CROSSING the ANDES



Laying the Trans-Andean Cable.

Prepared by National Geographic Society. Washington, D. C.-WNU Service. HE Andes, rooftops of the Western hemisphere, have frequently stirred the imaginations of engineers. The building of early Spanish trails across these mountains was among the feats of colonial days; the Trans-Andean railroad was one of the outstanding engineering achievements of its time; and more recently the laying of the cable that links Argentina and Chile by voice added another chapter to engineering progress in South America.

Braving ice, accident and avalanches, North American and Chilean engineers, by sheer strength and persistence, dragged the heavy cable up and over the freezing, wind-swept mountain passes, blocked with drifts for months each year. Deep snow here causes frequent slides, or avalanches, before which even the stoutest poles are as wheat straw in a Kansas cyclone. So, to keep the cable from being swept away, workmen dug a ditch many miles long, over the higher Andean wastes, and buried the cable in it.

Near the tiny hamlet of Las Cuevas, on the Argentine side of the Andes, the line reaches a point 12,300 feet above sea level. By contrast, the submarine telegraph cable off the coast of Chile rests on sea bottom in 21,000 feet of water.

Dangerous and difficult though these lonely Andean passes are, stubborn man has long used them in his restless transit across South America. Toiling on foot or shouting and stoning their lazy llama pack trains, native races of long ago traveled the worn trails that parallel the winding Aconcagua river, up ever-narrowing canyons, under cliffs, and along the edges of dizzy precipices.

In the glittering days of Spanish viceroys, when the king of Spain ruled much of South America through his agents at Santiago de Chile, pack trains and soldiers used these same Andean trails to reach Tucuman, Cordoba, and ancient Cuyo country.

Broke Off From Spain.

In these same bleak passe, where the big cable now carries spoken words, once echoed the shouts of San Martin's famous "Army of the Andes," when Chile and the Argentine more than a century ago, wrested independence from Spain.

For much of its length cable parallels the well-known "rack" railroad crossing the Andes. It took years to build this difficult railway, whose maximum grade is 8 per cent.

At Mendoza, on the Argentine side of the Andes, you leave the standard track and transfer to narrow-gauge coaches. For several hours a locomotive of the "adhesion" type draws the train. Finally when grades grow steeper, your engine crawls on the toothed rails of the "rack" system. As you climb slowly higher and higher, tunnels and snowsheds increase in number and length. Vegetation disappears.

To make this trip in June or July, which is midwinter there, is to see the Alps of South America in all their glistening glory. Sometimes snowplows precede your train. In July, 1930, scores of passengers were delayed many days at each end of the Trans-Andean line, waiting for 25-foot drifts to be cleared. Up in these passes resort hotels have risen, and holiday seekers come from Valparaiso, Santiago, Buenos Aires, and Montevideo for winter sports. One even sees soldiers training on skis.

Winding ever upward, the road runs in the shadow of Mount Tupungato, 21,550 feet high, and past an odd rock formation known as "The Penitents," from its resemblance to a procession | United States.

of cowled monks. Then you stop at Puente del Inca, a strongely formed natural bridge which gives the district its name. Just beyond this bridge, if the day is clear, you can glimpse great Aconcagua, highest mountain in the Americas, whose snow-capped peak rubs the sky 23,080 feet above the

At Las Cuevas the westbound train crawls into the mountain side from Argentina to emerge on Chilean soil,

Christ of the Andes.

Over the hill through which this twomile tunnel runs is laid the telephone cable; and, if the day be clear, just as your train emerges in Chilean sunshine you can look up at the hilltop and behold that famous peace monument, the Christ of the Andes.

Far below, though still at 9,000 feet elevation, Inca Lake is set among the peaks. Still descending, your train creaks, squeals, and winds in and out among mountains of infinite majesty. dignity and distance, rattles over bridges that span roaring cascades, to emerge at last into fertile, green valleys of Chile.

In clean, safe, steam-heated trains, this is a fascinating trip. You may sit comfortably at lunch and look out through plate-glass windows at one of the world's most astounding panoramas. But you merely see it. The workers out there along the track, in skating caps, ear muffs and mittens-the engineers on snowshoes and the crew driving the rotary plow against the drifts-they not only see but they feel and smell the Andes.

And they hear the voices of the high passes, the hiss of the snow and shrick of winds around the crags, the roar of avalanches.

Down the smooth, steep, snow-covered slope of one mountain, plainly visible from the train, an avalanche slides. Countless tons of rock, dirt and snow, coasting straight down from the very clouds leaves a long, perpendicular sear, "What is that funny trail down the mountain side?" asks a solitaire player, looking up from his cards. No one answers.

To save their cable from these slides, the telephone engineers buried it in the rocks all the way from Las Cuevas, on the Argentine side, over to Juncal, in Chile.

Safety Comes First.

"When we picked out the route for laying our cable over the Andes, it was not with the view of keeping close to roads and trails," said an official of the American-owned telephone and telegraph company. "What we sought was a path that would give the cable the most shelter and minimize the danger of breaks from avalanches, land-

slides or earthquakes. "But always we had to carry the heavy cable on the last lap of its hard journey up steep mountains and over cliffs, to where we had blasted a sunken way for it. Only picked men could stand this tremendous physical ordeal. We chose only those who had worked for years in high altitudes. Even the blasting and digging of our cable's underground path over this roof of the world, a ditch many miles long, was

a back breaking task." Once the Andes separated Chile and the Argentine not only physically and in a commercial way, but also formed a barrier against intellectual, social and artistic relations. Now, by this cable, friendly intercourse is easy; and not only can Santiago talk over the Andes and across the far pampas to busy Buenos Aires, but by a 66-mile cable under the great River Platte she can talk to Montevideo, in Uruguay, and from there on by radio telephone to Europe, the British Isles, and the

For Ever-Popular Canapes

Delicacies Accepted as Almost Indispensable Part of the Pre-Dinner Hour Offer Little Difficulties in Their Preparation.

nounce the word, and now they are a handle. Place on lettuce leaves and an accepted part of every woman's serve with mayonnaise or french food program. They add entertain- dressing, whichever is preferred, ment as well as savor to the half hour before dinner and everyone enjoys looking at a tray of attractive canapes, as well as eating them.

They take time to make, and disappear in a moment, but I think they repay us for our effort when we see our guests appreciate them so much, I find that the easiest way to make them is to cut the crusts from the loaf of bread and to spread it length wise with flavored butter. Perhaps I will use ketchup or pimiento but. yolk and pimento. ter for the first slice, anchovy butter for the next, watercress or parsley butter for the third, and cheese for the fourth. This gives a contrast of color as well as flavor. I then cut these large slices into finger lengths. squares, diamonds and rounds, or cecasionally with fancy cutters into more interesting shapes. I arrange them on a damp cloth and then garnish each one with a different combination of contrasting garnishes.

I have the garnishes ready-thin slices of pickles, green peppers and pimientoes, or slices of anchovies, stuffed olives and hard-cooked eggs, minced egg whites and strained egg yolks, tiny (capers) birdseye onlons and lobster claws. I take just a few moments to arrange these garnishes in simple designs. On the finger length strips I may put an overlapping row of stuffed olives, or the same around the edge of a round. The strips of green pepper can be crossed or arranged in a simple deeign-the egg silces put in the center, the egg-whites, well seasoned, used as an edging, the egg yolks to sprinkle in the center or around the edges. Just the least change of arrangement will make every canape individual. Sometimes I use with these a simple canape-just spread with butter and sprinkled with chutney or some other mixed pickle.

There is also another sort of canape which makes a good first course at the table. Either bread, toast or fried bread is used as its foundation and it is spread first with a flavored butter and then covered with slices of tomato, cucumber and hard-boiled egg, and garnished with mayonnaise, stuffed olives sliced, or sliced ripe olives or truffles. A hot mushroom ennape is also delicious. This is made by sauting the mushrooms, arranging them on the bread and covof grilled tomato may be put under the mushroom. Sometimes a more elaborate canape such as salmon eggs, for which I am giving the recipe, is used. Another interesting combination is made of latticed anchovy fillets or cheese spread. You may like to use small baked tomatoes on toast and cover them with a cheese sauce. A stuffed egg garnished attractively is another suggestion. Stuffed raw tomatoes or slices of green pepper stuffed with cheese, garnished with pimientoes, is another savory choice. Frozen cheese cut into squares, served on a slice of tomato or a bed of shredded lettuce is another suitable appetizer. Crab or lobster salad on a bed of cucumbers is another suggestion for a cold canape. This should be served on buttered bread and garnished with green peppers or capers.

We certainly have gone much further in our canape preparation than the dictionary-"A slice or plece of bread fried in butter or oil, on which anchovies, mushrooms, etc., are served."

Tomato Surprise Canape.

6 tomatoes cup chopped celery Philadelphia cream cheese

cup chopped nuts 2 cup capers or chopped olives

Skin six firm tomatoes and place in refrigerator. Mix celery, cheese, nuts and capers together, adding tomato pulp taken from tomatoes thoroughly chilled. Before scooping out tomatoes cut off small plece the bargain counter.

Canapes-only a few years ago we of top and insert through a silt in were asking each other how to pro- this a small lettuce leaf, to represent

Cornucopia Canape.

Toast bread, cut in finger lengths, spread with mayonnaise and chopped egg yolk. Fold a slice of dried beef into a cornucopia, fill with onion-seasoned cream cheese, and lay on toast.

Shrimp Canape.

Mix chopped parsley with creamed butter, and spread on small squares of brend. Top with a shrimp, and fill center with seasoned minced egg

> Quick Meal. Clam juice cocktail Asparague with posched eggs

Asparagus and cheese
Lettuce and tomato salad
Ice cream with crushed strawberries
Cookies Coffee

For the quick meal today, I am

suggesting an asparagus debauch, which any devotee of this vegetable likes to have as soon as it gets within a reasonable price. It makes a delicious main dish served around peached eggs on teast. It should be fressed with brown butter and grated cheese or with hollandaise sauce which goes so well with both eggs and asparagus. With this a mixed tomato and cucumber salad with & french dressing will go well. For dessert we might have ice cream with crushed strawberries or fresh pine-

To go back to the beginning of the meal, if the night is warm, a chilled clam or tomato juice cocktail will be refreshing.

Order of Preparation. Prepare salad and chill Prepare berries oach eggs Make toast Dress asparagus Make coffee 6. Bell Syndicate - WNU Service.

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