eral writers now travelling in Europe; "Mrs. Harrison in the White House," — a paper telling of the daily life of the President's wife, — authorized by Mrs. Harrison, and written by one of the attachés of the White House; "Mary J. Holmes's Travels Abroad," in European capitals and countries. Articles by such writers as Mrs. Lew Wallace, Elizabeth B. Custer, Blanche Willis Howard, Julia Ward Howe, Harriet Prescott Spofford, Susan Coolidge, Dr. William A. Hammond, Anna Katharine Green, Mrs. Henry Ward Beecher, Grace Greenwood, Ella Wheeler Wilcox, Margaret J. Preston, Rev. Robert Collyer, D.D., and Kate Upson Clarke, will be features of each number. The new regular department by Rev. T. De Witt Talmage, D.D., we have already referred to. In this the famous preacher will talk on all subjects of interest to woman. The department will be called "Under my Study Lamp." Fifteen departments for woman's daily life will be sustained by the journal, including "Side-Talks with Girls," "Practical Housekeeping," "Artistic Needlework," "The Latest Fashions," "All about Flowers," "Facts for Mothers."

LETTERS TO THE EDITOR.

**** Correspondents are requested to be as brief as possible. The writer's name is in all cases required as proof of good faith.*

The editor will be glad to publish any queries consonant with the character of the journal.

On request, twenty copies of the number containing his communication will be furnished free to any correspondent.

Is Man Left-Legged?

IN view of the subjoined facts and remarks, we would seem justified in awaiting the presentation of more statistics and investigations, before giving an affirmative answer to the above query.

1. Of over fifty men questioned by the writer, every one answered that he would kick a foot-ball with his right foot, except two, one of whom was left-handed, the other ambidextrous; and out of forty boys interrogated by the school superintendent here, thirty-eight kicked with the right foot, and the two others equally well with either foot, both being ambidextrous.

2. About half of those asked took the spring, in leaping, from the right foot, and alighted on the left; the other half, the reverse. The strain and force required in either case seem about equal.

3. Every shoe-merchant of this place testified that nearly all their customers preferred trying a new boot or shoe on the right foot, considering that one the larger, especially in breadth.

4. Standing on either leg, and using it more, would rather tend to consolidate the bone, and develop the muscle, of that leg: hence the somewhat increased length of the left leg, indicated by Dr. Sibley, might denote comparative weakness. Besides, if the greater length of the leg is admitted as evidence of left-leggedness, by parity of reasoning, we should find the right arm, on right-handed people, longer than the left; which, from such evidence as the writer has been able to obtain, is not the case.

5. The recruit is taught, at the word "forward," to throw his weight on the right foot; and, at the word "march," to step off with the left. This position, in olden warfare, would be favorable for the use of the shield, the spear, and the cross-bow, and in modern times is equally appropriate for a bayonet charge or for firing, by right-handed men. In dancing, the instructions are invariably to begin the "chassez," and similar movements, with the right foot. Piano and harp pedals, besides various treadles for harvesters and other agricultural implements, etc., are usually made to accommodate the right foot.

6. That man is naturally right-handed, is stated to arise from a physiological cause (see Bell's "Bridgewater Treatise on the Hand," or McClintock's "Biblical Cyclopædia," when commenting on the ambidextrous Benjamites); and the same cause would be likely to strengthen the whole side, including leg and foot.

7. In the West, our race-courses, quite as often as otherwise, are so arranged as to make the horse and rider, or sulky driver, curve to the left. Circus-riders invariably follow the left-hand curve, in order to mount and dismount on the near side. The reason for generally mounting on the left is obvious. Every right-handed man, in going to battle, has his sword in scabbard on his left side, and seizes his bridle-rein with his left hand: hence the necessity of mounting from the near side, and placing the left foot in the stirrup, but all the weight comes on the right stirrup, when wielding the sabre, battle-axe, or lance; and the lunge with the foil or small-sword is made with the right foot, by right-handed men.

8. As in dancing the lady is on the right of her partner, naturally in "hands round" or "balance all," or in the first movement of the waltz, the turn is to the right; but in each case the circle pursued is a left-hand curve: so that the argument on that point seems to have little force.

9. Backwoodsmen state, that, when lost in the forest, they usually find they have wandered in a left-hand curve, and come back nearly to the place of starting; and experiments in wheeling a wheel-barrow when blindfolded usually result in the stronger right leg gaining on the left, thus producing an inclination to the left hand.

If the officers of athletic college-clubs at Harvard, Yale, Princeton, etc., would be kind enough to report to *Science* the percentage of those students who kick the foot-ball with the right foot, and the comparative measure between the right and left leg in circumference around the muscular portion, it would aid much in arriving at the truth, especially if the small percentage kicking with the left proved to be either left-handed or ambidextrous.

RICHARD OWEN, M.D.

New Harmony, Ind., Dec. 20.

On Physical Fields.

WHEN the physical state of a body re-acts upon the medium that surrounds it so as to produce in the medium a state of stress or motion, or both, the space within which such effects are produced is called the "field" of the body. When a body is made to assume two or more physical states simultaneously, each state produces its own field independent of the existence of the others: hence two or more fields may co-exist in the same space. For instance: if a magnet be electrified, both the magnetic and the electric fields occupy the same space, and each as if the other did not exist.

PROPERTY OF VARIOUS FIELDS.

I. The Electric Field. — Suppose a glass rod be electrified with silk or cat skin. It is experimentally known that other bodies in its neighborhood are physically affected by its mere presence without contact, and various motions result which are commonly attributed to electric attraction or repulsion. The phenomena are explained as due to the stress into which the neighboring ether is thrown by the electrified body, the stress re-acting upon other bodies, and moving them this way or that as the stress is greater here or there. Suppose an electrified mass of matter remote from any other matter, in free space. The field, or the stress that constitutes it, is found to vary in strength inversely as the square of the distance from the body in every direction about it, which shows that the effect upon the ether is uniform in all directions, and that for such a stress under such conditions the ether is isotropic. Experiment shows that this kind of a stress travels outwards with the velocity of 186,000 miles a second, or the same as that of light, which shows that the velocity of motion in the ether depends solely upon the properties of the ether, and not at all upon the source of the disturbance. If this assumed electrified mass of matter were the only matter in the universe, then its electric field would be as extensive as the universe, and any electric change in the mass would ultimately re-act upon the whole of space, and be uniform in every direction. If, however, there be another mass of matter in proximity to the first, the disposition of the stress is altogether different; for instead of being disposed radially, as in the first case, the field is distorted by the re-action of the stressed ether upon the second body. The so-called "lines of force" bend more or less towards the second body, and the field stress becomes denser between the bodies at the expense of the field more remote. If this advancing stress in the ether from an electrified body be called radiation, and it seems to be an action of that kind, then it appears that the direction of such radiation depends upon the existence of other bodies in the ether. It is truly rectilinear no further than the shortest distance between the two bodies.

The electric field thus produced, and thus re-acting upon an-