

# GOETHALS SAYS HE CAN CLEAR PANAMA CANAL

## Removal of About Ten Million Cubic Yards of Dirt Will End Slides

### CAN'T SET FINAL OPENING

#### Nothing to Do Now but Carry Away Earth as it Appears—Underlying Strata Not Strong Enough to Withstand Pressure of Banks.

Washington.—General Goethals has sent a long report from Panama on the recent slides in the big ditch. He estimates that from seven to thirteen million cubic yards of earth will have to be removed from the cut before the slides are entirely stopped. He believes that the amount will really prove to be about ten million cubic yards. It should not be inferred, however, that the canal must be closed for ten months, or until this large amount is taken out, for it is the intention to pass ships as soon as a navigable channel is opened with a fair prospect of maintaining it. He does not know just when this will be accomplished.

#### Canal Means Much Loss to Shipping.

While no figures are available at the Washington office of the Panama canal or at the war department, showing the actual losses sustained by commerce by reason of having large numbers of ships tied up at the Atlantic and Pacific entrances to the canal, officials concede that the losses have been enormous. There is a feeling, however, that some shippers are inclined to exaggerate their losses. Only the shippers can give actual figures of their losses or even approximate them.

The loss to commerce would not have been as great had the Panama railroad been in position to move a larger volume of traffic across the isthmus. The inadequacy of the old rail system to meet the situation can be realized when it is known that at the height of its activity before the opening of the canal it hauled a total of 643,178 tons across the isthmus in 12 months. There were about 275,000 tons of cargo in vessels awaiting passage through the canal after the slides blocked it and before any of them left to take the longer routes. Even if the Panama railroad had preserved all of its rolling stock much of which went out of business when the canal was thrown open to traffic a year ago, it would have required months to move the freight tied up at the Atlantic and Pacific ports about October 1, to say nothing of what has arrived since.

Governor Goethals and the Panama railroad authorities are doing every thing possible to facilitate traffic across the isthmus by rail, giving preference to "rush" and perishable commodities. Between October 1 and October 18 the railroad moved upward of forty-six thousand tons of through freight transhipped from the Atlantic and Pacific sides, in addition to the usual volume of 10,000 tons of local freight.

#### Minimum Flat Rate by Rail.

Including coal shipments, the Panama railroad is now handling between four and five thousand tons of trans-isthmian freight per day. Two extra freight crews have been put on. The run across the isthmus is about 2 1/2 hours. At the time the great slides occurred the traffic through the canal was averaging upward of sixteen thousand tons daily and gradually increasing. While the railroad's facilities are wholly inadequate to handle the entire traffic, it is taking care of considerable of it.

To make the financial loss as light as possible on shippers Secretary of War Garrison issued an order establishing temporarily a flat rate by rail of \$3 per ton. The regular rates range from \$2 per ton on Class 5 commodities to \$15 on Classes 12 and 11. While only a small volume of traffic moves under the higher classes, the flat rate of \$3 per ton is exceptionally low. Shippers can elect to pay the regular schedule of rates, including wharfage, cranes and stevedoring. The flat rate of \$3 covers all of these charges and just meets the actual cost of the operation.

#### Discusses Earlier Slides.

General Goethals in the first part of his exhaustive report discusses the causes of the earlier slides, the theories offered in explanation of them, and the steps taken to check the movement of the banks and bottom of the ditch. Then he comes to the slides of October of last year and their treatment. He says in part:

"Ships were passed through the canal when a channel of sufficient width and depth was dredged through Cucaracha slide, and when there was every reasonable hope of maintaining it. In this respect there was no subsequent disappointment, and the dredges were completing their work in this locality when, on October 14, 1914, without any warning, a section of the east bank north of Gold hill settled vertically 20 feet. This section measured 2,000 feet along the prism face and extended back about 1,000 feet from the axis of the canal, generally along an irregular curved line.

The top of the bank was from 300

to 350 feet above sea level, and the extension of the ground eastward was relatively flat country. In the settlement the upper portion that broke away remained practically parallel to its original position and the benches which formed the upper part of the slide had not changed their relative positions, though they were badly broken up while the lower strata were squeezed out across the canal.

"Subsequently the broken mass moved into the cut, reducing the depth of water from 45 feet to nine inches at one point. Until August, 1915, the dredges were able for the most part to keep up with the movement as it came down, and probably would have been able to maintain this condition had not a movement occurred on the west bank, necessitating work on this side to the detriment of the east side.

#### Where Obstruction Lies.

"A crack was found on the slope of Zion hill in June, 1914, but observations made upon it showed no movement and the solidity of the hill was never doubted. Subsequent to the break on the east side a gradual but general breaking up of the west bank followed, and the crack on the slope increased in size and new ones developed farther up the hill, until finally one extended to elevation 480, the limit of the present break. The movement into the cut from the west bank occurred early in August, 1915, when a section of Zion hill broke away and settled down. The edge of the break on this side is also a curve.

"The movements from the two sides are toward the central portion of the enclosed area, and at this central portion is the obstruction to the channel. It first appeared as an island forced up from the bottom, then as a peninsula projecting from the east bank, and, finally, was pushed entirely across the channel, completely closing it.

"The dredges in attacking the closure have made little headway thus far, for any gain was offset by a movement in the vicinity or in the rear of the dredges, forcing them to withdraw and begin again their approaches on it. These successive movements are due in large measure to the rains, which were above the average through October. The amount of material blocking the canal at this locality could be easily removed in ten days but for the recurring movements. When a cut is secured through this mass and it can be held, some idea can be formed of when the passage of ships can be resumed, but until this is accomplished it is impossible to make any predictions.

#### Sluicing Produces Results.

"Sluicing the obstruction is producing some results, and the nozzles are being increased and streams with greater pressure are to be put at work to force the material to the dredges and to draw down the material which is the cause of obstruction. This sluicing, however, will not decrease the amount of material to be handled by the dredges. In the meantime, the dredges not employed on the obstruction are working to the north of it digging the channel to full depth and as much wider than the prism as is necessary to remove those portions of the slide.

"In moving toward the cut the material on the east side is forming into a succession of waves, which move gradually into the prism. The one that occupied part of the channel in October is being dug away, except at the obstruction, another has formed in its rear, and still another is forming up the slope of the hill. This material in moving down has at the same time taken away the support of the overlying rock on the north side of Gold hill, which, being sealed, becomes overbalanced and breaks away, producing the same results as occurred on the south face of Gold hill during the removal of Cucaracha slide.

"On the west bank the wave effect is also evident. Here the bank was pushed forward horizontally into the channel, followed by a settlement of the mass. The benches in some portions still maintain their relative position with respect to each other, but the ground in their rear settled, forming sink holes on the side away from the prism. There is some movement northward along the axis of these depressions into the prism. The southern portion of this west bank has come to rest, but projects into the channel.

"The breaks in the vicinity of Cucaracha cut were handled by excavations in the prism and by steam shovels lightening the bank above; at Cucaracha a great deal of material was diverted from the prism by sluicing. When the break of October 13, 1914, occurred an examination was made to ascertain if relief could be afforded by either of these methods, but neither was practicable for the east bank.

#### Some of the Difficulties.

"The configuration of the ground made it impossible to sluice any material away from the prism. Steam shovels and trains could not operate on any portion of the broken mass, which was incapable of giving them necessary support, and so far as concerned the stretch of ground between the break and the limiting crack, it was in such condition that before preparations could be completed for beginning work it would be broken up so that steam shovels could effect nothing; subsequent developments have verified this. No further cracks or indications of a further extension eastward have occurred, and judging from past experience the existing limits are definitely marked, the farthest section being 1,300 feet from the east water line of the canal.

"Similar investigations were made with regard to the use of steam shovels and sluicing operations on the west

bank. The configuration of the ground is such that all the material in the present movement will be taken away long before the area involved could be reached. Like the east side, sluicing away from the direction of the prism is impracticable.

"The conclusion reached, therefore, was that the only method of handling the slides on the two banks is to remove the material from the prism by dredges as it comes in. The breaks on the two banks are clearly defined, and judging from experience with other slides and breaks, the limits of the movement have been reached.

#### Confirmed by Geologists.

"Mr. MacDonald, the geologist formerly employed, passed through here on his way to Costa Rica three weeks ago, and, after going thoroughly over the slides, reached the same conclusions as to the limits to which the sliding would take place, and the methods employed for handling the material. His profession, his intimate knowledge of the formation of the locality and his experience with the various slides and breaks make his opinions on the subject of value. He also expressed the belief that the troubles due to slides would end with the removal of the material from those in progress.

"When the break occurred in October, 1914, and the subsequent breaking up of the west bank became evident, it was decided to augment the dredging fleet by another 15-yard dipper dredge and three 1,000-cubic-yard barges, all of which are now in service, and the dredges are handling at the slide nearly a million cubic yards per month at a cost less than 30 cents per cubic yard.

"As to the amounts involved, it is difficult to make any reliable estimate. As already stated, when the break occurred at Cucaracha in 1913, it was estimated that 2,000,000 cubic yards were involved, but before the movement ceased 4,679,238 cubic yards were taken out by steam shovels and dredges, in addition to upward of a million cubic yards of material which would have entered the prism had it not been removed by sluicing.

"The length of the slides, which are directly opposite each other, is approximately 2,200 feet (the channel through which is navigable with the exception of 600 feet); the banks are 300 to 350 feet above sea level on the east and extend up to 480 feet above sea level on the west. The area of the territory affected on the east side covers 81 acres and on the west side 78.5 acres.

#### Must Reach Angle of Repose.

"Assuming that all material, lying above planes extending from the outside limits of the bottom of the prism, referred to, up to the limits of the breaks, will move into the cut, 7,000,000 cubic yards will have to be removed before the slides are entirely stopped. Mr. Comber, resident engineer of the dredging division, assumed a surface parallel to the surface, existing on October 14, the date of the last complete survey, and 45 feet below it, on which basis 13,000,000 cubic yards would be the quantity to be handled. He thinks, however, that a mean between the two amounts may be more nearly correct, which was the method of arriving at the 10,000,000 cubic yard figure which has appeared in the press. It is at best only a guess.

"It must not be inferred from this that the canal will be closed until this amount is dredged, for such is not the case; on the contrary, it is the intention to pass ships as soon as a channel is secured through the remaining 600 feet, and there are reasonable grounds for assuming that a channel through the obstructed area can be maintained. "It is certain that the troubles are due to the failure of underlying strata because these were unable to bear the weight that the banks brought upon them. Under the circumstances it is difficult to understand the impression that has gained credence in some quarters that a sea-level canal would have avoided the difficulties encountered, since the cutting would have been through the same material, but at least eighty feet deeper.

"It is also certain that nothing can stop the movement now in progress until the angle of repose is reached by the materials under the conditions that exist, and that this can be reached only by removing the excess amount of material. If experience counts for aught, then that gained in the handling of the slides and the breaks that have occurred along the line of the canal leaves no doubt that the means adopted and now in use will effect a cure in the slides that now close the canal; furthermore, that when cured no further troubles need be anticipated from slides in this locality."

### BOUND TO GET A HUBBY

#### Woman Yells "Stop Thief" When Man Bolts at License Clerk's Desk.

Chicago.—A cry of "stop thief" prevented the escape of a bashful bridegroom here a few days ago. After two years' courtship Stephen McBeth and Mrs. Marie Alphonse went to the city hall to get a marriage license. Then McBeth weakened. As he started toward the street at top speed Mrs. Alphonse screamed:

"Stop thief! He has got my pocketbook."

McBeth was captured by a patrolman and taken to Central station, where the woman broke down. "He's not a thief," she confessed. "But I knew if he got away now he'd never get this close again." Later the couple got the license and started for the church.

### VETERAN KEPT HIS WORD

Noz Perce, Idaho.—B. T. Poore, a veteran of the Civil war, recently sentenced to serve 90 days in jail by Judge Dietrich of the United States court at Moscow, for introducing liquor on the reservation, arrived here recently with his own commitment. Mr. Poore made a request of the judge that he be allowed to serve his time in jail here and that he be allowed to bring his own commitment, which requests were granted.

### Message of the Hairdresser



There is at the present time no distinct or predominant mode of hair-dressing which if not followed will make one appear out of date. On the contrary, the styles are varied enough to allow milady to select one which is best suited to her particular type.

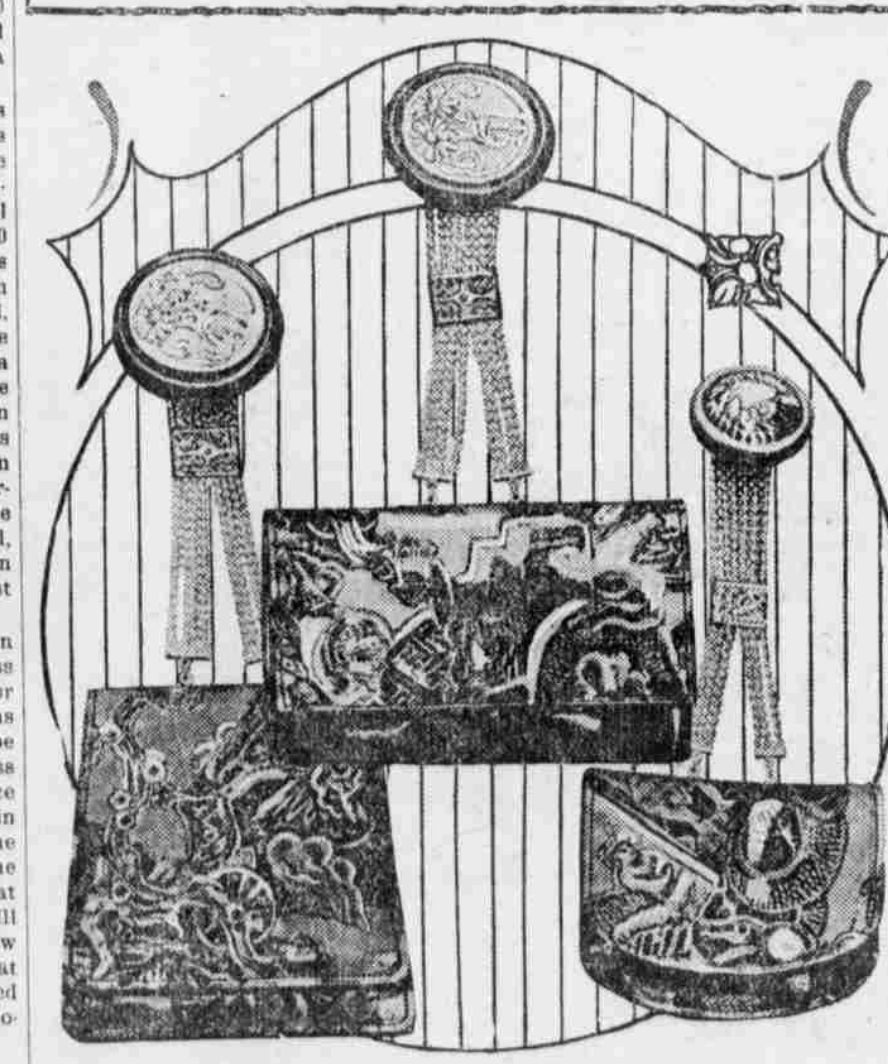
For the youthful face the Bobby effect is the most successful and attractive, giving the appearance of having the hair bobbed while it is merely pinned under. This is accomplished by the arrangement of hair around the ears, regardless of the finish at the back or forehead, and may be combined with either pompadour, side part or center part.

The soft, slightly waved pompadour is always worn by both young and older women. Middle-aged women are inclined to like a pompadour and high softness, while the younger woman usually favors the more girlish arrangement of the back hair dressed low.

The back hair is dressed in coils, two or three in number, according to size, with careful attention to the contour when finished. Short puffs and curls are sometimes added.

A fact not to be overlooked is that it is well to consider the gown in

### Tokyo Bags, and Others



Just the handsomest and smartest thing in new handbags is called the "Tokyo" or "Netsuke," and it is made of Tokyo leather. This is a soft, velvety looking embossed leather showing Japanese figures in rich colors against backgrounds of various colors. It is used for belts, collars and cuffs and other dress trimmings, and for chic turbans, which are usually trimmed with small fruits or flowers, made of plain colored leathers.

It is quite impossible to describe the rich and intricate surfaces that make the new Tokyo such a brilliant adjunct to the toilet, but the colors remind one of those in an India shawl, and the figures lure one to study them. All the colors are soft but full of life. The bags are lined with plain fello silk and furnished with the usual compartments and fittings such as are seen in bags of plain leather. They are finished with the regulation Japanese handle of silver beads and embossed

### Dainty Accessories.

The prettiest and daintiest among the new accessories are the gilt slippers and stockings which are to be worn for the winter dances and very formal evening affairs. The stockings match the slippers perfectly, having a metallic sheen. The foot wear is to be had both in bright and dull gilt. The cotton slippers, those that lace high above the ankle with ribbons are again in favor. The short and bouffant skirts are responsible for this. These pretty slippers are similar to the tan-

go slippers worn a season or so ago. Slippers and ribbons frequently contrast in color to the stockings. Black satin slippers are worn with white stockings.

### Somewhat Miffed.

"I don't think that doctor knows his business." "Couldn't he diagnose your ailment?" "Not to suit me. Says it isn't serious enough to require a trip to Florida."

# HAPPENINGS in the BIG CITIES

## Los Angeles Has a Really Progressive Church

LOS ANGELES.—"The world today wants an electric-lighted, self-starting, eight-cylinder church," says the pastor of the Trinity Methodist congregation of Los Angeles, and in the erection of Trinity auditorium, a new million-dollar institution, he believes he has fulfilled the requirements of a "1916 model" religious plant.

The recent completion of the nine-story church building, with social rooms, motion pictures, hotel for men, roof garden, cafeteria, barber shop, smoking room, nursery, hospital and bowling alley, marks the largest enterprise of its kind ever attempted on the Pacific coast.

Activities of the church and Sunday school are confined to the first three floors and roof. There are 326 hotel rooms on the remaining floors, and offices and clubrooms for various religious and secular organizations.

In the hotel all are outside rooms, many of which have sleeping porches and shower baths. On the roof there is ample room for tennis and basketball courts and an auditorium to seat 500 persons. The roof garden also is used for entertainment features of church activity. Typical of these was the three days' carnival of fun held for boys during dedication week.

The main auditorium, seating 2,300 people, is fully equipped with stage, orchestra pit, the usual stage curtains, drops and footlights. In addition to this auditorium there are four others, seating from 300 to 500 persons. These rooms are used for Sunday school classes, recitals, club meetings and social events.

Motion pictures begin the regular Sunday school service, and also are used through the week, when feature photo plays are presented to the public at regular motion picture show rates. The annual income from the auditorium alone is expected to be \$15,000, while the hotel is expected to yield \$75,000 annually, the cafeteria \$10,000, and the clubrooms and storerooms \$10,000.

## Jake, the Snipe Shooter, Annoys Chicago Lawyers

CHICAGO.—"Jake" is a "snipe shooter" with a national reputation. "Jake" has held the "common enemy" off with even more success than has Captain Streeter. Desperate appeals have been made to the office District Attorney Charles F. Clynne, but as yet the "snipe shooter" is monarch of all he surveys. "Jake" visits the federal building at 10:05 a. m. every court day of the year, and it is at that time his "pernicious activities" start and they continue as long as there is a court in session.

Many attorneys, court attaches, litigants and others who enter the federal courtrooms take the precaution to leave their cigars outside. There is only one place these may be left, on the outside casing of the windows and wainscoting. Court starts at 10 a. m., and at 10:05 a. m. along comes "Jake" and takes the entire collection. Then "Jake," who is a little, old man with white hair and mustache, steps gingerly into the courtroom and takes a seat among the other spectators. After a half hour or so, he steps out again, and there is a fresh supply. All go down into his pockets.

District Attorney Clynne has been asked to put a stop to "Jake's" practices by visitors to the courtrooms, who are annoyed by the disappearance of their unfinished cigars.

"I can't prosecute 'Jake' unless someone furnishes me with evidence that he is taking something of value," said Mr. Clynne. "So far no one has proved to my satisfaction that any of the articles he is reported to have taken were of value."

"Jake," who has been operating for years, says nothing, but is always ready when the "snipe" is deposited.

## Web-Footed Man Wanted to Join Marine Corps

SYRACUSE, N. Y.—Because a thin membranous filament connecting his toes made him web-footed, Frank Leque, Holtzville, L. I., thought he would make a splendid recruit for that semiaquatic organization, the United States marine corps, and was keenly disappointed when Sergt. George B. McGee, in charge of the local recruiting station, rejected him for that very reason. Now Leque believes that if Uncle Sam can't use a man-duck, he still has a mission in life, and is contemplating applying for a position as traffic "cop" in the city of unfixed leaks—Venice.

Sergeant McGee of the marines was loath to reject Leque for what he was pleased to term "duckitis," and he had momentary visions of the Long Island recruit being trained actually to walk on the water and so, in time, to hurdle foot-foot over hissing combers from one vessel to another to deliver his "Don't give up the ship, boys" messages from the admiral.

But perfect feet are absolutely essential to marines, and since the corps is usually filled up to maximum strength with exceptionally well-developed men, the web-footed one was told that he wouldn't do. Now nothing remains for him to do except to join the Venetian traffic squad, or, as another rejected applicant told him, "acquire water on the knee and a floating kidney with your other accomplishments and you could enter the Patagonian navy."

## New Yorkers Buy Unclaimed Steamship Baggage

NEW YORK.—"You step up, gentlemen," the auctioneer was saying, "and take your choice and your chance. I don't know what is in these packages, and neither do you. You may get something for nothing." And he might have added that you may get nothing for something.

The auctioneer was Max Glauberg, selling the unclaimed baggage that had collected at the Cunard line pier at the foot of West Thirtieth street. This baggage, about the most nondescript collection a man could well imagine, was piled all over the second tier of the dock. There were trunks and handbags, golf bags and burlap bags, umbrellas and canes, and a number of packages that looked like bundles of old clothes, but might be bombs. And it is not at all without the pale of reason to think that bombs might be left at the pier. It has been done; and when a man leaves a bomb at a pier, whether it goes off or not, he seldom if ever claims it.

At one point of the sale the auctioneer held up a square, villainous looking package from which there was an audible rattling.

"It's going off," said he, "going, going—" "If it's going off," said a nervous old gentleman, "I'm gone!" And he was.

All purchases had to be removed immediately the sale was over, and the expressions on the faces of the purchasers, when they found they had bought something of absolutely no use to them, was indescribably funny—to the spectator.

Two dollars was the maximum bid. So no one was hurt—much.

## MODEL POST OFFICE.

The Grand Central post office, recently opened in New York, combines all the latest devices for the rapid and efficient handling of mail, many of which have been designed especially for this office.

The secret of rapid mail service is the elimination of as much handling as possible. This is obtained by three devices. Electric trunks, moving belts and mail chutes are so arranged that sacks of mail may be taken through the building and sorted and finally placed upon the waiting mail trains without having been touched by hands.

Bags and pouches are dropped from the trucks into chutes. At the bottom of the chutes they hit a sliding canvas belt propelled by electricity at the rate of 130 feet a minute, which is operated from a switchboard. As the bags pass different stations in the building they are removed according to their ultimate destination. Those which need to be sorted are quickly disposed of and the others are passed on to the waiting trains below.

## WOLF SPOILS GOOD HUNT

#### Rebels on Playing the Part of Fox for Which It Was Drafted by Hunters.

Millersburg, Ohio.—A perfectly good wolf hunt was solemized here by the Fox Hunters' association, but hereafter, the association members say, they will stick strictly to the fox.

A husky, aggressive and quite unfriendly Texas prairie wolf was obtained for the hunt recently. The hunt,

as a social gathering, was an unqualified success. However, true to their breeding as foxhounds, the dogs, when Mr. Wolf was liberated, refused to associate with him. The wolf evinced a desire to lie down and go to sleep.

Then the master of the foxhounds told the dogs to make believe that the wolf was a fox and some of the more intelligent of the hounds obeyed orders, and the wolf chewed them so badly they beat a retreat. One of the fox hunters then shot the wolf, much to the relief of neighboring farmers.