

thousands of times, there had been no tests on a whole building constructed of such parts. Pure theory, eked out by empirical indications, has therefore had to serve as the basis for their design. The accidents that befell two Miami office buildings, respectively of fifteen and seventeen stories' height, point out pretty plainly that some of these theories of design have been exploded by mere facts.

As a result it is thought likely that building codes will be changed. According to the "Engineering News-Record," which sent Mr. F. E. Schmitt, its associate editor, to Miami to render an expert engineer's report on the effects of the hurricane from a technical point of view, "the Florida storm experience with tall buildings represents a mechanical analysis of buildings under lateral stress of such a character as to suggest the opportunity for thoroughgoing revision of building design methods."

It is possible to calculate beforehand the stresses to which a great steel building is likely to be subjected, yet engineers know that such calculations are based on rather ideal or theoretical conditions. When things actually happen, the exact train of events previously assumed does not often take place. For example, in the case of another comparable metallic structure, the dirigible airship Shenandoah, it would appear that winds struck the ship unevenly throughout its length, and thus brought enhanced stresses to bear on one part. Similarly, in the recent cases at Miami violent puffs or blasts with a force approaching sixty-five pounds pressure on each square foot of wall tore out parts of the masonry on which the integrity of the steel framework partly depended. Because of the force of the wind on the building the steel columns actually bent. Thus, somewhat like Napoleon, the wind found a strategy to cope with a theoretically stronger opponent: it divided it into parts and defeated each part in succession.

Such tests, made by nature, are of incalculable value. Of course, the suspicion that they throw on existing buildings is not as serious as would be the case had engineers not long known the extent to which they are compelled to rely on theory and allowed what they call a "factor of safety"—that is, empirically made their buildings two to four times as strong as theory called for. It is,

however, "an ill wind that blows nobody good;" and the Miami hurricane did what engineering laboratories are not yet equipped to do—it put whole buildings into a testing machine and gave them what the engineer calls a "destructive test."

Radio Television

FOR some months scientists have known that Dr. E. F. W. Alexanderson, consulting engineer of the General Electric Company and the Radio Corporation of America, was at work on a "television" projector—an apparatus for seeing at a distance through the medium of electricity. Recently he announced publicly that he had accomplished this purpose. It is now possible to see objects in motion by radio better than has ever been done before.

In its essence, his method is to divide into a mosaic of parts the image to be transmitted, and to transmit this mosaic with such rapid repetition that it fools the eye, taking advantage of the physiological phenomenon of "persistence of vision" that enables us in motion pictures to blend into continuous action the sixteen separate pictures a second of the film. A visual picture of continuous action results from the projection of a sufficiently rapid series of still pictures. Therefore, if we find a practical way to transmit the type of pictures that have been sent for a year or two by wire and wireless—that is, pictures broken up into some kind of mosaic—and to speed up this transmission until we attain sixteen pictures a second, we accomplish the television of moving objects.

How Dr. Alexanderson has done this is, briefly, first to divide the image vertically into 100 strips; then to subdivide each strip into 100 parts by means of a rapidly revolving drum carrying a large number of mirrors around its periphery, each mirror receiving a flash of light from the object. In actual practice each light beam is multiple; but this is only one of the several respects in which the new television process is an improvement on some previous methods. The next problem is to convert this mosaic of varying spots of light into radio waves. The photoelectric cell does this. It contains a metal which gives off electrons—electricity—when light falls on it. Thus the electric current is made to fluctuate in step with the many rapidly moving flashes of varying light in each

vertical zone. At the distant receiving end these processes are reversed—the amplified incoming radio current controls artificial sources of light, duplicating on a screen the original image.

For years these basic principles have been known, but the main difficulty has been to obtain the desired pictorial detail with the required speed. This Dr. Alexanderson has now accomplished. Some day the interesting chap who describes football games over the radio may find that the televisior has stolen his job.

Our Settlement With Germany

MORE than eight years after the Armistice, we are at last arriving at an arrangement with Germany for the payment of private war damages. The Alien Property Bill, by which claims of American and German citizens against the two Governments are adjusted, has been passed by the House of Representatives and sent to the Senate. It is not an ideal measure. No measure would be likely to be, in the circumstances. But it does offer a compromise acceptable to both parties, reached by a mixed claims commission without modifying any of the National claims of the United States.

Under the terms of the bill, four-fifths of the German property held by the Alien Property Custodian will be returned to the owners immediately, while the remaining fifth will be held as security until all claims of Americans against Germany are satisfied. Provision is made as to the conditions for mutual liquidation of American and German claims. The measure involves the disposition of some \$270,000,000 worth of German property seized upon the American declaration of war—including ship and radio patent rights—and the payment of extensive American claims, including 391 death and personal-injury claims.

The opposition to the bill in the House of Representatives, principally Democratic, has been based largely on the contention that it is confiscatory, because not all of the German property is to be returned at once. The bill which the Administration sponsors, however, does not confiscate. It defers restitution, it is true; but it promises restitution when our claims have been settled.

If the measure were blocked, German owners would remain deprived of all their property for an indefinite period

until a new agreement could be negotiated. Four-fifths of a loaf certainly is better than no bread. In the interest of equity without further delay, it is to be hoped that the Senate will pass the bill speedily and allow the President to make it law.

Germany Changing Cabinets Again

GERMANY is facing a test whether the reactionary militarists of the Nationalist Party or the moderate Socialists are to control the balance of power. The Reichstag has forced the "Little Coalition" Cabinet of Chancellor Marx out of office. During the New Year holidays there will be a feverish canvass of the political situation. Out of it should emerge a Cabinet which will show which way Germany is really headed.

The Marx Cabinet has been in the difficult position of a minority coalition, commanding only about 170 out of the 425 votes in the Reichstag. With the Opposition majority divided between the Nationalists and industrialists, on the one hand, and the Socialists and Communists, on the other, it has maintained existence by keeping both sides as contented as it could. The overthrow of the Cabinet was caused by Philip Scheidemann, the Socialist leader. He accused the Government of failing to mold the army into an instrument for the protection of the Republic. He also charged that the Defense Minister, Dr. Gessler, was pursuing secret policies in agreement with a monarchist army clique to build up a huge illegal reserve force. The Nationalists shouted "Traitor!" and "Blackguard!" at Scheidemann, but joined with the Socialists in a vote of no confidence in the Cabinet.

The Reichstag then adjourned for a month. President Hindenburg called the preceding Chancellor, Dr. Luther, back from Spain to Berlin for a conference. He is a non-partisan leader, in sympathy with the point of view and the policies which have been advanced by Chancellor Marx and Foreign Minister Stresemann. If Dr. Luther should become Chancellor again, Stresemann undoubtedly would continue to hold the post in the Foreign Office which he had in the former Luther Cabinet. But the main point is that now Germany must have a Cabinet which can count on the support of a majority in the Reichstag. That means choosing between the Nationalists and the Socialists. And that,

in turn, means a decision between the road back to monarchy and the road ahead for the Republic.

Japan Opens Her Land to Alien Owners

THE soil of Japan traditionally has been reserved for the Japanese. Foreigners could lease land, even in perpetuity, in regions not designated as of military or strategic importance. But they could not acquire title to ownership. By a new Imperial decree, making effective legislation passed by the Diet in the spring of 1925, the Japanese Government has now extended the right of ownership to aliens, except within the forbidden areas including territory around fortified areas and naval bases and the islands of Formosa, Hokkaido, and Sakhalin.

From the point of view of the United States, the significance of this decision is in its bearing upon the rights claimed for Japanese abroad. In the Pacific Coast States, for instance, Japan has been condemned for demanding the same landownership rights for her subjects as other foreigners enjoyed, while denying landownership to foreigners in her own territory. The basis for this argument has now been destroyed.

Japan's step may be the first on the way to a revival of negotiations for settlement of the long-vexed question of the landownership rights of Japanese in the United States. The Administration at Washington cannot interfere in the legislation of individual States. It cannot insist, for example, that the land laws of California be altered. But the Japanese action does open the opportunity for a reciprocal treaty, defining the landownership and leasing rights of Japanese in the United States and of Americans in Japan. The Japanese law left to the Government the option of bringing into force an Imperial rescript by which American citizens of States where Japanese subjects are prevented from owning land would be deprived of such rights in Japan. So far this has not been done. If the situation in the United States remains unmodified, there could be no objection to it under a new diplomatic agreement.

L'Enfant's Dream

IF the spirits of departed human beings retain their interest for more than a hundred years in earthly things, that of L'Enfant probably is looking eagerly

toward Washington these days. For there is good ground for hope that the dream of a magnificent capital city which he dreamed so long ago in the wilderness along the Potomac will be realized within this generation.

Congress not long ago appropriated \$50,000,000, to be made available in five annual installments, for the erection of needed public buildings in Washington. Now Secretary of the Treasury Mellon, in his annual report, has said that, not only must Washington be made the equal in beauty of any city on earth, but that, for reasons of economy, the necessary land must be bought now even though buildings are not to be erected upon it for years to come. He urges that the Government immediately acquire all of the land stretching from the Capitol grounds to Fifteenth Street, with Pennsylvania Avenue as its northern and the Mall as its southern boundary. Senator Smoot and Representative Underhill have introduced bills to authorize such purchases and to make an additional sum of \$25,000,000 available for the purpose. The Smoot bill has passed the Senate.

Those not acquainted with the mixed squalor and beauty of certain parts of Washington cannot understand what the acquisition of this great triangle would mean toward making the capital city of the United States what it ought to be, because they cannot know how, in its present state, this triangle detracts from the beauty of buildings already constructed and open spaces already parked and planted.

The Mall is a great open space—designed to be open and actually almost so—stretching from the Capitol to the Potomac River. Pennsylvania Avenue is the principal thoroughfare, running from the Capitol to the White House. Between them lies this triangle. In it are a few fine buildings—the District Building, the Post Office Department Building, the Southern Railway building. In it are the market houses and stalls and curb spaces for hucksters' wagons. In it are almost innumerable disheveled houses. Once, when cities were less careful than now of their outward appearance of morality, some of these houses were the abodes of painted women who sold their charms, and, though the women are long since gone, the old houses have something the look of old courtezans, wrinkled and bent, their paint faded and their finery thread-