

## Alpine Panoramas and Peepshows

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TOWARD the end of the eighteenth century there arose in many European cities and towns the urge to make, exhibit and view models of the Alps, for the dual purpose of refreshing the traveller's mind and to emphasize the birdseye view—the tridimensional effect, since few valley wanderers a century ago had any conception of the immense interlocking topography of mountain massifs. Such exhibits, supplemental as they were to stage production with Alpine scenery, focused attention directly on the mountains themselves. Here was no posturing hero, no swooning heroine, no incidental music or even plot. It was topography alone, a novelty, and the public liked it.

### RELIEFS

Relief maps are intended to represent a portion of ground in a fashion true to nature. In the glacier garden at Lucerne one can still see the earliest triangulated map of the Alps, made by Lieut.-General Franz Louis Pfyffer (1716-1802) during 1766-85. At the end of ten years' work the portion completed was 9.5 x 12 ft. Coxe (*Sketches in Switzerland*, 124) says: "The principal part is composed of wax, the mountains of stone, and the whole is coloured. . . . The plan is so minutely exact that it takes in not only all the mountains, lakes, rivers, towns, villages, and forests, but every cottage, every torrent, every bridge, and even every cross is distinctly and accurately represented." The final dimensions were 22.5 x 12 ft., the horizontal scale being 1:13,000 and the vertical 1:10,000.

De Saussure examined this model on several occasions when he was the general's guest (*Voyages*, §1944), and in 1791 visited Aarau to see similar work by Johann Rudolf Meyer (1752-1833; his sons made the first ascent of the Jungfrau in 1811), a silk manufacturer who had made some small reliefs as a basis for printing mountain panoramas on fabrics. Meyer had also engaged Johann Heinrich Weiss (1759-1856), a geographer of Strassburg, to undertake a relief of Switzerland 7 x 14 ft., from Mont Blanc

to the Lake of Constance, which de Saussure (*Voyages*, §1941) thought would be finished within the year.

Co-worker with Weiss was Joachim Eugen Müller (1752-1832), of Engelberg, who had assisted in the making of Pfyffer's model. For the purposes of the new work, Meyer, Weiss and Müller ascended the Titlis in 1787, and Weiss crossed the Oberaargoch about 1796. H. Dübi ("The Early Swiss Pioneers of the Alps," *A. J.*, 33, 77) says that the relief (1:60,000) "was constructed between 1786 and 1797 under Meyer's supervision at his house in Aarau by Weiss and Müller. A few smaller ones were made by Müller alone, especially one representing the Alps from Thun to the Italian lakes, and from the source of the Rhone to the mouth of the Lötschenthal."

Although the relief was not completed until 1797, during the period 1796-1802 Weiss brought out sheets of his *Atlas of Switzerland* (16 sheets, 1:115,200—made from the relief, as was then the custom, contour sheets not appearing until a later time), the best topographical representation of that country for a generation. In 1803 Meyer sold the relief to the French government for 25,000 francs, and Napoleon installed it at St. Cloud.

Caspar Rohrdorf (1773-1843), of Zürich, saw the reliefs of the Oberland by Weiss and Müller in the Berne museum, and decided to issue a new edition of the smaller one corrected by observation in the field. This he did in the summer of 1828, when he was the first to reach the Jungfrauoch and the Mathildenspitze (Sattelknopf). In December he deposited the finished work in the Berne townhall, advising the public that copies (15 x 20 inches) could be ordered. One of these is still to be found at Zürich.

Charles-François Exchaquet (1746-92), early explorer of the Col du Géant and director of the mines at Servoz, about 1786 "was constructing and selling relief maps of the chain of Mont Blanc, of part of the Valais, and of the St. Gotthard group. The models of Mont Blanc, sold for the high price of thirty louis, were made of wood, the snows and pastures being shown in their natural colours and the glaciers represented by fragments of spar tinted sky-blue." The interest in the Alps, awakened by the ascent of the highest summit, created a demand for reliefs of this kind, although but two examples of Exchaquet's relief of Mont Blanc now exist, one presented by Baron de Gersdorf to the Görlitz

museum and another in the collection of the Geneva section of the S. A. C.<sup>1</sup>

When Napoleon was in Chambéry in 1805, a model of Mont Blanc<sup>2</sup> 12 ft. long was placed in his apartment with the following lines appended:

"Sur ses bases éternelles  
Le Mont Blanc est moins assuré  
Que dans nos coeurs fidèles,  
De tes lois l'Empire sacré!"

In 1817, J. B. Troye, of 30 Frith Street, Soho, who advertised himself as a pupil of Exchaquet, and had probably been his workman, was offering for sale small models of Mont Blanc; and also exhibiting the *Mountains of Swisserland* at the Museum, Piccadilly, a series of carved reliefs, as described in his booklet, *A Short Account of Mont Blanc and the Valley of Chamouni*: "The representations of the undermentioned Places in relievos . . . are modelled after nature by the author, J. B. Troye, who resided purposely on the spot, and who was Pupil to the celebrated Exchaquet, Draftsman to his Majesty the King of Sardinia. As J. Troye has carved in wood several relievos of these places under the direction of Exchaquet himself, he can, from the experience he has had, offer with confidence his services to amateurs in general, for the executing, in a similar manner, and with similar accuracy, a model of whatever place may be the objec [*sic*] of their preference. The Mont Blanc Valley, of Bagnes, lately inundated, and Passage of the St. Bernard. Switzerland. City of Geneva, carved in Wood. Simplon."

<sup>1</sup> Through the courtesy of M. Paul Gilliland, we have received a photograph of this model, the Geneva section also possessing one of the St. Gotthard by Exchaquet. The Mont Blanc relief (1:34,000) is illustrated in J. P. von Berchem's *Itinéraire de la vallée de Chamouni*. From that of the St. Gotthard (1:16,666) was made the map for C. de Mechel's *Itinéraire du St. Gotthard* (1795). Exchaquet also made a relief of the vicinity of Aigle (1:15,000), a smaller one of Lake Geneva, and one of the Diablerets (150 x 150 cm.), an example of the latter being preserved in Berne. A detailed description of this work will be found in *Journal de Lausanne*, December 1st, 1787. Charles-François Exchaquet is mentioned by B. Studer (*Geschichte der Physische Geographie der Schweiz*, 439), by H. Dübi (*Wytenbach und seine Freunde*, 75), by H. F. Montagnier ("Early History of the Col du Géant," *A.J.*, 33, 363), as well as in a biographical study in *Die Alpen*, xi (1935), 187; so Coolidge (*Swiss Travel*, 173) would seem to be mistaken in ascribing the reliefs to Henri Abram Exchaquet (1742-1814), Freshfield (*Life of de Saussure*) following the same error. Even Montagnier (*loc. cit.*) was unaware that any of these reliefs still existed.

<sup>2</sup> Probably by Louis Albert Bacler-d'Albe (1761-1824), who had lived for seven years at Sallanches and had become Napoleon's chief topographer.

In a later notice (1821) from 8 Soho Square, "Models of the Valley of Bagnes, of the Simplon, of Mt. Cenis, of Mt. St. Gothard, of Switzerland, and the Valley of Chamouni, are executed and sold by J. B. Troye, Sculptor and Modeller of Her late Royal Highness the Princess Charlotte of Saxe Coburg, and to His Royal Highness the Duke of Gloucester at his Exhibition of the Mountains of Swisserland."

Three small reliefs by Troye, in the writer's possession, are made of papier maché and mounted in wooden cases 11 x 13 inches, in the lids of which are keys to various numbered points. The scale is approximately two inches to one mile. They are finished with care, forests and individual clumps of trees being represented by green fabric fluff, while rivers and roads are painted in, with tiny paper bridges thrown across the streams. Tunnels are actually cut through the buttresses, and each relief had more than 100 minute red-roofed houses arranged to show the locations of cities, villages and even isolated chalets. The average size of the houses is little larger than one cubic *millimetre*, and an attempt has been made to show relative scale, hospices (the tower of the Mt. Cenis hospice is 2 mm. high) being larger than ordinary houses, making the appearance far more real than is the case of Pfyffer's relief, where church steeples are often as tall as nearby peaks. The mountains are painted in natural colors, snowfields ending in glaciers made of crystal fragments.

(1) *Passage of the Mont Cenis*.—On this model the road is shown in zigzags from Lanslebourg to the pass, but a straight blue line marked *La Ramasse* indicates the sledge route long a feature of the descent on the north side. A bit of blue glass indicates the Lac du Mont Cenis. S. E. of the pass are the Roche Michel and Roche Melon, the winding road with its villages and bridges being shown as far as the city of Susa. A road (? to the Col du l'Autaret) curving S. E. from Lanslebourg is called *Route établie par le Roi de Sardaigne*.

(2) *Model of the Simplon, with the New Road and Rocks excavated by Napoleon Buonaparte to facilitate the Passage of the French Army into Italy*, is the lengthy title of the second relief, but which dates it within a few years after 1805. It extends from the Rhone (valleys of St. Niklaus, Saas and Binn) southward, the road winding through tunnels and across bridges from Brigue to Domodossola, past the hospice and village of Simplon.



The Safischjoch (Binn to Bérisal) is called *Passage de la Furca*. E. of the pass are the following peaks: Frugerhorn, Mederhorn (1900 fathom, accessible), and Pic du Lion (Monte Leone); to the W. are Fluschnhorn (Fletschnhorn) and Frigishorn. The named glaciers are Alatsch (Aletsch), Remi-Gels, Breitschnhorn, Kalt-Wasser and Mont Rosboden 1600 fathom. Brigue is said to be 207 fathoms above the Mediterranean.

(3) *Mont Blanc*, acquired by purchase through the Alpine Club, is the relief mentioned by Freshfield (*Life of de Saussure*, 244). As Troye described himself as "sculptor to her late Royal Highness the Princess Charlotte," and as this lady (daughter of George IV) died in 1817, the model is in all likelihood the first of Mont Blanc to have been made in England. Its details are easily recognized when compared with modern airplane photos.

Only two of the higher peaks are given elevations in the printed reference table: Mont Blanc, 14,556 ft. and Aig. d'Argentière, 11,412 ft. The Aig. de Bionnassay is called Mont Suc. On Mont Blanc are indicated (on the Grand Plateau) the *Passage de Saussure* and the *Grotte au l'on Couchè*. The Aig. du Midi is properly shown, but the remaining needles W. of the Mer de Glace are grouped as Aiguilles de Charmoz, the legend being applied in the position of the Aig. du Plan. At the Montanvert we are shown the Hospices de Mons. Blair, the Hospices de Mons. Deporte [*sic*] and the Pierre des Anglais. The Jardin is indicated, and the Mer de Glace then descended to the *Arveiron et sa Grotte*. La Grande Jorasse and Le Géant are shown in proper relation to the col, where the legend places a Chalet des Mulets.

The Verte, Dru, Aig. d'Argentière (legend placed on location of les Courtes), and Aig. du Chardonnet are also shown, the latter bearing the older name of Aiguille à Bochart. At the head of the Argentière Glacier is a pointed peak which might well be Mont Dolent, although this portion of the chain was not accurately known for another quarter of a century. The Glacier du Tour is named, as are also the Col de Balme and the Tête Noire. Le Prieuré de Chamouni is given an elevation of 3154 ft. On the Italian side, Courmayeur is not shown, but the Lac Combal is correctly placed. Strangely enough, the legend for the Brenva Glacier is placed in the location of the Géant séracs.

When Sir Thomas Raffles visited Chamonix in 1817, a Monsieur Crotet offered his services as guide to the glaciers. "He

traced out to us the plan of our route upon a beautiful model of the Alps of Savoy, executed in relief, which he brought with him for the double purpose of information and traffic."

In 1825, M. Gaudin, a maker of barometers, exhibited a *Model of Switzerland* at Egyptian Hall, Piccadilly. He then moved it back to Geneva, where its location is shown in Burford's panorama of that city (1827). Frederick Clissold saw it there in 1822, prior to his ascent of Mont Blanc, and says that "this model is 24 ft. long and 19 wide; exhibiting the whole line of the Jura, the Alps and intermediate country." Markham Sherwill, returning from Chamonix in 1825, thought this relief as perfect as could possibly be made. The Alpine Club (London) possesses an undated relief of Mont Blanc signed by L. Gaudin, made at Geneva. It is of plaster and measures 18.5 x 24 inches, the glaciers and snowfields colored white, icefalls in light brown, foothills green with trees indicated in black.

A German cartographer, K. W. Kummer, constructed a relief (*Stereorama*) of the Chamonix Valley and Mont Blanc, showing it about 1822 in Berlin, the scale being 2:1,000,000.

Dr. Martin Barry ascended Mont Blanc in 1834, and in March, 1836, described his adventure in two lectures for the benefit of the Royal Infirmary of Edinburgh, illustrating the discussion by a relief (46 sq. ft.) executed by Slater, an Edinburgh sculptor, which was then presented to the Royal Museum of Natural History in that city.<sup>3</sup>

At Chamonix in 1855 there was exhibited a large-scale relief of the Alps, from Mont Blanc to the Simplon, by Michel Carrier, as well as a diorama depicting various events in the ascent of Mont Blanc and adjacent peaks. The relief had been constructed considerably earlier, Carrier having received a medal for it at the National Exposition at Turin in 1844.

It was probably another model about which, at some time after 1870, Clinton Dent wrote: "We studied the *carte en relief*, but without much hope of getting any information of value from this inaccurate and lumpy absurdity. Mont Blanc, which according to this work of plastic art, was modelled out as some eight or ten thousand feet higher than any other point of the chain, had all

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<sup>3</sup> The director of the Royal Scottish Museum states that the relief was one of a number of models destroyed about twenty years ago because of their bad condition and exaggerated vertical scale.

the snow worn off its summit by much fingering . . . Still a considerable number of people seemed willing enough to pay fifty centimes for the pleasure of indicating elaborate expeditions on it with their forefingers, and appeared to derive pleasure from gazing at a pasteboard misrepresentation when they could by looking out of the window see the real thing for nothing."

In 1857 a relief was being shown on the Promenade du Lac, Geneva, covering Mont Blanc, the Valley of Chamonix and the Great St. Bernard. It was 20 x 14 ft., completely carved in wood after six years of study and work. Six hundred thousand tiny firs were planted to represent the immense forests, while villages and chalets were shown in miniature. The scale was 1:6000, embracing Martigny, the Buet, St. Gervais, the cols du Bonhomme, des Fours and de la Seigne, the Allée Blanche, Courmayeur and the valley of Aosta.

Mark Twain, in his *Tramp Abroad* (1878), did not disdain a lesson in topography when working out his journey from Interlaken to Zermatt. "The courier thought that the portier of the hotel might be able to tell us how to find our way. And so it turned out. He showed us the whole thing on a relief-map, and we could see our route, with all its elevations and depressions, its villages and its rivers, as clearly as if we were sailing over it in a balloon. A relief-map is a great thing."

For the Eastern Alps it may be mentioned that Pauling, of the Austrian Military-Geographic Institute, made a large relief of the Semmering (afterwards destroyed) for the Paris Exposition of 1855. For extraordinary devotion, however, one must turn to the reliefs of F. Keil, born in 1822 at Graslitz, Bohemia. Giving up his vocation as a pharmacist, he moved to Salzburg in 1859, where he literally starved until the value of his work attracted official attention. He made a relief of the Gross Glockner (1:48,000), enlarging this in three sections to cover the Tauern Range from the Dreiherrenspitze to the Ankogel, the whole being preserved in the Salzburg Carolino-Augustum. In checking measurements Keil was killed by a fall on the Hochschober in 1876.

#### PANORAMAS

A panorama is a pictorial representation of the whole view visible by an observer turning to look successively at all points of the horizon. They were frequently constructed on the interior

of cylindrical surfaces 60-130 ft. in diameter, and were first executed by an Edinburgh artist, Robert Barker, as early as 1788.

Marquard Wocher (d. Basle, 1820), a well-known artist who executed the engravings of de Saussure's ascent of Mont Blanc, including the suppressed plate of the descent, exhibited a *Panorama of Thun* in Berne about 1814.

Henry Aston Barker charged one shilling admittance to each of his paintings in the great rotunda of the Panorama, Leicester Square, during 1821; his *View of Bern and the High Alps* being shown with an interesting *View of Lausanne and the Lake of Geneva*.

At the Panorama, Strand, during 1827, Robert Burford showed a *View of the City and Lake of Geneva*, painted from drawings made by himself in the preceding year. Mont Blanc is seen in the distance. An interesting opinion is contained in a letter from D. W. Freshfield to John Ruskin in 1878: "Calame and that man . . . I forget his name—were merely vulgar and stupid panorama painters. The real old Burford work was worth a million of them." Albert Smith said of Burford that he never could be an orphan, as he was never without a pa-nor-a-ma!

Burford first presented his *View of Mont Blanc, the Valley of Chamounix, and the surrounding Mountains* at the Panorama, Leicester Square, February 3d, 1837, from drawings which he and his assistant, Mr. Selous, had made from the Flégère in 1853. "The time represented is evening, when the atmosphere is nearly cloudless, and the snow-clad heights shine resplendently, the lofty peaks reflecting the richest hues of the setting sun, long after the luminary which gilds them has sunk below the mountains and become invisible to the lower world . . . On our entering the room we felt as if *shut in by shadows*. In attempting justice to the aerial perspective of such a landscape, within the limited circle of the panorama, it must be, indeed, difficult for the artist to avoid sacrificing something of firmness and substance. With every succeeding minute, however, one object after another seemed to *come out*—one vista after another to open itself before us. The nearer portions of the picture are painted with unusual care and delicacy."

Although the mountain had been depicted by Daguerre in his Paris diorama of 1833, this was probably the first time Mont Blanc was shown on such a large scale in England. Burford was offering a *Panorama from the Rigi* as late as 1849, when Albert Smith

attested to its accuracy. The proprietor felt it necessary to announce that this was not an ordinary shoddy piece of scenery, but a painting made with the finest artist's colors.

The discovery of refrigeration gave further scope to the use of a panorama in *The Glaciarum*, in Baker Street, Portman Square, during 1843. "The small specimen of *Artificial Ice* is Removed from the Colosseum, and a surface of 3000 sq. ft. is now exhibiting, and open to the Public for Skating on, at all seasons, on which the skaters may be seen performing their elegant evolutions, amidst Alpine scenery, covered with snow and hoar frost, forming a beautiful and faithful Panorama of Lucerne and its lake frozen, taken on the spot expressly by Mr. F. Phillips. From Eleven till Dusk; and in the Evening, beautifully illuminated from Seven till Ten o'clock; with the addition of a Promenade Musicale, under the direction of Mr. A. Sedgwick. Admittance 1s. Charge for Skating 1s. per hour, without additional charge for skates and attendance, which are provided."

A *Panorama of the Bernese Alps* attracted visitors to the Midway Plaisance of the World's Columbian Exposition, Chicago, in 1893. The work of the Swiss artists Durnand, Furet and Auguste Baud-Bovy, it was "of huge proportions, being 65 ft. high and 500 ft. long. Along the horizons are seen sparkling glaciers, great fields of snow, rugged moss-covered rocks jutting out in the air, pastures dotted with Swiss chalets . . . in short everything that makes Alpine scenery fascinating." There is said also to have been a *Diorama of the Alps* by the German artists, Michel Zeno Diemer and Hans Beatus Wieland.

#### DIORAMAS

A diorama is a half or other portion of a panorama, large or small, usually transparent to permit variations of lighting. Both panoramas and dioramas may be arranged with foreground objects of receding scale to heighten the illusion of depth.

*The Diorama* (1822-39).—A method of reproducing landscape was invented by Louis Daguerre (1779-1851), and first exhibited by him on July 11th, 1822. While engaged in making panoramic views he discovered that proper illumination of a transparent canvas painted on both sides would simulate moonlight, changes of season, etc. It appears that a year or so after the Hamel accident (1820) he exhibited in Paris (Jardin de l'hôtel

Samson, Boulevard St. Martin) a diorama of Chamonix and Mont Blanc. [This is made use of by Karl Ziak in a dramatic incident of his Mont Blanc novel, *Balmat oder Paccard?* (1930)]. The Paris exhibits were destroyed by fire in 1839. Daguerre was accustomed to bring the dioramic views to London, where they were shown in Regent's Park. Freshfield in his *Italian Alps* refers to one of these as a "sham Switzerland."

The views were two in number, 80 ft. wide and 40 ft. high. The spectators were in comparative darkness, the picture receiving light through a ground-glass roof. The effect was partly optical, partly mechanical, the platform with seated audience (capacity 350!) being revolved at intervals by a winch, bringing the two distinct scenes into the field of view, the scenery itself being stationary. According to the *Athenaeum*, the "Valley of Sarnen" was presented in 1823, "Mt. St. Gotthard" in 1829, and "Val Sesia and Monte Rosa" in 1836.

The *Literary Gazette* (1836) states that "The Diorama, owing to some accident to the machinery, could only exhibit a partial (private) glance at the new subject yesterday—The Village of Alagna, and Swiss mountain scenery. The portion we saw, however, is wonderfully fine; and when the Avalanche is brought to act, in a preceding view, it will be the most extraordinary of these exhibitions."

"On Thursday, the Swiss valley of Alagna was added to the fine Diorama of Santa Croce; and produced from first to last a most impressive effect. The night view of the devoted town, with its lights gradually extinguished, the rising of the howling storm, the alarm from the steeple of the church, the rolling of thunder, and the fall of the dread avalanche, are equal to imagination and almost to reality. The break of morning and the altered face of the valley, the buried habitations and inhabitants, the choked up lake, and the general picture of desolation, appeal powerfully to the feelings. The exhibition is altogether one of great beauty and interest; and never was more skill displayed in this striking walk of Art."

The Daguerre-Bouton Diorama, reopened in Paris in 1833, Mont Blanc being shown after views of the Black Forest. Alexandre Dumas mentions it in *Impressions de Voyage*, while the popularity is further indicated by the fact that one of Mont Blanc,

exhibited for many years at Chamonix, has only recently been dismantled (1937).

At Berne, in 1827, Liddiard (*Tour in Switzerland*) enjoyed a small-scale diorama of the *Rigi at Sunrise*. "First of all, you see the mountain under the influence of twilight, or 'darkness visible,' then under that of various tints which accompany the approach of day, till every peak is resplendent with glorious light . . . very close to nature, and far more interesting than any of the dioramas I have seen in London."

#### COSMORAMAS

A cosmorama is an improved peepshow, a good oil-painting being placed behind a large convex glass, a tridimensional effect resulting from the spherical aberration. Between lens and views a black frame cuts off peripheral rays, and the picture is seen as if through an opening.

*Mont Blanc* with its *Mer de Glace*, a feature at the Cosmorama (London) in 1838 . . . "by its illusion makes you feel as if in the middle of it—*minus* the cold." Mt. St. Bernard had been the attraction in 1831.

A child's toy, *Miniature Mont Blanc*, was accompanied by a handbook edited by Mme. de Chatelain (2nd edit., London, 1855). "Most of our youthful readers, of those at least who reside in London, are acquainted with the external appearance of Egyptian Hall. They will, therefore, at once perceive that our Little Theatre, as far as outward features are concerned, is a tolerably correct copy of the front of the building. They have likewise, no doubt, heard of Albert Smith's *Mont Blanc* . . . Now, of course, we do not pretend that, on so small a scale as our tiny theatre, we can vie with the grandeur of Mr. Beverley's views, any more than we can borrow Mr. Smith's happy knack of narrating; but on looking through the glazed aperture on the front of the building, the youthful spectator will see a complete miniature transcript of Albert Smith's room, even including the portrait of the clever lecturer himself; and the views, faithfully copied on a reduced scale, will be successfully shown."

In the collection of M. Paul Payot, of Chamonix, there is a small peepshow *Ascent of Mont Blanc*, made of paper in the fashion of a hollow concertina (so-called *Vues d'Optique*, made in Paris about 1825). When this is stretched out, one looks through a

round hole at an interior series of colored "wings" on which portions of the mountain, together with a climbing party, are seen as if in perspective.

The Alpine panoramas and dioramas have vanished; a few of the ancient reliefs are still to be seen in museums, overshadowed by splendid modern examples based on contoured maps and stereoscopic photographs. But, from these exhibits, fading in memory, our fore-runners learned their way across glacial passes from one valley to the next, and their contribution to the sport of mountaineering should not be allowed to pass unnoticed.