

heretofore subject to the risks of flood and drought. This immense work was undertaken two years ago; and is not the least of the benefits that Egypt has received from British occupation.

The honor of an earldom was conferred upon Field Marshall Lord Roberts by Queen Victoria on his arrival in England in January; and Emperor William has now invested him with the Order of the Black Eagle, the highest German decoration.

Edison is said to have invented a storage battery, by the use of which electricity may be applied to so many uses that coal will be little needed in the future. If true, this means a revolution in our methods of transportation, as well as in many other things connected with everyday life.

The wireless telegraph is making rapid progress, and the Marconi system has already been outdone. Tesla promises yet further developments; and will, it is said, attempt to open communication between the coast of New Jersey and the coast of Portugal without wires.

A new province is to be created in the northwestern districts of India, to include Peshawur and the adjoining districts. Its area is to equal about one-fourteenth the total area of the Punjab.

Two royal marriages have taken place in Europe, under very different circumstances, within the last month. On the 7th of February Queen Wilhelmina, the young Queen of the Netherlands, was married at the Hague to Duke Henry, of Mecklenburg-Schwerin, in the midst of great popular rejoicings. A week later the Princess of the Asturias, elder sister of the young King of Spain, was married to Prince Charles, of Bourbon, at Madrid; and the city had to be put under martial law to prevent some exhibition of popular disapproval. The princess is heiress apparent to the Spanish throne; and was actually Queen for a short time, between the death of her father and the birth of her brother. The bridegroom is the son of a much detested Carlist leader, Count de Caserta. Hence the ill feeling on the part of the people, who fear the strengthening of Carlist influence.

De Wet, the Boer leader of the invasion of Cape Colony, has made his escape from the forces that surrounded him, and returned to the Orange River Colony. He utterly failed in his attempts to arouse the Dutch residents to active sympathy. Apparently, the Dutch in Cape Colony are much more loyal than either Boers or British have supposed.

China seems to be ready to comply with the demands of the Powers and has decreed the punishment of leaders responsible for the Boxer uprising. Rumors of a disagreement between the allies over the Russian occupation of Manchuria are alarming.

The facts of history, the mathematics, and the idioms may crumble away, but the supreme gift of education—a larger, richer and more beautiful life—will live forever.—*Suocasa*.

### 'ROUND TABLE TALKS.

P. F. M.—What is meant by the Dog-days? When do they begin and end?

The Dog-days (*Dies caniculares*) included among the ancients the period of the greatest heat in summer, beginning with the time the Dog Star (Sirius) rose heliacally, that is, at the same time with the sun. The astrologers ascribed a malignant influence to this period.

The limits and duration of the Dog-days are different in ancient and modern calendars. Modern almanac-makers usually fix the period from July 3 to August 11—forty days.

S. C.—(1) Explain how rotating lawn-sprinklers are kept in motion.

(2) An ounce bullet leaves a gun weighing 8 pounds with a velocity of 800 feet per second. What is the maximum velocity of the gun's recoil?

(3) If water at the bottom of a vessel could be raised by application of heat to  $20^{\circ}\text{C}$ , while the water near the upper surface has a temperature of  $10^{\circ}\text{C}$ , what would happen?

(4) A lady gave a certain amount of money to the poor every month, always giving the same sum. When there were 10 persons, each person received  $\$1\frac{1}{2}$  more than when there were 12. What sum was distributed?

(1) In a rotating lawn-sprinkler the water under pressure comes out of a jet at right angles to the axis of rotation. The momentum of the water is continually re-acting on the jet and throwing it backwards.

(2) Theoretically it will be  $\frac{800}{8 \times 16}$  feet per second.

(3) The water at  $20^{\circ}$ , on account of being expanded by the greater heat, would be lighter and ascend, while the heavier water at the surface would take its place.

(4) To supply the shares of 2 additional persons, each of the 10 persons must give up  $\$1\frac{1}{2}$ , or  $\$15$  in all. Therefore each one gets  $\$7\frac{1}{2}$ , or all get  $12 \times \$7\frac{1}{2} = \$90$ .

C. P. F.—(1) How may the distance between two objects be found when the angles formed at each of them by lines drawn to the other and to two given stations are known, the distance between the stations also being known.

(2) Of two parallel forces acting in opposite directions, the greater is 10 pounds, and acts at a distance of 8 inches from the resultant, which is 6 pounds; find the distance between the forces.

(3) A boat is moored in a stream by two ropes, one from each bank, and inclined to the direction of the current at angles of  $30^{\circ}$  and  $45^{\circ}$ . What is the ratio of the tension of the ropes?

(4) Given the vertical angle and the lengths of the two medians drawn from the extremities of the base, construct the triangle.

(1) Let PQYX be a quadrilateral. Let PQ be the two points and XY the stations, the distance between