

er branches of fir, birch and hazel. The refuse mounds contain bones of stags, cows, sheep, etc., with evidences of fire. Near by was an oak-log canoe 37 feet long.

The remarkable discovery of "dark photography," or of the action of uranium and other substances on the sensitive plate, has suggested that living organisms might produce a similar effect. Experimenting along this line, Prof. P. F. Frankland, F. R. S. has shown that cultivations of bacteria give impressions on the photographic film, similar to those produced by the action of light, both when the bacteria touch the film and when placed a short distance from it, but not when a plate of glass intervenes. The effect is thought, therefore, not to be of the character of radiation. In direct contact definite pictures of the bacterial cultures were produced; and the much more vigorous action of bacteria that are luminous in the dark suggested that this might prove a valuable aid in distinguishing the different kinds of bacteria. It was made to appear possible also that all living structures may be able to record themselves without the aid of light.

A connection between the set of the human ear and the pitch of the voice in singing has been pointed out by Dr. Alex. Wallace of Colchester, England. Amusing himself by forecasting how vocalists he had never heard would sing, he has found that when the ear is set vertically on the cheek a deep-toned voice may be expected, and that a tenor or soprano voice accompanies a slanting downward and forward of the ear. He is unable to offer any anatomical explanation.

An English topographical novelty is a map stamped in tinned steel plate. The first experiment is a raised map of London and vicinity, representing about 320 square miles in a horizontal scale of an inch to a mile and a vertical scale of an inch to one thousand feet, such a map being sold for fifteen shillings. The surface, showing all natural undulations, is enameled in colors.

IN GRAND SWITZERLAND.

Switzerland is situated on the borders of France, Germany, Austria and Italy. It is small and entirely mountainous. The majestic Alps make it their center. I came over the line on the German side, making my first stop in Zurich. Zurich is the center of the Swiss lakes, and one of the largest cities in Switzerland. The lakes are fed by the numerous glaciers, which abound in every portion of high ranges. I will speak of them later on. A couple of hours' ride brought me to Lucern, the prettiest and most frequented spot for tourists in Switzerland. Here are the best hotels, and the prettiest lake in the region. It abounds in pretty spots and fine views. Every one visits the Rigi mountain, for the view is considered fine. I would rather hold my opinion of it. Mt. Pilate is another of the same style. Railroads run up each one. They are similar in construction to the one up Pike's Peak and Mt. Washington, running on three rails, the center one being notched to fit a cog wheel under the engine. They can climb almost any grade. Hotels as large as the Knutsford are situated on the summits.

Pilate derived its name from an existing legend. They say after Pilate was put to death, his body was thrown into the Tiber. But it continually threw it back. It was afterwards thrown into the Rhine, but suffered the same fate. It was then taken and sunk

in a small lake on Mt. Pilatus. I have had every guide in Switzerland tell me that old tale until it rings in my ears. You can have it with variations if you like it. Truthful guides will change it to suit your taste. The larger the tip the better you get it. How so many Americans can come over here year after year to take in the same old sights is a wonder, especially when we have a greater variety and finer in the grand old Rockies and Sierras that they never see. Everything is Switzerland. It is more on account of it being Europe than anything else. People can go home after with a lordly air, informing everyone of their travels in Europe. That little word is the magnet that draws. Not the scenery, or the enjoyment they derive. I well remember how I used to look on people who had traveled abroad. They were to be revered, more than the common run, hanging on every word describing this or that. How disappointing the reality to meet with the object described!

Many a time I have gone to examine some feature I have read about, or have seen pictured up in some geography, when to see it, all bright pictures are dulled, and interest is blasted. Switzerland acted on me in that manner. It is made too much of by profound liars of the pen and old traveler stamp. One writes yarns for fame, while the other spins yarns for a name. One sees how he must have practicable as well as theoretic knowledge to get at the base of things. About the only thing to be seen in Lucern is the lion carved in the solid rock. It was designed by Thorwaldsen, the great Danish sculptor, and was carved out by Ahom. It is in memory of the Swiss guard who made such a noble stand in behalf of the French king in Paris.

In the same hotel I was staying at, we had Don Carlos, the Spanish pretender; also Madam Patti. The life is rather lively at times. People, after leaving Carlsbad and other fashionable resorts, come here before going back to the cities for the round of life. At the further end of the lake is the small town of Aaldorf, the home and scene of William Tell's exploits. I stood on the spot where the apple was dissected. I always pride myself on my bravery. I dare not attempt a description of the scenes of the many legends connected with this Swiss hero. They are too far fetched to credit. His memory is still kept green by a holiday set apart in his honor.

From Lucern I went to Bern, the capital of Switzerland. Its quaint old streets and buildings are very unique and interesting, all being of the old Swiss type; gabled roofs hanging over the streets, giving one an idea of a monastery. From there I went to Interlaken, another great gathering place for tourists. It is situated in a pretty little valley on the lake of Tun. It also affords an excellent view of the Jungfrau, one of the largest and grandest of the Swiss mountains. The life is similar to that of Lucern, planning trips and climbing mountains, I went up the Jungfrau over dangerous glaciers with yawning crevices thousands of feet deep over countless acres of snow, up rocky ledges, on over more dangerous places, until the top was mine. The snow was drifting around, blown by a fierce wind until the marrow of my bones seemed to freeze. I was enjoying myself immensely when some one knocked against the telescope and brought me down in a twinkling. I advise all who wish to climb dangerous mountains if their heart is in good condition, and their courage a No. 1, to try the telescope. There is a cog wheel rail way up one of the mountains here, a fine view is obtained of the Jungfrau. The hotels give us a dance once in awhile to make life

move on for bridal couples which are quite numerous, spending their honeymoon. You see a great many old games, a nice young wife, who is quite willing to flirt the moment the dear old thing's head is turned. They have to let the young fellows have a go with them dance evenings.

It is amusing to see them sit and frown while Daisy or Elsa is having a bully time with Mr. Jones, Brown etc. The same old story. The dancing is rather mixed. Here are Germans trying their style, English moving their large feet in an entirely different dance. Americans following up with their style, French, Italian, etc., all trying their style, all to the same tune and at the same time. American girls are considered the best dancers here as everywhere else.

I left Interlaken after about a week's stay, over the Grimsel pass by stage. After climbing mountains in a zig-zag course all day following the Rhine river to its source, we dropped over the divide about dark, stopping for the night at the noted Rhone Glacier. I went out and examined this little piece of ice early in the morning. It covers miles of ground. It is considered the largest in Switzerland. I saw a much larger one in Norway.

A glacier is very curious creation. As a general thing they cover miles of ground, situated in some deep ravine running up between a couple of high snow-capped peaks. It is caused by the melting and freezing of the snow taking years to form. The surface is rough and choppy with yawning crevices thousands of feet deep. To fall down means sure death. It is quite touching to read of the accident on the Glacier du Boise on Mt. Blanc. There were seven in a party making some observations while crossing a crevice. The rope tying them together, broke by one of them losing his footing. He pulled another down with him. Their bodies were never recovered until some forty or fifty years afterwards. It was then at the foot of the glacier. The slow moving of the body of ice and its melting at the foot gave the bodies up after fifty years banking. The flesh was as firm and as perfect as the day of the catastrophe. One of the party who was saved was the chum of one of the killed. Both were young at the time. The one now was an old man on the brink of the grave, wrinkled and feeble. It must have been pitiful to see him take the hand of his old chum and companion. One hand full and plump, the other aged and wrinkled; while time had stood still with one, it had been at work with the other. Yet both were the same age. What memories the ghastly relic must have brought back to the old man!

After leaving Gletsch at the Rhone Glacier, I continued my journey on to Zermatt, partly by stage and partly by rail. The train was part of the time on the cog-wheels; we followed up a very pretty canyon, a glacier here and there in the ravines running down to the main canyon. There is a small village on the way, built right on a very nearly perpendicular slope. It is very convenient for some things. If you wanted to depart this life you would not have to waste your money on powder and lead. Just say good bye and give a run and jump. The flies here are the biggest pests of their kind. They simply wont be driven off from you. They have got so used to the sticking business from association with the steep cliffs, they are afraid to quietly drop off like a good, sensible fly, and escape death. They always meet an untimely death, crushed beyond all hope of being recognized by their friends. They say the chickens and mosquitos have to be rough shod