City of Brass—*Continued*

commerce of the world. One of the curiosities of geographical literature is the book entitled "Flooding the Sahara," by Donald MacKenzie, in 1877. He had heard from the Arabs that the "Great Hollow," called by them El Juf, included 60,000 square miles of the Western Sahara was 200 feet below sea level. He urged the British Government to occupy that strip of the Atlantic coast, above Cape Juby, lying between the French possessions and Morocco, and establish here a great seaport at the entrance of an inland sea which would open up the interior of Africa to British trade. The Lord Mayor of London described the scheme in one of the public meetings in these words:

"The distance from the coast to Timbuctoo across the desert is eight hundred miles; and in the event of the sand-barrier, five or six miles in extent, being removed, there would be uninterrupted access to the heart of Africa, and the commerce of Europe and America would be largely developed, besides effecting, what is more important, the abolition of the slave-trade and opening a way to the introduction of Christianity among the African tribes."

When the flooding of the Sahara was first proposed the fear was expressed that the creation of such a great inland sea might divert the Gulf Stream into the Straits of Gibraltar and so leave the British Isles as cold as Labrador, which is in the same latitude. But this alarm was allayed and the scheme collapsed when a better knowledge of land levels showed that most of the Sahara was over six hundred feet above sea level, much of it above 1,600, and it would take a lot of pumping to keep it wet.

Readers who know their Ibsen will remember that it was one of the get-rich-quick schemes of that prince of promoters, Peer Gynt, when he found himself cast away on the sandy shore of North Africa:

The sea's to the west; it lies piled up behind me,
Dammed out from the desert by a sloping ridge.
Dammed out? Then I could——? The ridge is narrow.
Dammed out? It wants but a gap, a canal—
Like a flood of life would the waters rush
In through the channel, and fill the desert!
Soon would the whole of yon red-hot grave
Spread forth, a breezy and rippling sea.
The oases would rise in the midst, like islands;
Atlas would tower in green cliffs on the north;
Sailing-ships would, like stray birds on the wing,
Skim to the south, on the caravans' track.
Life-giving breezes would scatter the choking
Vapours, and dew would distil from the clouds.
People would build themselves town on town,
And grass would grow green round the swaying palm-trees.
The southland, behind the Sahara's wall,
Would make a new seaboard for civilization.
Steam would set Timbuctoo's factories spinning;
Bornu would be colonized apace;
The naturalist would pass safely through Habes
In his railway-car to the Upper Nile.
In the midst of my sea, on a fat oasis,
I will replant the Norwegian race;
The Dalesman's blood is next door to royal!
Arabic crossing will do the rest.
Skirting a bay, on a shelving stand,
I'll build the chief city, Peeropolis.
The world is decrepit! Now comes the turn
Of Gyntiania, my virgin land!

Here the poet has anticipated the engineer, for "Peer Gynt" was written in 1867.

But geological exploration has exploded the old idea that the desert was merely the dried bed of an ancient sea which might be again filled if only the barrier were once broken, though the projects for filling the known depressions near the north coast seem feasible.

However fanciful may be the legends of the Atlantis and the City of Brass, it is certain that the region hereabouts, now largely given over to the sands of the Sahara, was once the seat of a high civilization. To the east of the Gulf of Gabes, which it is proposed to make the entrance of the artificial lake, lies Tripoli, the "Land of the Three Cities," as the Latin name implies, which once rivaled Egypt in fertility and wealth, while to the north lies Carthage, which formerly disputed with Rome the supremacy of the world. The Phoenician city is estimated to have had a population of from seven hundred thousand to a million before its destruction by Roman power. After its conquest the Romans built many cities along the coast and to a considerable distance inland. One of them, Tacape, stood on the site of the present town of Gabes, and the Arabs have used the pillars and carved stones from its ruins for building material. Gabes, the prospective port, (*Turn to next page*)

Blood Influences Drug

Physiology

The effect of a dose of medicine depends not merely on the chemical makeup of the medicine itself but on the chemical state of the blood in our bodies when we take it. This is indicated by the experiments of Dr. William Salant, of the University of Georgia Medical School, performed partly at the Cold Spring Harbor Biological Station on Long Island.

The blood of all warm-blooded animals is normally slightly alkaline. When Dr. Salant injected doses of the drug ergotamin into experimental animals whose blood alkalinity had been artificially reduced, a marked depression in their blood pressure resulted. It was possible to restore the pressure to normal or even to increase it beyond that point, simply by controlling the degree of alkalinity of the blood.

The effects of a drug depend not only on the alkalinity of the blood but also on the particular balance of certain elements. Dr. Salant has found that the concentrations of calcium and potassium in the blood are of especial significance in this respect. If the blood is lacking in calcium, adrenalin, a powerful stimulant and energy-releasing secretion, can not produce results. Even a considerable reduction in the calcium content inhibits the action of adrenalin, unless the potassium present is correspondingly reduced.

If much potassium is present, the poisonous effects of nicotin are greatly increased; and in the presence of an excess of potassium the usually stimulating adrenalin reverses its behavior and becomes a depressant.

The toxicity of mercury is greatly increased by reducing the calcium concentration in the blood. But if the calcium content is increased the resistance to this poison, and also to arsenic, is correspondingly increased. This point may eventually become one of importance in medical practice, because both mercury and arsenic, though poisonous, are widely used in medicine, especially in the treatment of syphilis. The diet of the patient, insofar as it affects the potassium and calcium content of his body fluids, becomes a matter of concern in the light of Dr. Salant's researches. It is recognized that the average American diet is very low in calcium.

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Germany has 10,000 miles of air routes.