tions failing to weaken Zell’s testimony, we must see how far it can be brought into harmony with other circumstances and the testi­monies MM, RR, SS, TT, VV, XX, YY, which claim the honour of the invention for Haarlem in Holland. Testimonies RR and SS do not mention the name of the inventor. But the former is a mere introduction destined for a complete book that was lost during the siege of Haarlem in 1573 before it was printed ; we are, there­fore, not entitled to say that Van Zuren did not know the name. SS may have omitted the name, because the publication of Van Zuren’s work was in contemplation at the time that it was written. That Guicciardini (testimony TT) in 1566 did not mention the name of the reputed Haarlem inventor cannot be considered as an in­dication that it was not known or had not yet been “invented” when he wrote, as his accounts of the cities of the northern Netherlands are all very meagre and were for the most part derived from correspondence. In Junius’s account (VV), however, we find every particular that could be desired. He begins by re­ferring to the difficulty of vindicating the honour of the invention for Haarlem on account of the deep-rooted and general opinion that it took place at Mainz. He then mentions that Lourens (son of Jan) surnamed Coster resided at Haarlem “more than 128 years ago” and gives us to understand that in the year indicated by that phrase he invented the art of printing. As Junius’s book was not pub­lished till after his death, in 1588, and the two prefaces in it are dated 1575 (he died 16th June 1575), the number 128 is supposed to go back from the date when he actually wrote his account, which he is calculated to have done about 1568. Thus we get the year 1440 as the supposed date of the Haarlem invention, though, if we based our calculation upon the date of the preface, the year 1446 or 1447 would have to be assumed. But, as Junius adds that Coster’s types were stolen by one of his servants, who fled with them to Mainz, and establishing there a printing office printed within a year’s time, in 1442, two books, he must, if this latter date is correct, have meant 1440. By testimonies XX and YY we see that in the 17th century the date of the Haarlem invention was first put back as far as 1428, then to 1423 ; and since then it has usually been re­garded as 1423, especially after it was discovered that the Haarlem wood where Coster is said to have cut his wooden letters was destroyed during a siege in 1426.

The researches as regards the reputed Haarlem inventor have hitherto not been made in a manner adequate for scientific purposes. It would appear that by the pushing back of the date of the inven­tion, in spite of Junius, to 1420-1428, two inhabitants of Haarlem have been mixed up by the Dutch authors on the subject. (1) Lourens Janszoon, who never bore the surname Coster, and whose existence seems to be authenticated by documents from 1404 to 1439, was sheriff, and a wine merchant and innkeeper, and is sup­posed to have died in 1439. About 1870, however, researches brought to light that there had been (2) a Lourens Janszoon Coster at Haarlem, duly authenticated by genuine official documents as a chandler and innkeeper, from 1436 to 1483, who went away from Haarlem in the latter year. The name of this man and some genea­logical particulars known of him fit into the story of Junius, though there are certain particulars in Junius’s account which cannot yet be properly explained.

Junius bases his account of the Haarlem invention on three books, a Dutch edition of the *Speculum Humanæ Salvationis,* the *Doctrinale,* and the *Tracts* of Petrus Hispanus (Pope John XXI.). The first work, he said, was printed by Coster himself as a first specimen of his art, and it would seem from his words that he con­sidered the work to be printed with wooden types. The two Dutch editions of the *Speculum,* however, were printed, like the two Latin editions of the same work, with movable metal type, though in one of the Latin editions there are twenty leaves the text of which is printed apparently from wooden blocks. The *Doctrinale* and the *Tracts* of Hispanus were printed, Junius says, at Mainz by Coster’s workman with the types which he had stolen from Coster. Of the Hispanus *Tracts* no edition has yet come to light that would answer to Junius’s description. But of the *Doctrinale* we have four edi­tions, all printed in the same type (i. ) as the four editions of the *Speculum.* With these same types are printed no less than six editions of the short Latin grammar of Ælius Donatus ; and editions of this school-book printed in Holland were, according to Zell in the *Cologne Chronicle,* the models for the printing at Mainz, which commenced about 1450. As there are no other editions of Donatus printed in Holland that could be placed before the year 1450, the claims of Haarlem and Holland are based on them ; and we will, therefore, briefly describe the types and books which must be con­nected with the *Specula, Doctrinalia,* and *Donatuses* just mentioned. In one of the editions of the *Speculum* in Dutch occur two leaves printed in a different type (ii. ) from the rest of the work. This type is in its turn so very much like another type with which a work of Laur. Valla *(Facetiæ Morales)* is printed that we link it (iii. ) on to the two just mentioned. Then again type iii. is, in some of its capitals, identical with a type (iv. ) used for a work of Ludovicus de Roma, *Singularia Juris,* at the end of which, on the last leaf, commences another work, printed in a different type (v. ). Type vi. is identical with type v., except in its capital P, which is larger. We have also works printed in two different types (vii., viii.) which both show such a great family likeness to each other and to types i. to vi. that it would not be advisable to separate them without evidence that they do not belong to the same office. With these eight types, which we cannot at present separate, forty­seven different books were printed, so far as we know at present. In type i.:—four editions (two in Latin,@@1 two in Dutch) of the *Speculum Humanæ Salvationis,* a work which consists of woodcuts with explanatory text underneath ; a Dutch version of *The Seven Penitential Psalms ;* one *Donatus* of 27 lines ; two editions of *Donatus* of 28 lines ; a *Liturgical Book* in 16mo ; three editions of *Donatus* of 30 lines ; one *Donatus,* in French, of 29 and 30 lines on a page ; four editions of *Doctrinale* of 32 lines ; one *Catonis Disticha* of 21 lines. In type ii.:—two leaves only (49 and 60) of one of the Dutch editions of the *Speculum.* In type iii.—Lauren­tius Valla, *Facetiæ Morales,* &c. In type iv. :—four editions of *Donatus* of 24 lines ; Lud. (Pontanus) de Roma, *Singularia Juris ;* Lud. (Pontanus) de Roma (?), *Treatise on Canonical Law (?).* In type v.:—Pius II., *Tractatus et Epitaphia* (printed at the end of the *Singularia Juris)* ; Guil. de Saliceto, *De Salute Corporis* ; one *Donatus* of 26 lines ; five editions of *Donatus* of 27 lines ; one *Doc­trinale* of 26 lines ; one *Doctrinale* of 28 lines ; one *Doctrinale* of 29 lines ; one *Doctrinale* of 32 lines ; *Catonis Disticha ;* Guil. de Saliceto, *De Salute Corporis,* together with Turrecremata, *De Salute Animae;* Pius II., *Tractatus de Amore,* &c. ; Pindar of Thebes, *Iliados Homericæ Epitome, cum Præfatione Pii II. ;* another edition of the same work. In type vi. :—one *Donatus* of 26 lines ; one *Donatus* of 27 lines. In type vii. :—one *Donatus* of 27 lines. In type viii. : —an *Abecedarium* of two leaves and a *Donatus* of 31 lines.@@2

Type v. must have been in existence before 13th September 1474, as there is evidence that a copy of the *Saliceto,* printed in that type, was bought for the monastery of St James at Lille by its abbot Conrad du Moulin, who filled that office from the end of 1471 to 13th September 1474. As a work in this type (the *Tracts and Epitaphs* of Pius II.) is printed at the end of the *Singularia Juris* in type iv., we may assume that this type existed a considerable time before type v. As the books printed in types iv. and v. show greater progress in style and workmanship than the books printed in types i. to iii., we must assign the latter to an earlier period than the former. There is indeed positive evidence that type i. must have existed a considerable time before the end of 1473, as fragments of a *Donatus* printed in that type were used by a book­binder at Haarlem to strengthen the binding of an account-book of the cathedral church in that town for the year 1474. From these facts alone we may safely assume that none of the forty-seven books can be dated after 1474, or, if any, only a few in types v. and vii. On the other hand, four of the works in type v. cannot be dated before 1458, as they bear the name of Pius II., who was not elected pope till that year. When we consider that there are twenty differ­ent editions of the *Donatus* printed in these types, and place an interval of about eighteen months between the successive editions, we get a period of some thirty years from about 1445 to 1474 for the issue of the twenty editions. That we reach the year 1445 by such a calculation is purely accidental ; but there is evidence that in 1446 and 1451 printed@@3 *Doctrinalia* were bought at Bruges and Valenciennes by Jean Le Robert, the abbot of Cambray, according to two entries in his diary, preserved in the archives at Lille. And, as we know positively that there was no printing done at Mainz before 1454, nor anywhere else so early, we can only apply these entries to the *Doctrinalia* printed in Holland in the same types as the four editions of the *Speculum* (on which Junius based the tra­dition of the Haarlem invention), and six editions of the Donatus, which we may fit into Zell’s account. That the editions of the *Speculum,* of the *Donatus,* and of the *Doctrinale* in type i. may be dated as early as 1445-1454 is clear when we compare them with the earliest products of Mainz printing, for which the *Donatuses,* according to the *Cologne Chronicle,* served as models. For instance, no difference in workmanship can be detected between the *Donatuses* printed in Holland and the three editions of *Donatus* in the 36-line Bible type and the four editions of the same in the 42-line Bible type, all seven presumably printed at Mainz and before 1456. Nor is the workmanship of the *Specula* (in type i.) or of the *Facetiæ Morales* (in type iii. ) different from or later than that of the Mainz *Catholicon* of 1460.

It has been pointed out above that the first products of the art of printing were not meant to be anything but faithful imitations of manuscript books, and that no material deviations from the general plan become observable till about 1473-1477. Nowhere is the plan of the MS. period more strictly adhered to than in the

@@@1 Twenty leaves of one of the Latin editions are apparently printed from wooden blocks, the text as well as the engravings.

2 For a detailed list of these books, and further particulars regarding them, see J. H. Hessels, *Haarlem, the Birthplace of Printing,* London, 1887, p. 25 *sq.*

@@@3 The abbot speaks of *Doctrinalia* “ gette” or “jettez en molle,” and the phrase is, as Bernard *(Origine,* i. 97 *sq.)* shows by eight examples from 1474—the year when printing is first officially spoken of in France—to 1593, and down to the present day, applied to typographically-printed books only.