

THE EARTH'S INTERIOR

Our Planet's Core Is Liquid, Yet It's as Rigid as Steel.

UNDER ENORMOUS PRESSURE

Neither Rock Nor Metal Could Remain There in the State in Which We See It on the Surface—The Lava That Breaks Through the Earth's Crust.

The idea that the interior of the globe is composed of flowing lava has long since been abandoned, but the picture that modern science offers of the inside of the earth is hardly less appalling. All investigations unite to prove that the heat increases as we descend deeper in the terrestrial crust at such a rate that forty or fifty miles down no substance with which we are acquainted could remain unmettled. And yet the same science tells us that the core of the globe is enormously more rigid than the hardest steel. This apparent contradiction is due to the tremendous pressure inside the earth. No rock or metal can remain there in the state in which we see it on the surface. Its molecules must lose the adherence characteristic of solid bodies in consequence of the heat, but still they are not free to flow like an ordinary liquid, because of the compression to which they are subjected.

The phenomena of earthquakes have given wonderful information about the internal state of the globe. All observations show that the shocks of earthquakes are confined to thin upper shell. They originate at a depth of only a few miles at the most. But the vibrations which they set going are felt all through the earth, often extending to the antipodes. The great core, held rigid by the pressure, is extremely elastic, and it responds to a shock like a ball of steel or of glass. The density of the earth increases toward the center. It is only in the upper part of the crust that local movements can take place, causing shocks and changes of level at the surface. Deeper down everything is gripped and immovable, except, as already remarked, that the molecules of the rocks and metals there are subject to vibration like those of a bell against which a blow is struck.

But this is not all. Whenever a local release from the pressure is brought about by changes near the surface the potentially liquid but effectually solid core at that point may suddenly become fluid and gush forth through a volcanic throat or other vent. But such effects cannot extend to any great depth. Nothing comes to us from the vast interior mass. That remains a perpetual mystery, far beyond the searching hand of science. Indirectly, however, we may learn much about it. Astronomical considerations throw a great deal of light upon the subject. We see that through the planetary system rotating globes are flattened at the poles. The same thing is true of the earth. Its equator bulges; its polar regions are drawn inward. Mechanical laws assure us that the cause is to be found in the fact that the earth and the other planets have assumed shape under the influence of the centrifugal force of their rotation. That force is necessarily greatest at the equator. Beginning as completed molten bodies, they have commenced to solidify at the surface after having assumed an ellipsoidal form due to their rotation.

Another very significant fact is that the shape of the earth corresponds with that which a globe rotating with its velocity would have if composed of materials arranged to their density—that is to say, growing denser toward the center. The heaviest materials must be deep down in the globe; the lighter materials have remained at the surface. This again corresponds with the facts of observation. We know the total "weight" and the average density of the earth. It "weighs" six sextillions of tons, and its average density is five and a half times that of water. But the substances composing the crust of the earth have an average density of twice that of water. It follows that the heaviest things in the earth, on the average, exist deep within its exterior. For all that we can tell, its inner core may be wholly metallic. At the center there is probably an enormous aggregation of dense metallic substances.

"An indication that the inner parts of the earth consist largely if not mainly of iron is to be found in the magnetism of the globe. The earth is a great permanent magnet. If we could learn the facts it might turn out that iron is the most abundant substance in the solar system and perhaps in the whole universe. The majority of the meteorites that fall upon the earth consist of solid iron. Blow the earth to pieces and in the resulting cloud of fragments the rocks that we are familiar with would be almost imperceptible. There would be a rain of iron and other metals descending upon the moon and upon any other attracting body in the vicinity.

This view of the interior of the globe dispenses of the notion, so picturesquely developed in one of Jules Verne's romances, of the existence of vast cavernous openings in the interior of the earth. Such void spaces, though on no large scale, may exist in the upper part of the crust, but not at a great depth. The earth is effectively more solid than a cannon ball, and the movable rocks composing its crust are like a film of rust on the hard metal—Professor Garrett P. Serviss in New York American.

It is better to become great than to be born great—Proverb.

THE MARKETS

Accurate prices paid by Decatur merchants for various products. Corrected every day at 2 o'clock.

EAST BUFFALO, N. Y., Jan. 2.—

Market steady.
Prime steers \$5.60
Medium steers \$4.50
Stockers to best feeders \$3.75
Receipts, hogs, 90 cars; market steady.
Mediums and heavies \$4.95
Yorkers \$4.95
Pigs \$4.95
Receipts, sheep, 50 cars; market steady.
Best spring lambs \$7.75
Wether sheep \$5.25
Culls, slipped \$4.00

CHICAGO MARKETS.

July wheat 99 1/2
May wheat 107 1/2
July corn 60 1/2
May corn 61 1/2
July oats 48 1/2
May oats 55

PITTSBURG MARKETS.

Jan. 2.—Hog supply, 50 cars; market steady.
Heavy \$5.00
Mediums \$5.00
Yorkers \$4.90
Light \$4.90
Pigs \$4.85

TOLEDO MARKETS.

Cash wheat 102 1/2
May wheat 107 1/2
Cash corn 60 1/2
May corn 62
Cash oats 53
May oats 54 1/2

PRODUCE.

By Decatur Produce Co.
Eggs 23c
Butter 18c
Fowls 7c
Chicks 7c
Ducks 6c
Geese 12c
Turkeys, young 9c
Turkeys, toms 9c
Turkeys, hens 9c

HIDES.

By B. Kalver and Son.
Beef hides 4 1/2c
Calf hides 7c
Tallow 4c
Sheep pelts 25c @ \$1.25
Mink 5c @ \$2.00
Muskrat 10c @ \$1.00
Coon 10c @ \$1.00
Shunk 10c @ \$0.90
Possum 5c @ 25c

NOTICE.

Any one knowing themselves indebted to the late Mathias Schafer will please call and settle with Mrs. Catherine Schafer, and any one holding any claim against the estate will please present the same at once.

213-3 Mrs. Catherine Schafer.

LOST—Fountain pen between Lehne's jewelry store and the Elks hall. Finder please return to this office.

Art Roosts Mign.

A number of women founded a club for the purpose of dabbling in literature and artistic pursuits. The two having the most leisure were delegated by the other members to look for clubrooms. A week later they reported that they had made a selection.

"Where are the rooms?" asked the rest of the women.

"On the third floor of this building," said the house hunters, and they spread out on the table a number of exterior and interior views of the building they had chosen. But their club associates refused even to look at the pictures.

"The rooms are on the third floor. It isn't worth while to consider them even for a minute," they said. "It is an unwritten law that all clubrooms dedicated to aesthetic and artistic pursuits must have an aerial location. Nothing below the eighth floor can be thought of. It is all right for political clubs and other organizations devoted to material interests to house themselves in first, second and third floors, but the higher the aims of any society the higher the altitude demanded for its clubrooms."

The house hunters looked sorely puzzled.

"Why?" they asked.

But not even the most enlightened woman present could tell why.

"We only know that it is so," they said. "Look up the location of all really soulful societies, and you'll find that the law is faithfully observed."

Wrong Tip.

"I have come all the way out here," said the tenderfoot, "to see your beautiful sunset."

"Somebody's been stringin' you, stranger," replied Arizona Al. "It ain't mine."—Chicago Record-Herald.

Hard Climbing.

Wearie Walker—De world's all wrong. Tired Tatters—Wot's eatin' youse now? Wearie Walker—Ef I'd a had de makin' uv it I'd made all de roads runnin' downhill.—Chicago News.

THE HOLLOWHORN DRUG CO.

FARMS For Sale

In Michigan, Ohio and Indiana

Call on

W. H. PARKER
212 Burt Street, Van Wert, Ohio

P. J. HYLAND
SANITARY PLUMBING

Gas Fitting, Steam and Hot Water Heating, Gas and Combination Fixtures

23 Monroe St. Phone 256

DR. J. M. MILLER
Eye, Ear, Nose and Throat Treated

EYES SE 9 AND GLASSES FITTED
220 South 2nd St. Decatur

Flower Bulbs

Hyacinths, Tulips, Lillies, and other Bulbs for fall planting

J. D. HALE

Money to loan on farms at low rate of interest. No commission. Partial payments allowed and interest stopped.

DORE B. ERWIN, Tues & Fri Attorney-at-Law.

Millions of bottles of Foley's Honey and Tar have been sold without any person ever having experienced any other than beneficial results from its use for coughs, colds and lung troubles. This is because the genuine Foley's Honey and Tar in the yellow package contains no opiates or other harmful drugs. Guard your health by refusing any but the genuine.

THE HOLLOWHORN DRUG CO.

NOTICE TO OUR CUSTOMERS.

We are pleased to announce that Foley's Honey and Tar for coughs, colds and lung troubles is not affected by the National Pure Food and Drug law as it contains no opiates or other harmful drugs, and we recommend it as a safe remedy for children and adults.

THE HOLLOWHORN DRUG CO.

PUBLIC SALE.

The undersigned will offer for sale at his residence one and one-fourth miles southwest of Decatur or one-fourth mile south of the Eley tile mill, on the Nicholas Eiting farm, at 10 o'clock a. m., on Monday, January 6, 1908, the following property, to-wit: Three head of horses, 1 grey mare 5 years old; 1 grey horse 5 year old, 1 grey horse 6 years old. These horses are extra good ones. Four head of cattle, one cow will be fresh in February, 1 yearling heifer, 1 yearling steer. One brood sow with 9 pigs by her side, about 6 dozen chickens, 2 ducks. Implements—One Studabaker wagon 3 and one-fourth inch, 1 set of dump boards, 1 top buggy, 1 Deering mower, 1 hay rake, 1 John Deere riding breaking plow, good as new; 1 Junk breaking plow, 1 grain drill, good as new; 1 corn cultivator, good as new; 1 spring tooth harrow, 1 spike tooth harrow, 1 double shovel corn plow, 1 set of double work harness, 1 set of single buggy harness, 1 hay ladder an hog rack combined, 10 acres of corn fodder in the barn, 3 tons of hay, 150 bushels of oats in the bin, 50 bushels of corn in the crib Household and Kitchen furniture and lots of other articles too numerous to mention.

TERMS—All sums of \$5.00 and under cash in hand; all sums over \$5.00, a credit of nine months will be given by purchaser giving note with approved security with 4 per cent off for cash.

EDW. L. GASE.

Fred Reppert, Auct.

Hard Climbing.

Wearie Walker—De world's all wrong. Tired Tatters—Wot's eatin' youse now?

Wearie Walker—Ef I'd a had de makin' uv it I'd made all de roads runnin' downhill.—Chicago News.

THE HOLLOWHORN DRUG CO.

DEMOCRAT WANT ADVERTISING

WANTED

WANTED TO BORROW—Money in amounts of \$500 and up. First mortgage security on Fort Wayne real estate given not to exceed 60 per cent of its valuation. Interest six per cent payable semi-annually. Inter-State Realty Company, 115 east Main St., Fort Wayne Ind. 290-30t

WANTED TO BUY—A second hand safe. Inquire of Charles Sullivan at the West End restaurant. 316-6t

WANTED

Corn either old or new; any quantity at the highest market price. Bring your wheat and get a premium.

285-24t A. VAN CAMP.

FOR SALE

FOR SALE—Buree Jersey swine, either sex, any age. Also black Langshan cockerels. Inquire E. F. Miller, R. R. 12, Phone 14G line. 291-1f

FOR SALE—A standard Remington Typewriter at a bargain. Inquire of S. J. Hain. 311-3t

FOR SALE—A church organ, second hand, but as good as new; has been used two years; will sell at a bargain. Inquire of Gay & Zwick.

FOR SALE—A \$500 Simplex piano and piano player, John Doll's make. It has been used only ten months and is in excellent condition. A rare bargain is offered. Inquire at this office for information. 316-6t

LOST AND FOUND

FOR RENT—Two houses for rent on Mercer ave. Call Mrs. Al Burd, 624 Mercer Ave., or Phone 28.

LOST—A baby's kid glove dressed with fur between Crystal theater and Third street. Finder return to this office.

LOST—A pair of gold rimmed glasses. Finder please return to this office.

LOST—A signet bracelet with the letter "r" on. Finder please return to this office.

LOST—A sheepskin mitten for left hand. Was lost in Decatur several days ago. Please return to this office. 313-6t

LOST—A ladies' pocketbook between the Everett Hite grocery and Charle's Grogelode shoe store. Finder please return to this office.

BLACKSMITHS ATTENTION—Just received a fine car of Smithy Coal. It is good stock if you need it. Decatur Lumber Co. 310-3d1t

FOR RENT—Furnished and unfurnished rooms. Inquire of Mrs. Whitright near Clover Leaf depot. 314-6t

FOR RENT—Three rooms at my home, second house south of Hower & Hower's grocery. Prices reasonable. John Ritter. 315-6t

FIRST NATIONAL BANK

DECATUR INDIANA

CAPITAL \$100,000

SURPLUS \$20,000

INTEREST PAID ON DEPOSITS

FORT WAYNE & SPRINGFIELD RY.

In Effect February 1, 1907.

Decatur—North. Ft. Wayne—South

6:00 a. m. 7:30 a. m.

9:00 a. m. 10:30 a. m.

12:00 noon 1:30 p. m.

3:00 p. m. 4:30 p. m.

6:00 p. m. 7:30 p. m.

9:00 p. m. 11:00 p. m.

12:00 m. 1:30 p. m.

3:00 p. m. 4:30 p. m.

6:00 p. m. 7:30 p. m.

9:00 p. m. 11:00 p. m.

12:00 m. 1:30 p. m.

3:00 p. m. 4:30 p. m.

6:00 p. m. 7:30 p. m.

9:00 p. m. 11:00 p. m.