

Latin America As Field for Engineers

Civil Engineering

Each Country Presents Its Own Problems says Mr. Hebard

OPPORTUNITIES similar to those in the United States before the Civil War, are open to engineers today in Latin America, R. W. Hebard, New York contractor, declares in a report just made to the American Road Builders Association. This is the reason, he says, that the Central and South American countries have fascinated and intrigued the engineer and contractor as perhaps no other in this generation.

"Here in Latin America were found rich productive countries with an interesting historical background, with an educated, cultured governing class, but without railways and highways or ports; important populated cities were lacking in or utterly without adequate water supply or modern sewerage and paving; important picturesque capital cities were found lying back in the mountains, two and three weeks distant from the coast, which could only be reached by mule and small river steamers; countries and cities, in one word, in more or less the same condition as that of the Spanish Colonial period. Such a field was bound to attract the American engineer as no other, not necessarily or primarily for reasons of possible financial gain, but because the pioneer spirit which is by no means extinct in the American race, asserted itself and drew these men to this part of the world. We have seen, in consequence, commencing one hundred years ago, the American engineer blazing the way well in advance of the banker, salesman and other business missionaries."

Mr. Hebard combats the idea popularly held in this country that all the twenty Latin American Republics are more or less the same. The contractor and his staff working in South America must adapt themselves to widely varying conditions not only of government and political situations but of topography and climate, of transportation facilities or lack of them, of labor conditions, and of characteristics of the people themselves.

"In this vast region of which little was known, where almost every facility was lacking, man could dream and see visions of prosperity replacing poverty, of comfort supplanting

hardship. A few of these men had vision coupled with common sense and ability. They succeeded. But the majority failed," explained Mr. Hebard, "and they will continue to fail through lack of understanding the economic obstacles which have to be overcome. Propaganda is not now required to convince Latin America that modern highways and railways should be built, that cities should be paved and water and sewage systems installed. All of these things are desired in those countries as much as here. The realization of these desires, however, is frequently balked by cold, unescapable, economic facts.

"In order to build railways, freight, either actual or potential, must exist. Unfortunately in all tropical countries, agricultural products which in the temperate zones are the source of the greatest single

Triplets are born once in every 10,000 births, according to a recent statistical study.

The great agricultural census to be taken in 1930 will represent about 98 per cent. of the agriculture of the world.

A thornless blackberry and a thornless dewberry are being raised successfully in some parts of the south.

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class of tonnage, are in general of high value and small bulk. This can best be illustrated by comparing wheat with coffee. One family by the use of machinery can readily grow 160 acres of wheat, producing on the average, say 100 tons of grain. One family can grow at the most, 6 acres of coffee, with a production of less than 2 tons. Measured in railway tonnage, a given number of people in the temperate zone will produce twenty-five times as much as the same number of people in the tropics. This comparison holds good with coffee, cacao, rubber, etc. While these products have such a high value per pound that they can stand a high freight rate, this rate is often controlled by the competition of primitive transportation methods. It is for these reasons that there are so few railways in the tropics, and the greater part of these have been built with the aid of heavy Government subvention."

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