which, by its being forced back by the cogs of the wheel, is the occaſion of the force with which the barrel is pulled.

SWITZ, or Schweits, the capital of one of the can­tons of Switzerland, to which it gives name, ſeated on the eaſt ſide of the lake Lucern, in N. Lat. 46. 55. E. Long. 8. 30.

SWITZERLAND, or Swisserland, is bounded on the north by Swabia; on the eaſt by Tirol; on the ſouth by Savoy and the Milaneſe; and on the west by France, being about 260 miles long and 100 broad. It is divided into 13 cantons, viz. *Berne, Zurich, Schaffhauſen, Basil, Lucerne, Un­derwalden, Uri, Switz, Friburg, Zug, Soleure, Glaris,* and App*enzel.* See theſe articles.

The Swiſs were anciently called *Helvetii ;* and being ſubdued by the Romans, they continued in ſubjection to that power till the empire declined, when they became a part of the kingdom of Burgundy. After that they fell under the dominion of the Franks, then of the Germans ; but being oppressed by the latter, they threw off the yoke, and erect­ed ſeveral ſtates and republics, which, at the treaty of Weſt- phalia in 1648, were recognized as free and independent. The cantons of Switz, Uri, and Underwalden, having, as ear­ly as the year 1308, entered into a confederacy in the can­ton of Switz, and having alſo obtained their firſt victory, in 1315, over Leopold archduke of Auſtria in the ſame can­ton, its name was given to the whole confederacy, which it still retains. The other cantons ſucceſſively acceded to this association, but ſome of them not until upwards of 100 years after. With reſpect to the government and conſtitu­tion of theſe cantons, ſome of them are ariſtocracies and ſome democracies. In the former, both the legiſlative and executive power is lodged in the burghers or citizens of the capital of each canton ; and of theſe there are ſeven, viz. Zurich, Berne, Basil, Friburg, Soleure, and Schaffhauſen ; an account of the moſt important of which may be ſeen under their reſpective names. In the others, the legiſ­lative power is lodged in the whole body of the people ; and every male above 16, whether maſter or servant, has a vote in making laws and in the choice of magiſtrates. For what concerns the whole Helvetic body, there are diets or­dinary and extraordinary : the former are held annually, and the others upon particular emergencies ; and both are ſummoned by the city of Zurich, which appoints the time and place of their meetings. Besides the general diets ſince the Reformation, there have been particular diets of the two religions, at which all public affairs of conſequence that re­gard the two parties are treated ſeparately ; for though a ſenſe of their common intereſt obliges them to ſtudy to maintain the league and union, yet it is certain, that the mutual confidence between the cantons is in ſome meaſure lost through the zeal of each party for their particular opi­nions, eſpecially of the Roman Catholics. The annual ge­neral diets are held always at Frauenfeld or Baden, princi­pally to regulate the affairs of the common bailiages. Lucern takes the lead of the Roman Catholic cantons, being the moſt powerful of that denomination ; but Zurich, tho’ leſs powerful than that of Berne, takes the precedence of all the other cantons, both Proteſtant and Popiſh. Theſe can­tons do not make one commonwealth, but are ſo many in­dependent ſtates, united together by ſtrict alliances for their mutual defence. The extraordinary diets or congresses are held at Aldorf. Each canton uſually deputes two envoys both to the ordinary and extraordinary, to which alſo the abbot and the town of St Gall, and the town of Biel, ſend repreſentatives as allies. To the 13 cantons belong in com­mon 21 bailiages, two towns, and two lordships. The al­lies, or incorporated places as they are called, are the abbot and town of St Gall, the three Griſon leagues, the repub­lic of the Valais, the towns of Muhlhauſen and Biel, the principality of Neuenberg or Neufchatel, Geneva, and the biſhop of Baſil, Of theſe the abbot and town of St Gall, and the town of Biel, are regarded as members oſ the Hel­vetic body, but the reſt only as allies.

As to the air, soil, and produce of Switzerland, that part of the canton of Berne to the eaſt of the lake of Geneva, to­gether with the cantons of Uri, Switz, Underwalden, Glaris, Appenzel, and part of the canton of Lucern, conſiſt of ſtupendous mountains, whoſe tops are ſaid to be from 9000 to 12,000 feet above the level of the ſea, conſiſting of craggy inacceſſible rocks, of which ſome are quite bare, while others are always covered with ice and ſnow. Among the moun­tains are many excellent medicinal and other ſprings, cold and warm baths, water-falls, craggy precipices, deep narrow valleys, and caverns. They yield alſo a great variety of herbs, thickets, and buſhes, in the upper parts ; and in the lower, rich paſtures and woods. The higheſt are thoſe in the canton of Uri. Many of the valleys are covered with lakes, or watered by brooks and rivers. In ſome of them are towns, villages, woods, vineyards, and corn-lands. Both on the mountains and in the valleys the air is extremely cold in winter ; but in ſummer it is very pleaſant, cool, and refreſhing on the former, but excessively hot in the latter. Sometimes it is winter on the north ſide of a mountain when, it is ſummer on the other ; nay, flowers may be gathered ſometimes with one hand, and ſnow with the other. Pro­digious masses of ice and ſnow often fall from them in winter, and do a great deal of damage (ſee Glacier) ; and moſt oſ the ſtreams and rivers take their rise from the thaw­ing of the ice and ſnow on their ſides and tops. From the riſing or deſcending of the clouds, with which they are com­monly enveloped, the inhabitants can, for the moſt part, pretty exactly foretel the changes of the weather ; ſo that they ſerve them inſtead of weather-glasses. The other and lower parts of Switzerland are very pleaſant and fertile, being diverſified with vineyards, corn-fields, meadows, and paſture-grounds. The mountains in theſe are but mole-hills in compariſon of the others : there is neither ſnow nor ice on them in ſummer ; and they frequently afford not only good paſturage, but arable ground. Many petrifactions are found both among theſe and the others, with a variety of foſſils. The ſands of the rivers yield gold-duſt, particularly thoſe of the Rhine, the Emmet, and the Aar, the Reuſs, the Arve, and the Inn. The metals of this country being general­ly found to be brittle, the only mines that are worked are a few iron ones. In the lower parts of Switzerland they ſow rye, oats, barley, ſpelt, flax, and hemp. Wines of va­rious sorts are alſo produced in ſome of them, with a varie­ty of fruits. Of wood for fuel and other uſes there is ge­nerally plenty ; in ſome places, however, they are obliged to burn ſheeps dung, and in others a kind of heath and ſmall ſhrubs. In the valleys they cultivate ſaffron with ſucceſs. The Switzers derive their principal ſubſiſtence from their flocks and herds of cattle, which in ſummer graze upon the mountains. Their cheeſe is much eſteemed, eſpecially that of Berne and Griers in the canton of Friburg. Great numbers of horſes are alſo bred here, and bought up for the French cavalry. Beſides the above mentioned rivers, the Rhone and the Tesin have their ſources in this country. The lakes are very numerous ; but the chief are thoſe of Geneva, Neufchatel, Biel, Zurich, Thun, Brien, Conſtance, and Lucern. Both rivers and lakes abound with fiſh, and afford a cheap water carriage. Switzerland is not ſo popu­lous as many other countries in Europe ; and the Popiſh can­tons leſs ſo than the Proteſtant. The total number of the inhabitants is computed at two millions.

The language generally ſpoken here is the German, in which alſo all public affairs are tranſacted ; but in thoſe