Special.

THE OLDEST METHODIST MINISTER IN PHILADELPHIA.

"I am the youngest old man in New York," said the Hon. William E. Dodge, a short time before he died. Mr. Dodge was indeed one of the sprightliest of old gentlemen. He was as active as most men of fifty, although he was about seventy-five. Up to the time of his death, which came very suddenly, he was able to accomplish more work in a day than almost any of his partners or clerks could get through with.

In Philadelphia lives another "young old man," one of the most venerable of Methodist ministers. He is as active, as hearty, and as cheery as was Mr. Dodge. He is the Rev. Anthony Atwood, honored and beloved not only by Methodists, but by good people of every persuasion. Mr. Atwood might pass for a man of about sixty, but he is eighty-five. About fifteen years ago he told the writer that he hardly expected to do much more work, and that he thought a man of seventy might be considered to have rendered all the effective service he would be capable of. Yet, since that time, Mr. Atwood has done more ministerial work than many a younger man has accomplished. Some years ago he had a partial stroke of paralysis, which for a while disturbed his general health. He also suffered from a bronchial difficulty which threatened to be serious. From both of these disabilities he has now entirely recovered. With his snow-white hair in its ample fullness, and his clear and ruddy complexion, he is the picture of a model patriarch, both in health and good nature. Although it is some time since Mr. Atwood has been in pastoral charge of a church, he preaches frequently, and is regularly at the Green Street Methodist Episcopal Church on Communion Sundays, taking part in the sacramental service.

The writer recently called on this venerable clergyman at his home, No. 809 North Seventeenth Street, Philadelphia, and found him as cheerful and vivacious as in former years.

"Well, Mr. Atwood, it looks like old times to see you looking so vigorous and hearty; but years do not seem to make you an old man, and you appear to enjoy quite as good health as most of the younger men."

"My health," said Mr. Atwood, "is all I can expect, considering my age, which is now close to eighty-five. Since the stroke of paralysis which I had several years ago, I have not been able to preach with my former vigor. I find that I am not capable of a prolonged pulpit effort as of old. Words do not follow my thoughts as quickly as they used to. But with this exception I am about as well as I have been for many years."

"When I had that stroke of paralysis," continued Mr. Atwood, "I resorted to a treatment which I found had been of great value to many others who were similarly affected. I had for many years known Dr. Palen, of Messrs. Starkey & Palen, who have done so much good with their Compound Oxygen, and I consulted him in reference to my case. I took the treatment at the office, which was then in Girard Street. At once I began to receive benefit. For some time I visited the office regularly and frequently. I took inhalations of the Oxygen until my health was so fully restored that I was in no further need. It gave me a new vitality, restored my general health, and put my whole system in renewed good order."

"You had some bronchial difficulty, did you not, Mr. Atwood?"

"Yes; I had an irritation in my throat which was quite troublesome, and threatened to be more so. I tried Compound Oxygen for this also, and was surprised not only to find the completeness of the relief it afforded me, but the readiness with which it acted. I procured a "Home Treatment" in order to cure this bronchial trouble at my leisure; supposing the irritation would be slow to go away, as it is in the case of many clergymen, who, after long years of pulpit service, are attacked with soreness of the vocal organs. But I had occasion to use only a small portion of what was contained in the "Treatment." My throat became so much better that I had no occasion again to resort to the use of Oxygen."

"And have you, since your recovery, had much occasion to use this remedy, Mr. Atwood?"

"Not a regular thing, at all; only at long intervals. Once in a while, if I need a general toning up of my system, I call at the new office of Drs. Starkey & Palen—which, by the way, is an exceedingly beautiful and convenient place—and I take a few inhalations. From this I always receive benefit and strength."

"You are, then, a firm believer in this method of treatment?"

"Yes, very, very firm. You may say that I most heartily and thoroughly approve the treatment, and indorse Drs. Starkey & Palen as gentlemen whom I have known for years, physicians of repute and ability, in whom I have entire confidence. They have done incalculable good with Compound Oxygen. I am glad that so many invalids have been brought to health by this means. I am glad, too, that people are becoming more generally acquainted with it."

The experience of Mr. Atwood is an evidence that the virtues of Compound Oxygen are not only for the advantage of the young and those in middle life. There are many other instances on record in which persons advanced in years have received, by means of this great vitalizer, renewal of health and prolongation of life. For further reference to these and for better acquaintance with the merits of Compound Oxygen write to Drs. STARKEY & PALEN, 1529 Arch Street, Philadelphia, Pa., for their pamphlet treatise, which will be freely mailed to any address.

Business and Personal.

The charge for Insertion under this head is One Dollar a line for each insertion; about eight words to a line. Advertisements must be received at publication office as early as Thursday morning to appear in next issue.

For Sale Cheap—State rights for patent Nail Holder, to hold in the left hand. Address A. L. Wheebock, Buffalo, Erie County, N. Y.

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If an invention has not been patented in the United States for more than one year, it may still be patented in Canada. Cost for Canadian patent, $40. Various other foreign patents may also be obtained. For instructions address Munn & Co., SCIENTIFIC AMERICAN patent agency, 361 Broadway, New York.

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Iron Planer, Lathe, Drill, and other machine tools of modern design. New Haven Mfg. Co., New Haven, Conn.

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Mineral Lands Prospected, Artesian Wells Bored, by Pa. Diamond Drill Co. Box 423, Pottsville, Pa. See p. 46.

Hercules Lacing and Superior Leather Belting made by Page Belting Co., Concord, N. H. See adv. page 238.

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do not find all their investments golden, by any means. But an investment in Dr. Pierce's "Golden Medical Discovery" is certain to prove a good one. It cures cough, consumption, bronchitis, sick headache, skin diseases, dyspepsia, costiveness, scrofulous diseases, chills and fever, and dumb ague. It reaches the blood, and through it the whole system. Agreeable to take, permanent in its results. By druggists.

Notes & Queries

HINTS TO CORRESPONDENTS.

Names and Address must accompany all letters, or no attention will be paid thereto. This is for our information, and not for publication.
References to former articles or answers should give date of paper and page or number of question.
Inquiries not answered in reasonable time should be repeated; correspondents will bear in mind that some answers require not a little research, and, though we endeavor to reply to all, either by letter or in this department, each must take his turn.
Special Written Information on matters of personal rather than general interest cannot be expected without remuneration.
Scientific American Supplements referred to may be had at the office. Price 10 cents each.
Books referred to promptly supplied on receipt of price.
Minerals sent for examination should be distinctly marked or labeled.

(1) J. W. asks: 1. Will a brass pipe expand in length as a pressure of steam is gradually let into it? A. Yes. 2. How much in length will a brass pipe 4 feet long by 1 inch inside diameter expand as steam pressure in it rises from 0 to 30 pounds, also 60 pounds? A. 0·1 inch and 0·114 inch respectively. 3. Is there any metal, as a rod ½ inch diameter, which, if placed within the pipe, will contract or remain stationary, or nearly so, as the pressure rises? A. None. 4. Will a large brass pipe expand more or less than a small one? A. The same.

(2) H. C. M. asks: What will harden soft spots in a grindstone and leave it so it will wear away evenly? A. We know of nothing that will penetrate and harden the spots.

(3) F. A. W. says: I have made a Voss-Holtz electrical machine with a revolving plate 8 inches in diameter. It will when in good working order give a 2 inch spark, but is constantly changing or rather reversing its poles. I had the same experience with a simple Holtz and also with a Wimshurst machine. Kindly give reason and remedy through your paper. A. Sometimes this happens owing to a slight displacement of the armature or stationary plate. See that it is free from liability to move.

(4) J. P. A.—The extreme depth of water in the Mersey River over the tunnel is, at high tide, 90 feet. The average thickness of solid rock between the bed of the river and crown of the tunnel is 30 feet, and nowhere less than 25. The height of the tunnel is 21 feet. The Nicaragua Canal would pass through a much healthier climate than the Panama Canal; the obstacles would not be so stupendous; the line to be cut would be less, as Lake Nicaragua would be utilized; it would present a shorter line from the North Atlantic to the North Pacific; but it would have to employ locks. The cost would be less both in men and money.

(5) "Inquirer" asks the method of finding the height of a conical frustum containing 20 ponnds of lead, the diameters of its faces being 3 inches and 1¾ inches respectively. A. The volume of 20 pounds of lead must first be found. The specific gravity of the metal being 11·363, and the weight of a cubic foot of distilled water at 0° C. being 62·418 pounds, it is a simple calculation to find the number of cubic inches of lead which will weigh the required number of pounds. This must then be put equal to the volume of a conical frustum which is given by the following formula:

$$v = \tfrac{1}{3}\, h \left(a^1 + \sqrt{a^1 a^3} + a^3\right)$$

in which a^1 and a^3 are the respective bases and h the height. The area of a circle being πr^2, we have all the data in the above equation except h. But we have found the value of v by the previous calculation. The equation may therefore be solved for h, giving us the result desired. Or, the formula may be stated as follows, omitting the separate calculation of the areas of the two circles:

$$v = \tfrac{1}{3}\, \pi h\, (r^2 + rR + R^2)$$

in which $r = 1\frac{1}{2}$ inches and $R = \frac{7}{8}$ inches.

(6) R. M. C. asks for details of a 14 inch hollow wall, designed to keep out the damp. A. Such a wall is formed of two casings with a space 2 inches wide between them, the outside casing being one brick, or 8 inches, in thickness and the inside casing half brick, or 4 inches. The bricks of each casing are laid in the ordinary manner, either in the usual running bond or, if it is preferred, in Flemish bond. The two casings are connected together by the insertion of galvanized iron or other ties in every fourth course in height and at distances apart of about 30 inches. Ties are manufactured for the purpose in various designs. The base of the wall is built solid up from the footings to just above the ground line, where it is covered on top with a damp course of asphalt or some other suitable material, impervious to moisture. The casings are then built upon the asphalt with the two inch space between them, forming a gutter to receive and carry away any water that may get in. This gutter is constructed with a slight fall and is connected with the drains. Care must be taken to place over every window and door frame a strip of sheet lead or zinc of a width a little greater than that of the frame, so that any water which may fall upon it shall drip off into the gutter below. A house built with hollow walls, properly constructed of good materials, will be perfectly dry.

(7) G. W. asks what it is that is put on paper, so, when you breathe on it, it will in a few seconds blaze up in a flame. A. Perhaps it may be phosphorus. Whatever it may be, our advice is to leave it alone. It cannot be a desirable article to have around.

(8) E. C. M. says: In your issue of March 6, query No. 32, W. T. W. A. asks for a remedy for ingrown nails. An excellent one, affording almost immediate relief, is the following, viz.: With a piece of glass or a file scrape along the top of the nail until it is very thin in a line with the toe; then, if the nail be too long, cut away some of the middle part of the edge only. By these means the nail is rendered elastic and yielding, and the corners are relieved from the pressure that caused the pain and inflammation.

(9) A. B. asks what to wash lamp chimneys in so they will not crack. A. Place the chimneys in cold water, and then gradually heat until the boiling point is reached, then allow them to cool slowly. By repeating this operation several times, the glass will become thoroughly annealed, and no fear of cracking need be had.

(10) G. S. asks: 1. What will stick sheet lead to cardboard? A. See list of "Cements" given in SCIENTIFIC AMERICAN SUPPLEMENT, No. 158. 2. Is there any way to cure dreaming? A. Do not lie on your back, and be careful to keep your stomach in good condition. Children sometimes have articles tied to them, so they will not turn over on their backs while asleep, as a preventive of disturbing dreams. 3. In what proportions is tincture of cantharides used for the hair, and how is it to be applied? A. Scald black tea, 2 ounces, with 1 gallon of boiling water, strain, and add 3 ounces glycerine, tincture of cantharides ½ ounce, bay rum 1 quart. Mix well, and perfume. Apply by rubbing on the head.

(11) W. W. N. asks for the component parts of Leclanche battery porous cup and prism. A. Manganese dioxide and carbon (graphite or powdered coke) with dust sifted out, are used about half and half for porous cup. For prisms, a paste of 40 parts manganese dioxide, 52 of carbon, 5 of gum lac, and 3 of bisulphate of potash, is compressed by a pressure of 300 atmospheres, at 100° C.

(12) J. H.—Alum gives excellent results when it has been found desirable to clarify muddy or turbid waters. Ammonia water will precipitate all iron in solution, but is not likely to be as successful a clarifying agent.

(13) L. D. P. asks what to add to nickel solution of double sulphate and ammonia to throw down any copper or iron that may be in it. Also, what will throw down the nickel itself? A. If the solution is acid, any copper present will be precipitated by hydrogen sulphide. Ammonia sulphide will precipitate nickel. See any work on qualitative analysis.

(14) J. L. D. asks: What will take the place of common reddish shellac, that is, colorless or nearly so? The coating desired should be waterproof, and not dissolve at a test of 110° Fah. Should be tasteless. A. Try gum sandarac 1 pound, clear turpentine 6 ounces, rectified spirit (65 over proof) 3 pints; dissolve. India rubber cut in fine shreds and dissolved in carbon disulphide or chloroform forms an excellent waterproof varnish.

(15) N. L. S. writes: How do minstrels use cork to blacken their faces and hands, and what makes it shine?

A. Take best lampblack..... ... 1 grain.
Cacao butter..... ..... 6 grains.
Oil of neroli..... 5 drops.

Melt the cacao butter, add the lampblack, and while cooling make an intimate mixture, adding the perfume toward the last.

(16) F. B. writes: In refinishing furniture, I know of no way to remove ink stains. Can you give me a simple method? A. Mix 6 ounces of spirit of salt and ½ ounce of powdered salt of lemons. Drop a little of this mixture on the stains, and rub well with a cork until they disappear, then wash off with cold water.

(17) Information desires the composition used for making silicate slates. A. We should think they could be made with pulverized slate or quartz moistened to the consistency of a thick fluid with water glass, and colored with powdered charcoal or boneblack. Then apply with a brush like a paint to the required surface.

(18) A. L. Z. asks: What is the best method of collecting very fine, flat, scaly gold from an auriferous sandbank? A. Wash it through sluice ways or troughs over mercury, and then distill the mercury, leaving the gold behind. Simple pan washing will answer if the gold is in small quantities.

(19) W. H. T.—The removal of superfluous hair from skin is possible both by means of depilatories and by electricity. The former are mostly preparations of sulphide of barium or sulphide of calcium, and the process by electricity is very slow, each hair root having to be killed separately.

(20) J. W. asks (1) whether the smoke of tobacco which has been filtered through cotton batting is rendered comparatively harmless. A. It is certainly rendered less poisonous, but the "comparative harmlessness" depends upon the individual. 2. How many candle power lamp of an incandescent electric lamp will be equal to a common gas flame? A. An ordinary burner consuming 5 feet of the New York Gas Company's gas per hour gives a light equal to 23 candles, while the ordinary Edison incandescent lamp burns with a brilliancy equal only to 16 candles.

(21) J. F. writes: I have in use porcelain enameled jacket kettles for melting beeswax from which the enamel has come off partly; how can I repair the kettles? A. It is not likely that the defective portions can be repaired. The enameling is baked on the iron, and so when broken cannot well be replaced unless the entire enamel is removed.

(22) E. F. S. writes: I wish to obtain information on bluing iron so it will be durable; some riding bridle bits that are inlaid with silver. What process must I use? A. We know of nothing but heat for bluing that will be permanent. The heat will also tarnish the silver inlaying. We can only recommend you to polish the whole bit.

(23) B. E. T. B. asks (1) for the best recipe for stereotyper's paste. A paste for paper that is highly adhesive, and that will stand considerable heat. A. We are advised by one of the large stereotype makers that the paste is composed of the following ingredients: Water, flour, starch, gum arabic,