

ENGINEERING

Roller Bearings Protect Building from Earthquake

► ROLLER BEARINGS are being installed in a building in Los Angeles as a protection against damage from earthquake shocks.

The installations are under the main pillars of a three-story addition atop a six-story Sears, Roebuck building, a structure completed before the city's present building code had been adopted.

Sixty-five sets of especially designed bearings, each weighing 600 pounds, are being used. Each assembly supports a load of 250,000 pounds, and acting together the bearings permit the three-story addition to move six inches in any direction. Their use divorces the vertical loads, due to gravity, from the horizontal forces exerted by the ground waves of an earthquake.

Each anti-earthquake bearing consists of three steel plates with two sets of steel rollers placed at right angles to each other. One set of rollers permits movement in one direction; the other set, movement at a right angle. If a diagonal shock is experienced, both sets operate.

The bearings were made by the Torrington Company of South Bend, Ind.

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Beauty Betrayed

► FRINGED GENTIANs, through most of their former range in the north-eastern states, have become so rare that enthusiastic flower lovers and keen students of botany may go for years without seeing even one of their beautiful blue blossoms. And it is all a result of over-enthusiasm by flower-lovers of a former generation—our grandfathers and grandmothers, who saw no reason for letting a flower stand on its stem if they happened to fancy it and wanted to carry it home and put it in a vase. That's what happened to millions of fringed gentians back in the nineteenth century—they died in parlor vases.

It is a bitter shame that this had to happen, for of all the blue-and-gold beauty that is autumn, no one thing ever stood out with more beauty than the fringed gentian. Both in gracefulness of form and ringing clearness of color, it seems more like a spring flower than one of late autumn. The four flaring upper ends of its petals, standing out boldly from the green calyx that offers them to the sun, are something for poets to write about. Indeed, one of the best of early American poets, William Cullen Bryant, dedicated one of his finest poems to the fringed gentian.

One reason why the fringed gentian has suffered so badly at the hands of its too-possessive friends is that it depends primarily on seed for its propagation. If you pick the flower you pick next year's gentians, too, and those of many a year thereafter—unless there chance to be some hidden flowers that you have overlooked. So the best thing to do, if you chance on a few survivors, is to look your fill, but let them alone—and don't tell anyone else of your discovery.

In one part of our country, fringed gentians live and flourish in great abundance. That is in the northern Rockies; in Yellowstone National Park within easy sight of the tourist highways there are whole alpine meadows that are blue with gentians in July and August—for these flowers, like all mountain flowers, must come into bloom early to avoid the early winter. This gentian, of course, is not identical with the fringed gentian of the East. But allowing for its somewhat greater size and sturdiness, it passes fairly enough for a western sister of the flower that Bryant loved.

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GEOLOGY

Helium Gas Traces Oil, Gas Movements

► THE NON-INFLAMMABLE light helium gas that gives lift to American blimps and balloons has found a new use.

It is being employed in West Virginia as a tracer to chart underground movements of oil and gas. This is its first use for this purpose in the East, but it has been tried successfully in both California and Texas.

Helium is especially suitable for this purpose because it is an inert gas, so inactive that it has never been found in compounds. It retains its identity though mixed with other gases and oil-well fluids.

It is being injected into oil- and gas-bearing layers deep in the earth. It travels with the gas or oil, and finds its way to output wells in the vicinity.

By careful observation of the length of time for the helium to travel to the adjacent output wells, and determining the amount of helium in each producing well, engineers can determine with reasonable accuracy the reservoir conditions between the two wells.

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