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M. L. PARSONS

METHOD OF PRINTING NUMBERS

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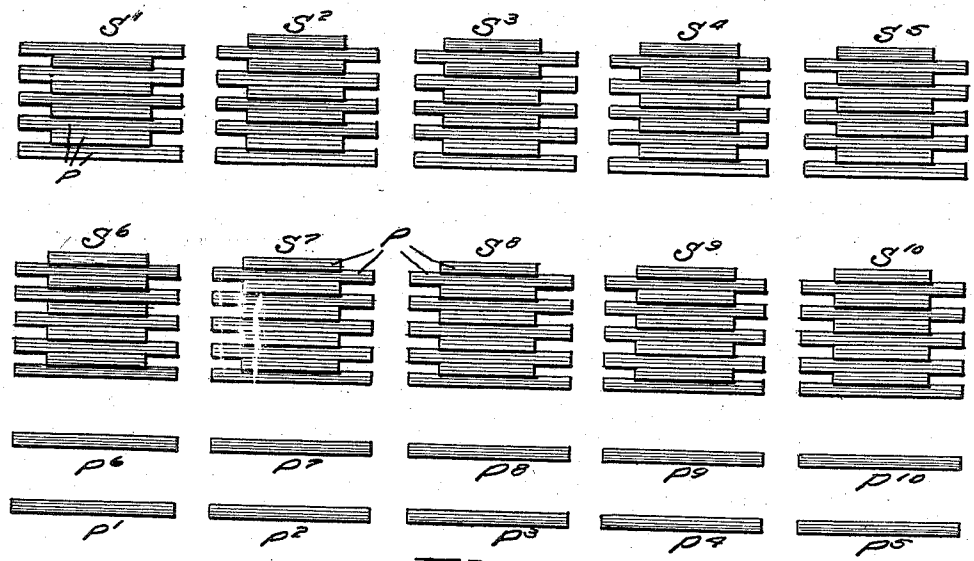

Fig. 1.

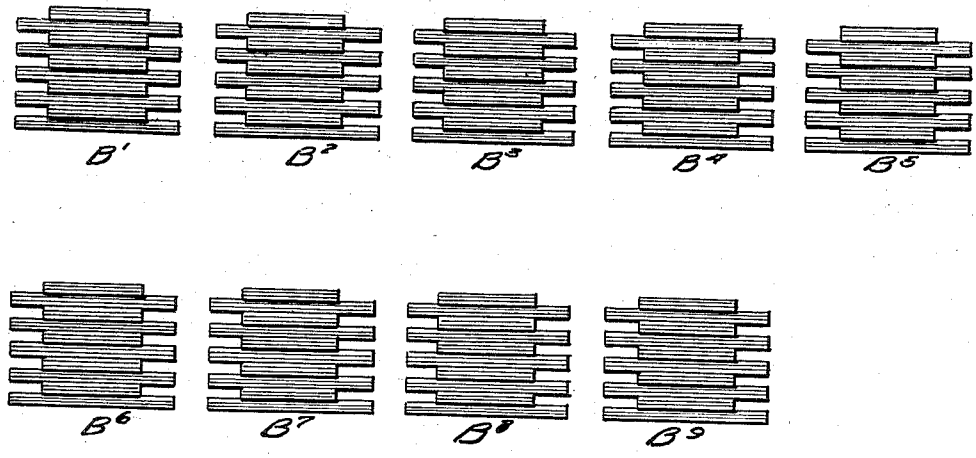

Fig. 2.

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METHOD OF PRINTING NUMBERS.

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This invention relates to improvements in a method of printing ordinal or serial numbers on separate sheets or plates.

The invention consists in the provision of a novel method of printing sheets having numerical designation in regular order running to large numbers, wherein the number of steps or operations required are materially reduced and simplified so that sheets or plates having ordinal designation may be produced in an economical manner.

A further object of the invention consists in the provision of a method of printing ordinal numbers on printing presses and with types of ordinary use, thus avoiding the relatively large expense incident to special numbering apparatus.

Other objects and advantages of my invention will be readily apparent in the course of the detailed description to follow.

In the accompanying drawings:

Figure 1 is a somewhat diagrammatical view in side elevation of a plurality of piles and stacks of printed matter illustrating the early stages of my improved method.

Fig. 2 is a similar view illustrating the later stages of my method wherein the printed matter is shown in bundles.

In the usual course of printing automobile license plates and in various other applications where numbering machines are not suitable or available, it is customary to print numbers thereon in order by changing the type at each impression. With my invention I propose to reduce the number of type changes to a relatively small number and thereby increase the efficiency and economy of such operations.

Assuming for the purposes of description that the number of sheets to be printed with ordinal numbers is 10,000, I take 100 sheets and print them with the numerals 00 and, when printed, distribute said sheets as the initial sheets of 100 piles. 100 sheets are then printed with the numerals 01 and distributed as the second sheet on each of said 100 piles. This operation is repeated 100 times with the numerals running from 00 in regular order with the last set of sheets numbered 99.

After distribution I have accumulated 100 piles of sheets indicated by the reference character P in Fig. 1, each of which contains 100 sheets printed in numerical order from 00 to 99. One of said piles P′ is then laid aside as complete, excepting for the first sheet printed with the figures 00, which is also laid aside for purposes to be hereinafter explained.

Nine of said piles are then superimposed in a stack S′, and nine additional stacks indicated respectively by characters S^2, S^3, S^4, S^5, S^6, S^7, S^8, S^9, S^{10} are formed in the same manner, containing ten piles each. The first stack S′ containing nine piles is then run through a printing press, printing the figure 0 as the third or hundreds figure of the several members. The second stack S^2 containing ten piles of 100 sheets is then run through the press, printing the numeral 1 as the third or hundreds figure of the several numbers, and 100 sheets thereof are set aside in consecutive order as completed, running from 100 to 199 and indicated by P^2 in Fig. 1. The third stack S^3 containing ten piles of 100 sheets is then run through the press, printing the numeral 2 as the third or hundreds figure of the several numbers, and 100 sheets thereof are set aside in consecutive order as completed, running from 200 to 299 as at P^3.

The remaining seven stacks are printed in similar fashion with the numerals 3 to 9, respectively, in the hundreds column, setting aside 100 sheets from each stack indicated respectively as P^4, P^5, P^6, P^7, P^8, P^9, and P^{10}.

There are now 999 sheets complete, running in serial order from 01 to 999 in the piles P′ to P^{10} inclusive. There are also ten stacks of sheets, each stack containing nine piles, all nine of the piles in each stack being exactly the same. In other words, the first stack S′ contains nine piles, each pile having 100 sheets running from 000 to 099. The second stack S^2 contains nine piles, each pile having 100 sheets runnning from 100 to 199. The piles in the third stack S^3 run from 200 to 299, and so on till the tenth stack S^{10}, whose piles run from 900 to 999.

I then redistribute the piles of the respective stacks into nine bundles of sheets indicated by B′, B^2, B^3, B^4, B^5, B^6, B^7, B^8, and B^9, respectively, by taking the first pile of the first stack, the first pile of the second stack, and so on through to the first pile of the tenth stack, thus giving me a bundle B′ containing ten piles, the sheets in this bundle running in regular order from 000 to 999. A second bundle B^2 is then formed by taking the second pile from each of the ten stacks, thus giving me a second bundle containing ten piles, the sheets in this bundle running

exactly as do the sheets in the first bundle from 000 to 999. There having been nine piles in each stack, there will be nine bundles all exactly the same, running from 000 to 999.

The first bundle B′, with sheets running in regular order from 000 to 999, is then printed with the figure 1 in the fourth or thousands column, giving me complete the numerals from 1000 to 1999. The second bundle B^2 is then printed with the figure 2 in the fourth or thousands column, giving complete the numerals from 2000 to 2999; and so on, printing each bundle with a digit figure in the thousands column from 1 to 9, respectively. The ninth bundle B^9, which is printed with the numeral 9 in the fourth or thousands column, gives complete the numerals from 9000 to 9999.

All the sheets are now printed in serial order from 01 to 9999. The sheet first laid aside, printed with the figures 00, is then printed with the figures 100, giving me my last sheet, 10000.

In the event that a larger number of sheets is required than 10,000, which is the number assumed in the foregoing example, the total number of sheets required are printed in the first instance with the first two figures of the number running from 00 to 99, and they are distributed in piles of 100 as described and in the foregoing manner in lots of 10,000. The first of such lots will be complete as just described, whereas each succeeding lot may be printed in similar fashion at each change of the press. Thus, each lot containing 10,000 sheets may then be printed with appropriate figures in the ten thousands column in a manner analogous to that formerly explained.

Thus, it will be seen that sheets running in regular order into any desired amount may be printed with a relatively small number of press changes, which will be approximately 120 press changes in printing 10,000 numbers, 130 changes for printing 100,000 numbers, and 140 changes for printing up to a million numbers.

It will be understood that where sheets are to be printed with duplicate numbers, as in automobile plates, in the original printing 200 sheets will be printed of each number running from 00 to 99, and that in distribution two sheets of identical numbers will be distributed in each of the 100 piles and thereafter will be considered as a single sheet.

Having described my invention, what I claim is:

The process of printing ordinal numbers consisting in printing the sheets with numbers from 00 to 99 in as many hundreds of sheets each as required, forming piles of such sheets, each pile containing one hundred consecutive numbers, forming stacks of ninety-nine of said piles containing ten piles each, save one, printing each of said stacks with digit figures from 0 to 9, respectively, as the third or hundreds figure, setting aside one pile from each said stack of ten piles, redistributing the sheets into nine bundles containing ten piles each with figures in the hundreds column running from 0 to 9, and printing each said bundle with digit figures from 1 to 9, respectively, as fourth or thousands figure.

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