mack patterns are possible with the three-hole-square, counting only those which have 4, 5, 6, 7, 8, and 9 holes as none have been reported having only 1, 2, or 3 holes. Then when the total number has been determined. there should be deducted all those which duplicate others in appearance. For instance, numbering the holes downward beginning at the upper left corner, the pattern having holes 1, 2, 3, 4, 5, 6 is identical in appearance with pattern 4, 5, 6, 7, 8, 9, As the holes are perforated at the same time the slots are cut, they are all properly centered and face up-there are never any inverts, ofverts, diagonals, sideways or double punching.

One perfin has shown up that is derived from a square having four holes on each side. This was used by the Schermack Company on their own stamps and had holes at 1, 2, 3, 4, 5, 8, 9, 12, 13, 14, 15, 16in other words forming a hollow square with four on each side.

The writer either has in his collection or has received reports regarding 18 of these Schermack perfins. These are:

 $\begin{array}{c} 1, 2, 3, 4, 5, 7, \\ 1, 2, 3, 4, 5, 7, \\ 1, 2, 3, 4, 5, 7, \\ 1, 2, 3, 4, 5, 6, 9 \\ 1, 2, 3, 6, 8, 9 \\ 1, 2, 3, 6, 9 \\ \end{array}$ 

- 1, 2, 3, 6, 7, 8, 9
- 1, 3, 4, 7 1, 3, 7, 9 1, 3, 4, 5, 6, 7, 9
- 1, 4, 5, 7, 8, 9
- 1, 4, 7, 8, 9 2, 3, 4, 5, 6, 7, 8
- 2, 3, 4, 5, 6, 8, 9

2, 4, 6, 8

3, 5, 6, 7, 8, 9

3, 6, 7, 8, 9

1, 2, 3, 5, 8, 9, 12, 13, 14, 15, 16

Anyone havin gadditional patterns kindly report-also identifications are greatly to be desired. 0

WANTED-Capital to expand my distinguish their output from that of printing business. Hallock Card, other companies. 20-1

When sending perfins on approval as I assume when a packet arrives different patterns may be made. And this gives rise to an interesting mathematical problem in "combina-tions"—how many of these Scher-

## SCHERMACK PERFINS Warren Travell

There is one kind of postally-used perfins which is in a class by itself -as it is quite different from all others both in its origin and in the style of its patterns. These are the perfins which were perforated by the Schermack Company at the same time they cut the side slots which

The Schermack patterns are derived from a square of three holes on a side—the complete square having or for a quotation see that a letter nine holes. By the omission of one accompanies them or arives before There is one kind of postally-used perfins which is in a class by itself, - as it is quite different from all others both in its origin and in the style of its patterns. These are the perfins which were perforated by the Schermack Company at the same time they out the side slots which distinguish their output from that of other companies.

The Schermack patterns are derived from a square of three holes on a side, the complete square having nine holes. By the omission of one or more holes, a large number of different patterns may be made. And this gives rise to an interesting mathematical problem in 'combinations', how many of these Schermack patterns are possible with the three-hole-square, counting only those which have 4, 5, 6, 7, 8, and 9 holes, as none have been reported having only 1, 2, or 3 holes? Then, when the total number has been determined, there should be deducted all those which duplicate others in appearance. For instance, numbering the holes downward beginning at the upper left corner, the pattern having holes 1,2,3,4,5,6 is identical in appearance with pattern 4,5,6,7,8,9. As the holes are perforated at the same time the slots are out, they are all properly centered and face up, - there are never any inverts, obverts, diagonals, sideways or double punching.

One perfin has shown up which is derived from a square having four holes on each side. This was used by the Schermack Company on their own stamps and had holes at 1,2,3,4,5,8,9,12, 13,14,15,16,- in other words, forming a hollow square with four on each side.

The writer either has in his collection or has received reports regarding 18 of these Schermack perfins. These are:

1,2,3,4,5,6,7,8,9	1,3,4,5,6,7,9
1,2,3,4,5,7	1,4,5,7,8,9
1,2,3,4,5,7,8	1,4,7,8,9
1,2,3,4,5,6,9	2,3,4,5,6,7,8
1, 2, 3, 5, 6, 8, 9	2,3,4,5,6,8,9
1,2,3,6,9	2,4,6,8
1,2,3,6,7,8,9	3,5,6,7,8,9
1,3,4,7	3.6.7.8.9
1,3,7,9	1,2,3,4,5,8,9,12,13,14,15,16

Anyone having additional patterns, kindly report, - also, identifications are greatly to be desired.

Warren Travell Muly 22, 1946.