REVIEWS AND NOTICES.

Chemin de Fer de Calais à Milan—Ligne Directe par Belfort, Berne, la Gemmi et le Simplon. Par James Ladame. (Geneva and Bâle: H. Georg. 1889. Large 8vo. pp. 293. 5 francs.)

THE writer of this book advocates the piercing of a tunnel under the Gemmi Pass, in order (by the aid of the Simplon tunnel) to shorten the way from Calais to Milan by nearly 50 miles. Mountaineers will be interested in this project, as opening up a direct line from Calais to Zermatt. The proposed tunnel would start from Mittholz, near the Blauseeli, between Frutigen and Kandersteg, and might be pierced in three different directions. M. Ladame favours a tunnel which would be 12½ or 13½ miles long, and would be connected by a line of 4 or 5 miles with the Rhone valley railway at the Turtman station. The depth of this tunnel would be about 1,530 yards—far less than that of any of the other great tunnels in Europe, as would be also its height above the sea-level; but, on the other hand, it would be twice as long as the Arlberg (6½ miles), and considerably longer than the Mont Cenis (7½ miles) and St. Gotthard (9¼ miles) tunnels. The total cost of the line (double rails) from Thun to Turtman is estimated at 56 million francs (2¼ million pounds sterling).

Many diagrams are given, and the advantages of the proposed scheme are dwelt on at length. Bern would thus become one of the chief international centres, and English traffic would be drawn to the new line from the rival line of the St. Gotthard. The entire cost of the line from Thun to Domo d'Ossola, including both tunnels, and interest on capital, rolling stock, and unexpected outlays are estimated to amount to 150 million francs (6 million pounds sterling). The project is a magnificent one, and it must in fairness be said that M. Ladame is a railway engineer by profession (the line from Neuchatel to Chaux de Fonds was built by him), and that this gigantic scheme was suggested by him to the Federal authorities more than thirty years ago. By far the larger part of the book is taken up with a very detailed account of the three great, and many of the minor, tunnels on the Continent, the most minute details of construction being given, as well as the complete history of each tunnel. It is an interesting work, and contains much curious information, though it is to be feared that mountaineers, always taking the longest way by preference, will disdain to read of tunnels which are intentional short cuts.

Uebersichts-Karte der Alpenländer. Von Vincenz von Haardt. (Vienna: Hölzel.)

This is one of the numerous attempts at producing a general map of the Alps. It is fairly engraved and legible, but the scale ($\frac{1}{1000000}$) is too small to allow of much detail being given. It extends from Ratisbon to Cortona, and from Lyons to Presburg. The ridiculous mistake of attributing a height of 3,883 mètres to the Aiguille d'Olan is repeated, and the Ecrins is treated as apparently one peak of the Mont Pelvoux, while the Mercantour still retains its 3,167 mètres. There are many

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mistakes and omissions in the lesser known parts of the Alps, but other portions of the Alpine chain are more correctly represented. The copy sent us is conveniently mounted on cloth to fold into a case, and the map itself may be referred to for a hasty bird's-eye view of the Alps, though its details require to be verified.

Annuaire du Club Alpin Français, 15ème année, 1888. (Paris.)

In the course of his interesting account of the progress of the C.A.F. during the year 1888 the official writer makes two noteworthy statements. He expressly contrasts the 'Annuaire' with the 'Alpine Journal,' the latter periodical, it seems, enjoying a very small circulation, and that exclusively among experienced climbers, who seek in its pages accounts of new ascents, so that they may repeat what has been done by the makers of the same. A little below we read, 'Puis, le C.A.F. ne se compose pas seulement d'ascensionnistes. Ceux-ci n'en forment, au contraire, qu'une faible partie. La grande majorité des membres du Club aiment à lire le récit d'expéditions qu'ils se sentent eux-mêmes hors d'état d'entreprendre.' The same writer explains that it is not his intention for a moment to criticise the 'Alpine Journal,' which he flatteringly calls 'ce célèbre recueil,' and the present writer has not the least intention of criticising the avowed aims and composition of the C.A.F. But these statements may serve as an excuse for the overburdened reviewer when he looks in dismay at the 700 large pages of the latest 'Annuaire,' for as soon as he grasps the fact that for readers of the 'Alpine Journal'—all of course experienced climbers—only a small portion of those 700 pages have any but the remotest interest, he feels with relief that his notice need not be constructed on the same scale as the stately volume he is writing about.

The first article is by M. Janssen, the celebrated astronomer and the President of the C.A.F., and it is of greater scientific than Alpine interest. In the middle of October 1888 M. Janssen spent several days at the Grands Mulets, for the purpose of discovering whether oxygen exists in the solar atmosphere, the result obtained being that if it exists at all it certainly does not produce the same visible results as in the case of the earth's atmosphere. M. Janssen took two entire days to reach the hut from Chamonix, employing no less than 13 *hours* to go from the Pierre Pointue to the Grands Mulets, during part of which time he was (owing to his advanced age) borne in a sort of litter which he had devised. M. Vallot, having in view always his proposed hut on the Bosses, writes an article with the high-sounding title 'Un Siècle d'Ascensions au Mont-Blanc.' It is really concerned chiefly with the exact topography of the Grands Mulets rocks, and with a very interesting and detailed history of the different huts and inns built thereon—De Saussure's cabin (1786), first hut (1853), first inn (1866), and second inn (1881)—each being represented by a woodcut. The first pages of the paper are taken up with a very vague sketch of the different routes up the peak, and with a summary of the number of ascents, illustrated by a diagram showing the rise and fall in successive years. 1,500 travellers are computed to have reached the summit, but M. Vallot shows far too great confidence in

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the Chamonix register. He is of opinion that it contains the names of most of those who have gone up with foreign guides and have come over from the Italian side. I venture to think that such is by no means the case; at any rate it was not some years ago, for of my three ascents (all made with Swiss guides only, and one from Italy to France) one only appears on the published copies of the official register, and this is very far from being the only instance. It may be noted too that the reason why there was but a single ascent in 1860 was not the Italian war, but the excessively bad weather of that season. A most curious engraving is given of the ice axe used by J. P. Cachat on the occasion of De Saussure's ascent in 1787.*

M. Ferrand's article on the Cime d'Oin is far and away the most permanently valuable contribution in the present volume. It is a most painstaking and detailed study of the exact topography of a peak in the Tarentaise, misplaced as to position and given an exaggerated height by the French map, and is illustrated by a number of very poor woodcuts from the author's capital photographs. M. Dulong de Rosnay describes the first ascent of the Pointe de Calabre, in the same district, and also that of the Tsanteleina or Sainte Hélène. The latter narrative is disfigured by many mistakes—e.g. statements that Mr. Nichols has never published a full account of his ascent (though it appeared in these pages in 1866, vol. ii.), and that the 1889 route is new, though it is practically the same as Mr. Nichols' in 1865. He overlooks the second ascent made by me on August 5, 1878; † gives the name of Grande Parei to the peak, though it belongs to another far away to the north, and a perfectly fanciful derivation of the name Tsanteleina (really from the patois 'tsantel,' meaning an inclined slope as contrasted with a steep wall), and makes the north face wholly Italian, whereas it is wholly French.‡ M. Dulong de Rosnay has been misled by the French map, which is far inferior in those regions to the new Italian one, but he is quite right in taking the name Pointe de Bazel from the Tsanteleina and giving it (in accordance with local usage) to the peak marked 3,443 mètres farther to the east.

A description by M. Giraud-Jordan of the High-Level route from Zermatt to Bourg St. Pierre appears to be the only paper relating to Switzerland, for another, bearing the title (most singularly inappropriate from the historical point of view) of 'Burgundian Switzerland,' deals with the Côte d'Or only. There are several articles on the Pyrenees, Count Henry Russell in particular narrating his seventeenth ascent of the Vignemale, and describing his new grottoes thereon, while advocating the excavating of similar caves as far better than the building of huts. M. Martel continues the narrative of his remarkable subterranean explorations in the Causses.

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* See note, p. 78. † *Alpine Journal*, vol. ix. p. 101.

‡ Since writing the above I notice that M. Dulong de Rosnay has published a supplementary note in the *Bulletin du C. A. F.* (November 1889, pp. 275-7), in which he has himself rectified the slips I have pointed out in the text. The right reference to my ascent of the Tsanteleina from the north in 1878 is, however, to the *Bulletin* of 1883 (p. 254), *not* to that of 1888 (p. 251), my original note appearing in vol. ix. p. 101 of the *Alpine Journal*.

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It seems that a medal has been struck in honour of the C.A.F., bronze copies of which may be purchased by members of that society. The engraving of it which forms the frontispiece of the volume is, however, rather mirth-provoking, as is also the description of the medal given later on in the volume. On the obverse 'un personnage symbolique' (of the female gender) grasps an 'alpiniste' by the shoulder and points into space—or (as the explanation tells us) towards a difficult peak. The 'alpiniste' has rope, ice axe, gaiters, and (possibly) spectacles, but no hat, and the motto is 'Per ardua.' The reverse is even more delightful. It represents the 'Genius of the Mountains' (again a female), with wings but without clothes, lounging (there is really no other word to describe her attitude) on a rock, which is fringed with icicles, and holding a sprig of edelweiss. Above the rock appears Mont Blanc in the background, while on the face of the same rock there is a blank tablet whereon the name of the recipient (or purchaser) of the medal may be engraved. The result does not seem to me at all successful. M. Vézian writes on Mountains in Geological Times, and M. Dufayard gives a pleasant sketch of diligence-travelling in France in the seventeenth and eighteenth centuries. M. Durier gives two photographs (taken by M. Joseph Tairraz) of the Argentière and Tour Glaciers as they were in 1888. They are printed by some permanent process, and will one day be valuable historical documents for glacialists.

Dauphiné does not receive much attention in this volume, though it is the highest mountain group which is wholly in France. There is an account of the new mountain inn of La Pra, on the Belledonne, of the first ascent of the not very important or conspicuous Aiguille de la Coste Rouge (between the two cols of that name), and of a new route up the Rouies (completed by another party a week later).

M. Bartoli describes the minor mountain ranges in Central and Eastern France (Auvergne, Vercors, Taillefer, Chartreuse), as well as a visit to the Mont de Lans Glacier and an ascent of the Dôme de Chasseforêt, and M. de Laclos his ascent of the Charbonel, the monarch of the Southern Graians.

The narrative of a four-days' round of a party in the Queyras is usefully supplemented by a very interesting article by M. de Gorloff. This tells how he worked his way along the mountain chain (keeping always on the French side, for it seems that travellers now wishing to cross into Italy by the carriage road of the Col de l'Argentière are turned back unless their passports have been *visés* by some Italian consul!!) from St. Martin Lantosque to Abriès. He waxes enthusiastic—and with perfect justice—over the magnificent ice and rock scenery of the Chambeyron group, but he is wrong in stating that there are still some new peaks left there, as in 1879 and 1881 I worked out the district very thoroughly, while three weeks after M. de Gorloff's visit I captured the one remaining fortress—Péou Roc.* M. de Gorloff would have found the difficulties of the Tête des Toillies very nearly disappear if he had resolutely attacked the apparently smooth rocks. He is inaccurate in saying that the Italian

* *Alpine Journal*, vol. xiv. p. 144.

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soldiers came up from the east; they simply gained the west base of the peak by means of a couloir on the east side, and their route up the last rocks was taken in 1879 by M. Guillemin, and by myself in 1888.* M. de Gorloff too is not quite right in saying that the Argentera (the monarch of the Maritime Alps) has only been twice climbed by Italians, for though there have been several alleged ascents I believe that the card I left there on the occasion of the first ascent (August 18, 1879) has been found but once,† so that in all probability only one party has reached the highest point since my visit. Nor is St. Véran the highest village in the Alps. It is not necessary in these pages to mention the papers on Khroumiria, the Sahara, the Ægean Sea, &c., which are accounts of travels rather than of climbs. According to the official account the club numbered (on July 1, 1889) no fewer than 5,506 members, distributed into 47 sections, the newest of which is the 'Léman,' with its head-quarters at Thonon. The official writer makes a sympathetic allusion to the great loss which the science of photography and the art of mountaineering have suffered, as well in England as on the Continent, by the terrible disaster in which our late Secretary perished with his companions—'morts sur le champ d'honneur.' W. A. B. Coolidge.

Annuaire de la Société des Touristes du Dauphiné, 14ème année, 1888. (Grenoble: Allier.)

Few societies have done so much for a special mountain district as the S.T.D., and not the least valuable part of this work is the long series of annual volumes, in which a vast amount of local information (for, most wisely, the society does not often step beyond the limits of its special region) has been gradually heaped together.

One of the articles in the latest volume will be well known to readers of the 'Alpine Journal,' for it is a translation of Mr. Gardiner's 'A Week amongst French Dolomites,'‡ while another, dealing with certain climbs in the Grandes Rousses and Chaillol districts,§ is due to the pen of the present writer. 'A. C.' gives a review of the 1888 season in Dauphiné (the details of which are supplied in the excellent classified lists of all ascents made therein, entitled 'Revue Alpine'), which, despite the weather, was most brilliant, for no fewer than ten ascents of the Meije and fourteen of the Ecrins are recorded as having been made by English, French, Italian, Austrian, German, and Belgian mountaineers. Miss Richardson's brilliant feats are spoken of in the most flattering terms, nor are Signor Sella's wonderful photographs overlooked.

There is a pleasant account of the annual meeting of the S. T. D. at Allemont on July 29, 1888, luckily a magnificent day. There are also two historical articles, one containing the Hints for the Excursion to the Grande Chartreuse by the Echelles from Chambéry, written by a Swiss, Louis de Manoël de Végobre (1781), and the other a most

* *Alpine Journal*, vol. xiv. p. 144.
† *Rivista Mensile del C.A.I.* 1888, p. 305.
‡ *Alpine Journal*, vol. xiv. pp. 211-21. § *Ibid.* vol. xiv. p. 145.

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vivid and interesting narrative of a journey from Grenoble to Bourg d'Oisans, La Grave, the Col du Galibier and Valloire, which was made by H. J. C. Colaud de la Salcette and a friend in September 1784. M. Guinier discusses the different systems of tracing roads, his fundamental proposition being that as far as possible every road should follow the line marked by the stream flowing through the valley traversed; if otherwise, great care must be taken in tracing the secondary roads which serve as feeders to the main road.

The society's affairs seem to be in a flourishing condition. It now numbers 608 members, though its budget is of very modest dimensions, under 320*l*. It proposes to repair some of its club huts, which have been illtreated by weather, and to improve the little inn at Le Clot, in Valgaudemar. I am glad to see that M. Tairraz has been granted a fresh lease (for twelve years) of the Chalet Hôtel at La Bérarde, which is one of the chief monuments of the activity of the S.T.D.

W. A. B. Coolidge.

Signaturen in- und ausländischer Kartenwerken. Von Josef Zauffak, Edler von Orion. Second and enlarged edition. (Vienna: Eduard Hölzel. 1889. 16mo. pp. 150. 3*s*.

This little book is primarily meant for the use of military men, but will be useful to mountaineers as well. It is intended to serve as a handy companion to the chief published maps, official and non-official, of the principal Continental States. As is well known, many different symbols are adopted on each of the great surveys, but the very sheet containing the explanation of these is not always at hand or easy to procure. The first 68 pages of Herr Zauffak's work are concerned with a detailed list of these symbols, arranged systematically under each map in due order and accompanied by 45 small tables figuring the said symbols. Three tables and three pages of the text are occupied by a very convenient enumeration of the scales on which a great number of Austrian maps, and 24 others, are constructed, besides two measuring rulers marked in 'Zollen' and 'centimètres,' and some details as to the figuring of forests, &c. Among the maps which deal with mountain ranges we find the Austrian and Austro-Hungarian, the Italian (the 1881 survey), the Swiss (Siegfried map), the Russian, the French ($\frac{1}{80000}$), the Greek, and that of the Balkan peninsula. This elaborate list is followed by instructions (filling 5 pages) how to pronounce certain doubtful letters in many non-German languages, and a most handy comparative dictionary (in no less than 12 languages and covering 70 pages) of various terms and abbreviations occurring on these maps. This dictionary is alphabetically arranged, and is followed by a set of separate glossaries (7 pages) for the 12 languages. Although not specially restricted to Alpine words, both dictionary and glossaries include many of these, and form perhaps the handiest and most striking feature of a most useful little book. It need only be added that the twelve languages are Albanian, Bohemian, Bulgarian, Croatian, French, German, Greek, Hungarian, Italian, Polish and Russian, Roumanian, and Turkish. Herr Zauffak's booklet will be henceforth indispensable to anyone who wishes to

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read his map intelligently, while a comparison of the words used in different languages to designate the same object (*e.g.* glacier, stream, alp, hut) is very instructive and interesting. W. A. B. COOLIDGE.

Bollettino del Club Alpino Italiano per l'Anno 1888. No. 55. (Turin.)

There is nothing very new or striking in the latest volume of this periodical. Signor Cainer publishes a revised edition of his 'Cronaca del C.A.I. dal 1863 al 1888,' of which the first issue has been noticed at length in these pages.* It is a full and authorised outline of the rise and acts of the C.A.I. and its members. The short paper contributed by the Signori Sella on their winter traverse of Monte Rosa (Feb. 1889) scarcely adds anything to the paragraph already published in these pages† as regards this noteworthy expedition. The ascent was apparently made by Mr. Hulton's 1874 route from the E. (which the Italians persist in calling Signor Rey's route, though he took it in 1886 only), but the real fatigues and difficulties of the undertaking began with the traverse of the Gorner Glacier and the ascent to the Riffelhaus. This article is chiefly remarkable for the suggestion therein contained that club huts should now be built, not only half-way up the higher peaks, but on the very summits of the latter, the Zumstein Spitze and Signal Kuppe being suggested as suitable sites, and the cost of a hut being estimated at 15,000 francs. It is urged that the panorama could then be studied under different lights and shadows, and that valuable meteorological observations might be recorded. No doubt these are advantages, and others are mentioned, but the practical difficulties are great, as shown by the breakdown of the scheme for erecting a hut on the summit of the Jungfrau. The Italian Club have, however, determined to make the attempt, and have selected a spot close to the top of the Punta Gnifetti, or Signal Kuppe, and entirely in Italian territory, as the most suitable site.‡ Signori Sella do not advocate huts on the summits of difficult peaks, such as the Matterhorn, but hint at building one on the highest rocks found on the Aiguille Grise route, not having heard apparently of M. Vallot's proposed hut on the Bosses du Dromadaire. Signor Lerco sends some pages from his forthcoming book, describing his Caucasian journey in 1887. He was prevented by stormy weather from *quite* reaching the top of the W. summit of Elbruz, but successfully traversed Kasbek, ascending by a new route from the S.E., and descending by Mr. Freshfield's 1868 route. This is the second ascent of Kasbek, but we regret to see that Signor Lerco still believes in the alleged ascent of Elbruz in 1829 by the Cossack Killar (whom he calls the 'Jacques Balmat of the Caucasus'), although it has been shown over and over again that it rests on the weakest evidence. Signor Lerco seems to have his doubts, however, even as to Killar, for he calls the 1868 ascent 'the first scientific ascent.' Signor Piolti describes the beauties, natural and scientific, of the great plain which forms the summit level of the Mont Cenis, but does

* *Alpine Journal*, vol. xiv. p. 174. † *Ibid.* vol. xiv. p. 325.
‡ *Rivista Mensile del C.A.I.*, September 1889, pp. 309–11.

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not add that at present strangers visiting it are not looked on with favour by the military authorities, so that in 1889 the inn, kept by Jorcin of Lanslebourg, was closed by them, for it is just within Italian territory and not far from the two great fortresses recently constructed on the pass by Italian engineers. We agree with him that the system of hospices requires amending in the interest of tourists, for whom part of the house might well be set aside as an inn, where they could pay for the accommodation required, and would be free from the vexation of making voluntary offerings, and feeling ill at ease, as half free guests, half paying travellers. Signor Marinelli sends a very detailed and valuable article on the highest peaks in the Carnic Alps. These seem to be Coglians (2,801 mètres) and the Kellerwand (at least 2,760), both ascended for the first time by Dr. Grohmann. Both are higher than the Jôf del Montasio (2,760) and the Peralba or Paralba (2,694). Prof. Cacciamali gives a careful account of the basin of the Liri and the surrounding ranges, lying in the provinces of Rome, Aquila, and Caserta, and the Marchese de Gregorio describes some rambles up the hills round Palermo, undertaken last autumn and winter by the members of the local section of the C.A.I. Dr. Giordani brings before the eyes of readers who are not scientific geologists the state of the upper Val Sesia during the Glacial Period. Father Denza sends a lengthy and detailed article describing the avalanches in January 1885 and February 1888, particularly with reference to the Italian Alps. Those of the former year were far more destructive than those in the latter, which were almost entirely 'Staublawinen;' but, curiously enough, the number of lives lost was the same in each case—248. In 1888 the estimated damage amounted to about 4½ millions of francs. This volume is accompanied by Signori Fiorio and Ratti's treatise on the 'Dangers of the Alps,' which will be noticed separately, and by views of Monte Coglians and of Elbruz, as well as by a sketch map of the Liri basin. It is a good average volume, but does not stand out conspicuously from its predecessors, as has been the case with one or two of the more recent numbers of the series. W. A. B. Coolidge.

Jahrbuch des Schweizer Alpenclub. Vol. xxiv. 1888-9. (Bern: J. Dalp.)

This volume appeared rather later than usual, owing partly to delay in the arrival of the Rhone Glacier report, and also in the completion of the map of the Glarus Alps which accompanies it.

The Special District, though already tolerably well known, supplies some interesting articles. Professor W. Gröbli has for years devoted part of his holiday to the study of this district, and especially of its highest summit, the Ringelspitz (3,251 m.=10,666 ft.). He describes several ascents of this mountain by the usual route from the S.W. On August 7, 1887, he effected the first ascent from the side of the Kalfeuserthal. Starting with the guide David Kohler from Vättis at 2 A.M., they reached the Glaser Glacier, and then by a couloir running up towards the Ringelspitz and partly over rocks they reached at 10 A.M. the glacier plateau N.E. of the summit, which was gained from that side by a short but sharp scramble. On

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January 5, 1889, Dr. Gröbli with Herr E. Huber made the ascent by the usual route and descended into the Kalfeuserthal. Starting from the Alp Lavadignas at 6 A.M., the top was reached about 1 P.M. The final rocks were not more difficult than in summer. The descent was effected by the 1887 route. The Glaser Gletscher was quitted at 5 P.M. The rest of the descent was effected in the dark, and after many falls on the ice-covered road Vättis was reached at 9 P.M. Two papers are devoted to excursions in the Graue Hörner (N.E. of the Ringelspitz), whose highest summit is Piz Sol (2,825 m.=9,268 ft.). The ascent of the latter made by Herren Imhof and Zwicky on October 28, 1888, was exceedingly laborious, and the descent to the Lavtina Alp very dangerous. Starting from a hut on the Lasa Alp at 5.30 A.M., they reached an apparently unascended summit (2,650 m.=8,694 ft.) at 9.15 A.M. The ridge was followed for some time towards the Piz Sol, but they were forced at last to descend on to the snowfields. Here they sank in breast-deep, and often had to take six to eight steps to gain a few inches. The summit was not reached till 3.40 P.M. The descent over glazed rocks was difficult and dangerous, and Weisstannen was not reached till after midnight.

The geology of the Special District is discussed by Professor A. Heim, whose article is illustrated by several profiles of the Tamina valley. According to him the Rhine at a former period flowed over the Kunkels Pass and down the valley of the Tamina, its bed being then 700 m. (2,300 ft.) above Reichenau. Professor Meyer v. Knonau gives an interesting account of the chief centres of historical interest in the same district. This is divided into four heads—Sargans, Pfäffers with Ragatz, Luziensteig, and Maienfeld, of which the first two are in the present volume, whilst the others will appear next year. A separate article by Herr C. Brüsch is devoted to an account of the castle and district of Haldenstein (on the left bank of the Rhine, opposite Chur), which retained independent rights until 1803.

Out of the Special District there are accounts of ten ascents (either new or by new routes), which shows that plenty of new work remains to be done, unless everything below 4,000 mètres, or 13,000 ft., is excluded. On July 15, 1888, the brothers Paul and Charles Montandon, starting from Lauterbrunnen soon after midnight, reached the Steinberg Alp at 4 A.M. Leaving at 5.10 A.M., after a difficult ascent, especially in a couloir below the ridge, they reached the Tschingelgrat (3,140 m.=10 303 ft.) at 2 P.M. The last 200 m. took them two hours. The descent was effected more easily than was expected, thanks to the length of their rope. Herr P. Montandon with four others on August 9, 1888, made the first ascent of the Elwerrück (3,386 m.=11,109 ft.), the first peak to the east of the Bietschhorn, and on August 14 from the Schafberg hut they ascended the Bietschhorn by the west ridge, descending by the north ridge.

Dr. H. Dübi, after giving a *résumé* of the principal expeditions in the Viescher Grat (twelve in number, of which nine were made by English parties), proceeds to describe an expedition which presented a new combination. After being twice defeated by bad weather he left the Bäregg with Christian Jossi and Peter Schlegel on September 27,

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1888, at 1.10 A.M. The Zasenberghorn was reached at 4.10 A.M., the peak marked 3,570 mètres (=11,713 ft.) at 11.40 A.M., whence by the N. arête they reached the Ochsenhorn (3,905 mètres = 12,812 ft.) at 3.40 P.M. The descent was made to the Concordia hut. The soft snow made the excursion a very fatiguing one. Next day they started at 8 A.M., with the intention of crossing the Eiger Joch, but instead ascended the Gross Viescherhorn by the ordinary route, reaching its summit at 12.30 P.M. The Mönch Joch was reached by the N.W. arête of the peak at 4 P.M., the Bäregg at 9 P.M., and Grindelwald at 11 P.M. Some slips in Herr Dübi's paper, relating to English climbers, have been already pointed out in these pages.*

Pfarrer H. Baumgartner made the first ascent of the Kilchlistock (3,113 m.=10,213 ft.) from the W. side. This mountain, which descends to the Rhone Glacier in easy rocks and snow slopes, appears from the west side as a pyramid of forbidding steepness. On September 7, 1888, with M. Brémond and the guides Von Bergen, Moor, and Tännler, he started from Guttannen at 4 A.M. The small Hohmad Glacier was reached; then by a couloir and a traverse over rocks they reached the south-east ridge, by which the top was reached without serious difficulty at 10 A.M. The descent was made over the Steinhaushorn and the Furtwang Pass, and Guttannen was gained at 4 P.M. The same two gentlemen, and the guides Von Bergen and Tännler, on September 27 made the first ascent of the Bächlistock (3,274 m.=10,742 ft.). Leaving the Handeck inn at 4 A.M., the notch (3,047 mètres = 9,997 feet) to the S.E. of the peak was reached at 10 A.M. This pass had been made by Herr E. v. Fellenberg in 1877. The ascent from this point was impracticable. They therefore descended on the west side and then effected a traverse southwards to the small Trift Glacier on the S.W. of the peak. Much time was consumed in this, and the summit was not reached until 3.20 P.M. They followed the same line in the descent to the Trift Glacier. Thence the Pavillon Dolfuss was reached at 6 P.M.

Herr C. Seelig again describes a number of Sunday excursions in his happy hunting ground of the Geschenen Alp. His expected finds of crystals did not come off, because the snow made the spot inaccessible. His excursions, if not of much novelty, are not the less adventurous. For want, no doubt, of leisure he burns the candle at both ends in a way that must tell against him in the long run. Along with two friends, A. Näf and E. Huber, he left Zürich on the evening of June 2, 1888. At 11 P.M. they left the Geschenen station. They had to cross the remains of numerous avalanches, and the Geschenen Alp was not reached till 3 A.M. Leaving at 4 A.M., the Winter Glacier was reached at 7.20 A.M., and the col between the Winterstock and the Gletschhorn, after long struggling through soft snow, at 1 P.M. Herr E. Huber led, and the latter part of the ascent was so critical that Herr Seelig declared he would not for a thousand francs return the same way. The condition of the snow made the ascent of the Gletschhorn impossible. They descended southwards towards the

* *Alpine Journal*, vol. xiv. p. 514.

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Tiefen Glacier, but were at last stopped by a precipice and forced to return. The col was reached for the second time at 6.30 P.M. The dreaded traverse was effected in fear and trembling, and the Winterlücke was reached at 7.50 P.M. Down the glacier a space which had taken four hours in the ascent was passed in as many minutes, and at 9 P.M. they were once more at the Geschenen Alp. After several other Sunday excursions, on August 26 he made his way alone from Geschenen to the Salbit Alp, and about 10 A.M. was on the ridge a little to the south of the Kühplankenstock (3,223 m. = 10,575 ft.). Making his way towards it he passed several summits in the ridge, and at last came to one so sharp that he was obliged to let himself down by the rope into a narrow notch. He thoughtlessly drew the rope after him, and then found that he was regularly caught in a trap. Advance and retreat by the ridge were equally impossible. On the side of the Voralpthal was an absolute precipice. Eastwards towards the Rohrfirn was his only chance of escape. It was an awful position. He let himself down on to a narrow ledge about 25 feet below. Here the stones dislodged from the ledge fell on the snow 350 feet below without touching the rock. He now slid along the ledge with his back to the rock and his legs hanging down for about 50 feet. Then for some distance the descent was a little easier. The next 50 feet were the worst. No secure point could be found round which to place the rope. The only available piece of rock was loose: however the rope was put round it, and in fear and trembling he let himself down. Then the rope would not come away: only after repeated efforts did it move; and then the piece of rock came with it right upon him. The interposition of his axe saved him from serious injury, but he received a severe bruise on the head. Once more he had to let himself down; then the Rohrfirn was reached without difficulty. The descent of about 430 feet had taken 1 hr. 40 min. He now saw, as the mist slightly cleared away, that had he at once descended to the Rohrfirn on reaching the ridge he would have avoided all difficulty. In spite of this unpleasant experience he persevered in the ascent. The Kühplankenstock was reached at 2.20 P.M., and he was back in Geschenen at 6.30 P.M. The editor of the 'Jahrbuch' very properly reproves Herr Seelig for his rash proceeding. The fault, however, lay more in his carelessness in withdrawing the rope at a critical point than in his going either alone or in a fog. The Fleckistock (3,418 m. = 11,214 ft.), farther to the north in the same ridge, was first ascended by Herren Raillard and Fininger, with Ambrose Zgraggen and Caspar Blatter, in 1864. Since that time it seems to have remained unnoticed until 1888, in which year it was climbed no less than four times—twice by Herr E. Huber (May 20 and September 15) with Jos. Gamma; on October 28 by Herr Seelig with Jos. Zgraggen; and later in the year (December 9) by Herr Schumacher, of Basel. All these ascents were made from the Voralpthal. In the second and fourth the somewhat difficult ascent was effected by the Kartigelfirn to the Meienthal. This route affords a much shorter approach to the mountain than the Geschenenthal.

Herr A. Francke contributes an article on the Melchthal, including

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an ascent of the Hohenstollen, with many interesting particulars about its inhabitants.

Dr. Th. Curtius, with Klucker, made the first ascent of the highest peak of the Pizzi di Sciora (3,235 m. = 10,614 ft.). These summits lie in the lateral chain in the Val Bregaglia, which divides the Albigna and Bondasca Glaciers. The first attempt was made on August 17, 1887. Leaving the Capanna Badile, above the Bagni di Masino, at 5.30 A.M., the Passo di Bondo was reached at 8 A.M. The ascent was then continued by the ridge, which gradually increased in difficulty until, when not far from the summit, on account of the bad weather and the state of the snow, they abandoned the attempt. They observed that an easier way to the summit was from a lower point of the Bondasca Glacier across the west face. This was effected—August 14, 1888—from Promontogno. Starting at 2.15 A.M., after considerable difficulty with the *Bergschrund*, they reached the first rocks at 11.50 and the summit at 1.10 P.M. Herr August Lorria, on October 8, 1886, along with the late Michel Innerkofler, ascended the Croda Rossa (3,133 m. = 10,279 ft.) by a ravine (*Riss*) running up from the Gottresthal. This had been followed by Herr Wallner, with the same guide, in the descent some years before; but the ascent by it was more difficult, as in several places it was blocked up. There was one especially bad place about 20 feet high. Innerkofler, standing on Herr Lorria's shoulders, made three attempts in vain. The fourth time he succeeded. Herr Lorria followed on the rope, but at the critical point where the rock bulged he was pushed off and swung in the air. The rest of the ascent was easy, and the descent was made by the usual route.

The folding case attached to the volume contains a map of the Glarus Alps in two sheets, in which an attempt has been made by colour and shading to relieve the somewhat monotonous uniformity of the maps of the Siegfried Atlas, and to make them more intelligible to the popular mind. Herr Fr. Becker remarks that in proportion as maps cease to be pictorial, and represent the ground by mere mechanical curves and lines, they cease to attract the uninstructed eye. He remembers, at the Zürich exhibition of 1883, how the peasants admired the 1664 map of Canton Zürich, with its pictures of towns, &c., whilst they passed by unheeded the maps both of the Dufour and of the Siegfried Atlas. In the present map, as in those of the Niesen and of the Stockhorn chain in vols. xx. and xxii. of the 'Jahrbuch,' on the ground of the Siegfried Atlas, are added toned neutral colours to represent the natural appearance as seen from a great distance; the blue colour of the lakes and glaciers is retained; the light comes from the north-west. It is a praiseworthy attempt to make a map pleasing to the unlearned. Whether it will be equally so to the learned is a doubtful question.

Professor F. A. Forel, in his ninth article on the 'Variations Périodiques des Glaciers des Alpes,' refers to the discovery by Professor R. Wolf, of Zürich, of the eleven-years' cycle of the solar spots, and to the connection which Professor H. Fritz, of Zürich, has sought to establish between this cycle and that of the variation of the glaciers.

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He, however, declares that further observations fail to confirm this theory, since, from observations of more than 30 glaciers of the Western Alps, the period between two maxima appears to be not less than 38 years. He gives a number of particulars of the glaciers of the Eastern and Western Alps, of the Pyrenees, and of Greenland. The usual report on the Rhone Glacier is deferred to next year. Professor L. Rütimeyer explains the relation between the S.A.C. and the Commission for the survey of this glacier, and refutes some erroneous ideas about the application of its funds for this purpose. Amongst new ascents which have not been already mentioned or recorded in the 'Alpine Journal' are those of the Tagliaferro (2,973 m. = 9,754 ft.), by the north ridge, by SS. Sinigaglia and Defilippi, with C. Martinale and G. Bottoni; of the Hühnerthälihorn (3,181 m. = 10,436 ft.) by Herren C. Montandon and H. Kümmerli without guides; of the Bifertenstock (3,426 m. = 11,240 ft.) from the Frisal Glacier by Herr J. Weber-Imhof, with A. Pollinger and P. J. Truffer. In the early spring of 1888 a great avalanche fell in the Haslithal, near the Handeck, which destroyed the larger inn with the adjoining outhouses, and carried away the grove of trees there, which are at least 400 years old. Mr. Philip Gosset went up to examine and photograph the avalanche. On March 11 the party took more than half a day to go from Meyringen to Guttannen. Several places were dangerous from the frequent recurrence of avalanches. At Guttannen they were detained for a week by bad weather. On March 18 they reached the Handeck in 3 hours. The place was unrecognisable. The fall was completely covered over and no noise could be heard. One photograph was taken from the middle of the gorge. It would have been possible to ascend the whole way up the fall had time allowed. The question arises, What occasioned this avalanche, which had not been known to fall before for so many years? It is probable that the avalanche had often fallen before, but not come so far. Mr. Gosset concludes that the Handeck avalance fell because the glaciers are now in a period of increase, and that it advanced farther than ever before and did more damage because the people of Guttannen had unwisely cut parts of the ancient forest.

Professor Meyer von Knonau addresses a letter to the editor on the vexed question of Hannibal's passage of the Alps. He has perfect confidence in Polybius and none in Livy. The fiction of the latter about finding great quantities of wood in a treeless region (xxi. 37) utterly destroys his credibility. Therefore the only route is the Little St. Bernard.

Few of the heroes of the new school of mountaineering, who for some years figured so conspicuously in the pages of the 'Jahrbuch,' appear in the present volume. Herr Purtscheller, as a member of the S. A. C. (section St. Gallen), contributes a list for 1888 of 93 peaks and passes, of which three were new excursions. The principal of these was the ascent of the Eastern Verstanklahorn (3,260 m. = 10,696 ft.), a difficult climb, on September 5.

The S.A.C. has been accused by some of wasting its funds unjustifiably upon scientific objects which are without any practical

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value, whilst neglecting more useful objects, as the building of huts, the making of new paths, the marking of mountain routes, &c. This is of course a matter of opinion. It may be observed that in parts of the Austrian Alps some of these objects are quite overdone. In Southern Algäu there is hardly a peak up which a path has not been made and marked. In the summers of 1888 and 1889 the Societa degli Alpinisti Tridentini marked the way up nearly every peak which can be reached from the valley of the Adige. The traveller is no longer allowed to think for himself. Maps are henceforward at a discount, and the tourist is like a child in leading-strings.

In 1888 the S.A.C. had no general Club festival, but only a meeting of delegates. This took place at Olten on September 17.

Besides numerous illustrations in the volume there are, in a case attached to it, the map of the Glarus Alps, already referred to, a view of the chain of the Ringelspitz from the Tschepp, a view of the mountains of the Voralpthal from the Mittagstock, near Wasen, and a second addition to the most valuable bibliography of the literature of the Bernese Alps compiled by Dr. E. von Fellenberg. J. S.

New Editions, Pamphlets, &c.

Signori Bazzetta and Brusoni have already been obliged to bring out a second edition of their excellent guide to the Val d'Ossola and its lateral glens.* In order to reach a wider public, the new edition appears in a French dress, and contains also many additions and corrections of statements in the first issue; in particular a description of the railway journey from Milan to Gravellona by way of Novara, Gozzano, and the Lake of Orta. We noticed the first edition at length some time ago,† and are glad to be able to recommend its successor, which should specially be consulted by all climbers proposing to visit the ranges around the Falls of the Tosa at the head of the Val Formazza.

A second edition, too, has appeared of the Guide to the Valley of Aosta, by Signori Ratti and Casanova,‡ in which, besides the corrections of the slips which inevitably occur in a first edition, the section relating to the environs of Courmayeur and the chain of Mont Blanc has been entirely re-written.

Two further volumes (completing the series bearing the general title of 'Les Alpes Suisses') of the late M. Rambert's papers and articles relating to the Alps have been issued. § One contains his writings on historical and political subjects, nearly 200 pages being occupied by

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* *Guide Historique, Descriptif et Itinéraire de l'Ossola et ses Environs.* Par G. G. Bazzetta et E. Brusoni. (Domo d'Ossola, 1889. 3 francs.)

† *Alpine Journal*, vol. xiv. pp. 338–9.

‡ *Guida Illustrata della Valle d'Aosta.* Di C. Ratti e F. Casanova. (Turin: Casanova, 1889. 5 francs.) See *Alpine Journal*, vol. xiii. pp. 490–1.

§ *Etudes Historiques et Nationales.* Par Eugène Rambert. *Etudes de Littérature Alpestre, et la Marmotte au Collier.* Par Eugène Rambert. (Both published by F. Rouge at Lausanne, 1889. 3 francs 50 centimes a volume.) See *Alpine Journal*, vol. xiv. p. 340.

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his excellent and detailed account of the 'Landsgemeinden' of the Democratic Cantons. The other is filled with various scattered papers of a literary nature, *e.g.* notices of Friedrich von Tschudi and his celebrated work 'Le Monde des Alpes,' of 'Tartarin sur les Alpes,' of Schiller and Goethe, and the ideas, imaginary and real, of the Alps, besides the quaint diary entitled 'La Marmotte au Collier—journal d'un philosophe.' The books are well printed, and form a worthy monument of one who loved the Alps well.

Several new numbers have been added to the useful series 'Europäische Wanderbilder,'* while English and French translations of many earlier numbers, including the guide-book to the Valais have been favourably mentioned in these pages.† Of the most recent numbers (still in German dress only) we may mention: 151, the Hungarian Carpathians; 152, Meran; 153–4, the railway up Pilatus (very complete and interesting); 155, Le Prese; and 160, Waldhaus-Flims. The reputation of this series is so deservedly great that we need not do more than chronicle these latest additions to it.

Herr Buchheister, a medical man of Hamburg, publishes a lecture he delivered on the subject of 'Mountain Climbing.'‡ The first half is taken up with a description of the mechanical causes and effects of climbing, together with a consideration of the foods best adapted to make up for the waste of muscular power. The author strongly recommends bacon and black bread, condemns extract of meat unreservedly as useless though agreeable (!), and highly approves drinking glacier and spring water while on the march. The second half of the pamphlet discourses on mountain apparatus and mountain dangers, and is largely borrowed from Dr. Güssfeldt's writings, several allusions being also made to the late Emil Zsigmondy's book on the 'Dangers of the Alps.' 'Steigeisen' are approved of, but guideless climbing is viewed with great disfavour. Dr. Buchheister seems, however, to miss the point when he asserts that, while certain amateurs can climb as well as guides, yet it is wrong to maintain (as has been done lately) that the best amateurs, when among mountains unknown to them, are inferior to the guides of the district. We cannot believe that no one ever dreamed of making the latter statement, for the real question is, What are the relative merits of guides and amateurs when the mountains which they are climbing are unknown to both or known to both? A comparison implies similar conditions. Many of the author's other remarks on the guide question will be cordially endorsed by all experienced climbers, though he modestly claims to be no more than a moderate mountaineer.

Dr. Carl Schmidt, of Basel, also publishes a lecture delivered by him on the subject of the Geology of the Swiss Alps.§ He first

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* Orel, Füssli & Co., Zürich. 6*d.* a piece.

† *Alpine Journal*, vol. xiii. p. 277; vol. xiv. pp. 265–6.

‡ *Ueber das Bergsteigen.* Von Dr. med. J. Buchheister. No. 78 of the new series of Virchow's *Sammlung gemeinverständlicher wissenschaftlicher Vorträge.* (Hamburg, 1889. 8vo., pp. 40. Price 1*s.*)

§ *Zur Geologie der Schweizeralpen.* Von Dr. Carl Schmidt. (Basel: Benno Schwabe, 1889. 8vo. pp. 52. 2 francs.)

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describes how the different kinds of rocks were formed, and then how the Swiss Alps were built up. He adopts Hutton's view, that causes actually at work are sufficient to account for the history of the earth's crust, and that it is not necessary to call in the aid of cataclysms or revolutions. Some diagrams serve to illustrate the statements contained in this unpretending and not uninteresting lecture, which was originally composed as the author's 'Habilitationsschrift' for the position of 'Privatdocent,' which he holds at present.

Another work treats of Switzerland, not as a geological museum, but as a hospital for invalids.* A good deal of useful information about the climate, mineral waters, and general characteristics and accommodation is given as to all the chief health-resorts in Switzerland, arranged in alphabetical order. Zermatt appears in this list, but not Chamonix or Grindelwald. The numerous illustrations are fairly well done (though one is rather startled, while perusing a book of this description, to come across a view taken from the summit of the Matterhorn), and the hints as to how to reach the different places are very full and accurate. As an appendix, some account is given of the wintering-places along the Mediterranean coast; the excuse for including them in a book relating to Switzerland being that many persons pass their winter in the South, and the rest of the year in Switzerland. 'La Suisse et le Midi se complètent l'un l'autre.' It is proposed to issue an edition of this book every year, thoroughly revised and brought up to date. Its subject and arrangement carry our minds back to the seventeenth- and eighteenth-century Swiss 'Badschriften.'

The six Piedmontese sections of the Italian Alpine Club (Turin, Aosta, Varallo, Domo d'Ossola, Biella, and Pinerclo) have recently issued two very useful little books in connection with the organisation of the guides in those parts of the Alps which they have lately effected.† One contains the regulations for the guides (printed in Italian and French), and is followed by fifty-four carefully arranged tables of the tariffs for the guides and porters of each district, the tables including nearly every conceivable peak and pass from the Col de Tenda to the Gries Pass, the height (in mètres) being given in each case, as well as the number of hours required to effect the expedition. The prices seem reasonable enough, *e.g.* Monte Viso 25 to 35 francs, Bessanese 25 francs, Ciamarella 15 to 25 francs; but 35 for the Grand Paradis by the very easy route up from Val Savaranche, and 60 for crossing to Cogne or ascending it from that place seems a high price, for 35 is the sum asked for the far harder Becca d'Invergnan, and 45 for the very difficult Col de la Grande Rousse, while the Grivola is priced at 30 only. The Courmayeur tariff is, as might naturally be expected, by far the highest in the book, *e.g.* 100 to 130 francs for crossing Mont Blanc and returning, and 70 for the Aiguille du Midi, while 80 only are asked for the Col

* *Annuaire de la Suisse Pittoresque et Hygiénique.* (Lausanne: Bureau de la *Bibliothèque Universelle*, 1889. Small 8vo., pp. 402. 3 francs 50 centimes.)

† *Arruolamento delle Guide e Portatori del Club Alpino Italiano—Elenco delle Escursioni e Tariffe nelle Alpi Occidentali.* (Turin: Candeletti, 1888. 8vo. pp. 95.)

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de la Brenva. The Aiguille Noire du Péteret is priced at 70, while it is remarked in a note that for the Aiguille Blanche du Péteret travellers must make their own bargains with the guides and porters. The 120 asked for crossing the Dent d'Hérens is probably influenced by the 150 for crossing its neighbour the Matterhorn. As a whole, however, the tariffs cannot be complained of.

A smaller book * contains the names of the guides and porters licensed and insured by the C.A.I., arranged under the separate villages. Each guide's name is followed by a list of the expeditions he has made, which is very curious reading, though there are some slips here and there.

Both pamphlets will be henceforth indispensable to travellers in the Piedmontese Alps, and the associated sections of the C.A.I. deserve great praise for their efforts to create and to maintain a class of trustworthy guides in many of the remoter parts of the Italian Alps.

WINTER EXHIBITION.

The picture and photograph exhibition, accompanying the Winter Dinner this year, was one of the most successful the Club has yet organised. The tendency, already apparent on the last two or three occasions of the same kind, for more attention to be bestowed upon the photographs than upon the paintings and drawings, was again manifested. It must be confessed that, the subjects of the photographs being considered, this was not unreasonable. We know our Matterhorn, Weisshorn, and all the rest so well that there is a charm in turning to something fresh; it is the self-same charm that attracts those climbers who have the time, strength, and money away from the Alps to less hackneyed districts. The great photograph of the year was Signor Sella's wonderful view from the slopes of the eastern peak of Elbruz, in which all the famous Caucasian peaks are ranged in their order, rising out of a sea of cloud.† There were many more Caucasus views by the same well-known photographer, besides an interesting series contributed by Mr. Woolley. A collection of Rocky Mountain and other American photographs was exhibited by Mr. Baillie-Grohmann, and a series of views in Bosnia and the Herzegovina by M. Déchy. Mr. H. Holmes also showed some good Alpine views, but the novelty in Swiss photographs was the wonderful series of cloud effects, caught with much skill and with a rare artistic sense by M. Loppé.

Amongst the paintings the palm was carried off by Mr. Compton's beautiful picture of the Hochalpenspitze. The light in the sky and

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* *Guide e Portatori riconosciuti ed assicurati dal Club Alpino Italiano arruolati dal Consorzio fra le Sezioni delle Alpi Occidentali.* (Turin: Candeletti, 1888. Oblong, pp. 37.)

† Signor Sella has also produced this panorama in an enlarged form, in which it presents probably the most impressive reproduction of a high mountain view that has yet been seen. All Signor Sella's photographs can be purchased at Messrs. Spooner's, where a priced catalogue may be obtained.

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