In mediæval times, from the 6th century in the Byzantium of Justinian down to the 14th century, most painting, whether on walls or panels, was executed in tempera, though in many cases it appears to have been the custom to put in the coloured ground in true fresco, and, when that was dry, paint on it the complete picture with a tempera medium. This was the method used in the Byzan­tine wall-paintings in the churches of Thessalonica, Mount Athos, and elsewhere. A similar practice existed in Eng­land and other northern countries,@@1 as in the very complete series of paintings on the walls and vault of the chancel of Kempley church, Gloucestershire, dating from about 1100. Most commonly, however, in England as in France and Germany the whole painting was done in tempera, the finished surface of the plaster being first covered with a wash of old slaked lime or whitening. As a rule every inch of stone, whether carved, moulded, or plain, in the cathedrals and other churches of mediæval France, Eng­land, and other countries was covered with this thin coating of white, and then elaborately decorated with tempera painting. In those rare cases where want of money pre­vented the application of colour the stone-work of the in­terior received the coat of white, so that at any future time the colouring might be added, and also because the feeling of the Middle Ages evidently was that bare stone inside a building had an unfinished and uncomfortable look,@@2 and was quite as unsuitable in a richly decorated and furnished cathedral as it would now be considered in a lady’s drawing-room. The additional splendour gained by the use of minute patterns stamped in gesso, thinly laid over the surface of the stone, is described in Mural Decoration, vol. xvii. p. 47 ; see also fig. 17.

*Tempera in Italy.—*For panel and canvas paintings tempera continued in use till nearly the end of the 15th century, when the Flemish method of oil painting gradu­ally took its place. In many cases with panel pictures of the latter part of the 15th century it is now difficult, if not impossible, to be sure whether they were painted in tempera or in oil, either because both methods were com­bined—the picture being begun in tempera and finished with oil glazings—or because an oil varnish has been laid over the tempera pictures, and so the pigments have ab­sorbed oil out of the varnish and have thus practically become associated with an oil medium. In some cases slight peculiarities of brush-work bear witness to one medium or the other ; but these appearances are often de­ceptive, and any real certainty on the point is unattain­able. The round panel of the Madonna and St Joseph by Michelangelo may be mentioned as an example of these doubtful cases.

In the main the earlier tempera easel pictures were painted on wood, —pear, poplar, or walnut being commonly used ; but a few painters preferred in some cases to use canvas.@@3 The National Gallery of London possesses a very beautiful example of this,—the Entombment, attributed to Van der Weyden (see Schools of Painting, vol. xxi. p. 438, fig. 29), which is most delicately and yet powerfully painted on linen without any priming. Usually both panels and canvas were prepared for tempera by being covered with a fine priming or coating of gesso (plaster). Some later painters used marble dust ; others unfortu­nately used white lead, which has since blackened through the absorption of gases from the air.

In the case of wall paintings, both tempera and fresco @@4 were used together,—the proportion of fresco work being gradually increased. In the 13th and most of the 14th century little more than the groundwork of the picture was painted in fresco, though this varied according to the custom of each painter. In the 15th century increased technical skill and rapidity of execution allowed much more complete work to be done in fresco, till at last nothing but a few finishing touches were done in tempera. For this, exceptional certainty of touch and speed of execution were required, and some weaker painters never attained to a very complete mastery over the fresco process. The brilliant series of wall paintings by Pinturicchio in the cathedral library at Siena contain a very large proportion of tempera work, in spite of which they are still in a wonder­ful state of preservation. Raphael’s rapid advance in the mastery of fresco-work is clearly shown in his paintings in the Vatican stanze, each one of which is carried to a further stage in true fresco than the preceding. Thus the earli­est painting of the series (the Disputa) is very largely executed in tempera, while some of the later ones are nearly completed in fresco, and show the most perfect skill in that difficult process. Michelangelo was specially re­markable for his great power in fresco, and carried his Sistine paintings to a very advanced stage before touching them with tempera. Sad to say, what tempera finishing touches he did apply have mostly been scraped off during the many cleanings and repairs that these works have undergone ; and the same misfortune has happened to a large number of other important pictures. Tempera was specially used for paintings on canvas which were in­tended to be hung like tapestry, as, for example, the fine 15th-century series at Rheims and Mantegna’s Triumph of Julius Cæsar at Hampton Court.@@5 It was also much used for large cartoons, such as Raphael’s tapestry designs, now in the South Kensington Museum. After the first half of the 16th century the increasing use of oil painting, assisted by the artistic decadence of the age, caused the gradual disuse of both fresco and tempera.

A third process, often used during the earlier Middle Ages, was a sort of compromise between tempera and fresco. A finished stucco surface was prepared as for ordinary tempera, but before each day’s painting the plaster was soaked with water, so that the pigments, laid on to the wet plaster, to some extent sank below the surface, though without penetrating as deeply as they would on newly mixed stucco. (j. H. Μ.)

TEMPERANCE SOCIETIES.@@6 The modern temper­ance movement may be said to date from the publication at Philadelphia, in 1785, of Dr Benjamin Rush’s essay on “ The Effects of Ardent Spirits on the Human Body and Mind,” which was republished in the *Gentleman’s Magazine* of 1786, and had a wide circulation. The distinction which he draws between distilled and fermented liquors has, however, no foundation in fact, the difference being one of degree and not of kind.· In 1808 Dr Lyman Beecher and Dr B. J. Clark, both readers of Rush, took action, and the result of the work of the latter was the formation of what is believed to be the first modern temperance society. It was formed in Greenfield, Saratoga county, New York, as an anti-spirits association, and still remains a teetotal society. This example was soon followed elsewhere, the early societies all restricting their scope to advocacy of moderation in the use of distilled liquors, and placing no inhibition upon fermented drinks. One society had a

@@@1 A fine example of 14th-century tempera painting in Sweden is illustrated in vol. xvii. plate I.

@@@2 Nothing could be more opposed to the spirit of the Middle Ages than the modern rage for cutting off plaster and scraping old stone­work, under a mistaken notion of æsthetic honesty.

@@@3 In order to ensure an even surface some painters prepared their panels by covering them with linen or vellum, over which the gesso priming was laid.

@@@4 “ Fresco ” here means “ fresco buono,” or true fresco.

@@@5 See vol. xvii. p. 38.

@@@6 The manner and degree in which the law has in recent years regulated the sale of intoxicants is described under Liquor Laws (vol. xiv. p. 688).