not, why? And how much difference will there be at 12 o'clock noon? A. We should infer yours to be a horizontal sun dial, and will give correct time only in latitude for which it was made, save when sun in meridian; because the gnomon or style by which the shadow is cast must be placed parallel with the polar axis of the earth, and the base upon which the shadow is cast parallel with the horizon, both of which cannot be done when a change of latitude is made. If the style of your dial is set truly in the meridian of your place, and depressed to correspond with your latitude, it will give you 6 o'clock A.M. and 6 o'clock P.M.. also the exact sun or true time, at noon.

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

W. N. W.-Galena-lead sulphide, a rich lead ore. It probably carries a little silver-worth assaying.

COMMUNICATIONS RECEIVED.

On the Motion of the planets. By A. K. On a New Theory of Planetary Movement. By J. H.S On Declination of the Magnetic Needle. By J. L. R. No Current in Magnets By W. B. F., M.D. On Protecting Oil Tanks from Lightning. By W.

[OFFICIAL.]

INDEX OF INVENTIONS

FOR WHICH

Letters Patent of the United States were Granted in the Week Ending August 17, 1880,

AND EACH BEARING THAT DATE. [Those marked (r) are reissued patents.]

A printed copy of the specification and drawing of any patent in the agreement list, also of any patent issued since 1866, will be furnished from this office for one dollar. In ordering please state the number and date of the patent desired and remit to Munn & Co., 37 Park Row, New York city. We also furnish copies of patents granted prior to 1866; but at increased cost, as the specifications not being printed, must be copied by hand.

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