Badische Landesbibliothek Karlsruhe

Digitale Sammlung der Badischen Landesbibliothek Karlsruhe

The upper Rhine

the scenery of its banks and the manners of its people

Mayence to the lake of Constance

Mayhew, Henry

London, 1858

Interpolated Rhenish Scenes-The Rhine falls by Schaffhausen

urn:nbn:de:bsz:31-161475

Visual Library

four, and those who reckon that three-and-one do the same thing; and that the two-and-two-ites have no faith in the calculation of the three-and-one-ites; whilst the three-and-one-ites, on the other hand, declare that theirs is the only true arithmetic, and do not hesitate to affirm that the two-and-two principle is utterly opposed to all that is right and sound in reckoning, and that the upholders of such a system will certainly visit a very ugly place hereafter for believing in any ciphering so absurd and wicked.

For ourselves, it is but due to the reader to state, we belong to *neither* class in its bigotry and intolerance of all who differ from themselves, but to *both* in their belief in a future state, as well as that a life passed in conformity with the doctrines of the great Teacher, and imitative, as far as possible, of His example, is the only way to ensure happiness in this world as well as in that to come. We would add, too, that we desire to meddle with no man's religious notions, except upon such points as tend to the *degradation of humanity.*

With this brief preface let us now pass to the details of the subject.

Interpolated Rhenish Scenes.

(13.)

THE RHINE FALLS BY SCHAFFHAUSEN.

It is curious how a feeling of disappointment invariably arises in the mind on first beholding any object, the effect of which depends mainly on its size. Scarcely a traveller that finds the Pyramids come up to his conception of them, or thinks the spire of Strasburg so *very* high after all.

It is the province of the ideal, indeed, to transcend the real, and there is no process so easy to the imagination as that of magnifying or conceiving any well-known object to be inordinately increased in bulk. The mind possesses, as it were, a microscopic power, and experiences little or no difficulty in enlarging mites into mammoths, or exaggerating mole-hills into mountains.

The main cause, however, for the feeling of disappointment which is mostly experienced on the first contemplation of so-called sublime objects, is that the sight of them enables us to comprehend that which we had before conceived to be *incomprehensible*. For, as a musical note gives us no sense of the isolated pulsations of the air of which it is composed, but is the feeling which results from the rapid and combined vibration of the whole series; so the emotion of sublimity is simply the compound impression consequent upon a succession of imperceptible attempts to compass that which we know and feel to be beyond all compassing. Hence, to grasp any such object with the eye—to see in a single glance that which we fancied was made up of an endless series of parts—is really to reduce the infinite to the finite, and to bring that which was before vague and inconceivable within the limits of a definite conception.

Another reason for the disappointment is, that the mind loses all power of measurement when dealing with the enormous. A savage, it is well known, cannot form a notion of numbers beyond ten, and points to the hairs of his head to express any greater sum. Even educated people, too, have but a faint idea of large quantities; and a vast object appears *less* vast to ordinary minds than it really is, simply because they are unable at first to form any precise estimate as to its vastness.

Hence it is plain, that all sublime objects which admit of

being seen at one view must necessarily be more or less stripped of their sublimity on first beholding them.

If the honest opinions of the visitors to the Rhine Falls by Schaffhausen could be polled, we are convinced that ninety-nine in every hundred, at least, would express disappointment. Though the Falls themselves are admitted to be the "finest cataract in Europe"—the broadest sheet of water streaming down from the greatest height—and though not one person in a thousand could ever have seen anything in the least comparable to them, it is certain, nevertheless, that the imagination, in most cases, so far outstrips the reality, and the judgment possesses such slight means of estimating inordinate greatness, that the *Rhein-fall* seems at first sight but little better than a monster mill-dam.

True, we are told that the appearance from one side of the river is tame in comparison with the other, while some writers declare that it is not the height of the fall, but the immense body of water, which is broken into spray in the most picturesque manner, that constitutes the great beauty of the cataract. But rest assured, reader, these are merely excuses framed by persons who are afraid to acknowledge that the sight comes short of one's expectations.

How much better to be candid, and confess outright that the impression produced by the first sight of the Rhine Falls is one of almost contemptuous indifference—the rush and descent of water seeming but little better than that of a very broad canal, overflowing and bursting through some extensive lock-gates.

The revulsion of feeling past, however, the mind settles down to the calm contemplation of the spectacle, and seldom fails in the end to wake up to a full sense of its beauty and grandeur.

Let us try and impress the reader with the same feeling.

BLB BADISCHE LANDESBIBLIOTHEK Baden-Württemberg

The way to the Falls (unless the journey by water be preferred) lies by the *Mühlen-thor* (the Gate by the Mills), and no sooner have we passed the "*Pforte*," than the clatter of the water-wheels beside the mills, that here flank the road, issues from every door and window by the way. The air is filled with the buzz-z of a hundred mill-streams, and the ground seems almost to tremble beneath the feet with the trundling of the cog-wheels, and the incessant whirr of the machinery.

Now there is a clacking of a multitude of looms, and we can half see the factory-girls' heads as we go by the long line of dirty windows. Then we catch the quick wheezing of the saw-mills, and can distinguish the bright blades bobbing up and down in the "clear obscure" within, whilst the pathway here is littered with stacks of timber and deals. Scarcely, too, is the smell of turpentine out of the nostrils before the air is redolent of flour, and men with white eyebrows and whiskers are seen at the upper floors of the tall, dusty-looking warehouses, guiding the heavy and dangling sacks into carts below—the whole building seeming to shiver with the rattle of the hoppers.

Presently the Rhine itself is seen fretting along, broad as a highway, and a bright bottle-green in colour, and with its banks skirted with the stone dykes of the adjacent mill-streams, and the pent-up water there dashing along white as a snow-drift.

In a few minutes afterwards (it is but a couple of miles from Schaffhausen to the Falls) we are at the turn of the road which leads to the little village of *Neuhausen*.

Here we descend the hill, passing the villagers' houses by the way, and soon stand on the embanked shore, close in front of the cataract itself.

"To form a faint idea of the Falls of Niagara," said the late Governor Morris, "fancy to yourself the Frith of

Forth rushing wrathfully down a deep descent, leaping in foam over a perpendicular rock more than 160 feet high, and then flowing away in the semblance of milk from a vast basin of emerald."

To have a notion, however, of the Rhine Falls, the reader should imagine a huge wall to be built up across the Seine at Paris, somewhat higher than the bridges there, and the pent-up river to be hurled perpendicularly over the coping in one broad glassy sheet.

Such an image, however, will enable the stranger to form a conception of the mere *size* of the fall—of the breadth of the stream, and the depth of the huge step in the bed of the river, down which the flood is precipitated.

But how shall we convey to the mind any adequate sense of the stupendous stream of water for ever sweeping over this steep bank of rock!

It is calculated that the great Fall of Niagara precipitates at least one hundred million tons, or about four hundred million hogsheads, of liquid per minute. But the Rhine Falls are not half as broad, nor half as high, as those of the great American cataract, being really only one-seventh its size:* so that, supposing all other circumstances to be equal, the Rhenish torrent would discharge near upon a million hogsheads every second.

But who can conceive a million hogsheads mingled into one dense flood? Let us, therefore still make the matter clearer to the comprehension.

The great Heidelberg tun has about the same cubic capa-

* The Falls of Niagara are 600 + 200 feet broad, and about 160 feet high. The Rhine Falls, on the other hand, are 300 feet wide and about 60 feet in height; so that the one contains 128,000 superficial feet, and the other 18,000. The Falls of *Terni*, near Rome (the "*Cascata dell' Marmore*"), are between 600 and 700 feet high, while those of the *Staubbach*, near Interlachen, are from 800 to 900 feet in height; but both of these are *narrow* streams.

BLB BADISCHE LANDESBIBLIOTHEK Baden-Württemberg

city as a house, holding just upon eight hundred hogsheads. We must, therefore, in order to have a notion of the overwhelming torrent continually being poured over the rocks by Schaff hausen, conceive one thousand of these same monster tuns to be emptied over the great dyke of limestone there with every beat of the pulse, and the same tremendous tide to keep for ever streaming along, and almost at the same rate.*

As yet, however, we have dealt only with the *size* and *volume* of the cataract; let us therefore proceed in due course to explain how the great body of water that is precipitated at the Falls is broken up in its descent.

The enormous wall of rock over which the flood descends is, for the most part, hidden beneath the glassy sheet streaming over it; so that the fall itself appears like a huge escarpment of water. In the midst of this liquid mound immense slabs or plates of crag stand up edge-wise, their peaks raised high above the level of the upper bed of the river, and seeming like the broken piers of some lofty bridge that has been swept away by the torrent. By means of the four protruding rock-plates (two of which stand close together in the centre of the fall, and two more not far from the side opposite the castle †), the cataract is parted into five distinct "*chutes*," consisting of two broad falls and three minor cascades, the latter being

* This statement, of course, does not hold good with regard to the months of June and July, when the waters are at their highest point, being swollen by the melting of the Alpine snow. The waters of the Lake of Constanz, with which the Rhine Falls are immediately connected, are (according to a table published by Dr. Dihlmann) lowest in February, after which they keep gradually rising till the month of June, when they are six feet higher than at their lowest period. They then remain stationary till the middle of July, when they begin to descend, and continue falling till the middle of August; at which period they become stationary for another month, remaining about five feet higher than in February. Towards the end of September they commence falling again, and go on descending till February, when, as we have said, they reach their lowest point.

† From the point of view at which the accompanying picture was taken but three of these rocks, and four divisions of the Falls, would be visible.

merely the gushing of the torrent between each pair of adjacent crags.

Above the fall itself there is a large horse-shoe basin, girt with a low rim of limestone, and over this the stream curls in a thin, green, transparent sheet, as if it were so much molten glass, while the rounded edge of the rock glistens brightly beneath it. At the farther side from the castle, the water in this basin descends in a series of steps, falling and falling, as it keeps sliding down to the cataract, in such a mere pellicle of crystal, that the rocky pavement is seen shining beneath as if its surface had been vitrified. Immediately under the castle, however, the flood within the basin is in a furious ferment, and appears, as it tears along to the great fall beneath, to be tumbling and tossing, as if it were no longer liquid, but a dense mass of powdery snow. Here, too, the mouth of the basin seems to get narrower and narrower, while the stream has the appearance of being sucked down the funnel-like vortex of some monster maelstroom, until at length it reaches the edge of the great rock-wall; and there it pours over the sides, in the most sublime and yet terrific confusion—in lines that flash like silver lightning, and with the muffled roar of liquid thunder.

At one part of the fall, a thick glassy plate—solid and transparent as though it were a sheet of ice—comes sloping down in one unbroken plane; at another, the torrent is seen spurting from behind the central rocks in a broad feathery jet, and streaming forth, as Byron has said, like the tail of a white horse. Yonder it falls, and falls, in an opaque and apparently dense mass, like an avalanche of foam, being shivered into positive dust as it strikes against the protruding blocks. There it streams straight down, till you might almost fancy the sheet of falling liquid were part of a fine crystal curtain; and there, again, it boils and surges up in huge mounds of water, as

BLB BADISCHE LANDESBIBLIOTHEK Baden-Württemberg

though the very caldrons of hell itself were seething beneath it.

Never was seen such grand confusion—such exquisite tangle and crossing of lines—such lovely opalescence of tint, and sparkle of light. A rocky precipice is jagged, opaque, and heavy; but in this precipice of water all is curved, transparent, and light as spray.

Every element of beauty and grandeur conspires to lend its charm to such a scene—wildness of motion conjoined with the most perfect softness and diversity of outline—play of light and lustre, and the faintest bloom of colour, mingled with the very fury of power—a whirlwind of water—a liquid volcano pouring forth lava-like torrents of foam.

The spray, too, which rises up in front of the great torrent, is not the least beautiful part of the spectacle. It is like a curtain of the finest mist—a gauzy veil of dew—a broad ethereal pellicle of metallic colours (such as one sees floating occasionally on the surface of a pool), and drifting through the air like a light cloud of water-dust, or river-smoke, or rain-powder. It seems as if it were a whiff of breath passing over the surface of a mirror—fresh and delicate as the early morning-bloom on fruit—soft as the feather-dust swept from a butterfly's wing—thin and iridescent as fragments of bubbles—powdery as the film of autumn frost on grass-blades—it sails through the air like a white shadow—the transparent spirit of a rainbow.

Then, the roar of the torrent is in exquisite harmony with the fury of the scene. It murmurs in the ear everlastingly like a sea-shell, filling the air with a faint moan, as does a storm sweeping through some distant forest. Now it sounds like the roar of a furnace—now like the rush of escaping steam—and then like the noise of a vast city's traffic heard

from some cathedral tower. What a sense it gives one of the adamantine nature of water! The torrent seems like a cascade of solid stones, and the very spray itself like a cloud of dust thrown up by the abraded particles. How the sound stirs the mind, too, like a spell, and seems to draw the body towards it; even as the continual watching of the descending flood makes you fancy the very earth itself to move, the ground beneath your feet seeming to slide towards the Falls —while the brain itself whirls round, like the huge green disc of water for ever circling in the bay immediately in front of the cataract!

It is somewhat curious that no ancient classic writer makes mention of the Falls by Schaffhausen. The omission may have arisen from one of two causes—since we cannot imagine that Tacitus, Pliny, and Strabo would have considered them unworthy of notice. Either the Romans were unacquainted with the Falls, or they are of recent formation, and did not exist in the days of the Cæsars.

The first supposition is hardly credible, for we know that Munatius Plancus was at Basel, and Constantius Chlorus at Constanz. Is it probable, therefore, that Schaffhausen and Neuhasen were unvisited by the neighbouring legions? On the contrary, tradition declares the castle of Unnoth to have been originally a Roman fort.

The latter conjecture—wild as it may at first appear—proves on investigation to be by far the more rational. In the first place it is proven, that the deposits of gravel in the valley of the Upper Rhine in Switzerland are identical with those in the vale of the Scez (a river falling into the Lake of Wallenstadt); and therefore, say geologists, the Rhine *must* at one time have flowed this way. Again, at Sargans there is a watershed, which divides the streams that feed the Rhine from those

which fall into the Lake of Wallenstadt; and this natural embankment is so slight, being but 20 feet high and 200 yards broad, that it has been calculated, from actual measurement, by the celebrated Escher von der Linth (him who cut the Linth Canal, and so put an end to the continual overflowing of the Wallenstadt Lake), that the Rhine need rise but 19½ feet (or its bed be raised that height by the deposits that are for ever being brought down), for its waters to pass by Wallenstadt—instead of by Constanz as now, and thence by the river Magg into the Lake of Zurich, and thence again by the Limmat into the Aar; so that it would run in an almost direct line from Sargans to Coblenz, just above Waldshut, instead pursuing its present round-about route by the Lake of Constanz and Schaffhausen. Indeed it is recorded, that in the year 1618 the Rhine was so swollen by long rains, that it was only prevented taking its course by the Lakes of Wallenstadt and Zurich by the construction of dams along its banks.

Hence it becomes extremely probable that the *Rhein-fall* by Schaffhausen is of comparatively modern origin, and that the silence of the Roman authors on the subject arises from the river having, since their time, opened up for itself a new channel.

All evidence, indeed, seems to warrant such a conclusion. According to the measurements given by the ancient geographer Strabo, the Lake of Constanz would seem to have been much smaller in the days of the Romans than at present—a circumstance which must be due either to the fact of the bed of the lake having been raised, or else to the circumstance of its liquid contents having been considerably increased. Moreover, the fossil remains of terrestrial and freshwater animals discovered in the "*Molasse*" deposits at Oehningen, just below the Unter See (lower lake), and which, though known to be of comparatively recent origin (some of the "*fauna*" being

identical with living species), are now between 500 and 600 feet above the level of the Rhine,* — so that all things point to some great change in the limits of the lake, as well as the route of the river.

We must, therefore, look with very different eyes upon the Falls of the Rhine from what we do upon those of Niagara. In the latter cataract we read — graven on the very water — the records of the vast age of the earth; for since the American torrent is continually wearing away the rock over which it is precipitated, the falls themselves being found to recede at the rate of 50 yards in 40 years, and there is geological evidence of the site of these falls having been once situate at Queenstown, though now 7 miles removed from that spot, it follows that the said torrent must have continued pouring down its 400 millions of hogsheads of water per minute for just upon 10,000 years.

The Rhine Falls, however, tell a tale equally grand, though comparatively but of yesterday. They lead the mind back to the time of the great flood which changed the course of the river, and which, sweeping across the earth in one broad stream — wide as the wind and wild as the hurricane — thundered for the first time over the steep precipice of rock by Schaffhausen. Like the flash from a volley of artillery, the torrent must have darted down the sides, and the spray

* "The Rhine, in its course from Constance to Schaffhausen, flows through a depression of tertiary marine formation, known by the name of '*Molasse*,' which forms hills on both sides of the river of from 700 to 900 feet in height. . . . Here leaves and stems of plants, insects, shells, crustacea, fishes, turtles, a large aquatic salamander, and a perfect skeleton of an animal allied to the common fox, have been discovered, as well as a tortoise 3 feet in length. Sir R. Murchison concludes that these freshwater deposits are the contents of a lake belonging to the new tertiary epoch, and that the period of their formation must have long preceded the present condition of the country, for they contain some unknown species of animals, and the Rhine has worn a channel through them to the depth of several hundred feet." — *Mantell's Wonders of Geology*, vol. i. pp. 263–5.

BLB BADISCHE LANDESBIBLIOTHEK
Baden-Württemberg

have risen up amid the booming, as though it were the smoke veiling some vast elemental war.

The arrangement of the rocks of Switzerland teaches us beyond the shadow of a doubt that the very Alps themselves are comparatively creations of our own period, and we are thus led to conceive the time when the Rhine was *not*—to imagine the days when the solid earth, tossed and heaved in billows like the sea, till the very impress of the monster land-waves became fixed in the mountain chains themselves; and thus to think of the melting of the first Alpine snows, which called the Rhine into existence, and caused the new-born river to trickle across the land. Here, too, in the Falls, we see written in the water the story of some equally vast, though more modern convulsion.

---

§ 1.

THE INTELLECTUAL CONDITION — KNOWLEDGE OF LATIN AND GREEK — SCIENTIFIC IGNORANCE — TEUTONIC SAVANTS — WORLDLY STUPIDITY — WANT OF SCIENTIFIC APPLIANCES — A GERMAN FIRE — A PHILO-COCKCHAFER.

"Every baker in Germany," said that Manchester Solon, Mr. Cobden, "can serve you with bread in Latin, as well as in his own language."

Now this was intended to give the English people a sense of the high state of education prevalent throughout Germany; and doubtlessly, to a man of Mr. Cobden's calibre, a knowledge of Latin and Greek appears (as with all vulgar people, who have failed to learn the classics in their youth) to constitute the very climax of wisdom.

The statement is, however, simply untrue. "*Salve,*