEN of this widely circulated and valuable journal will issue on the 20th of September. The new Volume will commence with AN ENTIRE NEW DRESS, and will be printed upon paper of a heavier texture than that used in the preceding volumes. It is the intention of the Publishers to ILLUSTRATE IT MORE FULLY, by introducing representations of prominent events connected with the advancement of Science; besides furnishing the usual amount of engravings of new inventions.

It is published weekly in Form for Binding, and affords, at the end of the year, a SPLENDID VOLUME of over FOUR HUNDRED PAGES, with a copious Index, and from FIVE to SIX HUNDRED ORIGINAL ENGRAVINGS, together with a vast amount of practical information concerning the progress of INVENTION and DISCOVERY throughout the world. There is no subject of importance to the Mechanic, Inventor, Manufacturer, and general reader, which is not treated in the most able manner—the Editors, Contributors, and Correspondents being men of the highest attainments. It is, in fact, the leading SCIENTIFIC JOURNAL in the country.

The Inventor will find in it a weekly Official List of AMERICAN PATENT CLAIMS, reported from the Patent Office,—an original feature, not found in any other weekly publication.

TERMS—\$2 a year; \$1 for six months.  
All Letters must be Post Paid and directed to MUNN & CO., Publishers of the Scientific American, 128 Fulton street, New York.

INDUCEMENTS FOR CLUBBING.

Any person who will send us four subscribers for six months, at our regular rates, shall be entitled to one copy for the same length of time; or we will furnish—

Ten Copies for Six Months for \$8  
Ten Copies for Twelve Months, 15  
Fifteen Copies for Twelve Months, 22  
Twenty Copies for Twelve Months, 28

Southern and Western Money taken at par for subscriptions, or Post Office Stamps taken at their full value.

INDEX.

**A**  
Academy, Philadelphia 202  
Accidents 208, 225  
Acid, Hydrocyanic 178  
Acid, Nitric 200  
Acid, Pyrologenous 48  
Acid, Sulphuric 69  
Actinism 189  
Acts of the Apostles, Original MS. of the 400  
Aerial Navigation 144  
Aeronaut, a Female 3  
Affinity, Chemical 347  
Agriculture, Chaldee 115  
Air, Properties of 64  
Alarm, Fire 316  
Amber, Yellow 299  
American Association of Science the 291, 395, 403  
American Institute Fair 30, 61, 66, 74  
Ammonia in the Atmosphere 2  
Animal Substances 152  
Annihilator, Fire 317, 333  
Annunciator, Electro Magnetic 237  
Antiquities, St. Domingo 328

Argillo 34  
Arkwrights, the 75  
Armor, India Rubber 337  
Ashes, Anthracite Coal 300  
Ashes as a Manure, Coal 8  
Asphaltum, Mining 29  
Astronomy 2, 26, 115, 145, 285, 336  
Astronomical 362  
Astronomical Science 266  
Auctions, Mock 381  
Auger, Clark's (3 Eng.) 64  
Auger Handle, Thayer's (Eng.) 220  
Axle Box 4

**B**  
Bags, Paper 332  
Baking Machine, Bread 52  
Balance, Brown's Sash (6 Eng.) 332  
Ballast 380  
Balloon, Taggart's 61, 72  
Balloon Trial 232  
Banvard 269  
Barley 78  
Barometer, the (2 Eng.) 56

Barrel Head Machine, Brown's (2 Eng.) 364  
Barrel Heads 331, 364  
Barrel Machinery 42  
Barrel Machinery, Hutchinson's (3 Eng.) 121  
Barrels made by Machinery 308  
Barron, Commodore 261  
Barter 217  
Bathing 56  
Baths 131  
Baths, Brown's Portable (2 Eng.) 52  
Batting, Cotton 164  
Bear, Hunting 136  
Beauty, Female 394  
Bedstead Fastening 380  
Bees, Honey 104, 170  
Bee Hives 404  
Bee-hives, Surl's (2 Eng.) 279  
Bell, Alarm 148  
Belts, Chain 202  
Belts, Thick and Thin 173  
Belts and Pulleys 142, 158  
Belts for Machinery 53  
Bench Hook, Kean's (2 Eng.) 9  
Bending Machine 388  
Benzole 178

Bird, Gigantic 194  
Bird, Wingless 155  
Birds, Taming 378  
Biscuit, Meat 197, 202  
Black, to Dye 200  
Blacking 193  
Blasting Rocks 286, 347  
Blinds 356  
Blowing Machine 132  
Boat, Life 76  
Boat, Submarine 232  
Boats, Metallic Life 242  
Bobbin, Rope Spinners' 188  
Bobbin Machine 372  
Bogasse, Drying 372  
Boiler, Anderson's Steam (4 Eng.) 265  
Boiler, Bradley's (2 Eng.) 97  
Boiler, Chapman's (Eng.) 204  
Boiler, Locomotive 76  
Boiler Bursting 213  
Boiler Plates, Montgomery's (3 Eng.) 276  
Boilers 348, 356  
Boilers, Explosions of Steam 163, 347  
Boilers, Steam 84, 137

Bolt Headin g40  
Book, first Printed 170  
Boring Conical Holes 340  
Bows in Wagon Tops, McKinney's Mode of setting, (2 Eng.) 41  
Boxes, Fire 152  
Brake, R. R. 324, 380  
Brake, Wade's R. R. (2 Eng.) 324, 380  
Brass, Malleable 73  
Bread, Arsenic in 224  
Bread, Summer 296  
Bread, Toast 358  
Bread Machine, Robinson and Lee's (3 Eng.) 129  
Breaker, Battin's Coal (3 Eng.) 17  
Breaker, Coal 148  
Brick Machine 68, 148  
Brick Manufacturing, Whipple's (5 Eng.) 281  
Bricks, Hollow (Eng.) 325  
Bricks, Ornamental (Eng.) 316  
Bridge, Britanni Tubular 69, 324  
Bridge, Fall of a R. R. 297  
Bridge, Fall of a Suspension 61  
Bridge, McCallum's 69  
Bridge, Queenston 186, 225

Bridge, Severn's 5 (Eng.) 260  
Bridge, Thayer's 269  
Bridge, Tubular 27  
Bridge, Wonderful 127  
Bridge Across the Straits of Dover 26  
Bridge from France to England 91  
Bridge in Alabama, Natural 395  
Bridges, Suspension 250  
Bridges, Tubular 26  
Broadcloth, Black 390  
Buckskins, Tanning 371  
Builder, Stair 402  
Building, House 48  
Buildings, Cast Iron 325  
Buildings, Falling of 149  
Buildings, Iron 357  
Burner, Michel's Gas (Eng.) 132  
Burns 177, 218, 233, 393  
Butter 20, 184  
Butter, Working 106

**C**  
Cab, the London 252  
Caesars and Stephenson's, the 394  
Calculating Machine 392