

Few varieties of corn raised commercially in this country mature in less than 120 days although some can be grown in 90. In the South, 150 to 180 days is the rule. It is the hope of the Department through the crossing of these South American varieties with those from the far north to obtain a short season corn, highly resistant to low temperatures. If the results are successful the product will probably be a dwarf variety, and the potato digger may come in handy when harvest time comes.

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VENUS NOW MOST BRILLIANT

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The planet Venus, which has been such a magnificent object in the western sky during the past winter and spring, far surpassing in splendor the other planets and brightest stars, will reach her greatest brilliancy on May 24. A few weeks later she will be so close to the sun that it will be impossible to find her in the twilight haze after sunset and on July 1 she will be in inferior conjunction with the sun and pass between earth and sun. After that she will be in the morning sky and late in July the early riser will find her ready to greet him before sunrise. At the end of the first week in August Venus will again be at her greatest brilliancy and after that will draw farther away from the sun and gradually decrease in brightness as she recedes from the earth.

About a month ago, in the latter part of April, Venus was at her greatest distance from the sun in the western sky, at greatest eastern elongation as it is called. She was then setting more than three hours after sunset and viewed in the telescope she looked like a little half-moon. After that date she began to draw in gradually toward the sun on the side of her orbit nearest the earth and began to resemble the crescent moon in the telescope. When Venus reaches her greatest brilliancy on the 24th of this month she will look like the crescent moon at the age of five days. This crescent will gradually grow thinner until at inferior conjunction on the first of July it will disappear and the planet will be invisible even in the telescope.

It may seem strange that Venus should be at her greatest brilliancy when she shows the crescent phase instead of at eastern elongation when half her surface is illuminated and she resembles the half-moon or earlier when she looks like the gibbous moon in the telescope. It must be remembered, though, that Venus is much nearer to us and so appears larger when the illuminated portion is crescent-shaped. As a result this crescent is greater in area than the half moon or gibbous moon of eastern elongation and earlier which we see when the planet is farther from the earth. As the brightness of Venus is proportional to the area of the illuminated part of its surface its brightness will be greatest when the planet is in the crescent phase. But this crescent increases in size while it narrows in width as Venus draws in toward the sun and it is a nice problem in mathematics to determine just when the area of the crescent is a maximum and when as a result the brilliancy of the planet is greatest. It has been found that this always happens 36 days before and after inferior conjunction.

As Venus will be in line with earth and sun at inferior conjunction on July 1 you can figure it out for yourself that Venus will be most brilliant on May 24 when she is visible in the west after sunset and on August 6 when she will be

found in the east before sunrise. At and near the time of greatest brilliancy Venus may be easily seen in broad daylight and also like the moon she casts a strong shadow.

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#### BRICKS FROM PRESSED DIRT USED IN EUROPE

A compressed brick made from ordinary dirt and suitable for house construction has been developed by two French engineers working under the auspices of the National committee for Scientific Research and Invention.

In the process perfected by MM. Waligorsky and Carriere, ordinary subsoil earth containing five to eight per cent of clay is compressed by tremendous pressure. The resultant bricks have a pressure resistance of 600 pounds per square inch.

Walls are coated with a protective mixture which makes them impervious to moisture. The Committee states that the new bricks are only recommended for low buildings. Their chief value will be on the farm where outbuildings and walls can now be built with materials found on the premises.

The committee is trying to duplicate the results obtained by a German engineer named Hecht who uses a mixture of other ingredients. To greasy, slippery earth is added either foundry waste, coke ashes or other cheap porous substances. Pine needles are kneaded into the mixture which is placed in moulds, compressed by hand and allowed to dry in the open air. The bricks formed are considerably larger than the ordinary variety, thus reducing the labor of brick-laying.

Two workers and an assistant working at Gross-Lichterfeld are able to make 200 to 225 bricks in an eight-hour day, equivalent to 1300 bricks of the ordinary size.

Once they are dry these blocks are sufficiently hard to be laid the same as other bricks. A special mortar has been prepared. Laboratory tests show a resistance of 64 pounds per square inch for blocks four weeks old. Age makes them more resistant. Outside walls are made 9 to 12 inches thick, inside separating walls only 5 inches. Only one-story buildings are constructed but they are dry, warm in winter and cool in summer.

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#### BIG GROUP OF SUN SPOTS MAY BE SEEN

A group of sunspots, visible under good conditions with the naked eye, and easily seen through field glasses of moderate power, is now travelling across the sun's face. The group is the largest seen in several weeks. It consists of four separate spots with a few dark streaks between and has been growing in size for several days. The spots were in almost the middle of the sun's face on May 15, somewhat south of the solar equator. They will disappear around the edge of the orb about May 22 but because of foreshortening will be hard to see for a few days before that time.

Persons trying to see this group of spots should always use heavily smoked or colored glass when looking at the sun. If field glasses are used the smoked glass should be placed between the glass and the sun.