

Notes and 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 This is for our information and not for publication.

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Manufacturers should investigate the B. F. BARNES MACHINE TOOLS before placing orders. The Tool here illustrated is our 20-inch Drill, and we have many other sizes to make a very complete line.

(9867) J. E. W. asks: 1. If at the equator a hole 2 feet wide pierced the earth through its center, and a ball a half inch in diameter were dropped into the hole, I figure that in about nine and one half seconds, and at a depth of about 1,440 feet the ball would impinge against the east side of the hole, because at that depth the earth would be revolving a little over one-tenth of an inch slower than at the surface; and from that point down to the center the continually decreasing speed of revolution would cause the ball to press continually against the east side.

Bag mouth closure, T. A. Palmer... 808,110 Balance, specific gravity, F. M. Williams... 808,421 Baling press, P. J. W. Helot... 808,153 Banana shipping case, F. Schmitz... 808,313 Barrel hoop, T. E. White... 808,496 Barrel metal, H. Wehrhahn... 808,327 Barrel or keg washers, barrel or keg rolling device for, F. P. Pfell... 808,305 Barrel sectional metal, G. Henk... 808,548 Battery. See Thermo electric battery.

NEW BOOKS, ETC.

- DYNAMO, MOTOR, AND SWITCHBOARD CIRCUITS. By W. R. Bowker, C.E. New York: D. Van Nostrand Company, 1904. 8vo.; pp. 120. Price, \$2.25 net.
- THE TEMPERATURE-ENTROPY DIAGRAM. By Charles W. Berry. New York: John Wiley & Sons, 1905. 12mo.; pp. 134. Price, \$1.25.
- CONCRETE. Edited by John Black. London: John Dicks. New York: Industrial Publication Company. N. D. 16mo.; pp. 94. Price, 20 cents.

(9865) W. S. asks: 1. Why is twilight so much longer in England than in Spain or North Africa? Is it true that the period of twilight increases as we approach the poles, and if so, what is the cause of the increase? A. Twilight lasts till the sun is about 18 deg. below the horizon in the evening at any place. The sun in the torrid zone descends vertically in setting, and the duration of twilight is least in this region of the earth.

How To Increase Your Business READ carefully, every week, the Business and Personal Wants column in the Scientific American This week it will be found on page 14.

(9866) C. O. B. writes: I send you this letter with inclosed salt formation, in the hope that I may get some explanation, published or otherwise, as to its cause. A. You inclose a very nice crystal of common salt, which is known in chemistry as sodium chloride. If you will dissolve some table salt in water and set the dish in a quiet place, such crystals will begin to form as soon as the solution becomes saturated by the evaporation of water.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Issued for the Week Ending December 26, 1905 AND EACH BEARING THAT DATE [See note at end of list about copies of these patents.]

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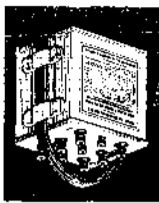
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The July issue was a general introduction of the subject, together with examples of one or two typical English living rooms. The August issue treats of the subject of Halls. Subjects to follow will relate to the Dining Room, the Drawing Room, etc.

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