The hole itself is one of the finest (though not one of the deepest) that I have ever visited, and daylight penetrates to the very bottom. The large cathedral cave acts as a reservoir to Clapham Beck, and so is very interesting and important.

I dare not hope that I shall ever have another chance of going down grand Gaping Ghyll, but I hope most sincerely that the Leeds gentlemen (Messrs. Calvert, Booth, Gray, Green, Bellhouse, &c.), who since my descent have been twice hindered by rain from repeating it, may succeed as soon as possible, not merely in order to confirm my report, but also to remove the boulders which stopped me, and so to discover the other caves which certainly exist there. To accomplish this a large party must be lowered down.

All round Ingleborough, and in many other parts of England and Ireland, there are many such pot-holes, well worthy to excite the curiosity and stimulate the boldness of the most capable and hardy Alpine climbers. To these I would venture to say, 'Try mountaineering reversed for once.'

THE RIDGE CONNECTING THE M. VÉLAN AND THE GRAND COMBIN.

By ALFRED G. TOPHAM.

Both the Italian Government map and the more recent sheet 532 *bis* of the Swiss map are terribly mixed in the nomenclature of this frontier ridge. In the scheme below I have endeavoured to put matters straight. The ridge, which is mostly very jagged, is very conspicuous from the south side of the Col de Fenêtre. It is also seen, though much dwarfed by its big neighbours, from Aosta, and from the Lac de Champex, and I have distinguished the Lake of Geneva from one of the summits. On the west side the cliff which cuts in two the Sonadon Glacier is carried right across the face of all the aiguilles, and it is only after gaining the Col de Valsorey, and from the upper névé of the Sonadon Glacier, that any approach can be made to the frontier. Several years since I attempted an ascent from this side, but the formidable lines of precipices one above another turned us back, and drove us another year to the east side. From the Vélan to the Col de Valsorey this side is composed of steep though broken-up rocks, but on touching the Trois Frères this is altered. On the lower slopes most uncompromising *plaques* are encountered, surmounted by the tall, thin aiguilles; but from Mont Percé onwards a narrow, easily gained snow-field lies high up at their feet.

In the following list the first column contains the recognised names of the summits and cols, in proper order; the second column the inadequate and often wrong nomenclature of the Swiss map; the third that of the Italian map, and the fourth details of ascents.

Digitized by Google

Table of Summits, &c., from M. Vélan to the Col du Sonadon.

Correct Names	S. Map	I. Map	Remarks and First Ascents
Tête d'Ariondet . .	—	--	C. G. Monro and O. G. Jones 'A. J.' xv. 545 'A. J.' xvi. 361
M. Capucin . . .	3,467 m.	3,406 m.	C. G. Monro and O. G. Jones 'A. J.' xv. 545
Col des Chamois . .	—	—	—
M. Cordina, or Tête de Cordon (1) . .	—	—	Walter Leaf and G. W. Prothero 'A. J.' xv. 544
Col de Valsorey . .	Col des Chamois ou de Valsorey (3,113 m.)	3,087 m.	C. E. Mathews and A. Reilly 'A. J.' ii. 364 'Boll.' v. 52
Les Trois Frères . .	M. Capucin (3,270 m.)	M. Cordina (3,269 m.)	A. G. Topham 'A. J.' xvi. 515 'A. J.' xvi. 359
Aiguilles de Valsorey (2)	—	—	—
Gran Carré (3) . .	Les Trois Frères (3,248 m.)	—	—
Mont Percé (4) . .	Le Tunnel	M. Percé (3,262 m.)	A. G. Topham 'A. J.' xvi.' 515
Aiguilles de Luisettes (5)	Aiguille de Luisettes	M. Tre Fratelli (3,418 m.)	E. Carr 'A. J.' xv. 261, 301, 302
Col de Luisettes . .	—	—	E. Carr 'A. J.' xv. 261, 301, 302
West Aiguille Verte de Valsorey . . .	Aiguilles Vertes	—	—
Col Vert de Valsorey .	—	—	W. M. Conway and F. M. Davies 'A. J.' xv. 261, 301, 302
East Aiguille Verte de Valsorey . . .	3,503 m.	3,467 m.	E. Colomb and L. Kurz 'Echo des Alpes,' 1887, 197-212
Col d'Amianthe (6) .	—	—	'Echo des Alpes,' 1887, 206
Amianthe . . .	Amianthe and Gran Testa di By (3,600 m.)	Gran Testa di By (3,584 m.)	H. V. Reade and T. H. Dickson (7) 'A. J.' xviii. 48 Ratti and Casanova, 257 'D.u.Oe.A.Z.' 461

(1) That the first climbers of the Capucin and Cordina were much confused by the existing information is seen by the two entries in the 'Journal' and the accompanying note. Both parties give to the summit immediately S.W. of the true

Digitized by Google

Col des Chamois the height of 3,467 m. or 3,406 m. These heights on the S. and I. maps are rather in the position of where the Ariondet is situated, but it is probable that the cartographers meant these heights to apply to the more conspicuous Capucin.

(2) A three-headed peak. The whole ridge used to be known by this name, but it is best restricted to this group.

(3) This summit is really the flat-topped extreme N. end of the Trois-Frères Aigs. de Valsorey group. It is hardly worthy of a name, but is known to the guide Balley as M. Carré.

(4) The position assigned to M. Percé by the Italian map is correct. It is immediately N.E. of a snowy depression, and not where placed on the latest edition of the S. sheet. On the latter it should be exactly over the L. of the wrongly placed Les Trois Frères. The older edition gives a height 2,827 m. as the correct position for the Percé, but these figures are probably meant for the height of the snowy depression. M. Percé is also sometimes called the Fenêtre de Valsorey.

(5) This being also a three-headed peak will account for the wrong name on the I. map, and the position of the name on the map points to the most easterly of the three. All three summits were ascended.

(6) This pass is wrongly called the Col de l'Aiguille Verte de Valsorey in the 'C.P.G.' The col was reached from the N. by E. Colomb and L. Kurz, but they did not descend the Ollomont by it.

(7) There seems to be no recorded ascent previous to the one here given, which was made on August 26, 1895, a large cairn being then found on the summit. It is a snowy summit rising out of the great Durand Glacier immediately S. of the Col de Sonadon, and is also sometimes known as the M. Sonadon.

If the above scheme is not perfect it will serve as a 'point de départ.'

ALPINE NOTES.

THE BIRRENHORN, BIRRE, OR BIERENSTOCK. *September* 13.—A direct route up the S. face of this little peak (2,511 m.), differing somewhat from that described by Mr. Wherry in the last number of the Journal,* was found by Messrs. H. V. Reade, T. H. Dickson, and C. S. Ascherson (without guides), who were ignorant of the details of the former ascent. The foot of the rocks at the W. end of the S. face, which are about 650 m. in height, was reached in 2 hrs. from the Hôtel Victoria at Kandersteg by zigzagging up the grass slopes above the chalets of Hubeln; then Mr. Wherry's couloir was taken to, but, instead of quitting it by the traverse 'to the W.S.W. as far as some little pine trees,' the party followed it to the top. It is broken by pitches of varying steepness and difficulty, and ends in a fine vertical chimney about 60 feet high, blocked at the top by a large boulder, forming a cave, from which a difficult and, for the leader, somewhat risky exit is made by working through a narrow rift and climbing the left wall of the chimney. The top of the ridge is then reached some way to the E. of Mr. Wherry's 'Fenster.'

* *Alpine Journal*, vol. xvii. p. 600.

Digitized by Google