

G. J. McCLOSKY,
PROCESS OF PRINTING NUMBERED BANDS.
APPLICATION FILED FEB. 4, 1920.

1,341,186.

Patented May 25, 1920.
4 SHEETS—SHEET 1.

Fig. 1.

NUMBERED	
From P	0001
To P	0500
NUMBERED	
From P	0501
To P	1000
NUMBERED	
From P	1001
To P	1500
NUMBERED	
From P	1501
To P	2000
NUMBERED	
From P	2001
To P	2500
NUMBERED	
From P	2501
To P	3000
NUMBERED	
From P	3001
To P	3500
NUMBERED	
From P	3501
To P	4000
NUMBERED	
From P	4001
To P	4500
NUMBERED	
From P	4501
To P	5000
NUMBERED	
From P	5001
To P	5500
NUMBERED	
From P	5501
To P	6000
NUMBERED	
From P	6001
To P	6500
NUMBERED	
From P	6501
To P	7000
NUMBERED	
From P	7001
To P	7500
NUMBERED	
From P	7501
To P	8000
NUMBERED	
From P	8001
To P	8500
NUMBERED	
From P	8501
To P	9000
NUMBERED	
From P	9001
To P	9500
NUMBERED	
From P	9501
To P	0000

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4 SHEETS—SHEET 2.

Fig. 2.

NUMBERED From P 10001 To P 10500	
NUMBERED From P 10501 To P 11000	
NUMBERED From P 11001 To P 11500	
NUMBERED From P 11501 To P 12000	
NUMBERED From P 12001 To P 12500	
NUMBERED From P 12501 To P 13000	3
NUMBERED From P 13001 To P 13500	
NUMBERED From P 13501 To P 14000	
NUMBERED From P 14001 To P 14500	
NUMBERED From P 14501 To P 15000	
NUMBERED From P 15001 To P 15500	
NUMBERED From P 15501 To P 16000	
NUMBERED From P 16001 To P 16500	
NUMBERED From P 16501 To P 17000	3
NUMBERED From P 17001 To P 17500	
NUMBERED From P 17501 To P 18000	
NUMBERED From P 18001 To P 18500	
NUMBERED From P 18501 To P 19000	
NUMBERED From P 19001 To P 19500	
NUMBERED From P 19501 To P 20000	

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4 SHEETS—SHEET 3.

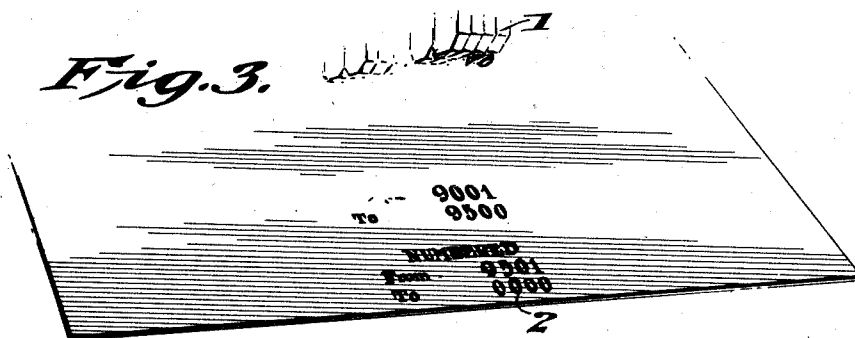
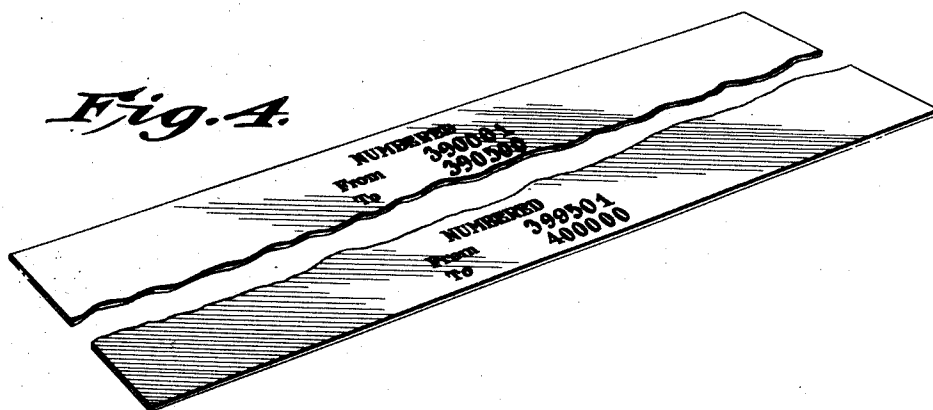
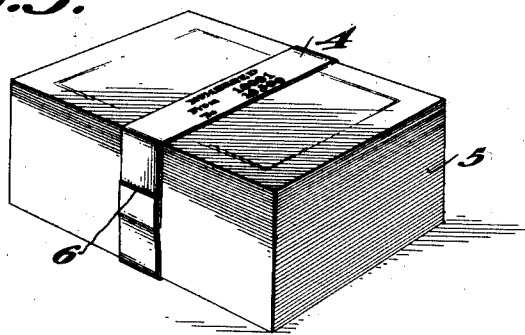


Fig. 5.



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4 SHEETS—SHEET 4.

Fig. 6.

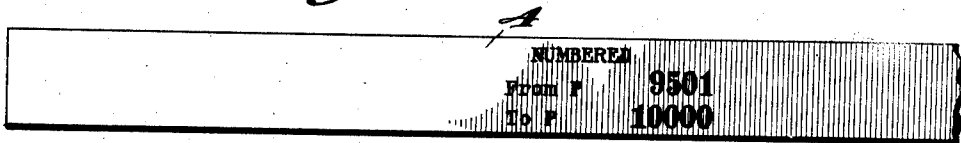


Fig. 7.

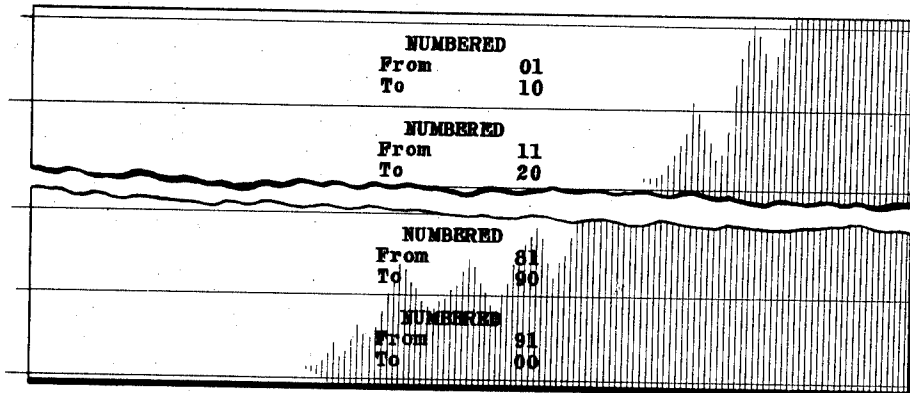
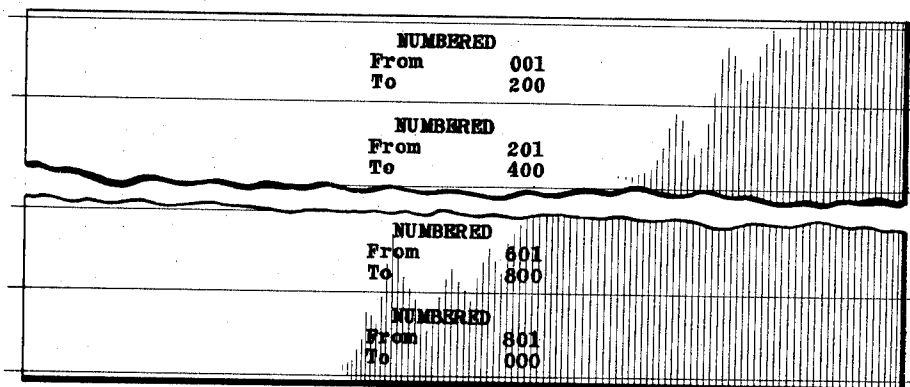


Fig. 8.



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UNITED STATES PATENT OFFICE.

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PROCESS OF PRINTING NUMBERED BANDS.

1,341,186.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE J. McCLOSKEY, a citizen of the United States, residing at Washington, in the District of Columbia, have invented new and useful Improvements in Processes of Printing Numbered Bands, of which the following is a specification.

My invention relates to an improvement in the process of printing numbered bands, and pertains particularly to the printing of bands intended to be used in banding packages of numbered labels, tickets, transfers, and the like, and to furnish information as to the numbers included in each package.

An object of my invention is to provide a process or method by which bands for use in banding packages of consecutively numbered labels, tickets, transfers, or like slips, or cards, can be conveniently and expeditiously printed to show serially the numbers contained in different packages.

Another object resides in carrying out a process in the accomplishment of which several automatically operated numbering machines can be employed to simultaneously print a plurality of band markings upon a single sheet, which sheet will later be severed into individual bands.

A still further object lies in carrying out the process in such a manner that as the numbering machines operate the serial numbering upon the bands advances in proper order to give the desired sequence when the printing operation is completed.

With these and other objects in view, which will be apparent from the specification, drawings, and claims, this invention includes certain novel steps and procedure which will now be set forth.

In the drawings:

Figure 1 shows a sheet printed in a form preparatory for the commencement of the printing of the serial numbering.

Fig. 2 illustrates the same sheet following the final printing step and indicates the lines of severance for the individual bands.

Fig. 3 is a perspective view, slightly distorted, to better disclose the manner of carrying out the final printing step.

Fig. 4 is a perspective view showing the two ends of a printed sheet with the middle torn out to give a clearer notion of the comparative printing thereon.

Fig. 5 shows in perspective a package of labels or the like bound by a band printed in accordance with my process.

Fig. 6 illustrates the last label on the first printed sheet as contained in the series illustrated in Fig. 1.

Fig. 7 shows the top and bottom ends of a sheet with a different serial numbering carried out.

Fig. 8 is a view similar to Fig. 7 illustrating the carrying out of still another grouping in the serial numbering.

While my improved process can be carried out to print bands for many groupings of numbers, I have in the embodiment illustrated in Figs. 1 to 6, shown the division into series of five hundred, and the following description will be read accordingly.

In this adaptation the bands will be numbered from 1 to 500, from 501 to 1000, *et seq.* Carrying out this same numbering there will be twenty groups from 1 to 10000, and thus twenty bands can be produced with the placing of an additional digit in the ten-thousandths column only as the last figure appears on the last band. Consequently, a second group of bands with this division of numbering can be produced by adding the digit "1" in the thousandths column and changing the "2" in the last number on the last band. By successively increasing the last number at the left on each group of twenty bands, the series can be carried on indefinitely, it only being necessary to add the necessary ciphers in each instance to the numbers on the second band to carry these numbers out to the ten-thousandths column.

With the above in mind I employ, in carrying out my process, a sheet of a width equal to or greater than the length desired for the bands and of a length sufficient to cut up into twenty bands. The printed matter which is to appear on each of the bands is then set up in twenty duplicates, and with each of these is also set up two numbers, indicating the first and last numbers embraced within one of the groupings of five hundred. This matter for the individual bands is then assembled and made up with the grouping indicating numbers preferably running consecutively down a column, the space between each grouping being maintained sufficient to permit trimming of the bands. In setting up, the numbers

for the first band will be made to read from "0001" to "0500"; for the second band, from "501" to "1000"; and, on the last band, from "9501" to "0000"; the intervening groupings being carried through serially; all substantially as shown in Fig. 1. In some cases it may be found desirable to use cuts or slugs, and again where the numbers are to appear in one color of ink and the reading matter of the bands is to be in a contrasting color or in black it will be necessary to assemble the numbers into one form and the reading matter into another.

This matter is then printed in duplicate on a number of sheets, so that each will appear substantially as shown in Fig. 1. One of these sheets will be the first in a series. This first sheet of the series is complete with the exception of the last number on the last band, and this is completed by the printing of the digit "1" in the thousandths column so that the numbers will show a proper sequence, as illustrated in Fig. 6.

The next step in the accomplishment of my process is the printing of numbers in the ten-thousandths and higher columns to carry on the sequence of numbering, and this step may be accomplished substantially as indicated in Fig. 3, by the employment of numbering machines printing upon the printed sheets with the numbers in registry with and in the same color as the numbers appearing on the sheets as originally duplicated. It has been found that this step is well accomplished by making up a plurality of numbering machines in a printing press and setting the machines to each commence printing at "1," with the exception of that machine which will print adjacent the four ciphers appearing at the bottom of the printed sheet, this machine being set at "2." The numbering machines are connected to be simultaneously advanced one number for each impression printed, and as the printed sheets are fed to the press the numbering machines will print upon the first sheet so that the finished impression appears substantially as in Fig. 2.

Referring to Fig. 3, it will be noted that the numbering machines at 1 are so placed that in each instance numbers printed thereby will be at the left of the numbers 2 on the printed sheets. It will be appreciated that the showing in Fig. 3 is of a schematic nature, intended only to give an idea of the printing relation, and that in carrying out the step of my process the sheets may be brought down onto the printing characters of the numbering machine, can be handled by a cylinder press, or in fact might be manipulated in any manner most expedient to the employment of the machinery at hand and the meeting of particular or peculiar operating conditions.

With the numbering machines advancing one complete unit and the machine printing at the bottom of the sheets always carrying one in advance of the remaining machines, the serial numbers may be carried on practically indefinitely as far as is desired, or up to the limit of the numbering machines. In Fig. 4 I have shown the top and bottom ends of one of the completed sheets of higher serial numbering, and it will be observed that the right hand figure of the last number is carried one in advance of the remaining numbers, this same ratio of advance being maintained throughout the continuance of the step of printing on the duplicated sheets. When the printing operation has been carried on to include the last serial number required, the sheets are evened up, by jogging or otherwise, and are cut successively on the lines 3—3 to sever the individual bands which will then appear substantially as at 4 in Figs. 5 and 6. As illustrated in Fig. 5, the bands can be used in confining a bunch of numbered labels, tickets, or the like, as shown at 5, by being wrapped around the bunch and pasted or otherwise secured at its ends as at 6, and the numbers of the labels or tickets included in the package will be presented in clear view on the band, the figures, made by the first and second numbering imprints, appearing on the finished band substantially as a single imprint.

In Fig. 7 I have illustrated the embodiment of a different grouping of numbers in which the figures on the duplicated printed sheets are carried only into the tens column, the advance in the serial numbering being in groups of ten, and it will be apparent that by printing in the hundreds and higher columns at the left hand of the duplicated numbers with the subsequently printed figures increasing one unit with each impression this series can be carried on indefinitely.

Another serial grouping is shown in Fig. 8, the groups here being in units of two hundred, and by a comparison with the showing in Figs. 1 and 2 it will be seen that by carrying out the numbering in the manner previously described the figures and the serial grouping can be followed out to the limits of the highest number of labels or the like to be banded. In this showing and in the grouping illustrated in Fig. 7 it will be appreciated that the sheet of paper will be of proper length to embrace all of the required bands between the limits disclosed.

From the foregoing it will be seen that I have provided a process or method by which bands for use in banding packages of consecutively numbered labels, tickets, transfers, or like slips or cards, can be expeditiously printed to show serially the num-

bers included in packages to be bound by the individual bands, and it will be appreciated that after the sheets are cut to form the separate bands these may be readily assembled to have the numbers thereon run consecutively or that by taking in rotation from the different bunches of bands into which the sheets are cut a proper serial sequence of the bands as applied to the packages will be obtained.

While, in the foregoing, I have illustrated printed matter of set form on each of the bands and have particularly described only certain serial groupings, it will be appreciated that these adaptations are included only as illustrating the accomplishment of my improved process, and that changes without limit can be resorted to in this respect. Likewise, other mechanisms and varied sequence of steps might be employed in carrying out my process in view of which I wish to be limited only to such points as are included in the claims.

I claim:

1. The process of printing numbered bands serially numbered, which consists in printing in duplicate upon sheets of sufficient size to cut up into a number of bands figures starting with any number and advancing in the desired series to show a serial number on each band when cut, and subsequently printing on said sheets at the left hand of the figures thereon other figures commencing with any number and advancing with each sheet printed.

2. The process of printing numbered bands which consists in printing in duplicate upon sheets of sufficient size to cut up into a number of bands figures starting with "1" and advancing serially to show upon each of the bands when cut, and subsequently printing on said sheets at the left hand of the figures thereon other figures commencing with "1" and advancing one unit with each sheet printed.

3. The process of printing numbered bands which consists in printing sheets of a size to cut up into a predetermined number of bands in duplicate with figures spaced to show upon the individual bands when cut and running numerically from "1" to the

highest figure for the predetermined number of bands, and subsequently printing upon said sheets figures at the left of and in registry with the duplicated figures which last printed figures commence with "1" and increase by one unit with each printing impression.

4. The process of printing numbered bands which consists in printing in duplicate upon sheets to cut up into a plurality of bands low and high figures commencing with "1" and advancing serially to designate predetermined groupings for which the bands are intended, the sheets being of sufficient size to form a number of bands to carry throughout the limit of figures embraced in the units and tens columns and the like necessary to express the predetermined serial grouping and ending on the space of the last band with a line of ciphers occupying all of said columns, and subsequently printing said sheets commencing with the figure "2" at the left of the line of ciphers and the numeral "1" at the left of each of the remaining figures and advancing said subsequently printed figure and numerals one unit for each sheet printed.

5. The process of printing numbered bands which consists in printing in duplicate upon sheets to cut up into a plurality of bands low and high figures commencing with "1" and advancing serially to designate predetermined groupings for which the bands are intended, the sheets being of sufficient size to form a number of bands to carry throughout the limit of figures embraced in the units and tens columns and the like necessary to express the predetermined serial grouping and ending on the space of the last band with a line of ciphers occupying all of said columns, printing a numeral "1" upon one of said sheets at the left and in registry with said ciphers, and subsequently printing other of said duplicated sheets commencing with the figure "2" at the left of the line of ciphers and the numeral "1" at the left of each of the remaining figures and advancing said subsequently printed figure and numerals one unit for each sheet printed.

In testimony whereof I affix my signature.

GEO. J. McCLOSKEY.