

Business and Personal.

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Acme engine, 1 to 5 H. P. See adv. next issue. "U. S." metal polish. Indianapolis. Samples free.

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Screw machines, milling machines, and drill presses. The Garvin Mach. Co., Laight and Canal Sts., New York.

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Notes & Queries

HINTS TO CORRESPONDENTS. Names and Address must accompany all letters, or no attention will be paid thereto.

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.

(4594) W. F. W. says: Will you kindly advise me through the columns of the Scientific American in regard to a rule or formula for calculating the velocity or discharge through small openings?

(4595) A. L. writes: I notice in your issue of November 5, 1892, an answer to Mr. E. Kurtz's question, "Why are stereoscopic prints reversed?"

(4596) J. H. M. says: The sewer running from my dwelling in this city to the street main became stopped up, and when the obstruction was removed, we were very much amazed to find that it had the appearance of being a vegetable growth.

ago, there was a back water from the main street sewer. The part of the pipe where the growth occurred was many feet underground and the whole yard where it runs is covered with concrete.

(4597) N. Y. Z. says: Will you give a recipe for making the gelatin-like sheets which are in a duplicator for duplicating handwriting, typewriting and ink drawing?

(4598) J. D. says: I have a building I want to heat with exhaust steam. Will you please answer the following questions through your paper?

(4599) E. E. B. asks: 1. Can old crucibles be used over by crushing them up fine, and mixing cement with and forming them over again?

(4600) P. B. asks: What style of pump and power would be most suitable to raise water from wells, one 60 and the other 160 feet deep?

(4601) R. P.—There is no easy way of increasing the gloss on your celluloid collars. The manufacturers finish hair collars in such a way that they may be taken for linen.

(4602) W. E. Y. asks: If a gas on expanding does external work, will it require as much mechanical energy to reduce it to its original bulk as though it had expanded without doing any external work?

square inch? A. The work of compressing a gas is the same, whether it has done work in expanding or not. The variation of temperatures for given volumes is the same for compression as for expansion.

TO INVENTORS. An experience of forty years, and the preparation of more than one hundred thousand applications for patents at home and abroad, enable us to understand the laws and practice on both continents, and to possess unequalled facilities for procuring patents everywhere.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted November 15, 1892, AND EACH BEARING THAT DATE.

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

Table listing inventions with names and patent numbers. Includes items like Advertising cabinet, Alarm, Animal clipper, Armature for dynamo-electric machines, etc.

Table listing inventions with names and patent numbers. Includes items like Fibrous material for making pulp, Filter, water, Siegrist & Bittman, Firearm, breech-loading, J. M. & M. S. Browning, etc.