

death Duke Leopold, of Austria, gathered an army and led them against the small army of 1,800 Swiss. A detachment of 4,000 Austrians went over Mount Brunig, 1,000 over Lucerne, and Duke Leopold with the great body of the army advanced upon Morgarten. But there, in a narrow pass about sixty Swiss had posted themselves and rolled logs and rocks upon them, and in the confusion this created, the body of the Swiss force fell upon them and defeated the army of Austria entirely. The previously mentioned detachments were also chased to flight. This defeat weakened Austria's power, and peace was concluded.

From 1346 to 1350 famine and earthquakes distressed Europe and affected Switzerland considerably. In 1352 Glarus and Zug and in 1353 Berne, entered the Swiss Confederation. Meanwhile Leopold the VIII of Austria, gathered an army of 4,000 knights and many other warriors, and led them against the Swiss force of 1,400 at Sempach. The harnessed knights of Austria, arrayed in a formidable phalanx, resisted the attack of the Swiss for a long time, and the case of the little band seemed almost hopeless, when one of their number, Arnold of Winkelried, feeling the importance of the moment, called aloud, "Take care of my wife and children, I will open a road for you," grasped as many of the enemy's spears as he could embrace, and buried their points in his bosom. The Swiss rushed over his body, dispersed the enemy, and gained a signal victory; 657 counts, lords and knights, among them Duke Leopold, fell. Soon after this the little band Appenzell defeated Austria in several battles, in which the wives and daughters of the men of Appenzell, clothed in military attire, and well armed manoeuvred in sight of the Austrian army, to induce the belief of greater numbers, and intimidate the enemy.

Appenzell entered the Confederacy in 1414. Shortly afterwards the demise of the count of Toggenburg and the consequent litigations about his possessions, brought the Cantons of Schwytz and Zurich into serious difficulties which lasted for years.

Through the instigation of Austria, France sent an army of 50,000 men against the Swiss. A Swiss army of 1,500 men met a detachment of this army 8,000 strong, August 26th, 1444, and drove them back upon the entrenchments of Muttens, where another force of 12,000 were stationed which the Swiss also routed. Notwithstanding the orders not to cross the Birs, the victorious little army went over and encountered the great body of the Dauphin's force. They were soon surrounded, but instead of surrendering, fought desperately. Five hundred of their number were killed, the rest broke through the French ranks and reached the hospital of St. Jacob, where they fought for several hours, killing thousands, until the hospital was fired, and all the Swiss, save ten excepted, had fallen. This cooled the Dauphin's courage, and he withdrew his army and concluded peace. But this peace did not last long. Duke Karl the Bold, of Burgundy, found occasion to make war against the Swiss, and in January 1470, a Burgundian army of 60,000 men, and many cannon, advanced over Besancon, but were repulsed by a small force of Swiss, lost all their cannon, camp equipage, etc. But in a few weeks Karl had again collected a force of 60,000 men and 150 cannon, and attacked Morat (Murten), where General Bubenberg with 2,000 Swiss was encamped. These defended Morat for ten days until the arrival of the Swiss army of 31,000 from Berne. Karl's army lost every cannon in the beginning of the ensuing battle, and soon dispersed in all directions. Only about 15,000 escaped. As Duke Rene of Lothringen called upon the Swiss to assist him against Karl the Bold afterwards, they sent 20,000 men, and united with a similar force from Lothringen, assailed the force of Karl at Nancy, (January 5th, 1477) killed 8,000, took all the field-pieces, wagons, camp equipage and provisions. Duke Karl, and multitudes of the nobility of Burgundy, fell in this battle.

In 1499 the Swiss had war with the Emperor Maximilian of Germany. The 22d of March they defeated a German force at Bruderholz, April, 11th, 2,000 men of Lucerne and Unterwalden, vanquished 18,000 Germans at Ermatingen, April 20th, 2,000 Swiss routed 17,000 Austrians, and May 22d, 8,000 men of Grison defeated 12,000 Austrians. Yet even these victories were dearly bought, for more than 2,000 villages and towns had been laid in ashes, and great distress and poverty brought upon the country.

There is one peculiar feature of the Swiss warriors that should be mentioned; immediately before the commencement of any battle they would all fall upon their knees to solicit the assistance of the God of battles and thus they often awaited the enemy's attack. The division of the booty after each victory took place with a strict regard to right and justice. But the great riches that fell into their hands during the Burgundian wars tended to make them covetous and estrange them from the primitive simplicity and untiring industry that had hitherto made them happy. This led to the disastrous and disgraceful practice of serving in foreign wars as mercenaries, and this implicated them in many difficulties which they might otherwise have escaped. Among these was the war in concert with the Pope, Milan and Spain against France in 1515. In the battle of Marignano just as the French began to retreat, 16,000 Venetians broke upon the Swiss in the rear and defeated them. This was the first time a Swiss army suffered an inglorious defeat and the faith in their invincibility was lost among the na-

tions. They now suffered several defeats in the period of a few years.

The reformation was begun in Switzerland at Zurich in 1519, by Ulrich Zwingli and several others. A war between the followers of Zwingli and the Catholic cantons ensued and in the decisive battle at Kappel (Oct. 12th, 1531) Zwingli fell and the Catholics achieved a victory. But still the work of reformation made rapid progress until several cantons had become entirely Protestant.

During the time of the French revolution, Switzerland had some internal troubles and changes of government. Bonaparte superintended the framing of a constitution for Switzerland in 1803, and after some more changes had been made the constitution was ratified by the Congress of the Great Powers of Europe in 1815, at Vienna. After this the country enjoyed a goodly degree of tranquility and peace, with the exception of some religious jealousies and broils, mostly caused by the influence of the Pope, the Jesuits and Monks, the Pietists, Methodists and Calvinists. The many fugitives of different countries who found an asylum in Switzerland also occasioned some troubles.

In 1845 the Catholic cantons of Uri, Schwytz, Unterwalden, Lucerne, Zug, Wallis, Friburg, led by Jesuite influence, formed a separate confederacy in league with, and in hopes of assistance of the Pope and Austria. It became essential to call out the national army to suppress the rebellion, and after the confederate cantons were defeated in several battles, and invaded by the federal force (1847), they returned to their allegiance to the federal government. This occurrence suggested the change of constitution and government that have since taken place and brought the affairs of the country into their present shape.

In regard to the manner and customs of the country it must be said that they are exceedingly various. On the whole the manners are free and easy; cordiality and open, frank deportment, which sometimes degenerates into rough uncourteousness, predominate. In regard to dress, much originality prevails in the rural districts, and great varieties of singular apparel are worn. The cities generally follow immediately in the wake of Paris fashions. The recent influx of foreign element into the country and the contagious desire to ape the fashions and manners of France have done much toward crowding the primitive simplicity, the candor and cordiality by which the people have ever been distinguished, back into the rural districts, and the population of cities resembles now in nearly every particular that of the great cities of Europe.

Switzerland is a free country; but the spirit of the surrounding despotic nations has some influence upon its institutions. The passport system, for instance, a mockery of freedom and a great torture to travellers, prevails in conformity with the customs of all other continental European nations. Religious liberty is guaranteed by the Constitution; but it is more a name than a reality; for as soon as a man begins to promulgate a doctrine that comes in contact with the long established usages and prejudices of the people he becomes subject to all the petty annoyances the passport system can inflict. An officer of the parish may refuse the necessary permission to remain within his jurisdiction, return the passport with the remark endorsed that the owner is an instigator of disturbance, and this, being no recommendation, generally precludes the privilege, of remaining longer than twenty-four hours in any place, except ones native parish.

The few Swiss who have, up to the present time, been gathered to this Territory, are mostly of the peasant class, Gothic descent, and not particularly calculated to give a fair idea of the nation. Like others from the continent of Europe, their views bear the impress of the stereotyped, castiron institutions under which they have been born and trained, and it is with difficulty that they can adapt themselves to the manners and customs of the natives of this land, and others that have ever breathed the spirit of freer institutions; yet their industrious habits, their general disposition to fair and honest dealing, and their firm adherence to their religion, qualify them to become valuable citizens.

The Human Hair.

It would appear that the beautiful golden hair owes its brightness to an excess of sulphur and oxygen, whilst black hair owes its jetty aspect to an excess of carbon and a deficiency of sulphur and oxygen. Vauquelin traces an oxide of iron in the latter, and also in red hair. The coloring matter, however, form but one portion of the difference existing between the soft luxuriant tangles of the Saxony girl and the coarse blue-black locks of the North American squaw. The size and quality of each hair, and the manner in which it is planted, tell powerfully in determining the line between the two races. An eminent German has undergone the enormous labor of counting the number of hairs in heads of four different colors. In a blond he found 140,000 hairs; in a brown, 100,440; in a black, 102,062, and in a red one, 88,740. What the red and black heads wanted in number of hairs was made up, however, in the greater bulk of the hairs individually; and, in all probability, the scalps were pretty equal in weight. It is to the fineness and multiplicity of hairs that blond tresses owe the rich and silk like character of their flow—a circumstance which artists have so loved to dwell upon.

SEVENTY-FIVE DOLLARS FOR A DINNER.

Among the many anecdotes told of "Billy Gibbons," the New Jersey millionaire, is one of his high-priced dinners in the country village in which he owned some real estate, and, after transacting his business, he came to the village hotel about 3 p. m., tired, dusty and hungry, and applied for a hot dinner. A smart clerk in attendance, glancing at his rather rusty habiliments, told him "They didn't have hot dinners for travelers at that time of day, but to wait till the committee on the New Town House were attended to, and if there was any chance then he would see."

"But," remarked the old gentleman, whose olfactorys were saluted with a grateful incense of certain roasts and broils, "there seems to be something ready now!"

"Oh, yes," said the clerk, "the committee of the selectmen for purchasing a new Town House lot have a dinner here to-day,"—and he bustled off in one direction, the landlord in another, and two white-jacketed waiters flew hither and thither, impressed with the vast importance of providing for the magnates who were to honor the house by dinner there.

"Why can't I have dinner with the committee?" said the old gentleman, arresting the clerk once more as he passed by him, "I'm perfectly willing to pay for all that I have."

"You! Well, my old fellow, that is cool," said the clerk, "why, do you think the selectmen would let you in to their table?"

"Stranger things have happened," was the reply; "at any rate, I should like to try!"

"Ha! ha! ha!" laughed the clerk, "couldn't think of such a thing."

The old man at this moment, however, as the clerk turned away, caught sight, through a half-opened door, of a well-spread table, evidently all in readiness for the committee, who were assembled in a room above, and would soon be summoned to discuss the viands that were already smoking upon the board. Without any ado, therefore, he passed in, took a seat, and commenced a vigorous attack upon the dish nearest him, which chanced to be an excellent pair of chickens. It happened that there was no person in the room when the invited guest took his seat, and two or three servants who came in within the next few minutes to place upon the table the remaining articles which were necessary, only honored him with a curious stare as they performed their duties, while he plied his knife and with a vigor, that betokened a sharpened appetite and a proper appreciation of the excellence of the fare before him.

The clerk, who entered a short time after to take a final glance and see that all was right, was horrified at the spectacle. "Why, you old sinner!" said he,—"rushing up to the object of his wrath, who was enjoying the savory viands before him with great gusto,—didn't I tell you that this dinner was for the committee?—What are you doing here?"

"Can't you see yourself," said the old man, cutting into a huge decorated ham, "I'm having a good dinner."

"Having a good dinner! Why, you are spoiling everything," said the clerk, aghast at the frightful gap made by the onslaught upon the ham.

"That's very true, young man," was the reply, "I'm spoiling my appetite also, and if matters proceed in this manner, it will soon be gone altogether."

The clerk, in dismay, hurried off for the landlord, while the cause of his trouble continued to eat away as industriously and quietly as though nothing had happened.—In a few minutes the landlord rushed in boiling with wrath.

"How dare you, sir!" exclaimed the worthy, "how dare you?" said he, advancing with hostile intent.

"Keep perfectly cool," said the old man, with a dangerous look in his eye, as he suspended operations with a large carving-knife in a roast turkey he was dismembering,— "remember, I'll pay for all that I have."

"Pay for all that you have!" said the landlord, eyeing the carving-knife, "why, you will have to pay for the whole supper!"

"Very glad to do that," said the other, resuming his knife and fork and finishing his repast with a few choice morsels.

"Yes, you shall pay for all you've destroyed," said the landlord, almost choking with rage, as his visitor coolly poured out a glass of wine from a decanter, and, nodding to him, drank it off.

"Agreed," said the other, as he wiped his mouth and fingers upon a napkin, and drew a long breath of satisfaction, "and, landlord, you say I shall pay for all I destroy?"

"That I do, and roundly, too," said Boniface.

"Well, then, let's have the bill for the sum total," said the old man as he rose, bringing up one side of the table with him at the same time, and precipitating, with a crash, the whole contents in one common pile upon the floor.

The landlord started back with horror and dismay at the sight, while his customer, coolly drawing a tooth-pick from his vest pocket, exclaimed:—

"Let's have the bill, landlord! Don't be frightened at a little broken crockery. Let's know the price of the supper."

The landlord giving the wink to his clerk, to keep an eye on the old fellow, and see that he did not escape, proceeded to the office, followed by his customer. The score was soon figured up and passed over to the old man, who stood quietly waiting for it, with the clerk and two waiters behind him ready to seize him at a signal from their employer.

"There's the amount, sir," said the landlord, with a grin of triumph, "Seventy-five dollars! Now, where's your money?"

"Cheap enough," said the expensive dinner eater, as he drew a portentous calf skin wallet from his pocket, and, opening it, commenced turning over the bank notes therein, when the host ascertained that they were of such large denominations, that he had not money enough in his house to make change with his customer.

The clerk, who had been gaping over the old man's shoulder during the operation, slipped round to the landlord and whispered: "It must be the president of a bank, for he has ten thousand dollars in his wallet."

Finally the stranger managed to find a one hundred dollar note among the pile in his wallet, which he passed over to the astonished landlord, received the change, carefully counted it, placed it in his wallet and walked away, saying as he did so:

"Good day, landlord, I always pay for what I have."

"Do you know who that old chap is that just went out?" asked the landlord of one of the selectmen, who came in at that moment.

"That man! why, yes, that's old Billy Gibbons, the richest man in the State. We bought five thousand dollars worth of real estate from him to-day, and paid him cash for it."

"Five thousand dollars!" said the host, "Why, how much is he worth?"

"Oh, a million or so," was the reply.

"Whe—e—w," said the landlord. "No wonder he can afford a seventy-five dollar dinner."

A Hottentot's Sermon.

The Missionaries at Bethelsdrop, in their Journal for the year 1817, gave an account of a sermon by Kruisman, a native preacher. In the evening he preached from Isaiah 60: 18—20. After speaking for a short time of the benefit of the natural sun to the earth and its inhabitants, he asked, "What shall we do, then, when the sun shall be no more our light by day, nor the moon by night? Will it be darkness with us then? Oh, no! the Lord himself, who is the Creator of the natural sun, shall be unto us an everlasting light, and our God shall be our glory. What occasion then shall we have for the natural sun, when the Lord himself shall shine upon us? And not this alone, but it is also said that all those who are saved to everlasting life, shall themselves shine as the brightness of the firmament, and as the stars forever and ever. What occasion shall we have then for the natural sun and moon, when we shall even ourselves outshine them in brightness and glory? And not only that, but Jesus Christ also, the Sun of Righteousness, shall shine upon us for evermore. God and the Lamb shall be light of the holy city in which righteousness shall dwell forever."

Waterloo Relics.

An individual who owned a small tavern near the eventful field was frequently questioned as to whether he did not possess some relics of the battle, and as invariably and as honestly answered in the negative. But he was very poor, and one day while lamenting to a neighbor not only of poverty, but the annoyance to which travelers subjected him, his friend cut him short with—"We'll make one help the other. Make some relics!"

"But what can I do?" inquired the poor man.

"Tell them that Napoleon or Wellington entered your shop during the battle, and sat down on that chair."

Not long after an English tourist entered, and inquiring for relics, was told the chair story. The chair was bought at an incredible price. The next comer was informed that Wellington had taken a drink, and the Wellington tumbler was accordingly sold. The third arrival gazed with wonder at the nail on which Bonaparte "had hung up his hat." The fourth purchased the door posts between which he had entered.

Frictional Gearing.

It is stated that frictional gearing is coming into successful use in Great Britain, for all purposes, from small machine up to the driving of the screws of steamships. Instead of one wheel driving another by the intersection or meshing of the cogs or teeth on their rims, the adjacent surfaces or faces of the wheels are grooved lengthwise, or in the direction of their motion, like the rolls of a rolling mill. These grooves are V-shaped, and the friction of the V's of one wheel against the sides of the V's of the other wheel is so great that the one drives the other, as in the case of cogs. The friction of the journals of the shafts is somewhat greater than in the case of toothed gearing, but in other respects, the frictional wheels move most smoothly. The back lash, or rattle of teeth, especially when worn, is prevented. The chief economy is in first cost. The cutting of the teeth of gearing involves the application of abstruse mathematical principles, and the machines and processes required, are numerous and expensive, especially in cases of beveled gearing. But the preparation of frictional gearing is the most simple and straight forward work of the turning-lathe.

—Heenan's champion belt was sold in London recently at auction to Ben Caunt at fifty-one guineas. Its original value was one hundred guineas.