He designed a new form of testing machine and applied Gauss's method of reading by reflection in instruments for measuring deformation of bodies when strained, made tests of cement, mortar, timber, cast iron, wrought iron and steel, and for the railway authorities made investigations on defective axles, rails, etc. Much of his work was inspired by the labours of his famous countryman August Wöhler (1819–1914). An important outcome of Bauschinger's labours was the formation in Germany of a society for exchanging views on investigations similar to his own, and this led to the foundation of the International Association for Testing Materials. In his own particular line, he was regarded by Unwin as "the prince of observers". He died at Munich on November 25, 1893.

Preparations for New Ascents into the Stratosphere

THE National Geographic Society, Washington, D.C., is co-operating with the U.S. Army Air Corps and other donors in a new ascent to the stratosphere to be made this month. According to the *National Geographic Magazine* of April, the balloon to be used will have a capacity of 3,000,000 cubic feet, and will be manned by Maj. William E. Kepner and Capt. Albert W. Stevens. The balloon fabric is of cotton impregnated with rubber, and the spherical gondola, which is made of a magnesium-aluminium alloy, is 8 ft. 4 in. in diameter. The total weight to be raised, including balloon, gondola, equipment and crew, is nearly eight tons. It is estimated that when the balloon rises from the earth partly inflated, the top will be 295 ft. from the ground; at its 'ceiling', the balloon will be a sphere 180 ft. in diameter. Hydrogen is to be used for inflating it. The gas valve in the top of the balloon will be operated from the gondola by compressed air. The programme of scientific work includes the collection of samples of the atmosphere of the stratosphere, determination of electric gradient, observations of cosmic rays and of ozone content and photography at great heights. According to the Brussels correspondent of the *Times*, Dr. Max Cosyns, who accompanied Prof. Piccard on his second ascent to the stratosphere, has completed his preparations for a new ascent (NATURE, Nov. 25, 1933, p. 812). The gondola of the Belgian balloon has been constructed of aluminium.

New Paris Zoo

The lures of Paris are many. Its latest is a new zoo at Vincennes which should be well worth seeing. Hagenbeck, in Germany, was one of the first to abolish the old and hideous system of keeping birds and beasts in cages. The Zoological Society of London, when Sir Peter Chalmers Mitchell took over the reins of government, followed suit, starting with the fine sea-lions pond, and the now famous Mappin Terraces. These last seem to have inspired the director of the new Paris Gardens, Prof. Urbain, and the architect, M. Charles Letrosne, for the dominant feature of the Gardens, we are told, is a towering mass of reinforced concrete, 200 ft. high, shaped and coloured to look like reddish-brown rock, with ledges for sheep, goats, and antelopes. The interior of this mass contains two large reservoirs for the storage of water to supply pools in various parts of the Gardens. In the London Mappin Terraces similar reservoirs supply the wonderful Aquarium—the finest in Europe. Another noteworthy feature of the Paris Gardens is a great aviary giving the birds plenty of room for flying. Occupying an area of about 23 acres, it would seem to be reminiscent of the Gardens of the Zoological Society in London and at Whipsnade, and there is no doubt they will be as much appreciated. The new Gardens occupy the site of the Colonial Exhibition in the Bois de Vincennes. They were opened on June 2 by the President of the Republic, M. Lebrun.

The Indian Earthquake of January 15, 1934

THIS great earthquake is being studied by officers of the Geological Survey of India. Their investigations in the central area are expected to last for several weeks longer, and their results will be published by the Survey at an early date. In the meantime, three papers of some interest have appeared. Sir E. Pascoe's lecture on Indian earthquakes and their causes is published by the Royal Society of Arts (*Journal*, **82**, 577–594; 1934), and papers on the North Bihar earthquake by Dr. M. S. Krishnan and Dr. S. K. Banerji in *Current Science* (**2**, 323–326, 326–331; 1934). From the observations so far made, it seems, according to Dr. Banerji, that the earthquake fault reaches from Motihari to Monghyr, a distance of about 135 miles. There is probably also a second fault, branching from near the middle of the latter and running in the direction of Purnea. Most of the seismographs in India were thrown out of action by the shock, but good records were obtained, and are here reproduced, at Colaba (Bombay) and Agra. From the great preponderance of the surface waves compared with the primary and secondary waves, Dr. Banerji concludes that the focus was at a very slight depth below the surface. All three writers agree in attributing the earthquake to a disturbance of the isostatic compensation.

After-Shocks of the Bihar Earthquake

AT the end of May, the after-shocks of the Bihar earthquake of January 15 increased in frequency and strength. The strongest, which occurred at about 1 A.M. on May 31, seems to have originated within the focus of the principal earthquake, for it caused alarm at Muzaffurpur, Patna and other places in its epicentral area. So far as is known, there was no loss of life and no damage except that walls injured in January collapsed, while fissures that had become filled with dust reappeared. Shocks were also felt about noon on the same day in Assam, the first of which is reported to have lasted two minutes and to have been felt in Calcutta.

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THE Rome correspondent of the *Times* states, in a short communication published in the issue of June 5, that an article in the *Giornale d'Italia* which surveys recent work on induced radioactivity by Prof. Enrico Fermi, of the Royal University, Rome,

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