THE PLANETS.

They All, With Their Satellites, Exhibit Phases Like the Moon.

We are likely to regard the moon as the only thing in the heavens that exhibits phases such as the quarter, the half and the full. As a matter of fact all planets and their satellites exhibit separately such phases, and most of them can be easily seen with a small power telescope. Thus Mars and Venus, which are comparatively close to the earth, show through the telescope at times a beautiful crescent, at others a half planet fully as brilliant, considering the distance, as does our satellite. At times also the planets suffer eclipse, just as the earth, the moon and the sun, and these eclipses are foretold with as great accuracy.

As to just what causes the phases, say of the moon, is easy to comprehend by a homely analogy. If one stands in a corner of a room, places a globe of some description in the next corner and a light in the third corner the phenomenon of the half moon is seen. The light, representing the sun, shines of course on half the globe representing the moon, but the observer in the corner sees only half of the surface toward him illuminated. If now the light be placed behind the observer and a little above his head a full moon will be seen, the "sun," however, shining on the same area of surface as before, merely allowing this time a view from the "earth" of the whole amount of illumination. All the phases can be demonstrated in this manner by moving the "moon" directly outward from its corner.

One of the greatest discoveries of science is due to observation of the eclipses of Jupiter's moons. It was found that when the earth was in the part of its orbit nearest to Jupiter these eclipses occurred sixteen minutes earlier than when it was in the farthermost part, whereas by all rules of astronomy they should have occurred at the same minute each time. It was deduced from this that light was not instantaneous and consequently took sixteen minutes to traverse the diameter of the earth's orbit, a distance of about 200,000,000 miles, thus giving to light a velocity of 186,000 miles a second, which was accurately shown later by other experiments.—St. Louis Republic.

WATCH SPRINGS.

Not Surprising They Break Considering the Work They Do.

The mainspring of a watch does not unwind at a uniform rate, but intermittently. It is subjected to a sudden jerk at every tick—four times per second for my watch. This makes 345,600 times per day and over 125,000,000 times per year. This operating condition is analogous to others discussed in Kent's "Mechanical Pocketbook" under the heads of "Relation of the Elastic Limit of Endurance Under Repeated Stresses" and "Resistance of Metals to Repeated Shocks." Among other things it says:

"Another long known result of experience is the fact that rupture may be caused by a succession of shocks or impacts none of which alone would be sufficient to cause it. Iron axles, the piston rods of steam hammers and other pieces of metal subject to continuously repeated shocks invariably break after a certain length of service. They have 'a life' which is limited."

Wöhler found in testing iron by repeated stresses (not impacts) that in one case 400,000 applications of a stress of 500 centners to the square inch caused a rupture, while a similar bar remained sound after 48,000,000 applications of a stress of 300 centners to the square inch. One centner equals 100.2 pounds. The mainspring of a watch is not only under a considerable tensile stress, but also under a bending stress when suddenly released, then immediately stopped by the escapement mechanism. It is then probable that its molecular cohesive power deteriorates in a manner similar to those quoted.—Scientific American.

Von Bulow of Gentle Nature.

When first Von Bulow was introduced to me I almost avoided him on account of the many stories of his irascibility, his erratic disposition, his offhand treatment of the public, his brutality toward musicians and many other crimes of this sort. On closer acquaintance with the great pianist I experienced some astonishment to find him a man of strong mind, yet gentle nature, enthusiastic, artistic to the finger tips and well bred, though of an exceedingly nervous temperament. Irascible he might have been at times, but I am sure that the moments of ungovernable anger were always provoked by people's stupidity or by some unpardonable mistakes in musical execution.—From "Modjeska's Memoirs" in Century.

Sometimes There Isn't.

Flubbe—I'm going into the manufacture of something there ought to be money in.

Dubbe—What are you going to manufacture?

Flubbe—Pocketbooks and purses.—London Telegraph.

MONKEYS IN BATTLE.

They Fight Under Leaders and Roll Stones on Enemies.

Aesop's age, it will be remembered, wept on passing through a human graveyard, overcome with sorrow for its dead ancestors, and that all monkeys are willing enough to be more like us than they are they show by their mimicry.

An old authority tells that the easiest way to capture apes is for the hunter to pretend to shave himself, then to wash his face, fill the basin with a sort of birdlime and leave it for the apes to blind themselves. If the Chinese story is to be believed the imitative craze is even more fatal in another way, for if you shoot one monkey of a band with a poisoned arrow its neighbor, jealous of so unusual a decoration, will snatch the arrow from it and stab itself, only to have it torn away by a third, until in succession the whole troop has committed suicide.

In their wild life baboons as well as many varieties of the monkey tribe undoubtedly submit to the authority of recognized leaders. There is co-operation between them to the extent that when fighting in company one will go to the help of another which is hard pressed.

In rocky ground they roll down stones upon their enemies, and when making a raid, as on an orchard which they believe to be guarded, the attack is conducted on an organized plan, sentries being posted and scouts thrown out, which gradually feel their way forward to make sure that the coast is clear, while the main body remains in concealment behind until told that the road is open.

From the fact that the sentries stay posted throughout the raid, getting for themselves no share of the plunder, it has been assumed that there must be some sort of division of the proceeds afterward. Man, again, has been differentiated from all other creatures as being a tool using animal, but more than one kind of monkey takes a stone in its hand and with it breaks the nuts which are too hard to be cracked with the teeth.—London Globe.

CHANCES OF LIFE.

Probability at Your Age of How Long You Will Live.

After we are dead it probably will not concern us whether we died at twenty or fifty or ninety, but just now most of us are intensely interested in the matter, and, being average persons in sound health, we can figure out with certainty just what our chances are of reaching any particular age, says Harper's Weekly.

If we are just 20 years of age, our chances of living to or beyond 30 are nearly 12 to 1; of living to be 40, 5½ to 1; to be 50, 3 to 1; to be 60, 1 2-3 to 1. Of living to be 70 we have less than 1 chance in 2½; to be 80, less than 1 chance in 7½, and to be 90, less than 1 chance in 100.

If we have reached 30, our chances to reach 40 are nearly 11 to 1; to be 50, nearly 4½ to 1; to be 60, 2⅝ to 1; to be 70, 4½ chances in 10; to be 80, 1 chance in 7½; to be 90, 1 chance in 100.

The average man of 40 has 87 chances to 1 of reaching his fiftieth birthday, 2⅝ chances to 1 of attaining 60, only 5 chances out of 10 of reaching 70, 1 chance in 5⅝ of reaching 80 and 1 chance in 100 of becoming 90.

Having been lucky in all the drawings up to fifty years, the average man has 4⅝ chances to 1 of becoming 60, to become 70 the chances are 1⅝ to 1 in his favor; to become 80 he has but 1 chance in 5 and to become 90 1 chance in 100.

If already 60 the average citizen has 2 chances to 1 of becoming 70, 1 chance in 4 of becoming 80 and 1 chance in 66 of reaching 90.

The man of 70 has 3 chances in 8 of becoming 80 and 1 in 50 of becoming 90.

If one has weathered the storm until his eightieth birthday he has 1 chance in 17 of reaching his ninetieth milepost.

It will be observed that as we get older our chances of reaching 90 increase greatly.

Followed Instructions.

At Gloucester some time ago a man was sentenced to one month's hard labor for stealing a bottle of medicine that he had been asked to deliver by the doctor in the village in which he lived. Some months after he was brought up on a similar charge and when in the dock was asked what he had to say in his defense.

"Well, your honor," he replied, "I was asked by the doctor to call again for another patient's medicine, and the bottle stood on the doctor's desk labeled, 'To be taken as before.'"

He was discharged amid roars of laughter.—London Fun.

Protecting Himself.

"Prisoner at the bar," said the portly, pompous and florid magistrate, according to the London News, "you are charged with stealing a pig, a very serious offense in this district. There has been a great deal of pig stealing, and I shall make an example of you or none of us will be safe."

THE SILK SPECIAL.

Fast Train That Carries the Raw Material Across the Continent.

When a fast mail steamer from Yokohama, Shanghai or Canton, the great silk ports of the orient, docks at Vancouver, Tacoma, Seattle or San Francisco a special train stands ready on the pier awaiting her arrival. It is not the private conveyance of some transportation king or multimillionaire nor of any of the passengers who throng the decks, nor does it tarry for the sacks of letters from the far east. Its coaches do not shine with the refulgence of varnish and plate glass. Their paint is dull, and they are windowless, like express cars. The side doors toward the ship are open. This special is the emperor of trains. It is reserved for the costliest of all freight—raw silk. When it starts eastward its sterling will be worth a fortune—a million and a half, perhaps two millions, of dollars.

A giant locomotive, built for speed with driving wheels greater in diameter than the height of a tall man, backs down and is coupled on to the cars, now sealed and locked and ready. With clanging bell and hissing steam the train glides out and, with a burst of speed that seems almost extravagant, takes the main line rails for the long journey. The silk must be landed in New York in five days. Even the United States mails will not travel faster across the continent. Day and night the silk train rushes eastward over mountains and plains, across deserts and through great cities. It never stops except to change engines. Then it halts only for a moment. Another giant locomotive, oiled and groomed and fit, is always waiting to take up the race.

The silk train is run as a special. It is limited loses time and gets in the way the limited has to rest on a siding while the silk train roars by in a whirlwind of dust. The silk special runs on no schedule except that of the greatest speed consistent with safety. The chief dispatcher of each division listens watchfully to the news of its progress coming in over the wires from one signal tower and station after another. While the silk train is yet a thousand miles away it is being prepared for. The capabilities of engineers and engines are thoughtfully discussed by division dispatchers and trainmasters, and the men and machines with the highest capacity for speed are picked. Tracks are cleared and a thousand details arranged so that there shall be no delay in hurling this huge projectile across the continent.—Harper's Weekly.

Tantalizing Ownership.

In a French village a citizen built upon his land a part of an old building containing two very beautiful windows. He was in debt and embarrassed and eagerly closed with the offer of a rich antiquarian, who bought them. Thereupon the government inspector, hearing of the bargain, arrived just in time to stop the masons from dislodging the windows. "I cannot," he said to the villager, "sell antiquities, my man." "But, excellency, I have used the money and paid my creditors." The villager was in despair, but the official was unmoved. "That's all right," he said. "The money is safe. The windows are no longer yours. But the buyer can't move a stone of them. He can, however, come with a camp stool and sit down and look at his property as much as he likes."

Sham Wisdom.

The Sophists were a body of teachers in ancient Athens during the fourth and fifth centuries B. C., who gave instruction in any or all the higher branches of learning. Although they were not a philosophic sect and held no doctrines in common, the Sophists were nevertheless skeptics and maintained a belief of uncertainty of all particular knowledge and, in fact, in the impossibility of all truth. Their two leading representatives were Protagoras and Gorgias. The Sophists were charged with bringing reasoning into contempt by casting uncertainty over the most obvious truths and in consequence were ridiculed and denounced by Aristophanes, Socrates and Plato. Aristotle defined a Sophist as "a man who makes money by sham wisdom."

A Remarkable Banquet Party.

One of the most notorious Hungarian duellists fought his thirty-fifth duel in 1881 and celebrated the event by a banquet, to which only those who could prove that they had participated in at least six duels were invited. There was a room full of such warriors, some with faces seamed with scars, others minus an ear, an eye or with two or three fingers missing. The most marvel of all was a Frenchman who had lost his nose in an encounter with Count Andrassy, the statesman. There was only one relaxation of the rule, and that was made in favor of a lady who had killed her man.

Pneumonia follows a cold but never follows the use of Foley's Honey and Tar which stops the cough, heals the lungs and expels the cold from the system. For sale by St. Lucie Drug Co.

Bloodhounds to Halt an Uprising.

Slavery swept Jamaica was in 1735 the scene of a rising of the negro plantation slaves. At first there were brushes between the soldiers of the island garrison and the insurgents, and lives were lost on both sides. Then the commander, General Walpole, bethought him of having 100 dogs trained to track slaves brought from Cuba. These powerful and savage brutes, misnamed bloodhounds, were really of the mastiff tribe, says the London Chronicle. After being muzzled they were led to the position taken up by the malcontents. General Walpole sent a message to the slaves threatening to unmuzzle and unleash the animals if they did not surrender. The negroes, who had shown themselves to be by no means afraid of the bullets of the military, were now mad with terror. They threw down their arms and gave in. Remarks a contemporary historian of Jamaica, "It is pleasing to observe that not a drop of blood was spilled after the dogs arrived in the island."

Stubborn as Mules

are liver and bowels sometimes; seem to balk without cause. Then there's trouble—loss of appetite, indigestion, nervousness, despondency, headache. But such troubles fly before Dr. King's New Life Pills, the world's best stomach and liver remedy. So easy. 25c at Fort Pierce Drug Co.

To Make a Glass Cutter.

A glass cutter can easily be made with an ordinary mapping pen and a small piece of carborundum or carbide of silicon. Cut off a part of the nib to form a small tube. Fit a crystal or part of one of carborundum into the tube, take it out again and dip one end in cement and replace it. Next wind a piece of fine wire tightly around the tube and part of the handle and fix it in a notch cut in the latter. Put it aside for a day to allow the cement to harden. A glass cutter made thus will do its work as well as the expensive diamond and a great deal better than the ordinary wheel cutter.

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