

PLANS FOR CANAL

Four Schemes Before Engineer Wallace.

THREE CALL FOR BIG DAM

Water and Light Would Thus Be Given Entire Isthmus.

WORK COULD GO ON AT NIGHT

Sea-Level Canal, While Costing More Time and Money to Build, Could Be Maintained and Enlarged at Much Less Cost.

Table with 2 columns: Solution Number, Description, and Estimated Cost.

WASHINGTON, Dec. 18.—John F. Wallace, chief engineer of the Isthmian Canal Commission, has given the House committee on interstate and foreign commerce the benefit of his investigations so far as made regarding the engineering tasks to be performed in the construction of the Panama canal.

The Associated Press has been given the benefit of the testimony in advance of its publication through the courtesy of Chairman Hepburn and Secretary Cushman, of the commission. Before taking up in detail the four distinct canal propositions which are being considered by him and on which he is to report to the canal commission, Mr. Wallace made this explanation of the general problem:

The Isthmus is traversed by a mountain range, the summit of which is approximately 12 miles from the Pacific and 25 miles from the Caribbean. Originally a gorge evidently existed in the Caribbean near Colon to the vicinity of Gamboa and extended beyond that point in an easterly direction forming the upper basin of the Chagres River.

After filling this gorge with an alluvial deposit the Chagres has swung itself from one side of the valley to the other. The result is that the trend of the original gorge cannot be followed or found from surface indications, and it is only by drilling to bedrock that exact information of any particular locality can be obtained.

The presence of boulders in this alluvial deposit also explains the reason why engineers, not taking time to go into the rock far enough to determine its actual character, have been misled into thinking they had struck bedrock. To determine the most feasible plan for the construction of the canal will require a most careful and comprehensive examination, not only of surface conditions but the subsurface as well.

Poor Site for a Dam. After following the valley of the Chagres to Gamboa the line of the canal follows a tributary called the Obispo up the summit of Culabra, and thence follows down the valley of the Rio Grande into the Bay of Panama. The summit of Culabra was originally about 200 feet above the sea level and is the lowest point in the divide along the entire length of the Isthmus of Panama. The plan of the former commission provided for a dam of practically 100 feet in height above sea level, at Bohio, with a water level of 20 feet above sea level.

This place was selected on account of the fact that at that point the hills on either side of the Chagres come comparatively close together, being 1500 feet apart, and from the surface indications it seemed a favorable place for the construction of a dam. But the indications are that this locality would be an unfavorable and expensive one for the construction of a high dam.

Plan of Former Commissioner. The first plan to be considered, the one estimated upon by the former commission, is the possibility and probability of a high dam, or proper foundation for a high dam, at Bohio, upon which depends the advisability of constructing a high-level canal, with the surface of the water 90 feet above sea level.

The second plan under consideration is a summit level of 60 feet above sea level. Constructing a canal on this plan admits of two different methods of treatment:

First, the construction of a dam 40 feet above sea level at Bohio, with two locks of 30 feet, there being two locks on the western slope; second, the construction of a dam 60 feet above sea level at Gatun, eight miles from Colon, with two 20-foot locks in the same vicinity. The adoption of a 60-foot level also will render it necessary to construct a dam at Gamboa in order to provide a reservoir to accumulate water enough during the wet season to furnish water for the summit level of the canal.

Tunnel of Eight Miles. The construction of a dam at Gamboa in this connection would also control the Chagres River, except that it would be necessary to provide a safety spillway by the construction of a tunnel some eight miles in length through the divide, discharging the surplus waters of the Chagres into the headwaters of the Juan Diaz, or the alternate plan of constructing a tunnel four miles long through the divide, separating the Chagres headwaters from the headwaters of the Gatunillo, a stream that enters into the Chagres Valley at Gatun. Should this latter course be adopted, it would be necessary to construct an auxiliary channel from the Chagres from Gatun to the sea, in order to divert its flood waters into the bay westward of Colon.

The third general plan under consideration would be the construction of a canal with a single lock at Bohio, or in the immediate vicinity, the construction of the Gamboa dam to be required in this instance the same as in the 60-foot level plan.

The fourth plan would be the construction of a sea level with a tidal lock at Miraflores. In this connection, it is necessary to explain that why the mean sea level of the Pacific and the Caribbean are the same, high tide in the Bay of Panama rises 10 feet above mean sea level and falls 10 feet below, whereas the fluctuation of the tide of the Caribbean is less than two feet. The construction of a dam at Gamboa, with the necessary spillways, as noted in the previous plan, would be the same under the sea-level plan as under the 60-foot level.

Provide Water and Power. The construction of the Gamboa dam would provide the water supply for the entire line of the canal, including the cities of Panama and Colon. It also would provide a power plant for the generation of electric power sufficient to furnish ample power for the operation of the Panama Railroad and for the operation of any machinery that might be used in the construction of the canal. It would require two years to construct this dam, and roughly estimated, its cost, including spillways, would be between \$15,000,000 and \$20,000,000, not including the power plant.

Asked by members of the Commission for an estimate of the cost of the various plans, Mr. Wallace said the best estimate that could be made at present would be based on the estimate of the former Commission of \$200,000,000 for a 90-foot level canal. Figuring on a basis that the 60-foot level canal would cost \$225,000,000; could be open for traffic in 10 years, and fully completed in 12 years; the 40-foot level would cost \$250,000,000, open for traffic in 12 years and completed in 15 years; the sea-level canal would cost \$300,000,000, could be open for traffic in 15 years and completed in 30 years.

Able to Work Three Shifts. Chairman Hepburn's questions developed that the estimate of time to build a canal was based on a 10-hour day, and that with the construction of the Gamboa dam and the operation of the power plant, electric light sufficient to illuminate the whole of the Culabra cut might be had, thus making practical the working of two or more shifts and shortening the time of construction.

Mr. Wallace stated that the excavation of this cut was the feature of the time of the canal that took the longest. He said: "Upon an economical and efficient handling of material from Culabra depends the cost and time it would take to complete the canal. Every other question and every other problem connected with the entire work is subordinate and inferior to the problem of excavation and disposal of the material from the Culabra cut; that is the principal problem of the work."

American Shovels Arriving. Work is now going on in the cut, one American shovel and some of the French machinery being on the operation. Fourteen American steam shovels have been purchased, one of which is now being delivered to the site. The others are to be delivered at the rate of one a month. During October 2185 men were on the payrolls of the Commission. Of these 2145 were laborers. More laborers are to be employed in the immediate future.

Answering a question about the operation of a sea-level canal, Mr. Wallace said: "A sea-level canal would be less expensive to maintain and less expensive to operate, save time in passage through it, and would be widened and deepened when required without interfering with traffic."

AD RUSSIAN DESERTERS.

Christian and Jews Work Together at Cracow. A combination has been effected between the Christian and Hebrew committee organized for the purpose of aiding Russian deserters. The two bodies now work hand in hand and in the same manner.

TOUR OF KING ALONSO. Will Be Accompanied by War and Foreign Ministers. MADRID, Dec. 18.—In accordance with a Cabinet decision King Alfonso will visit Paris, Berlin and London in February, accompanied by the Ministers of War and Foreign Affairs. It is said to be the intention of the young King to appoint Emperor William a Field Marshal of the Spanish army. The statement is made by a well-informed authority that King Alfonso will return to Madrid as the betrothed of an English Princess.

A significant feature of the King's itinerary is the omission of a visit to Vienna. Alfonso is Emperor Franz Joseph's nephew and recently the aged monarch has taken occasion to warn the King that he is the omission of a visit to Vienna. Alfonso is Emperor Franz Joseph's nephew and recently the aged monarch has taken occasion to warn the King that he is the omission of a visit to Vienna.

AMERICANS RULE THE MARKET. Business Very Much Restricted on London Stock Exchange. LONDON, Dec. 18.—The Stock Exchange last week was again mainly under the influence of the American market, and considering the violent fluctuations in the latter, the absence of serious trouble was regarded as decidedly satisfactory. Business was very much restricted, but there was less uncertainty than in previous developments in Wall street and markets here were better and steadier.

WOMAN A BURLAR

Helps Her Husband in Robbing Prescott Stores.

GOODS TAKEN BY WAGON-LOAD

Investigation of Home Premises by Officers Discloses Enough Plunder to Load Seven Drays—Stealing for Years.

PRESCOTT, Ariz., Dec. 18.—Fred Roemer and wife were caught in the act of burglarizing J. I. Gardner's store early today. Gardner had been missing goods from his store for years, and other business houses also had been broken into during the same period and goods stolen. Gardner and one of his employees have been sleeping in the store for two weeks in the hope of capturing the burglars. Roemer and wife drove in a small spring wagon into the alley at the rear of the store. The former opened the door with a skeleton key, entered and commenced carrying the goods outside while Mrs. Roemer remained on guard in the alley. Gardner and his companion waited until the wagon was about loaded, when they surprised Roemer and took the couple into custody and escorted them with the goods to the county jail.

The Roemers reside about half a mile north of town, and today officers made an investigation of the premises and discovered a miscellaneous assortment of articles aggregating seven drayloads.

WOMAN FOUND MURDERED.

Body Stripped of Clothing and Features Much Disfigured. COLORADO SPRINGS, Colo., Dec. 18.—The nude body of a white woman, who is believed to have been murdered, has been found on Mount Cutler by two residents of this city, who were surveying. The body was lying face downward, and a log. An attempt had been made to destroy the features and prevent identification. From appearances, death occurred about seven days ago.

A reward for the recovery of the girl's clothing or any part that will lead to her identification has been offered by the authorities.

Telegrams were sent out tonight to the Chiefs of Police of Philadelphia, St. Louis and other cities, giving a complete description of the woman, and a dead girl. They were sent upon the theory that the girl was killed by some person who found that she stood in the way of valuable property or an inheritance.

Near the point where the body was found, the officers discovered a card bearing the name and address of a St. Louis man and a prescription blank bearing the name of Dr. F. K. Baker, 328 Diamond street, Philadelphia, and the name of a druggist, Thirtieth and Diamond streets, Philadelphia.

MRS. CHADWICK WILL NOT TALK

Attorney Says He Will Decline to Let Her Give Testimony Today.

CLEVELAND, O., Dec. 18.—The examination of Mrs. Chadwick in the bankruptcy proceedings against her is set for tomorrow morning. Her attorney, however, is considered certain she will not testify if present at the hearing. Her attorney, F. P. Dawley, said tonight that he would request a continuance tomorrow, saying he has not yet had time to investigate any phase of the case. He will decline to allow her to give any testimony. The only other person summoned in the bankruptcy hearing to give information may have property owned by Mrs. Chadwick are Emil Hoover, Mrs. Chadwick's son, and Freda Swanson, her nurse. Mr. Hoover said tonight that he did not expect any more witnesses would be called for the present. He has arranged to insure for \$50,000 the Chadwick property in his possession.

Eloping Bank President Caught.

PHOENIX, Ariz., Dec. 18.—A man giving the name of J. A. Bryan was arrested here today, and a search of his effects disclosed his suspected identity, which he later admitted, as Bernard B. McGreevy, one of O'Neill's bank presidents. The Elkhorn Valley Bank, which closed its doors the night before Thanksgiving, McGreevy denies taking any money, and says he will go back without requisition papers.

Gas Pipe Line Blown Up.

COFFEYVILLE, Kan., Dec. 18.—Between Liberty and the Verdigris River, more than a mile of the partially completed gas pipe line of the Kansas Gas Company was blown up with dynamite by masked men some time during the night. The pipe was broken, and great holes were made in the ground. The perpetrators are unknown. The farmers of this section resent the piping of the gas to Missouri.

Girl's Mutilated Body Found.

HUNTINGTON, W. Va., Dec. 18.—The mutilated body of Rose White, the 16-year-old daughter of Harlan White, a wealthy planter, has been found in the snow near Chapmanville. A clenching iron found near the body, and the blood, and the surroundings indicated a struggle. A prominent young man has disappeared.

DOWIE LOVED HER MONEY.

Son of Prophet Is Deserted by Wife He Treated Badly. LONDON, Dec. 18.—The Daily Mail's Geneva correspondent writes that Mrs. Gladstone Dowie, Miss Ruth Hofer before she married the son of the founder of Zion City, has returned to Lake Constance convinced that the "prophet's son" had fallen in love with her money and not with herself.

MISERABLE SINNERS

American People's Brutal and Stupid Course Abroad.

PORTLAND, Dec. 18.—(To the Editor.)—The people of the Philippine Islands should be given their independence. It is their natural right and we are the last people on earth who should deny it.

We should remember the words of Lincoln: "They who depend upon others deserve it not themselves, and under a just God will not long retain it." The twaddle about their not being able to govern themselves is a very cheap claim: "It is to arraign the disposition of the Almighty to suppose that he created beings incapable of governing themselves. Self-government is the natural government of man. Man cannot govern himself, but we confine them in asylums. In all cases men are entitled to the presumption of competence until the contrary be shown. Every man should be given a fair trial before he is deprived of the right to govern himself. The Philippines have never had such a trial. What the United States has done is to interfere without giving them a chance, and after destroying their government we charge them with inability to organize one.

Philippine may not govern themselves as well as they ought. Neither do we. We engaged in a fratricidal strife which cost us a half-million of the best lives in the country and burned us to a debt which we have been struggling for 40 years to pay. We have squandered the patrimony of ourselves and of our children by surrendering the natural right of our country to ourselves and of the trusts and corporations and have given the railroads the best part of our lands.

When I struck down silver we did a foolish thing, and are yet foolish enough to boast of it. We have not good sense enough to adopt an income tax and are foolish enough to think that we can get rich by taxing ourselves with a tariff and imagine the foreigner pays it.

We have dependencies whom we pretend to love but have no understanding enough for self-government. We are afraid of our own people and they will beat us at the bargain counter. Our tobacco and sugar men are afraid to trust themselves in competition with the Philippines.

A learned statistician of our country has figured out that it costs \$1.05 per each individual in the United States to hold the Philippines, and that our country has lost about 5 cents per capita and the profit on that trade is probably 1 cent.

Senator Hoar and Edward Atkinson have given us the figures that the Philippines have cost us \$100,000,000, these figures have been questioned. But when we consider the ordinary military estimate of \$1000 to maintain one soldier one year, it is easy to calculate the amount necessary to support our Army in the Philippines during the last six years and to see that these figures are not far wrong.

And for an enormous sum for the sake of a little paltry trade of \$2,000,000 a year. It is enough to cast a cloud upon our own ability for self-government.

Surely if the Philippines were left to themselves they would make a better showing than that. We have no right to boast of our superior acumen in government. We live in a glass house and should not throw stones.

People who advise the government as well as they deserve to be governed. If they make mistakes they are the ones to suffer for it.

Admiral Dewey said the Philippines were far more capable of governing themselves than the Cubans and that he was familiar with both. Senator Hoar examined their constitution and found it a better one than we had. He said that he would compare favorably with the Japanese Parliament. General Anderson says they have been underrated by us. Albert Sonnerup, who was held captive by them for ten months, says they are brave and generous and law-abiding. He saw no lawlessness during his stay among the natives. He notes an instance of Spanish prisoners applied to the courts for redress of grievances against the military, thus showing that the military was subordinate to the civil authority, even in those troublesome islands.

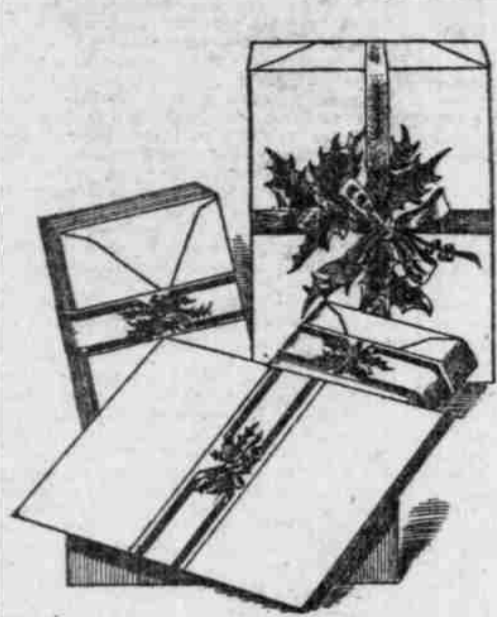
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The Store Will Be Open Evenings Until Christmas



Great Holiday Umbrella Sale

Table listing umbrella prices: All our \$ 5.00 Umbrellas, \$ 4.19; All our \$ 6.00 Umbrellas, 4.95; All our \$ 6.50 Umbrellas, 5.45; All our \$ 7.00 Umbrellas, 5.90; All our \$ 7.50 Umbrellas, 6.60; All our \$ 8.00 Umbrellas, 6.95; All our \$ 8.50 Umbrellas, 7.45; All our \$ 9.00 Umbrellas, 7.85; All our \$ 10.00 Umbrellas, 8.75; All our \$ 11.00 Umbrellas, 9.65. Also lists other umbrella prices up to \$11.50.



25c Holly-Box Paper 15c

Those handsome Christmas packages that bring happiness to all who admire fine Stationery. The offering consists of— One thousand boxes fine white paper and envelopes in holly decorated boxes, with holly bands around paper and envelopes. Actual value is 25c. On sale today at 15c. The "Remex" Fountain Pen, 14k point, fully guaranteed in every way—A bargain marvel at \$1.00. No one in the country sells Waterman's Fountain Pens for less than we do \$2.50 to \$10. Large display of fine papers, packed in beautiful hand-painted boxes.

\$1.25 Pictures 43c

Cartoons by Gibson, Christy, Underwood, Perce, Jessie Wilcox Smith, Russell, De Nesti Hutt, Anita LeRoy and Harrison Fisher. This morning special— 9 A. M. to 12 M. Special 43c. Regular prices, 75c, 90c and \$1.25. NO PHONE ORDERS FILLED.

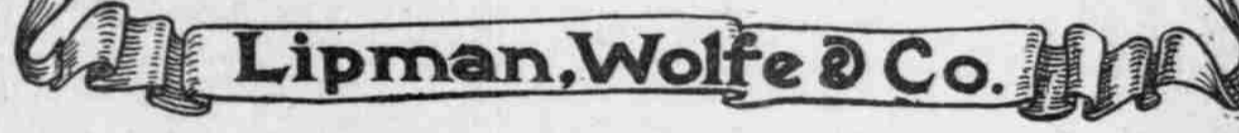
\$3-\$4 Calendars \$1.39

Great Monday Morning Special 9 A. M. to 12 M. The Christy Calendar. The Harrison Fisher Calendar. The Underwood Calendar. Regular Price, \$3.00 and \$4.00 each. Special \$1.39. NO PHONE ORDERS FILLED.

BOOK STORE—One hundred copies of Wagner's famous book "The Simple Life"—The \$1.25 edition at 65c.

Music Store: 50c Albums 25c

We place on sale today THE STEPHEN FOSTER ALBUM, containing a complete collection of this famous composer's songs. "Gentle Annie," "My Old Kentucky Home," "Old Black Joe," "Way Down Upon de Swanee Ribber," "Willie, We Have Missed You," "Massa's in de Cold, Cold Ground," "Old Folks at Home," and many others. This morning special, 9 A. M. to 12 M. Regular price 50c. Special, 25c.



have established schools; yes, at their expense. We have given jobs to about 900 school teachers, most incompetents at home, at high salary and charged the expense up to the Filipino. It is easy to establish schools at the expense of other people. We exhibit them at St. Louis, yes, we have squandered \$1,000,000 of the Filipino money to help out the St. Louis Fair; \$400,000 of it to exhibit the naked Igorotes, whom we encourage ignorant Americans to believe are fair samples of the Philippine people.

It has been a source of almost universal regret that we were not more liberal with the South at the close of the Civil War and other nations. The Philippines that liberty which we should have given to the Philippines, while the vicious weeds are growing, we neglect our crop to hoe our neighbor's corn. We should at once make reparations by returning to the Philippines that liberty which we should never have taken from them. We should hasten to avoid the shoals of imperialism and militarism. We should drop these questions about foreign affairs and attend strictly to business at home. The \$100,000,000 which we have spent in the Philippines would have dug the Panama Canal, irrigated our arid land, reclaimed all the swamps in the country, and provided happy homes for 50,000,000 more people. And, besides, have we not enough race troubles at home, without going abroad for more? Let us give the Filipino their independence, and do it now. H. B. NICHOLAS.

SUPERIOR TO THE GERMANS.

Professor Lectures on American Agricultural Conditions. SPECIAL CABLE. BRESLAU, Dec. 18.—Professor L. Wittmack, who was in charge of the horticultural department of the German exhibit at St. Louis, has engaged upon a course of lectures on his American experiences. In his first lecture Professor Wittmack said that not a single one of the reports printed in the German newspapers did justice to the grandeur and splendor of the Exposition.

Speaking of American agriculture, which had made a subject for special study, Professor Wittmack said that while the experimental stations in the United States were far superior to those in Germany, the German knew far more about the scientific utilization and improvement of the soil than did the Americans. The professor added the American farmer seemed to him the ideal type of the modern agriculturist.

The Name "Oregon" Again.

PORTLAND, Dec. 18.—(To the Editor.)—In a work issued by Hall J. Kelly in 1852, on page 18, there is a footnote giving what he believed was the origin of the word Oregon. It is as follows: "Oregon, the Indian name of this river, was traced by me to a large river called Orjon, in Chinese Tartary, whose latitude corresponds with that of Oregon, in America. The word Kilamucka, the name of the tribe, a little south of the mouth of the Oregon, was also traced to a people called Kilamuck, who actually lived near the mouth of the Orjon in Asia. It is evident that the Oregon Kilamucka were among the early settlers of North America, and brought with them many of the proper names used by our Indians. The word Mexico (Mecozotl) is identified with the name of the ancient capital of Japan. Identifications of both proper and common names are numerous." GEORGE H. HIMES.

After serious illness Hood's Sarsaparilla imparts the strength and vigor so much needed.

A adulteration goes full length in spices and flavoring extracts—you think it isn't worth while to cheat in such trifles—four-fifths of "vanilla" is tonka; cost's one or two cents for "\$1-worth". Schilling's Best are entirely pure; at your grocer's.

Tutt's Pills Cure All Liver Ills.

Secret of Beauty is health. The secret of health is the power to digest and assimilate a proper quantity of food. This can never be done when the liver does not act its part. Do you know this? Tutt's Liver Pills are an absolute cure for sick headache, dyspepsia, sour stomach, malaria, constipation, torpid liver, piles, jaundice, bilious fever, biliousness and kindred diseases.

Tutt's Liver Pills

HOOD'S THE PAINLESS CATHARTIC PILLS. Easy to take, easy to operate; cure biliousness, constipation, morning and sick headache; break up colds and ward off fevers. All druggists. Ho, C. I. Hood Co., Lowell, Mass.