PRESIDENT ON PANAMA Sends Special Message to Corgress Giving Results of His Observations in Canal Zone-Replies to Critics and Makes Recommendations. The commendations of the feeding and general the first same type of American soldier. Without exception the black policemen whom I questioned had served either in the British army or is the Jamaica or Barbadow police. They were evidently contented, and were doing their work well. When the police is a proposible the policemen are avoid the policemen are without exception the black policemen whom I questioned had served either in the British army or is the Jamaica or Barbadow police. They were evidently on the British army or is the Jamaica or Barbadow police. They were evidently on the British army or is the Jamaica or Barbadow police. They were evidently extended that the sum that is, where the complaints made to five notes that list were not made wantonly or malletous-were not made wantonly or malletous-were not made wantonly or malletous-and colored employes have been established, the school service being under the freet that they wanted the first that they wanted the first that the creation and completion of this Ulanic work in a tropic wilderness, it is impossible to avoid some mistakes in building a giant canal through jungle-covered mountains and awarps, while at the same time sanitating tropic cities, and one colored America teachers or mountains and awarps, while at the same time sanitating tropic cities, and a pleasant thing to see the pride that the teachers were taking in their work and providing for the foeding and general the fact that the teachers were taking in their work and providing for the foeding and general the fact that the same time sanitating tropic cities, and one colored America teachers or the senders and the fact that the same time sanitating tropic cities, and a pleasant thing to see the pride that the teachers were taking in their work and providing for the foeding and general the fact that the same time sanitating tropic cities, a

The following is the text of President Roosevelt's special message to congress on the subject of the Panama canali. To the Senate and House of Representatives:

In the month of November I visited the Isthmus of Panama, going over the Canal Zone with considerable care, and also visited the cities of Panama and Colon, which are not in the zone or under the United States flag, but as to which the United States government, through its agents, exercises control for certain sanilary purposes. I chose the month of November for my visit partly because it is the rainest month of the year, the month in which the work goes forward at the greatest disadvantage, and one of the two months which the medical department of the French Canal company found most unhealthy.

Following the introduction to the message the president gives a resume of his programme during the days he was on the isthmus, and then says: Roosevelt's special message to congress on the subject of the Panama canal:

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Following the introduction to the message the president gives a resume of his programme during the days he was on the isthmus, and then says:

At the olitect I wish to pay tribute to the ameunt of work done by the French Canal company under very difficult circumstances. Many of the buildings they put up were excellent and are still in use, though, naturally, the houses are now getting out of repair and are still in use, though, naturally, the houses are now getting out of repair and are being used as dwellings only until other houses can be built, and much of the work they did in the Culebra cut, and some of the work they did in digging has been of direct and real benefit. This country has never made a better investment than the \$40,000,000 which it paid to the French company for work and betterments, including especially the Panama railroad.

An inspection on the ground at the height of the rainy season served to convince me of the wisdom of congress in refusing to adopt either a high-level or a sea-level canal. There seems to be a universal agreement among all people competent to judge that the Panama route, the one actually chosen, is much superlor to both the Nicaragua and Darien routes.

Preliminary Work Being Done.

Preliminary Work Being Done.

The wisdom of the canal management has been shown in nothing more clearly than in the way in which the foundations of the work have been laid. To have yielded to the natural impatience of ill-informed outsiders and begun all kinds of experiments in work prior to a thorough sanilation of the isthmus, and to a fairly satisfactory working out of the problem of getting and keeping a sufficient labor supply, would have been disastrous. The various preliminary measures had to be taken first; and these could not be taken so as to allow us to begin the real work of construction prior to January 1 of the present year. It then became necessary to have the type of the canal decided, and the only delay has been the necessary delay until the 25th day of June, the date when the congress definitely and wisely settled that we should have an \$5-foot level canal. Immediately after that the work began in hard earnest and has been continued with increasing vigor ever since; and it will continue so to progress in the future. When the contracts are let the conditions will be such as to insure a constantly increasing amount of performance. The wisdom of the canal management

Successful Sanitation.

The first great problem to be solved, upon the solution of which the success of the rest of the work depended, was the problem of annitation. This was from the outset under the direction of Dr. W. C. Gorgas, who is to be made a full member of the commission. It must be remembered that his work was not mere sanitation as the term is understood in our ordinary municipal work. Throughout the zone and in the two cities of out the zone and in the two cities of Panama and Colon, in addition to the sanitation work proper, he has had to do all the work that the Marine hospital service does as regards the nation, that the health department officers do in the various states and cities, and that Col. Waring did in New York when he cleaned its streets. The results have been astounding. The isthmus had been a byword for deadly unhealthfulness. Now, after two years of our occupation the conditions as regards sickness and the death rate compare favorably with reasonably healthy localities in the United States. Especial care has been devoted to minimizing the risk due to the presence of those species of mosquitoes the death rate compare favorably with reasonably healthy localities in the United States. Expecial care has been devoted to minimizing the risk due to the presence of those species of mosquitoes which have been found to propagate mularial and yellow fevers. In all the settlements, the little temporary towns or cities composed of the white and black employes, which grow up here and there in the tropic jungle as the needs of the work dictate, the utmost care is exercised to keep the conditions healthy. Everywhere are to be seen the drainage ditches which in removing the water have removed the broeding places of the mosquitoes, while the whole jungle is cut away for a considerable space around the habitations, thus destroying the places in which the mosquitoes take shelter. These drainage ditches and clearings are in evidence in every settlement, and, together with the invariable presence of mosquito doors to the houses, not to speak of the careful funigation that has gone on in all infected houses, doubtless explain the extraordinary absence of mosquitoes. As a matter of fact, but a single mosquito, and this not of the dangerous specles, was seen by any member of our party during my three days on the isthmus. Equal care is taken by the inspectors of the health department to secure cleanliness in the houses and proper hygicaic conditions of every kind. I inspected between 20 and 50 water-closets, both those used by the white employes and those used by the colored laborers. In almost every case I found the conditions perfect. In but one case did 1 find them really bad. In this case, affecting a settlement of unmarried white employes and those used by the colored laborers, in almost every case I found the conditions perfect. In but one case did 1 find them really bad. In this case, affecting a settlement of unmarried white employes and those used by the colored laborers, in almost every case I found the condition has been allowed. Nevertheless this did not excuse the fact that the bad condition has been allowed to p

Improvements in Cities.

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The sanitation work in the cities of Panama and Colon has been just as important as in the zone itself, and in many respects much more difficult, because it was necessary to deal with the already existing population, which naturally had scant sympathy with revolutionary changes, the value of which they were for a long time not able to perceive. In Colon the population consists largely of colored laborers who, having come over from the West Indies to work on the canal, abandon the work and either take to the brush or lie idle in Colon itself; thus peopling Colon with the least desirable among the imported laborers,

this honest complaint was typical of what occurred when I investigated most of the other honest complaints made to me. That is, where the complaints were not made wantonly or maliciously, they almost always proved due to failure to appreciate the fact that time was necessary in the creation and completion of this titanic work in a tropic wilderness. It is impossible to avoid some mistakes in building a giant canal through jungle-covered mountains and awamps, while at the same time sanitating tropic cities, and providing for the feeding and general care of from 20,000 to 30,000 workers. The complaints brought to me, either of insufficient provision in caring for some of the laborers, or of failure to finish the envements of Colon, or of failure to supply water, or of failure to build wooden sidewalks for the use of the laborers in the rainy season, on investigation proved, almost withmut exception, to be due merely to the utter inability of the commission to do everything at once.

Unjust Criticism.

Care of Employes.

Chinese and Other Labor.

Unjust Criticism. Care and forethought have been exercised by the commission, and nothing has reflected more credit upon them than their refusal either to go ahead too fast or to be deterred by the fear of criticism from not going ahead fast enough. It is curious to note the fact that many of the most severe critics of the commission criticise them for precisely opposite reasons, some complaining bitterly that the

PRESIDENT ON A STEAM SHOVEL



At Pedro Miguel, Culebra Cut, President Roosevelt was photographed seated on one of the immense steam shovels used in the work of excavating.

of the land being 1½ feet above low tide. The slight undulations furnish shallow, natural reservoirs or freshwater breeding places for every variety of mosquito, and the ground tends to be lowest in the middle. When the town was originally built no attempt was made to fill the low ground, either in the streets or on the building sites, so that the entire surface was practically a quagmire: when the quagmire became impassable certain of the streets were crudely improved by filling especially bad mud holes with soft rock or other material. In September, 1965, a systematic effort was begun to formulate a general plan for the proper sanitation of the city; in February last temporary relief measures were taken, while in July the prosecution of the work was begun in good earnest. The results are already visible in the sewering, draining, guitering and paving of the streets. Some four months will be required before the work of sewerage and street improvement will be completed, but the progress already made is very marked. Ditches have been dug through the town, connecting the salt water on both sides, and into these the ponds, which have served as breeding places for the mosquitoes, are drained. These ditches have answered their purpose, for they are probably the chief cause of the astonishing diminution of mosquitoes. More ditches of the kind are being constructed.

Colon Water Supply.

Colon Water Supply.

Colon Water Supply.

It was not practicable, with the force at the commission's disposal, and in view of the need that the force should be used in the larger town of Panama, to begin this work before carly last winter. Water mains were then laid in the town and water was furnished to the people early in March from a temporary reservoir. This reservoir proved to be of insufficient capacity before the end of the dry season and the shortage was made up by hauling water over the Panama railroad, so that there was at all times an ample supply of the very best water. Since that time the new reservoir back of Mount Hope has been practically completed. I visited this reservoir. It is a lake over a mile long and half a mile broad. It now carries some 500,000,000 gallons of first-class water. I forward herewith a photograph of this lake, together with certain other photographs of what I saw while I was on the isthmus, Nothing but a cataclysm will hereafter render it necessary in the dry season to haul water for the use of Colon and Cristobal.

Colon Pavements.

Chinese and Other Labor. Of the 19,000 or 20,000 day laborers employed on the canal a few hundred are Spaniards. These do excellent work. Their foreman told me that they did twice as well as the West Indian laborers. They keep healthy and no difficulty is experienced with them in any way. Some Italian laborers are also employed in connection with the drilling. As might be expected, with labor as high priced as at present in the United States, it has not so far proved practicable to get any ordinary laborers from the United States. The American wage-workers on the isthmus are the highly paid skilled mechanics of the types mentioned previously. A steady effort is being made to secure Italians, and especially to procure more Spaniards, because of the very satisfactory results that have come from their employment and their numbers will be increased as far as possible. It has not proved possible, however, to get them in anything like the numbers reed to rely, for the ordinary unskilled work, partly upon colored laborers from the West Indies, partly upon Chinese labor. It certainly ought to be unnecessary to point out that the PRESIDENTIAL PARTY LEAVING HOTEL



ter class, who are to be found as fore-men, as skilled mechanics, as police-men, are good men; and many of the ordinary day laborers are also good. Work of Construction.

Care of Employes.

Next in importance to the problem of sanitation, and indeed now of equal importance, is the problem of securing and caring for the mechanics, laborers and other employes who actually do the work on the canal and the railroad. This great task has been under the control of Mr. Jackson Smith, and on the whole has been well done. At present there are some 5,000 white employes and some 19,000 colored employes on the isthmus. I went over the different places where the different kinds of employes were working! I think I saw representatives of every type both at their work and in their homes; and I conversed with probably a couple of hundred of them all told, choosing them at random from every class and including those who came especially to present certain grievances olmost invariably expressed far greater content and satisfaction with the conditions than did those who called to make complaint.

Nearly 5,000 of the white employes had come from the United States. No man can see these young, vigorous men energetically doing their duty without a thrill of pride in them as Americans. They represent on the average a high class. Doubtless to congress the wages paid them will seem high, but as a matter of fact the only general complaint which I found had any real basis among the complaints made to me upon the isthmus was that, owing to the peculiar surroundings, the cost of living, and the distance from home, the wages were really not as high as they should be. In fact, almost every man I spoke to felt that he ought to be receiving more money—a view, however, which the average man who stays at home in the United States probably likewise holds as regards himself. I append figures of the wages paid, so that the congress can judge the matter for itself. Later I shall confer on the subject with certain representative labor men here in the United States, as well as going over with Mr. Stevens, the comparative wages paid on the zone and at home; and I may then committees of the two houses.

Chinese and Other Lab

But thousands of those who are brought over under contract (at our expense) go off into the Jungle to live, or loaf around Colon, or work so badive after the first three or four days as to cause a serious diminution of the amount of labor performed on Friday and Saturday of each week. I questioned many of these Jamaica laborers as to the conditions of their work and what, if any changes, they wished. I received many complaints from them, but as regards most of these complaints they themselves contradicted one another. In all cases where the complaint was as to their treatment by any individual it proved on examination that this individual was himself a West India man of color, either a policeman, a storekeeper. Or an assistant storekeeper. Doubtless there must be many complaints against Americans; but those to whom I spoke did not happen to make any such complaint to me.

The work is now going on with a vigor and efficiency pleasant to witness. The three big problems of the canal are the La Boca dams, the Gatun dam, and the Culebra cut. The Culebra cut must be made, anyhow; but of course changes as to the dams, or at least as to the locks adjacent to the dams, may still occur. The La Boca dams offer no particular problem, the bottom material being so good that there is a practical certainty, not merely as to what can be achieved, but as to the time of achievement. The Gatun dam offers the most scrious problem which we have to solve; and yet the ablest men on the isthmus believe that this problem is certain of solution along the lines proposed; although, of course, it necessitates great toil, energy, and intelligence, and although equally, of course, there will be some little risk in connection with the work. The risk arises from the fact that some of the material near the bottom is not so good as could be desired. If the huge earth dam now contemplated is thrown across from one foothill to the other we will have what is practically a low, broad, mountain ringe. The exact locality of the locks at this dam—as at

In Culebra Cut.

New Records for Excavation.

As soon as the type of canal was decided this work began in good earnest. The rainy season will shortly be over and then there will be an immense increase in the amount taken out; but even during the last three months, in the rainy season, steady progress is shown by the figures: In August, 242,000 cubic yards, and in October, 325,000 cubic yards, and in October new records were established for the output of individual shovels as well as for the tonnage haul of individual locomotives. I hope to see the growth of a healthy spirit of emulation between the different shovel and locomotive crews, just such a spirit as has grown on our battle ships between the different gun crews in matters of marksmanship. Passing through the cut the amount of new work can be seen at a glance. In one place the entire side of a hill had been taken out recently by 27 tons of dynamite, which were exploded at one blast. At another place I was given a presidential salute of 21 charges of dynamite. On the top notch of the Culebra cut the prism is now as wide as it will be; all told, the canal bed at this point has now been sunk about 200 feet below what it originally was. It will have to be sunk about 130 feet farther. Throughout the cut the drilling, blasting, shoveling and hauling are going on with constantly increasing energy, the huge shovels being pressed up, as if they were mental in howitzers, into the most unlikely looking places, where they eat their way into the hillsides.

The most advanced methods, not only New Records for Excavation.

Railway Improvements.

Railway Improvements.

The most advanced methods, not only in construction, but in railroad management, have been applied in the zone, with corresponding economies in time and cost. This has been shown in the handling of the tonnage from ships into cars, and from cars into ships on the Panama railroad, where, thanks largely to the efficiency of General Manager Bierd, the saving in time and cost, has been noteworthy. My examination tended to show that some of the departments had (doubtless necessarily) become overdeveloped, and could now be reduced or subordinated without impairment of efficiency and with a saving of cost. The chairman of the commission, Mr. Shonts, has all matters of this kind constantly in view, and is now reorganizing the gov-

protected. In a place which has been for ages a byword for unhealthfulness, and with so large a congregation of strangers suddenly put down and set to hard work there will now and then be outbreaks of disease. There will now and then be shortcomings in administration; there will be unlooked-for accidents to delay the excavation of the cut or the building of the dams and locks. Each such incident will be entirely natural, and, even though serious, no one of them will mean more than a little extra delay or trouble. Yet each, when discovered by sensation mongers and retailed to timid folk of little faith, will serve as an excuse for the bellef that the whole work is being badly managed. Experiments will continually be tried in housing, in hygiene, in street repairing, in dredging and in digging earth and rock. Now and then an experiment will be a failure; and among those who hear of it, a certain proportion of doubting Thomases will at once believe that the whole work is a failure. Doubtless here and there some minor rascality will be uncovered; but as to this, I have to say that after the most painstaking inquiry I have been unable to find a single reputable person who had so much as heard of any serious accusations affecting the honesty of the commission or of any responsible officer under it. I append a letter dealing with the most serious charge, that of the ownership of lots in Colon; the charge was not advanced by a reputable man, and is utterly baseless. It is not too much to say that the whole atmosphere of the commission for spoils politics in connection with it.

I have investigated every complaint brought to me for which there seemed to be any shadow of foundation. In two or three cases, all of which I have indicated in the course of this message, I came to the conclusion that there was foundation for the complaint, and that the methods of the commission in the respect complained of could be bettered. In the other instances where they referred to migtakes which the commission had already found out and c

Slanders and Libelers.

Slanders and Libelers.

So much for honest criticism. There remains an immense amount of as reckless slander as has ever been published. Where the slanderers are of foreign origin I have no concern with them. Where they are Americans, I feel for them the heartiest contempt and indignation; because, in a spirit of wanton dishonesty and malice, they are trying to interfere with and hamper the execution of, the greatest work of the kind ever attempted, and are seeking to bring to naught the efforts of their countrymen to put is the credit of America one of the giant feats of the ages. The outrageous accusations of these slanderers constitute a gross libel upon a body of public servants who, for trained intelligence, expert ability, high character and devotion to duty, have never been excelled anywhere. There is not a man among those directing the work on the isthmus who has obtained his position on any other basis than merit alone, and not one who has used his position in any way for his own personal or pecuniary advantage.

Plan to Build by Contract.

culebra cut. It was striking and impressive to see the huge steam shovels in full play, the dumping trains carrying away the rock and earth they dislodged. The implements of French excavating machinery, which often stand a little way from the line of work, though of extended to the contract, if we can come to satisfactory terms with the contractors. The whole work is of a kind work by contract, if we can come to satisfactory terms with the contractors way the rock and earth they dislodged. The implements of French excavating machinery, which often stand a little way from the line of work, though of extended to grapple with it. It is of course to the contract with the long trains of huge cars, dumped by steam plows, which are now in use. This represents the enormous advance that has been made in machinery during the past quarter of a century. No doubt a quarter of a century, hence this new machinery, of which we are now so proud, will similarly seem out of date, but it is certainly serving its purpose well now. The old French cars had to be entirely discarded. We still have in use a few of the more modern, but not most modern, cars, which hold but 12 yards of earth. They can be employed on certain lines with sharp curves. But the recent cars hold from 35 to 39 yards aplece, and instead of the old clumsy methods of unloading them, a steam plow is drawn from end to end of the whole vestibuled train, thus immensely economizing labor. In the rain, thus immensely economizing labor. In the rain, they way the rock and in the harder ground. There were some 25 at work during the time 1 was on the isteam shovels can do but little in dirt, but they work steadily in rock and in the harder ground. There were some 25 at work during the time 1 was on the isteam shovels can do but little in dirt, but they work steadily in rock and in the harder ground. There were some 25 at work during the time 1 was on the isteam shovels can do but little in dirt, but they work steadily in rock and in the harder ground. There were some 25 at w Stevens then submitted the plan to the chairman of the commission, Mr. Shonts, who went carefully over it with Mr. Rogers, the legal adviser of the commission, to see that all legal difficulties were met. He then submitted copies of the plan to both Secretary Taft and myself. Secretary Taft submitted it to some of the best counsel at the New York bar, and afterwards I went over it very carefully with Mr. Taft and Mr. Shonts, and we laid the plan in its general features before Mr. Root. My conclusion is that it combines the maximum of advantage with the minimum of disadvantage. Under it a premium will be put upon the speedy and economical construction of the canal, and a penalty imposed on delay and waste. The plan as promulgated is tentative; doubtless it will have to be changed in some respects before we can come to a satisfactory agreement with responsible contractors—perhaps even after the bids have been received; and of course it is possible that we can not come to a agreement, in which case the government will do the work itself. Meanwhile the work on the isthmus is progressing steadly and without any let up.

Single Commissioner Desired.

Single Commissioner Desired. A seven-headed commission is

A seven-headed commission is of course a clumsy executive instrument. We should have but one commissioner, with such heads of departments and other officers under him as we may find necessary. We should be expressly permitted to employ the best engineers in the country as consulting engineers.

I accompany this paper with a map showing substantially what the canal will be like when it is finished. When the Culebra cut has been made and the dams built (if they are built as at present proposed) there will then be at both the Pacific and Atlantic ends of the canal two great fresh-water lakes, connected by a broad channel running at the bottom of a ravine, across the backbone of the Western Hemisphere. Those best informed believe that the work will be completed in about eight years; but it is never safe to prophesy about such a work as this, especially in the tropics.

Confident of Uitimate Success.

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with extant chery with the problem of the problem of the streets of Colon and Cristolate. To the through the streets of Colon and Cristolate. To the through the streets of Colon and Cristolate. The problem of the streets of Colon and Cristolate. The problem of the streets of Colon and Cristolate. The problem of the streets of Colon and Cristolate. The problem of the streets of Colon and Cristolate of the streets of Colon and Cristolate. The problem of the streets of Colon and Cristolate of the Street of Colon and Cristolate of the Street of Colon and Cristolate of the Street of Colon and Cristolate of Colon and Cristolate