



DOTTED PRINT.

(Coronation of the Virgin.)

(Close of the fifteenth or beginning of the sixteenth century.)

(From print in the National Museum).

WHITE-LINE ENGRAVING FOR RELIEF-PRINTING IN THE FIFTEENTH AND SIXTEENTH CENTURIES.

(DOTTED PRINTS, GRAVURES EN MANIÈRE CRIBLÉE, SCHROTBLÄTTER.)

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The U. S. National Museum has lately come into the possession of a few impressions from relief-blocks of the fifteenth or early sixteenth century which bear upon the much-discussed question as to the nature and origin of the so-called "dotted prints" (French: "gravures en manière criblée"; German: "Schrotblätter"). The acquisition of these interesting specimens affords an opportunity for the re-publication in amplified form of an article on this subject, written by me for a European journal.*

It is the aim of this article to show that the prints in question are simply *white-line engravings for relief-printing*, and that, as such, they are identical, in the technical principle involved, with modern wood-engraving, which also is white-line engraving for relief-printing, the whites and the tints intermediate between black and white being produced in both cases by white lines and dots cut into the block, while the black is supplied by those parts of the wood (or metal) left standing in relief and carrying the ink. The conclusion embodied in this statement, which places these primitive and rude performances technically on a level with the delicate and refined work of men like King, Cole, Closson, Juengling, Miller, etc., may seem strange to absurdity to those who are not accustomed to consider processes without regard to the artistic character of the result reached. It is, nevertheless, unavoidable, as the following investigation will demonstrate.

The "dotted prints" form a group quite by themselves among the products of the reproductive or multiplying arts at the close of the fifteenth and the beginning of the sixteenth century. The "Coronation of the Virgin," here reproduced (Pl. XLVII) from one of the specimens in

* See "Chronik für vervielfältigende Kunst," Vienna, 1889, vol. II, No. 9.

the Museum, is a good, although minor, example of the whole class.* The large white dots observable in it, as in most—although, as we shall presently see, by no means in all—of the prints here to be considered, gave rise to the English name “dotted prints,” as well as to the French designation, “*manière criblée*,” the latter in allusion to “*le crible*,” the sieve, a utensil which, in its older forms, is made of a piece of sheet-iron perforated by round holes. The German “*Schrotblätter*” or “*geschrotene Arbeit*,” from “*schroten*,” (to grind corn coarsely, to cut or saw rudely) expresses another peculiarity of these prints, the rude way, namely, in which the ground in many of them seems to have been gnawed out rather than cut. In drawing, most of the “dotted prints” are quite primitive, and there is noticeable in them a very marked predilection on the part of their designers or engravers for ornamental backgrounds and accessories.

Owing to the inartistic character just alluded to, the tendency among the older writers on the subject was to rank these prints among the earliest specimens of the arts of engraving and printing, and to carry their origin back to the beginning of the fifteenth century. At present it is thought, however, that the rudeness of most of the designs is evidence of lack of skill in the artists rather than of antiquity, and that it will be safe to assume about the middle of the fifteenth century as the oldest *probable* date. If this be so, the “*manière criblée*” was quite short-lived, as there is good reason to believe that it was not practiced much beyond the beginning of the sixteenth century. In quantity the “dotted prints” are also quite limited. According to Dr. Willshire† only about three hundred were known fifteen years ago, and although this number has been added to by new discoveries since then, they are still decidedly rare. Finally, it may be said that most of these prints are of small or medium size, comparatively few only measuring as much as about 10 by 14 inches.

It would seem from all this as if the prints in question had been given an importance in the history of the multiplying arts and in the appreciation of collectors not warranted either by their artistic character or their bulk. It must be conceded, however, that they are very interesting, and no one who has met with them can have failed of having been struck by their unique appearance as compared with all other contemporaneous attempts at producing pictures multipliable in the press. Their most obvious characteristic is that the design is mainly

* Measurements, through the center, 73 by 106 millimeters. Partly colored red, yellow, and light green; the red, thick and glossy, as if it had been gummed. The obscurations in the reproduction are due to the coloring. Mr. W. L. Schreiber, of Franzensberg, Germany, to whom I sent a photograph of this print, kindly calls my attention to the fact that it is identical with Weigel's No. 333. See Weigel und Zestermann, “*Anfänge der Druckerkunst*,” Leipzig, 1866, vol. II, p. 236.

† “Introduction to the study and collection of ancient prints,” 2d ed., London, 1877, vol. II, p. 67.

brought out by white dots and lines, or sometimes by white dots only, or by white lines only, on a black ground, which is precisely the reverse of the ordinary wood-cuts of the time, these being to all intents and purposes reproductions of drawings in black lines on a white ground, or, in other words, black-line fac-simile work. The strange appearance of the "dotted prints" is furthermore increased by the admixture of ordinary work in black lines on a white ground with the work in white lines and dots on a black ground, so that it would seem as if two opposing principles, harshly contrasting with one another, had been utilized in their execution. The result was that most investigators were sorely puzzled as to the nature of these queer productions. All sorts of speculations were indulged in as to the material—whether wood or metal—and the *modus operandi* employed, one of the suggestions offered being that they were the outcome of a combination of intaglio-engraving and relief-engraving, and it was naturally enough asked, what motive could possibly have prevailed upon their originators to adopt such an "irrational" method of proceeding?

"Criblé," says Mr. Henri Hymans, the excellent curator of the print department in the Royal Library of Belgium, in his essay entitled "Gravures criblées,"* "is a sort of engraving in which the subject is worked out by a combination of dots and of lines, crossing one another, and relieved white against a black ground; but in which, nevertheless, black lines on a white ground are also seen, producing a more curious than happy combination of intaglio-engraving (*gravure en creux*) and relief-engraving (*gravure en relief*)." Again, speaking of a still-existing plate engraved on copper for relief-printing, of which an impression is given in the article in question (see the reproduction, Pl. XLVIII), Mr. Hymans says that it is "executed in intaglio and in relief at one and the same time. * * * The features, the rays which surround the heads of the saints, the folds of the drapery, in a word, everything which marks form, is engraved in relief, as in wood-engraving; † elsewhere, however, intaglio-engraving (*la taille douce*) has been used to a considerable extent, and produces in the impression white lines on a black ground. * * * If we ask for the reasons which may have prevailed upon the artist to use so tedious and difficult a process, and one, moreover, so limited in its means of expression, * * * we can only find them in the necessities forced upon him by a long edition and the desire to prevent the wearing of the plate. * * * Unfortunately the existence of the plates [plate?] * * * can throw light only upon the technique of the curious and irrational art which forms the subject of our article, without allowing us to draw a conclusion which would bring us a step nearer to the discovery of its origin."

* See "Documents iconographiques et bibliographiques de la bibliothèque royale de Belgique." Brussels, 1887, pp. 14, 17, and 18.

† This is not quite correct, as the rays of the nimbi are decidedly white on a black ground.

Upon these remarks of Mr. Hymans an English writer has based a most astonishing hypothesis, which is calculated to make an already apparently very difficult matter still more difficult.

"The more we look," says Dr. Willshire (vol. II, p. 58, of his otherwise very useful "Introduction," before quoted), "the more inclined are we to believe that the ground [should be, the surface] of the original plate [*i. e.*, of the plate on which the engraving was executed] has remained for the greater part in *relief*, as it were, and has been inked, and that the white forms or the dots and lines have been cut in *intaglio*, kept free of ink, and so appear white off black in the impression. But in other parts it would seem that the ground [should again be, the surface] has been kept clean or uninked, and the cut or intagliated lines and scratches have been inked and appear black off white, as in ordinary copper plate impressions. Where the inked or black *ground* appears to give the forms, the plate or block may be said to have been engraved in relief or *en taille d'épargne*; but where the inked intagliated *lines* or *scratches* indicate them, it must have been engraved *en creux*. This strange mixture of work and effects gives rise, as Mr. Hymans observes, to a combination more singular than agreeable."

The hypothesis involved in the preceding paragraph is so extraordinary that one is inclined to think there must be some misunderstanding. The summing up, however, of his investigations and speculations, given by Dr. Willshire on pp. 65 and 66, leaves no room for doubt. "That a clear and full knowledge," he says, "of the exact mode of execution of the *manière ébillée* is yet a *desideratum*, we candidly admit in the face of what we have already stated. Nevertheless we believe we are so far right in maintaining, first, that it was generally practiced on metal plates; secondly, that the engraving was both in relief and intaglio, according to circumstances; thirdly, that the larger 'dots' were punched out of the metal, and the smaller ones indented, but not to complete perforation, or at any rate that all the punctiform technic was in intaglio, and did not receive ink; fourthly, that narrow lined forms or contours, indicated in the impression by black detaching itself from a white ground, were often from relief-engraving on the metal; fifthly, that narrow-lined engraved work and hatchings, indicating texture and shadow rather than forms in the impression, were from work in intaglio; sixthly, that the peculiar effects produced by the admixture of engraving *en creux* and *en taille d'épargne* were added to and varied by the removal of the ink in certain parts before printing."

If the explanation attempted by Dr. Willshire were borne out by the facts, the method of procedure adopted by the engravers of the "dotted prints" might, indeed, justly be called "irrational." It is evident, however, from the quotations given from the dissertation of Mr. Hymans, that the conclusions drawn by the English writer find no basis whatever in the utterances of his Belgian colleague. Mr. Hymans does not even hint at a combination of relief-printing with intaglio-printing in



RUDE WHITE-LINE (TINT) ENGRAVING.

(The Trinity between St. Crispinus and St. Crispinianus.)

(From the impression given by Hymans).

the production of the "manière criblée" prints. Dr. Willshire simply allowed himself to be misled by the somewhat unfortunate expression "a more curious than happy combination of intaglio-engraving with relief-engraving," used by Mr. Hymans. Had he looked at the matter more from the practical-technical than from the theoretical-literary point of view, and had he, moreover, consulted all the historical material at command, the problem would have been less puzzling to him. Looked at in the light thus to be obtained, the last vestige of uncertainty besetting this question, and which caused even Mr. Hymans to characterize the criblés as the productions of a "curious and irrational art," will quickly vanish.

Art has its material as well as its ideal side, and so far as the former is concerned the artist is absolutely dependent upon his means. The two small illustrations which accompany this article (Figs. 48 and 49) look at first sight as if both were taken from "dotted prints" of the fifteenth century. Nevertheless they are separated from one another, as to period,



Fig. 48.

FRAGMENT FROM A "DOTTED PRINT" OF
THE FIFTEENTH CENTURY.



Fig. 49.

FRAGMENT FROM A WOOD-ENGRAVING
BY THOMAS BEWICK.

by at least 300 years. Fig. 48 is a fragment of a criblé, "The Stigmatisation of St. Francis," attributed to the last third of the fifteenth century, and published, in a reduction, in Dr. Willshire's "Catalogue of Early Prints," vol. 1, Pl. IV. Fig. 49, is a bit from a wood-engraving by Bewick, which appeared in "Poems by Goldsmith and Parnell," 1795, and is reproduced in Dobson's "Thomas Bewick and his Pupils" (Boston, 1884), p. 79. In the fragments here given, Fig. 48 is reduced about one-third, while Fig. 49 is enlarged about one-half, thus eliminating from the comparison, at least to some degree, the disturbing element of

difference in size. It is hardly necessary to point out that both, so far as the means of expression are concerned, rest absolutely upon the same system, although the modern artist displays not only greater skill in the use of these means, but also more refined powers of observation. Their homogeneity is due to the fact that they are drawn with *white lines upon a black ground*, and this again is explained by the further fact that both were *executed with the graver for relief-printing*. That the latter statement must be true will be easily seen when it is considered that the *white line* is the natural product of the graver in its application to relief-engraving, and that consequently the *black line* is used in this kind of engraving only where it can not be avoided; that is to say, in those passages in which forms have to be indicated on a light ground or in high light. This explains also why we find in the "dotted prints" of the fifteenth century the combination of white lines on black and of black lines on white, which has seemed to some investigators to be so curious, and even "irrational." The same combination is found in the wood-engravings of the nineteenth century. But while, owing to lack of skill, it produces an unpleasant crudeness in the works of the relief-engravers of the middle ages, no such crudeness is apparent in the productions of the wood-engravers of to-day, because they have refined the means of expression to a degree of which their mediæval predecessors had not the remotest idea, without in the least altering the principle involved.

It is literally true, therefore, as stated at the outset, that the so-called "dotted prints" of the fifteenth and sixteenth centuries, although executed in the great majority of cases on metal, are simply premature precursors of modern white-line engraving. The fact that they were premature, and that white-line engraving could not develop at the time, but was doomed to die away again after it had hardly made a crude beginning, finds ready explanation in the conditions of the period in which it arose.

The aim of the reproductive arts in their infancy was simply the rendering of *drawings*. It would have been quite impossible for them to attempt the suggestion of the effects of painting as it is understood to-day, not only because the skill was wanting, but also because such effects were not as yet within the grasp of art. It was reserved for the painters of Venice and of the Netherlands to take this step at a considerably later period. The goldsmith, therefore, who desired to become a reproductive artist, took up his graver as an instrument with which he was familiar, and with it he produced, on the copper plate and aided by intaglio-printing, black lines and dots on a white ground, as in drawing. On the other hand, the first artists who endeavored to produce blocks for relief-printing chose a board and a knife, very likely in imitation of the "form-cutters," or makers of wooden molds and stamps, which was an old trade. The knife they were compelled to adhere to,



WHITE-LINE ENGRAVING.

(The Crucifixion.)

(From print in the U. S. National Museum).

as wood cut across the grain was not yet in vogue, and the graver can not be used on wood cut in the direction of the grain or fiber. It is quite conceivable, however, that the advantages of relief-engraving, the ease and more especially the rapidity of printing, were soon discovered by the goldsmiths who wielded the burin, and if this was once the case, it is not to be wondered at that they should have attempted to reach the same end with the means to which they were accustomed. As the graver, however, in its application to relief-engraving, most readily produces *white lines*, they were naturally, and it may indeed be said inevitably, led to the same result as the engravers who first essayed to use the burin for relief work in the eighteenth century; that is to say, they endeavored to produce their drawings by white lines on a black ground, and used black lines only where they could not do without them, namely, in the high lights. They thus arrived at *white-line engraving on metal*, and this again led them unconsciously to the first rude beginnings of tint-engraving. It may be difficult at first, with the modern idea of tint-engraving present to the mind, to detect tints in the "manière criblée" prints. But a little reflection will show that the white dots produced by punches, even without the white lines with which they are often intermingled, served only to break up the black surface and thus to convert it into *tints*. These conclusions once established, it will be conceded that the terms *dotted prints* and *manière criblée* are wholly unjustifiable and inadequate, since the dot is merely an incident. The main point is the elaboration of the design by white lines and dots on a black ground, and this constitutes essentially white-line engraving, which in its development is *tint-engraving*. This being so, it is not to be wondered at that we find "dotted prints" with not a single dot in them. The engraving here reproduced from the impression given by Mr. Hymans (see Pl. XLVIII) is a good illustration of this fact. It is a rude white-line engraving (tint-engraving), without any dots whatever, which clearly shows that it owes its origin to the graver, as, for instance, in the dots in the dark space under the right arm of Christ. The identity of the principle involved with that of modern wood-engraving is, however, still more clearly brought out by an examination of the "Crucifixion" (Pl. XLIX)* here reproduced from the original in the U. S. National Museum. Not only do certain parts, such as the leg of the man at the right and the pieces of wood by which the cross is held in the ground, show well defined tints, but the garments are throughout worked in *white lines crossing one another*. To show that precisely the same method is employed in modern white-line engraving, an enlargement is here

*Measurement, through the center, 42 by 57 millimetres. Colored in parts light red, light yellow, light green, in transparent washes. The green, however, seems to be a body color mixed with white, but laid on very thin. Mr. Schreiber points out that this print is Weigel's No. 356. See Weigel and Zestermann, II, p. 270. It passed into Coppenrath's hands and was sold at auction in his first sale, No. 2082. The defects of the reproduction are again due to the coloring.

given (Fig. 50), by permission of the Century Company, of part of an engraving by Mr. Cole from Mr. St. Gaudens's "Angel of the Morgan Tomb." The face of the angel is engraved with the same white lines crossing one another which we find in the little fifteenth century "Crucifixion," with this difference only, that while the lines of the mediæval artist are rigid and coarse, those of his modern follower are flexible and delicate. It would be more appropriate, therefore, to call these old productions *mediæval white-line engravings for relief-printing*, rather than "dotted prints" or "gravures en manière criblée" or "Schrotblätter."

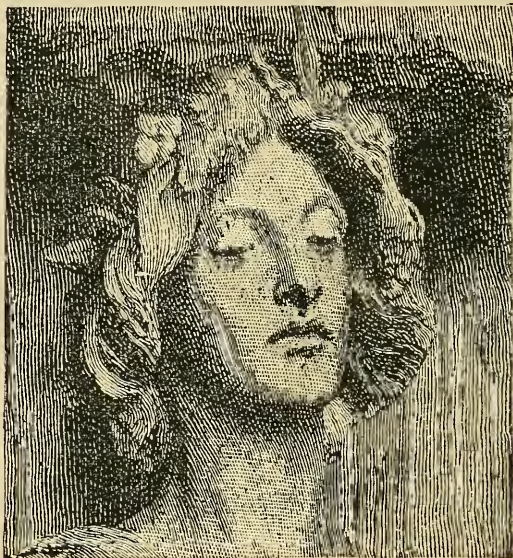


Fig. 50.

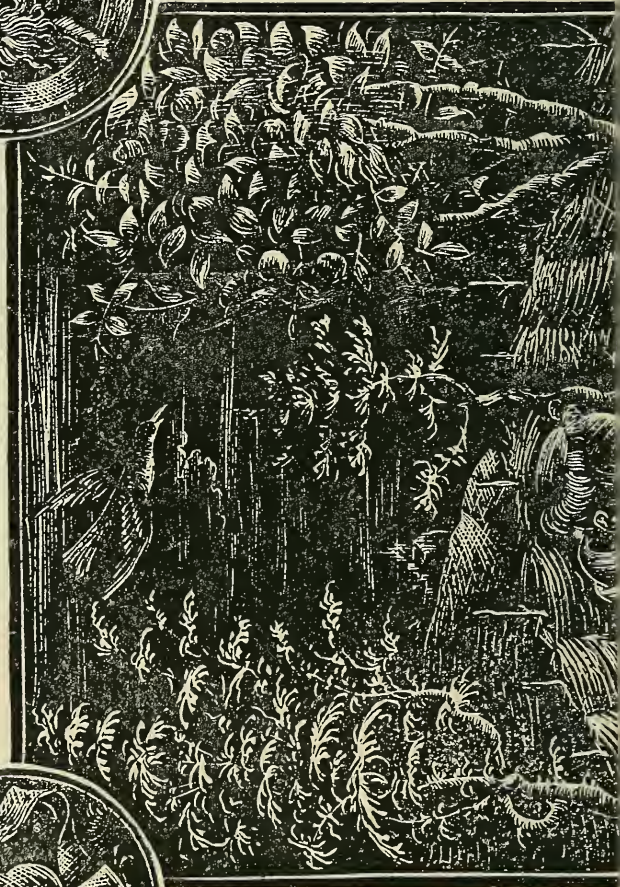
ENLARGEMENT OF PART OF A WOOD-ENGRAVING BY T. COLE.
(By permission of The Century Company.)

The use of the white line in the fifteenth and sixteenth centuries is not, however, confined to the class of prints just spoken of. There are extant a few white-line relief-engravings of the same period which have nothing in common with the so-called "dotted prints," and which, judging from the absence of the characteristic love of ornamentation and from the better quality of the draftsmanship, would seem to be, not the work of artisan goldsmiths, but of regular designers and engravers. One of these, ascribed to the close of the fifteenth century, is also here reproduced (Pl. L) from an impression in the U. S. National Museum. That it is not a negative impression, that is to say, an impression printed from an intaglio plate inked on the surface,* is evident from the way in

* The subject of negative and positive impressions is illustrated in the U. S. National Museum by prints from both intaglio and relief plates. The specimens in question will be found in the Hall of Graphic Arts, eastern side, alcove 1, in frames 1 and 1a.

Pomerium quadragessimale.

fratris Delbarti ordinis
sancti Francisci





WHITE-LINE ENGRAVING OF THE FIFTEENTH CENTURY.

[St. Francis (St. Benedict?)]

(From print in the U. S. National Museum.)

Pomerium quadragesimale.

fratris Helbarti ordinis
sancti Francisci



WHITE-LINE ENGRAVING OF THE FIFTEENTH CENTURE.

[St. Francis (St. Bernardini)]

From print in the U. S. National Museum.

which the lights are managed. It is questionable, however, whether this plate was engraved in white lines in obedience to the demands of the graver, or merely with a desire to produce an odd effect.* Of another similar print, "The Satyr's Family," after Urse Graf, dated 1520, a good reproduction of which is easily accessible in Hirth and Muther's "Master Woodcuts of Four Centuries," † it seems almost certain that the motive suggested prompted it. The angularity of some of the curves in it would, indeed, suggest that it was executed with the knife on wood.

It has been pointed out already that the use of the white line, with all the consequences it involves, could not lead to any lasting result at the period under consideration. The possibilities contained in it could not be recognized by the artists of the time, and for the fac-simile reproduction of drawings, intaglio-engraving on metal and relief-cutting on wood were far better fitted. White-line relief-engraving therefore remained a premature shoot, destined to an early decay, since its time had not yet come. But black-line relief-cutting also could not maintain its ground, so soon as it was asked to grapple with painting in the modern sense of the word. For this purpose the plank and the knife were insufficient, and hence the woodcut had to succumb in the competition with intaglio-engraving on metal. It was only towards the end of the eighteenth century, when the graver—this time, however, on wood cut across the grain—again came into use, that relief-work once more found itself in a position to enter the lists; for the new means at its command enabled it to develop *tint engraving*, which made it possible to produce blocks printable on the type-press and yet producing effects suggestive of painting. Modern wood-engraving is no longer content with *drawing*; it *paints*, or at least endeavors to suggest the effects of painting, and therein lies its true importance.

To sum up, it may be regarded as proven that the so-called "dotted prints" are white-line engravings intended for relief-printing, that they were executed with the graver, and, in some cases, with punches, on metal (which does not exclude the possibility that similar work may have been done on wood with the knife now and then, in the spirit of imitation), and that, arguing from the means used and the love of ornamentation displayed in them, their originators were goldsmiths.

Although the simple explanation here offered dispels the mystery which, in the eyes of most investigators and collectors, has hitherto en-

* This engraving, evidently intended for a title page, occurs in a number of different states as to lettering. An impression in the Royal Library of Belgium, of which Mr. Hymans gives a reproduction, is without lettering. Passavant, "Peintre-Graveur," I, p. 101, describes a second, which would seem to be lettered "Pomerium de tempore, fratris Pelbarti ordinis Sancti Francisci." According to Willshire, "Catalogue of Early Prints," I, p. 320 a third impression, in the British Museum, has the legend "Pomerium de sanctis, fratris Pelbarti ordinis sancti Francisci." Still another impression, in the collection of Mr. Henry F. Sewall, of New York, corresponds with the one here reproduced.

† "Meister-Holzschnitte aus vier Jahrhunderten," Munich and Leipsic, 1890, pl. 108.

veloped the whole of this class of prints, the latter nevertheless retain their interest, historically as well as technically considered. And it may, indeed, be claimed that the recognition of the true state of the case has given them an added interest which did not attach to them before. This interest flows from the perception of the close connection existing between these crude productions of past centuries and the highly developed technique of our own day, a connection which up to the present has escaped the notice of all observers.