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Table listing various items such as Door fastening, J. W. Krepps, New York city; Electric time ball apparatus, Standard Time Ball Company, New Haven, Conn.; Flax breaker, J. Shinn, Philadelphia, Pa.; Gas stove, W. W. Goodwin, Philadelphia, Pa.; Machinery, apparatus for starting, J. A. Horton, Reading, Pa.; Motor, W. S. Colwell, Pittsburg, Pa.; Printing machine, Cornell & Shelton, Birmingham, Conn.; Reaping machine, W. A. Wood Mowing and Reaping Machine Company, Hoosick Falls, N. Y.; Stone crusher, S. L. Marsden, New Haven, Conn.; Stovepipe attachment, C. Lovell, Massachusetts; Table, F. F. Atkinson, New York city; Telegraph printing apparatus, A. A. Knudson, Brooklyn, N. Y.; Time detector, G. F. Ransom, Cleveland, O.; Water closet, J. Cooper, Boston, Mass.; Weighing and package filling apparatus, C. C. Clawson, Raleigh, N. C.; Umbrella spring, W. H. Belknap, New York city;

Notes & Queries

HINTS TO CORRESPONDENTS.

No attention will be paid to communications unless accompanied with the full name and address of the writer. Names and addresses of correspondents will not be given to inquirers. We renew our request that correspondents, in referring to former answers or articles, will be kind enough to name the date of the paper and the page, or the number of the question. Correspondents whose inquiries do not appear after a reasonable time should repeat them. If not then published, they may conclude that, for good reasons, the Editor declines them. Persons desiring special information which is purely of a personal character, and not of general interest, should remit from \$1 to \$5, according to the subject, as we cannot be expected to spend time and labor to obtain such information without remuneration. Any numbers of the SCIENTIFIC AMERICAN SUPPLEMENT referred to in these columns may be had at this office. Price 10 cents each. Correspondents sending samples of minerals, etc., for examination, should be careful to distinctly mark or label their specimens so as to avoid error in their identification.

(1) W. H. D. asks how the polish on bright wire screw eye hooks is put on, and what is used to prevent their rusting readily (they appear to be rust resisting); at what part of the process of manufacture is it done? A. Screw eye hooks receive their bright polish before the thread is cut, by tumbling in sand, gravel, or any mixture that will produce a clean surface. They are then threaded, and receive a final tumbling with leather skivings and any cheap polishing powder with an admixture of lime. Some boil them in lime water, and use sawdust for finishing.

(2) G. M. asks: 1. What book would you advise me to get concerning steam engines and how to make them, for a amateur? A. "Goodeve on the Steam Engine" and "Roper on Land and Marine Engines." 2. Is working a lathe in a machine shop a good branch of mechanics? A. It is only a part of a machinist's trade, and should be learned as such. 3. How long does it generally take a person to learn lathe work? A. It depends much upon the person; some two years, others five years, and others never can learn so as to become ready and quick workmen.

(3) R. S. T. writes: I have just been reading an article in your last issue entitled "How a Fire sweeps a Wooden House." Thinking it would do no harm, even if it does no good, I will tell you how I fixed a house as a protection against mice, and I think it must be of service in case of fire, although that was not thought of at the time. After the house was up and closed in and the under floors laid, I took any pieces of waste boards, cut them to the right length and width to fit the spaces between studding, and nailed them in flush with the bottom of the ledger board between that and the outside boarding, and by so doing I had a box between each pair of studs that would hold about six or eight quarts, which I filled with cheap mortar made by using a very little lime and the coarse sand and gravel that the masons could not use in their mortar. I also let the under floors run to the outside boarding, and spread the mortar on them about one inch deep between the base boards and outside boarding in each story. This was done only to stop rats and mice, and was a perfect success.

(4) H. K. asks (1) how many cubic feet of air it takes to burn a cord of soft wood per hour. A. In practice, 70 to 80 cubic feet per 1 pound of wood. Theoretically, only about half this quantity. 2. Also what per cent of heat is put into steam where ordinary return flue boilers are used? In other words, what part of the heat goes up the smoke stack? A. This cannot be determined, and it depends much on the setting and proportions of the boiler and the temperature maintained in the furnace. The temperature of the gases in chimney usually varies from 400° to 600° Fahr. 3. How many cubic feet of air will a three pound pressure force through an eight inch pipe a hundred and fifty feet long? A. About 62 feet per second, depending upon the character of the pipe and number and shortness of bends.

(5) J. R. W. writes: In your November 4 number of the SCIENTIFIC AMERICAN, on page 299, question No. 4 is asked by E. B., and answered, as to a simple test for detecting sewer gas in a room or apartment. I wish to know whether the same method or some other will determine the existence of coal gas in distinction from other gases, when they cannot be determined by the odor? A. The test there noted is for sulphureted hydrogen, and would also show coal gas, or any gas containing sulphureted hydrogen.

(6) E. H. asks how much water is used to the pound of lime in preparing lime water. A. Twenty gallons.

DESIGNS.

Table listing various designs such as Bridle bit, A. Buermann, 13,458; Bridle bit pattern, A. Buermann, 13,459; Card, show, M. H. Wiener, 13,463; Carpet, E. Fajon, 13,460; Carpet, Hunt & Rollings, 13,461; Currycomb, H. C. Brill, 13,457; Lamp and reflector, combined street, S. F. Van Choate, 13,462; Stove, Bascom & Heister, 13,454; Stove, cook, Bascom & Heister, 13,455; Stove or range, Bascom & Heister, 13,456;

TRADE MARKS.

Table listing various trade marks such as Cigars, cigarettes, and smoking and chewing tobacco, H. M. Mason, 9,840; Pencils, lead, E. Faber, 9,848; Soap, laundry, Procter & Gamble, 9,841, 9,842, 9,843, 9,844, 9,849; Stationery, certain articles of, E. Faber, 9,847; Toilet preparation, A. Weeden, 9,846; Toilet wash for the complexion, F. A. Jones, 9,839; Watch cases and movements, Vacheron & Constantin, 9,845;

English Patents Issued to Americans.

From October 31 to November 3, 1882, inclusive. Bathing apparatus, W. W. Rosenfield, New York city. Boat lowering apparatus, M. Bourke, Youngstown, O. Cable traction railway, C. F. Findlay, Chicago, Ill. Compound for preventing the passage of heat, R. J. Elbert et al., New York city. Door check, The Elliott Pneumatic Door Check Company, Boston, Mass.

