(25) S. D. asks: What will clarify a solution of 5 lbs. of Irish moss, boiled in 20 gallons of water, long enough to extract the gelatin? I want to get rid of the small particles, which give it a cloudy appearance. A. Mix with clean paper pulp, place in a fine linen bag, and strain. The paper and gelatin should be mixed and well stirred together while the gelatin is hot and as liquid as

(26) H. S. S. C. asks: Will a house 30 feet by 30, covered with tin and having a water conductor at each corner connected with the roof, each conductor being connected with the ground by a copper wire, be sufficiently protected against lightning without a lightning rod? A. The water conductors, not being in the form of a compact body of metal, would hardly be so good as a rod: but, if provided with a pointed rod at top in con-nection with each, extending about three feet high above the roof, and a like rod extending some distance into the ground at the bottom, they might be considered safe.

(27) O. A. W. asks: Is there a chemical that, when rubbed on the hand, enables one to handle red hot iron or melted lead with impuni ty? A. No; but if the hand be damp with perspiration, or slightly moistened, it may for an in stant be dipped in melted lead or white hot melted iron without burning or discomfort. The moisture is thrown into the spheroidal condition, and presents an effectual barrier against the in-

(28) W. M. M. asks: How is a bichromate battery made? A. It consists usually of a large glass jar having within it a cup of porous unglazed porcelain. The intermediate space, between the sides of the vessels, is filled with dilute sulphuric acid (1 to 20), and contains a sheet of zinc shaped so as to conform to the curve of the inner cup, which it completely surrounds. A stick of gas carbon is placed in the porous cup, and surrounded with a fluid made by adding strong sulphuric acid to a saturated aqueous solutionof bichromate of potassa until the chromic acid begins to separate in flakes, it is afterwards diluted a very little in order to redissolve the precipitate. The proportion of the several ingredients in this mixture should be about as follows: to about 10 ozs. of bichromate of potassa in 1 gallon of water, add 1 pint of strong oil of vit-

(29) S. asks: Is the common arsenic of the drug stores the kind that can be fused with block tin? A. No, use metallic arsenic.

MINERALS, ETC.—Specimens have been received from the following correspondents, and examined, with the results stated:

W. Z. J.—No. 1 is blue clay. No. 3 is a piece of slate. No. 4 is a variety of steatite. No. 5 is ba-No. 6 is a piece of bituminous shale. No. 7 is chalcopyrite (sulphide of copper). A smaller specimen numbered 6 is an agate. No. 2 did not arrive.—P. & B.—It is nodular iron pyrites.—B. M. R.—No. 1 is a limestone fossil, but has been so badly damaged that we cannot classify it. No. 2 is a piece of shale.—S. S.—It is a broken quartz crystal.—S. L.—It is partially reduced oxide of copper.—W. E.—The color on the window blind does not contain arsenic. It is an organic pigment.—C. C.—They are garnets, of considerable value when large and perfect.—J. A. C.—It is a bituminous shale, and might be used for heating purposes.—S. J.—The sand might, if properly screened, find a limited employment for scouring, grinding, and p lishing purposes, as well as in the manufacture of glass and glazes.

S. G. C. asks: Is there anything which will restore drawing paper, which has become soft from age and use so that ink runs on it, sufficiently to ink on a few lines at a time when neces -O. S. says: Can you inform me what is the yield of oil to the bushel of peanuts, and what are the means of extracting the oil?—J. L. R. Jr asks: Please tell me where the character \$ came from originally.

#### COMMUNICATIONS RECEIVED.

The Editor of the SCIENTIFIC AMERICAN acknowledges, with much pleasure, the receipt of original papers and contributions upon the following subjects:

On Weight on and in the Earth. By E. B. W. On the Polarity of the Compass Needle. By D.

On a Rope Swing. By J. S. P. On the Monjolo. By C. J. W.

Also inquiries and answers from the following: A. S.-J. R.-J. A. P.-J H. E.-C. C.-G. T. D.-J. M.-T. J. B.-J. McC.-W. B. P.-C. H. P.-H. H

## HINTS TO CORRESPONDENTS.

Correspondents whose inquiries fail to appear should repeat them. If not then published, they may conclude that, for good reasons, the Editor declines them. The address of the writer should

Enquiries relating to patents, or to the patentability of inventions, assignments, etc., will not be published here. All such questions, when initials only are given, are thrown into the waste basket, as it would fill half of our paper to print them all; but we generally take pleasure in answering briefly by mail, if the writer's address is given.

Hundreds of inquiries analogous to the following are sent: "Who makes machines for pressing stove blacking? Who sells electric telegraph apparatus? Who sells propeller wheels? makes cast steel bells? Who makes labeling All such personal inquiries are machines?" printed, as will be observed, in the column of "Business and Personal," which is specially set apart for that purpose, subject to the charge mentioned at the head of that column. Almost any desired information can in this way be expeditiously obtained.

#### [OFFICIAL]

#### INDEX OF INVENTIONS

Letters Patent of the United States Were Granted in the Week Ending

August 8, 1876,

AND EACH BEARING THAT DATE.

[Those marked (r) are reissued patents.]

A complete copy of any patent in the annexed list, including both the specifications and drawings, will be furnished from this office for one dollar. In ordering, please state the number and date of the patent desired,

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Aerometer, C. Godfrey		Lamp extinguisher, M. Wagner (r) Latch, gate, C. S. Currie
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Bedstead, invalid, F. E. SawyerBedstead, sofa, J. A. Bigger		Mosquito bar, M. J. Waldron
Bending machine, P. A. Whitney	180,810	Motor, E. Pepple
Beveling machine, plate, Pedder & Abel Binder, temporary, F. Guicheteau		Mower, lawn, R. Hughes
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Brick and mop handles, S. J. Mather180,723, Brush-holding stopple, F. A. Reichardt		Pick eyes, forming, Kiein et al
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