

Business and Personal.

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For Sale-Patent 477,942. S. J. Kelso, 396 Parliamentary Rd., Glasgow, Scotland.

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Screw machines, milling machines, and drill presses. The Garvin Mach. Co., Laight and Canal Sts., New York. Centrifugal Pumps for paper and pulp mills. Irrigating and sand pumping plants. Irvin Van Wie, Syracuse, N. Y.

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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 This is for our information and not for publication.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.

(4666) W. N. asks what they put in the tumbling mills to smooth up broom handles. I want to make a mill for tumbling handles, and don't know what to put in to roll with them. A. Hard wood chips from a turning lathe or wood planer are best. Coarse hard wood sawdust may be used.

(4667) C. E. M., Arizona, writes: We have a number of barrels of cement that got wet in high water last spring. Do you know of any way that it can be fixed so it can be used again? Would like very much to know, as cement is a very expensive article in this country. A. You can only utilize the cement by reburning in a kiln and regrinding.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

January 31, 1893,

AND EACH BEARING THAT DATE.

[See note at end of list about copies of these patents.]

Table listing inventions with patent numbers, including items like 'Air and gas mixing apparatus', 'Alarm device', 'Alloy rod using metallic', 'Ammeter, recording', 'Animal holder', etc.

Main table of inventions with patent numbers, including items like 'Binding, M. M. Beeman', 'Black slate, H. A. Newman et al.', 'Block signal system', 'Boiler', 'Boiler furnace', 'Boilers, steam drying and superheating apparatus', etc.

Continuation of the main table of inventions with patent numbers, including items like 'Glassware, machine for printing', 'Grain drill, W. A. Van Brunt', 'Grate bar, C. A. Pelly', 'Grinding mill, portable', 'Gun, breech-loading', 'Hammer, portable', 'Harvester, corn', etc.

Continuation of the main table of inventions with patent numbers, including items like 'Spring, C. H. Yarrington', 'Spring setting machine', 'Stamping machine', 'Square, combination', 'Square, separable, stocking & vroom', 'Stall floor, M. St. Germain', etc.

DESIGNS.

Table listing designs with numbers, including items like 'Base or pedestal, J. Librowicz', 'Bookbinders' cloth', 'Bottle, C. H. Beach', 'Brush, S. Giesseck', etc.

TRADE MARKS.

Table listing trade marks with numbers, including items like 'Beverages, nutrient or tonic, Coca Cola Company', 'Bicycles, Royal Cycle Works', 'Brushes, S. Giesseck', etc.