



How Badly it Hurts In Your Mouth

Dr. Woods Hutchison

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THANKS to the magnificent work now being done in school dental clinics and mouth hygiene movements, so that in some progressive towns and districts all the children's teeth in the community are being systematically and thoroughly examined, treated and recorded. We shall, 20 years from now, have the data for a comparison which will really give us reliable information. Personally, I don't mind hazarding the prophecy that it will show distinct improvement instead of deterioration.

It must be remembered that it is only about 25 or 35 years ago that the science of modern dentistry was born, and that dentists were invented and began to go about with a holy zeal for improvement, and tell us what terrible sets of teeth we kept. And few things have added more already to the comfort of the patient than the same invention of mannikin teeth and good looks of mannikin teeth that have been made and crusade. Indeed, it is not too much to say that modern science has already checked or begun to check whatever decadence of modern teeth may have set in. How this has been done is almost a household word. Not only has the school dentist, the army dentist and the prison dentist become a regular and indispensable institution, but many of our more intelligent employers of labor on a larger scale are establishing dental rooms and dental clinics upon their premises. Among the latest in the progress are department stores, life insurance company headquarters and manufacturers. Fully equipped dental rooms are provided in the building, with dentists in constant attendance, who examine the teeth of all employees and do prophylactic or preventive work free, and then either refer the case to a dental clinic or treatment to their private dentist, or make arrangements to do the work at moderate rates and let payments be made in small weekly installments.

Applicants for employment, if found satisfactory in other respects, are sent to the dentist for examination and if dental defects are found they are required to have these corrected, or to agree to have them attended to within a reasonable time, before they are appointed to a position. The reasons for this precaution and expenditure are straight-forward and practical ones: First, that it has been found that putting the teeth in good condition and keeping them so improves the health

and working power of the employe and distinctly diminishes the number of days of absence on account of sickness throughout the year. The same had already been found true in school children in several of our cities, those who had gone to the dentist and had their teeth attended to showing less than half the number of absences of those who had failed to heed such directions.

Good Teeth a Business Asset.

The other reason is equally practical, though an esthetic one, and that is the much more attractive appearance presented by employes with white, lustrous and even sets of teeth, and the fact that customers prefer to be waited upon by clerks whose teeth are clean and fresh and wholesome looking, as well as their complexion and fingers, nails and attire. Besides, the girl who knows she has pretty teeth is usually more willing to display them in a smile, and as she is also free from the carking discomforts of toothache and ulcerated gums, she is more likely to be affable and obliging in her demeanor.

In fact, these higher standards of dental department, both individual and general, have produced an appreciable effect already, and nowhere in the world can one see so universally perfect and sparkling and attractive sets of teeth upon the principal shopping streets of our American cities. And one of the most universal comments made on the American women and girls by the visiting foreigners is the beauty, whiteness and evenness of their teeth.

The Secret of Dental Salvation.

The secret of this scheme of dental salvation may be summed up in three words: Give them plenty to do, keep them clean and protect them from infections. The details can be found in any health board circular or school clinic leaflet. One or two new slants are of interest. First, the rather unexpected fact that next after the first essential requirements comes proper care of the nose, in preventing decay and displacement of the teeth. The moment that from neglected and half-cured colds adenoids develop and the nose becomes obstructed, and the child drops his mouth open in order to get his breath, trouble begins. The jaws drop apart, the teeth lose their proper support between the lips outside and the tongue inside, the jaws become narrowed and misshapen and the teeth

overlapping and irregular; the gums become dry and cracked and infected by the germs of the air, as well as of the food, and the basis is laid for fully half, if not two-thirds, of the decays and ulcerations and bad mastication of later life.

A new and extremely important field has been opened up by the use of the X-ray, and by this, pictures can be taken of the jaws and teeth, showing not only the shape and position of every root in the gums down to its very tip, but also the state of the pulp and the nerve canals, and what is even more important, whether there are abscesses deep in the gums, along the roots of the teeth. At first sight, it may look like adding insult to injury to disclose defects below the surface when our mouths seemed already chock full of calamities and disasters visible to the naked eye. But these revelations of the "Eye of the Lord" are of great value; first, by enabling us to fill and treat the root canals of teeth right down to their tips much more perfectly when we know their exact position and shape, so that we are sure of a safe and permanent anchorage for our crowns and bridges; second, that these wretched little abscess bombs or infernal machines hidden about the roots of our teeth are the source of chronic rheumatism, heart infections, neuritis and neuralgia. Indeed, a considerable part of the development of X-ray work on the teeth was due to the eager search of physicians for the hidden cause of obstinate and unmanageable joint diseases and other chronic infections.

Most recent of all, indeed so much so that it is still undefined as to its final value and permanence, is the new light upon the cause of one of our most troublesome and unmanageable diseases of the teeth and gums. That is the new notion that supports the roots of the teeth and roots of the teeth known as Riggs' disease, or pyorrhea. This condition was for years the despair of dentistry. Ordinary antiseptics appeared almost helpless against it, and only by the most heroic and doggedly persistent of agonizing root scrapings and socket injections for months at even years could it be held in check or even delayed. As it occurs in something like 90 per cent of all mouths, and is the cause of loss by loosening and shedding of nearly two-thirds of all teeth lost, the checkmate was a



serious one. Now we have discovered at one stroke, not merely the cause

of it, but also an extremely promising cure.

How the New Cure Was Found.

The discovery, like many great inventions, was made by two sets of workers acting entirely independently and without knowledge of each other's research. One curiously enough discovered the remedy first and the cause after. The other worked out the cause and began casting about for a remedy. The twin, or, rather, triplet discoverers, were Dr. Baas of Pennsylvania, one of our leading authorities upon tropical diseases, and Drs. Allen Smith and Barrett, of the University of Pennsylvania, the latter a dentist, the former a pathologist. Dr. Baas, in the course of a study of dysentery, treated a large number of cases of this disease by the injection into the blood of the alkaloid or active principle of ipecac, the latter an old, well-known remedy for the disease, brought back by pioneer physicians from the East Indies. Several of the dysentery patients also happened to be suffering from pyorrhea, and these came to him in great delight, and reported that not only were they better of their intestinal disease, but that their gums, instead of being spongy, bleeding and ulcerated, had become firm and healthy and tightened down around the roots of the teeth.

As dysentery is due not to an ordinary bacterium, or bacillus, which is a vegetable organism, but to a low animal parasite known as an ameba—to which class the parasite causing malaria belongs—he promptly made an examination of the pus from a gum abscess in pyorrhea, and found an abundance of amebae, though of a different species. The blood of the patient, being saturated with the alkaloid of ipecac, called emetin, had destroyed all the parasitic amebae that it came in contact with, whether in intestine or in gums.

It was at once begun to gather cases of pyorrhea, to test emetin upon, and to most gratifying results. In from 80 to 90 per cent of patients, after five daily injections of the drug into the arm, the amebae completely disappeared, the suppuration almost completely cleared up and the gums became firm and hard. As the method was first tested out only last Autumn, it is too soon to say how permanent the results will be; but no remedy that has ever before been tried has given such

encouraging results, and it is certain to be a very great relief to this condition, even if it should not prove a specific and permanent cure.

Others Working on Another Method.

The other two workers, Drs. Smith and Barrett, had been working for a considerable length of time from the other end of the problem, so to speak; that is to say, the part played by amebae in diseases of the mouth, throat and lungs. Finding amebae in the pus from diseased gums, they began casting about for a germicide, and, knowing the effect of emetin upon the amebae of dysentery, they gave it a trial, and, curiously enough, within a month of Dr. Baas' tests, secured the same gratifying results. If to our amebae and other diseased condition in childhood and young life emetin shall add the mastery of the apparatus and loosening decays of later life, then our teeth have an excellent prospect of living as long as we do, and toothache and gum-boil may become curiosities worthy of a place in medical museums.

For the present the remedy must be regarded as on trial, and should only be administered by and under the care of a competent physician or dentist, partly because the best way of getting up an efficient concentration of emetin in the blood is by hypodermic injection and partly because the remedy has the well-known emetic and irritating properties of ipecac. So that an overdose may produce vomiting, griping and purging.

"As a Man Thinketh—"

Christian Herald.

Is our ideal the song of the sword? Then our rewards will be in the terms of the sword or in brute force. Is our chief ideal money? Then we must give up our ideal of the kingdom of the mind and spirit. The things we admire and imagine, these mold us, these become our masters. We must choose our ideals with thoughtful care, for whether we know it or not, they are our idols and all our worship is colored by them.

Let my imaginations be above the flesh, above the things that perish as I touch them. Let me build up in my thoughts ideals that lift me above the restless surge of my lower passions—then I am safe—then I can walk in the dark and enjoy bright day.

ADVENTURES OF J. RUFUS WALLINGFORD

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my friend, Mr. Bogger, wants to ask you a question or two, Mr. Barnes." "I'm not Barnes," declared Wallingford, gruffly. "I am his personal representative and business executive. My name's Sears. Unger, I never saw such a dirty lot of uniforms. Look at that elephant man. It's a disgrace. I want these uniforms cleaned at once." "Yes, sir," said Unger.

"And those cages. Freshen them up right away. If I have to sell this circus for Mr. Barnes, I want it in decent shape. What are today's profits?" "Over a thousand dollars," said Unger, brightly.

"A thousand?" Wallingford's face was purple with fury. "Unger, I'm going to investigate this thing, if you know what's good for you, you won't let me see you on this lot today."

"Over a thousand profit," gasped Bogger, as Unger hurried away, looking for a time dubious. "Say, Mr. Daw, I thought you said that was Mr. Barnes."

"He's known as Barnes because he does all the business," returned Blackie, lightly. "Barnes is a cripple. Now's your chance, Bogger."

Elias Bogger stepped forward instead, as Wallingford left the unfortunate Unger.

"If I ain't intruding Mr. Sears, let's talk business as man to man. I know the truth about our fix. You have to take \$50,000 for this show, today. I'm here with the money."

Wallingford glanced incredulously at Blackie, but put out his hand deprecatingly.

"I promised to sell it to a friend."

"Oh!" Mr. Bogger gulped. He was only stopped for a moment, however. "I'll give you fifty-five."

"No."

Wallingford hesitated.

"Make it sixty-five, spot cash, and we'll go right up to a lawyer's and draw up a bill of sale."

Elias studied a long time. "Well," he concluded, "I'm satisfied about the money part. He asked six or seven times the amount of the show, and though they don't all say the same thing, they've convinced me that there's a fortune in it every day."

Both Wallingford and Blackie carefully refrained from smiling. It required no very lively imagination to see that this circus has a special cast-in-car to carry money in, and when it gets full Barnes has it shipped home, where he has a tall iron building like a grain elevator to keep it in; but I guess he was joking, wasn't he?"

"Well," confessed Wallingford, slowly, "he was exaggerating a little. Mr. Barnes don't have an elevator; he uses vaults."

"That's what I thought," laughed Bogger. "Come on, we'll go up to my bank."

Mr. Bogger walked on the grounds of the P. T. Barnes Colossal Aggregation of Tented Wonders of the World, and he surveyed, just as the torches were being lit, in the hour before the evening performance. He held his head very high, did Mr. Bogger, and wore his gay-banded straw hat rakishly upon the side of his head. Those white-tinted pinks and all that they covet were his to do with as he wished. He could go in and order an elephant hitched to his buggy, if he liked!

Just between the main tent and the cook-tent "Daredevil Demo" accented him. In his street clothes, Demo, whose everyday name was Murphy, was a skinny little chap, who looked as if a girl could slap him and make him sharply.

"Well, what do you want?" he asked in his quick, high voice.

"Money!" replied Demo promptly,

"They tell me you're the new boss and have the coin. I'm three weeks back, and I want mine!"

"Well!" exclaimed Bogger. "I'll have to look into this! How much do you get a week?"

"Five hundred and fifty dollars," Demo declared.

Mr. Bogger almost dropped dead on the spot. "A week, did you say?" he gasped.

"A week. I get shot out of a canon to a platform up in the dome, grab a bicycle, ride down a two-hundred-foot chute, jump a forty-foot gap, and get a bucket of water. Do I get my back pay?"

"I'll see about it," promised Bogger, much troubled, and he started to turn away.

Demo grabbed him by the shoulder and turned him around with one swing. "I declare, now!" he declared, "I'll close up your blooming show! I ain't so strong for this outfit anyhow, especially since a hay's going to try to run it. If I don't get my coin before I go on tonight, no show! And if these rubea don't see my act, they'll tear up the tent. I'm what brings 'em here!"

"The Twelve Trio of Aerial Acrobats" descended upon Mr. Bogger in a body before Demo had finished with him. They were Swiss, and knew but little English, but they were energetic, and when Mr. Bogger saw that they were there, he saw that they were there, and wanted their money. If they didn't get it, no show; also a sheriff!

A brigade of peg-drivers and roustabouts joined the party while the Twelve Trio gathered and jabbered, and they surrounded Mr. Bogger in solid phalanx, demanding three weeks' back pay. If they didn't get it, they intended to tear down the big top right after the show, and leave it on the ground. More came running, bareback conveyors, iron men, tumblers, trainers, chariot drivers, and even some of the young ladies of the spectacle, all with Elias Bogger as their objective point, and all screaming a mad demand for money! Gazing about him in despair, the new proprietor saw Wallingford standing by a big rear tent, and rushed toward him for protection. J. Rufus seemed to know instinctively that Bogger was in growing fear of his life, for he lifted up the edge of the tent, showed Elias through, and met the maddened mob himself. The smile on Wallingford's jovial face deepened, as presently there came from the interior of that tent a hubbub of shrill cries. A moment later Mr. Bogger suddenly appeared in the dark, followed by a platoon of chorus ladies screaming for vengeance! It took all of Wallingford's persuasiveness to rescue Elias from the wrath of the Amazons and lead him to safety in the cook tent.

"This was full of women dressing!" painted Mr. Bogger. "What did you shove me in there for?"

"Didn't they know you were the proprietor?" inquired J. Rufus in astonishment. "The proprietor, you know, has a right anywhere."

"I showed 'em my bill of sale," urged Bogger in his own defense, "then an old-looking young woman pushed me in the face, and the rest of them jumped on me. Trying to get away from them I ran into a little private dressing-room, where there was a woman, she showed through, and she screamed like a steamboat whistle."

"Great snakes!" exploded Wallingford. "You've done it this time. That's Madame Balarina, our star rider. She does a toe-dance on horseback, and her husband, who is built like an ox, has a temper like the red-hot stove. It's a lion tamer. Our head clown is her brother, and he has killed three men in his time."

"Lord help me!" groaned Bogger.

"What am I going to do?"

"Never mind, we'll protect you," said Wallingford reassuringly. "You'd better stick close to us tonight, and we'll not allow anyone to hurt you."

"I won't leave you a minute!" earnestly declared Mr. Bogger.

"Come over to the big top," invited

Blackie, peering in at the door. "Fred Bristol's going to try out a new fly-trapeze act before the performance," and he led the way.

The main tent was big and high and dim and mysterious, with its one torch lit. Away up in the dome a tiny trapeze swung on long strands, which, from the ground, looked like spiderwebs. Upon a little shelf, a few feet away, stood a slender, graceful man in pink tights, and from either side of the shelf stretched down long ropes. A man with a coat and trousers on over his tights hurried up to Bogger and handed him a rope.

"Here, pal," he said, "hold this line, will you?" and he thrust it into Bogger's hands. "Get a good grip on it," he directed, and moved away.

The pink-clad acrobat upon the high shelf drew the trapeze far across and to him with a rope. All at once there came a mighty tug, and Bogger was holding and it was jerked from his grasp. A cry of horror burst from the throats of a score of circus attaches, and down, down through the dusty air of the big tent, with its rows of rows of dismal empty benches, came a chilling and spreading spray of blood. A shriek burst from the pallid lips of Bogger as it thudded upon the ground. The circus men, mostly acrobats, rushed to the spot where the pink figure lay, concealing it from view.

"Here's a piercing shriek from a woman near the entrance."

Bogger, trembling, nervous, and stunned into paralysis, leaned back against the tent-pole, his weak knees bending under him and letting him slide gradually down, when Wallingford clucked him by the arm.

"This way out!" he shouted, and Bogger, running, ahead of him, to an opening, and thrust him through. Bogger had run a third of the length of this enclosure before he realized that he was once more in the women's dressing-room, and then the chorus ladies, as his legs had never yielded in his life. At the outer entrance of this tent, where the blessed air came through, a fairy-like figure in fluffy green, suddenly confronted him with an accusing finger. Everybody but the terror-stricken Bogger saw, and appreciated, the stare-fright of Violet Warden, in her role of Madame Balarina, the star bare-back rider.

"Here's the Johnny-Peeper, boys—get him!" she cried, in trembling tones, and Blackie applauded loudly.

A man the size of a side of a house, and dressed in high hat, spike-tail coat, white trousers, and shiny top-boots, suddenly appeared in the outer darkness, accompanied by a clown with a foolish grin painted on his face and with a snarl on his actual lips. It was the clown who grappled with Elias and landed the first and only blow, a glancing one upon the cheek bone. There was no time for only the one Mr. Bogger, jerking loose by an almost superhuman effort, put on an additional spurt of speed which made his previous progress seem small-like; and the darkness swallowed him up, shrieking.

There was but one logical end to such blind speed, and that was a stumble. A little drainage-ditch got him, and laid him low to listen to the beating of his heart and imagine that trip-hammer noise to be the patter of hooves. Wallingford and Blackie, Daw caught up with him, and helped him with kind and comforting words, when a sad procession filed out of the main tent. Four men bore a stretcher, upon which was a limp form, covered by the iron which was a woman, and then the faces of the boys over which bare-back riders tramp. Quite a number of men with bowed heads followed it down to the railroad siding, where the circus sleeping-cars stood.

"It looks bad," said Wallingford; "very, very bad! I don't know whether the man is dead or not, but in any event you're up against it, Bogger. Fred Bristol is one of the best high-trapeze men in the business, and it means a fifty-thousand-dollar damage suit, which you'll probably lose, you

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The Murman coast and represses the sale of any or all liquor.

The physical aspects of the Murman coast—that country, which is now reached by the Ekaterina railway direct—disclose a littoral of an almost unbroken series of bare granite cliffs, marked here and there with moss and meager vegetation. Those cliffs are indentured here and there by deep gulches and inlets of the sea, penetrating far inland and forming more or less suitable anchorages. The banks of the rivers are covered with sand, overlaid in many parts by beds of peat, and diversified here and there with fairly good meadow land, which latter can be depended upon to provide food for livestock.

The temperature of the Murman is temperate, owing to the influence of the eastern branch of the Gulf Stream, which branch is sometimes referred to as the North Cape Stream. Spring, in fact, lasts from the end of May, and ushering in flights of sea birds, begins about the early part of April and continues to the end of May. The average temperature during this period is 37 degrees Fahrenheit.

Summer, the season of eternal daylight and of toilsome labors at the factories, lasts from the end of May to the end of July. The mean Summer temperature is 62 degrees Fahrenheit. Toward the end of Summer mushrooms and ferns may be gathered. Autumn sets in about the end of July and comes with fog and rain. The winter, which begins about the middle of October, when fogs again prevail. The snow commences to desert the coast, and the fishermen from adjacent countries quit the region. The Murman, by the end of Autumn, takes on a deserted appearance. The average Autumn temperature is 39 degrees Fahrenheit.

Winter in the Murman lasts from the middle of October to the middle or end of March, the mean temperature being 17 degrees Fahrenheit. Snow falls in great abundance, forming drifts often of 15 to 18 feet in the hills. The snow never entirely disappears, even in the Summer. The Arctic waters of the coast never freeze during any part of the winter, nor are ice floes encountered. The small inlets get only thin coats of ice, with blocks of no great size or force floating about, here and there, but never to such an extent as to interfere with navigation. The reign of perpetual night, lit up by the marvelous northern lights, or, as they are termed in the Murman, "Spolokki," lasts from about November 25 to January 21.

The population of the Murman is for the most part made up of fishermen, many of whom come from the district of Archangel, others from Kem and Wesa. They start, as a rule, about the beginning of March, tramping through Kandalax to Kola, where the steamer of the Archangel-Murman Steamship Company, which winters at Ekaterina harbor, conveys them to their fishing rendezvous. Fishing generally ends about the third week in August, when the men hurry homeward. The catch is either taken to Archangel or shipped by vessel to Norway. It is a curious fact that the Gulf of Kola in the winter time swarms with sharks. They are caught solely for the liver oil.

Rolling Stock and Locomotives.

The rolling stock and equipment used on the new Ekaterina line will be partly American and partly Russian. The American engines and cars must be built to Russian specifications. Under normal conditions Russia could supply all necessary cars and other equipment, but the demands of the present war have created conditions so abnormal here, outside help is necessary. The new road will use many Mallet compound engines of the type built by the Koloma Works of Russia. Mallet compound engines of American construction were used among the first assigned to the Archangel railway, but the late years the Russian government has not had to draw on foreign countries for rolling stock. The engines built by the Koloma Works may be regarded as standard in type

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of those used by the Russian state railways. The Koloma Works are located on the Moskva River, in working order at a station of the Moscow-Kasim Railroad. The annual production of these works is estimated at \$6,000,000. To date the Koloma Works have built about five thousand locomotives and the annual output of cars is approximately 15,000. The number of men employed is 7,500, and the hours of labor are 19 a man. Many of the departments run continuously 24 hours a day. The 10-wheel compound passenger locomotive of the Mallet system used on the middle Siberian railway is based on the Archangel road, and it is to be presumed it will be the type used on the Ekaterina railway.

The principal characteristics of this locomotive are: Weight in working order, 29,780 inches; wheels of tender, 35.5 tons; wheel base driving (rigid), 5 feet 7 inches; wheel base total, 26 feet 6.9 inches; height of center of boiler above rails, 3 feet 4.2 inches; diameter of cylinders, high pressure, 16.54 inches; low pressure, 24.8 inches; stroke of piston, 23.82 inches; diameters of drivers, 58.15 inches; diameter of track wheels, 35.43 inches; diameter of boiler inside at smallest ring, 57.48 inches; working steam pressure, 170 pounds; total number of tubes, 220; outside diameter of tubes, 2 inches; length over tube sheets, 15 feet 2.4 inches; fire box heating surface, 124.75 square feet; tubes heating surface, 77.25 square feet; total heating surface, 1938 square feet; grate area, 28.18 square feet; diameter of wheels of tender, 39.78 inches; wheels of tender's base, 10 feet 10.7 inches; water capacity, 706 cubic feet; weight, empty, 43,980 pounds; weight, loaded, 103,500 pounds; total wheel base of engine and tender, 52 feet.

The system of valve gear used on the Russian 10-wheel Mallet compound engines is usually one of three makes—the Walschaert, the Friedmann or the Westinghouse. At the Koloma Works all parts of the locomotive except the boiler tubes and special patented appliances are made in the shops of that company from the raw material.

Railway Carriages.

The standard Russian State Railway's first-class carriage for passenger use is built upon an ordinary steel underframe, eight-wheel truck type, the distance between centers of trucks being 41 feet 9.5 inches. The wheel-base of each truck is 6 feet 8 inches and the diameter of wheels measures 41.24 inches over tread. The carriage frames are made up of drained iron supported by truss rods. The cars are divided into eight separate compartments for 16 passengers, each compartment being capable of seating and sleeping two persons. There is also one compartment for the railway officials and one compartment occupied by a steam boiler, the latter being used to heat the car. The principal dimensions of one of these cars are: Length of body, outside 9 feet 1.3 inches; width, outside 10 feet 3.7 inches; height, inside, 8 feet 10 inches; weight of car, empty, \$2,310 pounds; total wheelbase, 47 feet 8 inches. The Russian standard railway gauge is five feet. This is wider than the American gauge. In consequence the riding is easier, assuming that the roads are as well made, and there is much gained from an engineering standpoint, particularly in the ability of cars to weight.

Russian railroads are run on schedule. If a train loses time it drops back into the next schedule or is passed along by one station master to another. There is practically no effort made to make time. The trains run on a somewhat irregular basis of speed, and it is remarkable how well they keep up to the schedule. Such a thing as a train dispatcher as known in American railroading is unknown in Russia.

For the new Ekaterina railway, owing to the tremendous pressure of war conditions, the Russian locomotive shops will be unable to provide engines in sufficient numbers. It is

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expected that American works will provide at the outset not fewer than 50 heavy compound engines to take the rails at Ekaterina immediately upon being landed there.

Archangel Railway.

The first railroad built to reach the Arctic from Petrograd was the now existing Volodga-Archangel Railway. This road was begun in 1895, and was opened to daily traffic in November, 1897. The road was built through uninhabited regions, and the work was that had never known the foot of man and over tundras and deep swamps. Today one is able to travel through this country rapidly and without interruption. The distance from Archangel to Volodga is 296 miles, and the distance from Archangel to Moscow is 709 miles. The Archangel road is connected with the Trans-Siberian by way of Kollars, in the Northern Dvina. The Archangel line is a single track railway and has flooded Archangel since the beginning of the war, has proved too much for the single track connection. All accounts agree that the quays at Archangel are cluttered with goods awaiting forwarding. It was largely because of this situation that the Russian authorities decided to reach Ekaterina harbor and to build a double track road which should connect with the Ekaterina line running Archangel will continue to be a port of importance, and it is freely predicted that the Russian authorities will double track the Archangel route.

The first Russian railway dates from 1835 and was built from Petrograd to Tsarskoe Selo, 18 miles south of the capital and a favorite imperial resort. The project for this line was laid before Emperor Nicholas by Professor Gerstner, of the Polytechnic Institute of Vienna, and the Tsar authorized the construction as an experiment.

Kings and Incomes

ACCORDING to reliable reports the war has brought about a decided diminution in the income of the Kaiser. The tearing up of the little "scrap of paper" has already cost him personally \$5,000,000. Wilhelm, however, has still a respectable fortune left, if a recent calculation by Herr Martin, an authority on German rich people, is correct. Wilhelm was supposed to be worth \$7,000,000, but Herr Martin has pointed out that a trifle of, roughly \$13,000,000, the value of the family estate of lands and farms has been overlooked. This brings up the royal estate to a total of \$20,000,000.

The Kaiser, however, has never been the richest monarch in the world. This honor belongs to the Czar, who on his accession came into the Russian private estate, yielding about \$2,000,000 a year. Beyond that his salary amounts to another \$2,000,000, besides many profitable investments abroad. There are small expenses to be deducted, such as some \$500,000 a year to grand dukes and duchesses, but when everything is taken into account the Czar's income is far ahead of that of the Turkish Sultan with \$1,500,000, or our own King, who is the richest of the family of kings of all the Old World potentates. A state grant of \$1,500,000, added to his other revenues, brings the Czar's income up to \$3,000,000 a year. Out of this he has at least \$5,000,000 a year for his private use.

King George receives \$470,000 per annum from the state, but little more than a fourth of this goes into the privy purse. It would be naturally impossible for the King to live in a manner befitting his rank on an income of \$120,000 or so, but there are miscellaneous revenues from invested lands and other private sources which help to swell the privy purse.

The Emperor of Austria, who is also King of Hungary, draws a salary amounting to \$552,500 each. The King of Italy receives \$750,000 a year, but has to make allowances to several members of his family, or if the King Alfonso has an allowance of \$375,500, a sum which is his own to spend as he pleases. Belgium's King receives about \$175,000—London Tid Bits.

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see, what makes it so rotten is that if you had a more speculator holding that rope, they couldn't have held you for much, but being the proprietor of the circus—well, you can see how it is yourself."

"Where is he! Where is he!" bellowed a bull-like voice from out of the darkness. His right cheek was streaked with red grease-paint from the fingers of the chorus lady who had "pushed his face"; his left cheek was crimson from the glancing out of the clown's fist; his forehead and nose were black with the mud of the field; his gay straw hat, which, by some freak of circumstance, had stayed upon his head, had an open lid and a fallen brim; his collar was torn open, and his tie was ludicrously awry; but more pathetic than all these was the broken and drooping spirit which feebly glimmered through the bloodshot eyes of Bogger, the crest-humbled.

"You'll have to be the proprietor," said Wallingford, coldly. "It's a legally binding transfer, and you're lucky if you don't have manslaughter against you as well as a damage suit."

"What stand this damage suit myself?" inquired Wallingford, with scorn. "I should say not. A sale is a sale."

"Again the voice from the darkness, this time nearer."

"I'll discount it," offered Bogger; "only get me away from here! I'll give you anything you say!"

"Right outside is a buggy," said Wallingford. "I'll jump you in that, and take you to town as soon as we come to terms. I'll take your bill of sale and tear it up, and give you ten thousand dollars, and deny that you were the proprietor when you held that rope."

"Ten thousand dollars!" exclaimed Bogger. "Ten thousand dollars! It's robbery!"

"There's that damage suit," Wallingford reminded him.

"You may win it," protested Bogger. "Give me forty thousand, and I'll settle it."

"Here he is!" yelled Wallingford loudly to the angry husband somewhere in the darkness.

"Don't! For Heaven's sake, don't!" Bogger half sobbed. "Here's your bill of sale! Give me the money! Now, where's that buggy?"

The transfer was made as they ran, and as Wallingford whipped up the horse, the megaphone voice of the big husband was heard once more, bellowing:

"Where is he! Where is he!" VI.

In the tent of the departed Manager Unger gathered the tired but happy conspirators; and, on the little folding table, J. Rufus Wallingford threw fifty thousand dollars in real money.

"Principal, interest, and expenses," he declared with satisfaction. "I need five thousand to pay off Texas Ed and the acrobat who dropped the dummy from the trapeze, and our other good friends who helped, and I set aside a big chunk for a Sunday treat to the whole circus, including the animals. This ten we'll take out for the expenses of the gang, and the forty thousand, ladies, goes to the Restitution Fund of the estate of the late Mr. Warden."

"And that crosses off the name of Elias Bogger," added Blackie, bending over Violet, who had the little book in her hand.

Peculiar Freedom.

Judge.

"Boys, stop fighting! What's it all about?"

"Why, this fellow stole our baseball outfit and won't give it up."

"Let him keep it, then. Remember, you've got to pay something for the expense, and peace we must have at any cost!"