



## RAISING A PYRAMID EVERY FIFTY DAYS

**How a Bulk Equal to 20 Years Work in Egypt is Handled at Panama**

**N**APOLÉON, standing five feet and a few inches, in the shadow of the Pyramids, acknowledged the vanity of human greatness.

If, instead of perishing in the living tomb to which England's terror condemned him, Napoleon had survived only a few years longer than the last veterans of his disastrous Waterloo, he might have beheld the awe-inspiring Pyramids dwarfed into insignificance — from the standpoint of building achievement — by the labors of the newest nation among the great peoples of the earth, even as the Pyramids were the enduring expression of the genius of the oldest people among the ancient nations.

Napoleon paused in awe under the shadow of the Pyramids because those giant structures of stone represented the marvelous building achievements of a wonderful

age upon which history and tradition had cast romantic lights and shadows. He had no foresight of what was to be accomplished within less than a century of his death.

Every fifty working days the toilers who are bringing the Panama canal into being are moving an amount of material equal to the Great Pyramid of Cheops, which consumed the labor of 100,000 men for twenty

years in the building and the services of the same number, for ten years in constructing the road connecting the work with the quarries.

Thus sharply brought into contrast, modern methods of doing great things, as viewed in the light of past achievements that have been the wonder of the age, reveal more clearly than anything else the marvelous progress of the world.



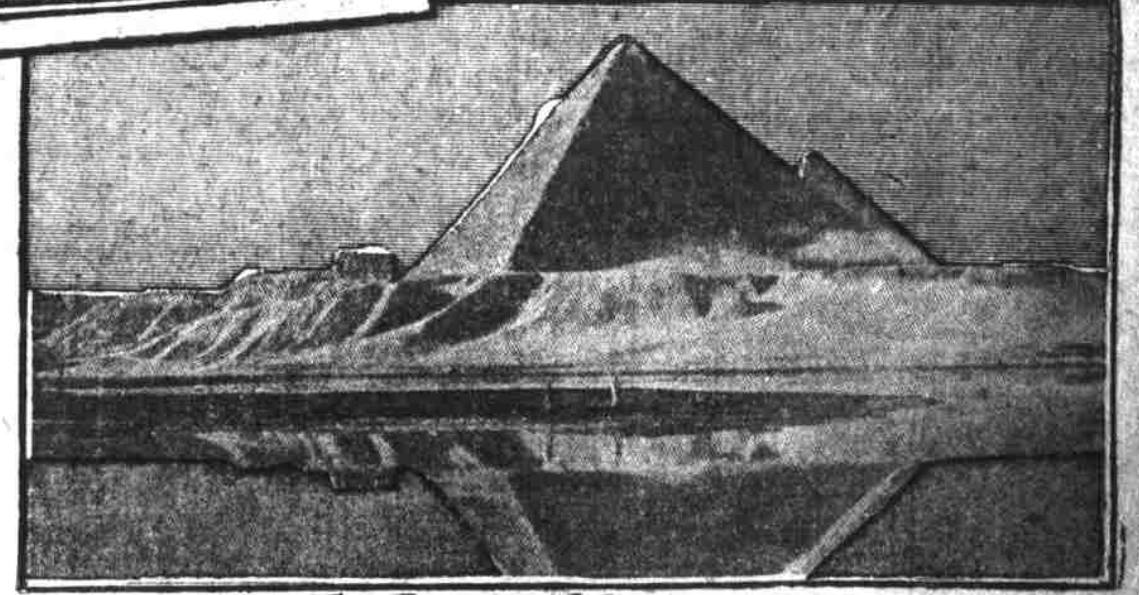
*Steam Shovel at Work in Culebra Cut.*



*Great Stones Used in the Pyramids Construction.*

blocks under forty solid feet of earth — and archeologists would have had to dig for the Bibles and the sets of Shakespeare in the parlors harder than they digged for the kettles in the kitchens than they gusted for amphorae in vanished Herculaneum.

Napoleon in awe of the Pyramids! The men who had already reduced the Pyramids to mud heaps, if he could have foreseen the results of their labor-saving devices when their principles should be applied to the tasks of the future, were born and buried before he scratched his first mosquito bite in Egypt. Those mountains of earth, flung aside so contemptuously during



*The Pyramid of Cheops.*

**E**GYPT'S proud possession, the Pyramids, which called for the lapse of centuries, the ambitions of dynasties, the endless, arduous toil of races, in order to insure their completion, will remain the wonder of ages yet to come. But the new Napoleons, with their soaring dreams of conquest, must betake themselves to the hemisphere of the New World if they would be awed into reverent silence.

For the Panama canal force, with no more awe than a gang of coal heavers in the presence of a pile of egg-size and a gondola, would dig into any old pyramid which any old Pharaoh left lying around loose, and cart it off as coolly as though it happened to be an ordinary hill that had the bad luck to be in its road.

Somehow, within the last year, the American people have suddenly had a great surcease of anxiety concerning the canal. For months, apparently, nobody has been worrying.

This change appears to have been coincident with the appointment of Colonel Goethals to the direction of the work. He has made the dirt fly, and that was what the people wished to see. Now, it seems, they are not bothering especially about the progress of work on the great waterway; they know it is being pushed with all the speed that engineering skill and the most modern machinery can guarantee. Not the least gratifying report that has come from Panama — the most recent — is that a bulk equal to the great Pyramid of Cheops is being removed every fifty working days.

It is really a marvelous work, that being done at Panama, when one pauses to grasp more than a mere outline. To those millions of tons which are being flung far from the places where nature put them, thousands of the most astute intellects have contributed the means. Modern American engineers, embodying the

latest and finest flower of mechanical genius, who imbue Jamaican indolence with energy and Spanish brawn with brains, are themselves nothing more than the living summaries of the science which went before them, plus the grains they bring to the common lore in their day and generation — grains that loom so large in living eyes and yet serve only to raise the general ascent in the long perspective of time.

The tools they use — herculean engines for an Augean labor — are stamped ineffaceably with the sign manuals of a James Watt, a Benjamin Franklin, a Morse, a Baldwin, a Bell — of the whole distinguished train of scientists, students, inventors and improvers, whose triumphs were indispensable to the triumphs of the men who use them.

Even Frenchmen, who failed so lamentably where we are assured of such signal success, contributed their quota to the knowledge

which now makes facile all that they, in their immature decade of science, proved so hopelessly impossible.

It is, then, not the American people alone, but the whole human race that is thinking and toiling there on the isthmus, concentrated in its latest machinery, its powerful locomotives, its insatiate steam shovels.

Yet, for all that, the stupendous figures of the accomplishment do not dwindle in the astounded gaze. In one month — November of the year just past — the excavation from the line of the canal aggregated 1,338,486 cubic yards.

Spread in any city of the Union, the earth which was made to fly from the canal, during a single month, would have buried ten solid

a lone month of American digging, are nature's tribute to man's intelligence.

Computations made of the labor-saving value of machines, of which Americans are most prodigal when need comes, during one month of the dry season at Panama, afford a hint of what it means to this country to use steam shovels, each one of which could dig out 18,000 cubic yards a month.

Including the men employed in moving up the shovel and clearing the track, the engineer and the trainmen, the service of only 298 workmen and laborers is required for the 70-ton and 95-ton steam shovels. In the one dry month just spoken of 815,270 cubic yards of earth were handled; it would have taken 6465 laborers.

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