

## Envelope Knife Illustrations

A knife is a sharp-edged, steel form used to cut envelope blanks (like a cookie cutter). In the $19^{\text {th }}$ and early $20^{\text {th }}$ century, envelope blanks were made by forcing the knife, using a hydraulic press, through a pile of up to 500 sheets of paper. The knife was then repositioned and another set of blanks cut from the same pile of sheets. This process was repeated until as many blanks as possible were cut from the sheets.

It should be apparent from the previous description that metal knives wore out and needed to be replaced. The replacement may have varied slightly in shape from the original. Therefore it is important to recognize that knives shown on the following pages are actually a family of shapes that varied slightly over time.


Envelopes blanks cut with a knife from sheets (above) have straight edges and gradual curves, while rotary cut envelopes have rougher edges with nicks (below).


10x magnification


Arrows point to nicks from rotary knife.

Beginning about 1912, some envelopes were made from a roll of paper fed into the press with envelopes printed and then cut in one process. These early rotary cut envelopes can usually be identified by less sharp edges.

In philately, we refer to 'knife' as the shape of envelope cut by a particular metal knife.

Diagrams below give terms and conventions for portraying envelope characteristics. Sizes and knives not shown on following pages were used only on $19^{\text {th }}$ century envelopes.


Right flap over Left (R/L) Left flap over Right (L/R)

A knife number may be followed by a letter indicating a subtype. The terms used in this catalog are:
o - Open ended envelope
u - Without gum on top flap
w - Window envelope (with number if more than one type)
x - Extra quality paper

Size 3-73/77 x 134


Plimpton-Morgan Knife, right side flap over left, 73 x 134 mm.

## Knife 10



Mercantile Knife, left side flap over right, $77 \times 134 \mathrm{~mm}$.

Size 7-82/83 x 139


Plimpton-Morgan Knife, tongueshaped top flap, side shapes vary.

Knife 34


Plimpton-Morgan Knife, high back knife, first time sides don't meet.

## Knife 35



Mercantile Knife, side ends nearly straight, made to match the shape used on web printing machines.

## Size 8 - $85 \times 149$ mm

## Knife 42



Mercantile Knife, made to match the low back shape required for web printing.

## Size 9-92 x 149 mm

## Knife 45



Plimpton-Morgan Knife, high back knife.


Mercantile Knife, made to match the low back shape required for web printing.

## Size 10-89 x 160 mm



Plimpton-Morgan Knife, moderately deep throat, side flaps with shoulder $1 / 4$ distance from end, right side flap over left.


Mercantile Knife, made with Kenny rotary machines, side flaps with square ends ( 20 mm ), rough edges usual.


Similar to knife 54 but left side flap over right.

## Knife 59



Mercantile Knife, side ends nearly straight, made to match the shape used on web printing machines.


Mercantile Knife, high back knife.

## Knife 60



Middle West Envelope Co Knife, made with Smithe rotary machine, side flaps with square ends ( 15 mm ), rough edges usual.

## Size 11-95 x 160 mm



Plimpton-Morgan Knife, high back knife.

## Knife 65



Mercantile Knife, made to match the low back shape required for web printing.

## Size 12-92 x 165 mm



International Env. Co Knife, high back knife, rounded top of bottom flap, top flap 45 mm .


International Env. Co Knife, high back knife, flattened top of bottom flap, top flap $36 / 37 \mathrm{~mm}$.


International Env. Co Knife, pointed and angular sides and bottom, top flap 57 mm .


International Env. Co Knife, pointed and angular sides and bottom, top flap 50 mm .

Knife 70


National Envelope Company Knife, wide back and narrow side flaps, $93 \times 166 \mathrm{~mm}$.

Size 13-95 x 171 mm

Knife 78


Plimpton-Morgan Knife, also used by International Envelope Co for window fronts from 1949 to 1965.


Mercantile Knife, side flaps with square side flap ends ( 20 mm ); rough edges; made with Kenny rotary machine.


Mercantile Knife, made to match shape used on the Kenny rotary machines. Used for solid fronts, 1915-29; window fronts 1915-1949.


Middle West Envelope Co. Knife, side flaps with square side flap ends ( 15 mm ), rough edges; made with Smithe rotary machine.

Size 14 - $90 \times 117 \mathrm{~mm}$


Plimpton \& Morgan Knife, small baronial size.

Size 19-98 x 190 mm

## Knife 91



International Envelope Co Knife, new size 1931, withdrawn 1936.

Size 16-108 x 132 mm


Plimpton \& Morgan Knife, baronial size.

Size 19A-127 x 190 mm

## Knife 127



1988 Christmas issue only. (UPSS \# 3728)

Size 17-108 x 140 mm

## Knife 89



Mercantile Knife, baronial size.

Size 19B-91 x 201 mm
Knife 126


Official mail window envelope for Savings Bonds.

## Size 20-92 x 219 mm



Middle West Envelope Co. Knife, very deep throat, low back envelope.


International Envelope Co. Knife, high back envelope.

## Size 21-98 x 225 mm

## Knife 100 <br> 

Plimpton Knife \& U.S. Envelope Co Knife, used for window fronts after 1949, high back.

## Knife 103 <br> 

Middle West Envelope Co. Knife, intended to duplicate shape of Smithe rotary machine.


Middle West Envelope Co Knife, rough edges, made with Smithe rotary machine.

## Knife 104A



National Envelope Company Knife, wide back and narrow side flaps, $98 \times 225 \mathrm{~mm}$.

Knife 128

U.S. Envelope Company Knife, sharp corners on and bottom top flaps, $98 \times 226 \mathrm{~mm}$.

## Size 21A-112 x 226 mm

Knife 129


Passport envelope for Dept of State; very deep throat, sides angular with square ends that meet, top \& bottom pointed.

## Knife 130



Passport self adhesive envelope for Dept of State; wide back and narrow side flaps.

Size 23-105/112 x 241 mm


Plimpton \& Morgan Knife \& International Envelope Company, high back envelope, side flaps top curved with nearly circular tips ( 12 mm dia.), bottom flap is 95 mm tall. $105 \times 241 \mathrm{~mm}$.


Mercantile Knife, rough edges; with square side flap ends ( 20 mm ); made with the Kenny rotary machine. $105 \times 241 \mathrm{~mm}$.


Middle West Knife, rough edges usual; with square side flap ends ( 15 mm ); made with Smithe rotary machine. $105 \times 241 \mathrm{~mm}$.


Middle West Envelope Co. Knife, intended to duplicate the shape of the Kenny rotary machine. $105 \times 241 \mathrm{~mm}$.


International Envelope Co. Knife, corners on top flap, high back (85 mm ), compare to Knives 106 and 116, used for envelopes 3501A and 3501B only. $110 \times 241 \mathrm{~mm}$.

## Knife 115A



National Envelope Company Knife, wide back and narrow side flaps. $112 \times 246 \mathrm{~mm}$.

## Knife 116



International Envelope Co. Knife, used for all size 23 envelopes from 1950 to 1964, except in 1961 when knife 113 was used, side flaps slightly concave with large rounded tips ( 19 mm dia.), bottom flap is 88 mm tall. $105 \times 241 \mathrm{~mm}$.

## Size 25-111 x 257 mm



Plimpton \& Morgan Knife, high back.

Knives are listed by knife number. In addition to size categories, check the listed knife number below to find those knife illustrations.

Knife Number Knife Size
126 19B
127 19A
$128 \quad 21$
129
130
21A
21A

## Wrapper Sizes



| $\begin{aligned} & \text { Thory } \\ & \text { Thorp } \end{aligned}$ |  | Knife UPSS |  | Conversion size (inches) |  | $\begin{aligned} & \text { Issue } \\ & \text { Date } \end{aligned}$ | UPSS Knife to Thorp Knife Conversion |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | UPSS |  |  |  | Thorp | size (mm) | size (inches) |  |  | Issue <br> Date |
| Knife | Size |  |  |  | height |  | x width | Knife S |  | Knife |  | Size | height x width | height | x | width |
| 46 | 1 | 83 | $73 \times 134$ | 2-7/8 | $\times$ 5-1/4 |  | 1878 | 8 | 3 | 46 | 1 | $73 \times 134$ | 2-7/8 | $x$ | 5-1/4 | 1878 |
| 48 | 3 | 317 | $83 \times 139$ | 3-1/4 | x 5-1/2 | 1878 | 10 | 3 | 65 a | 1 | $73 \times 134$ | 2-7/8 | $x$ | 5-1/4 | 1907 |
| 50 | 5 | 5410 | $89 \times 160$ | 3-1/2 | x 6-5/16 | 1878 | 31 | 7 | 48 | 3 | $83 \times 139$ | 3-1/4 | $x$ | 5-1/2 | 1878 |
| 51 | 7 | 10021 | $98 \times 225$ | 3-7/8 | $\times 8-7 / 8$ | 1874 | 34 | 7 | 79 | 2 | $82 \times 139$ | 3-1/4 | x | 5-1/2 | 1900 |
| 59 | H | 10623 | $105 \times 241$ | 4-1/8 | x 9-1/2 | 1890 | 35 | 7 | 94 | 2 | $82 \times 139$ | 3-1/4 | $x$ | 5-1/2 | 1912 |
| 59 | H | 11623 | $105 \times 241$ | 4-1/8 | $\times$ 9-1/2 | 1890 | 41 | 8 | 80 | 3 | $85 \times 149$ | 3-3/8 | $x$ | 5-7/8 | 1900 |
| 61 | I | 12425 | $111 \times 257$ | 4-3/8 | x 10-1/8 | 1890 | 42 | 8 | 92 | 3 | $85 \times 149$ | 3-3/8 | $x$ | 5-7/8 | 1912 |
| 65 a | 1 | 103 | $73 \times 134$ | 2-7/8 | $\times$ 5-1/4 | 1907 | 45 | 9 | 84 | 4 | $92 \times 149$ | 3-5/8 | $x$ | 5-7/8 | 1900 |
| 68 | 5 | 5510 | $89 \times 160$ | 3-1/2 | $\times 6-5 / 16$ | 1894 | 46 | 9 | 95 | 4 | $92 \times 149$ | 3-5/8 | $x$ | 5-7/8 | 1912 |
| 79 | 2 | 347 | $82 \times 139$ | 3-1/4 | x 5-1/2 | 1900 | 54 | 10 | 50 | 5 | $89 \times 160$ | 3-1/2 | $x$ | 6-5/16 | 1878 |
| 80 | 3 | 418 | $85 \times 149$ | 3-3/8 | x 5-7/8 | 1900 | 55 | 10 | 68 | 5 | $89 \times 160$ | 3-1/2 | $x$ | 6-5/16 | 1894 |
| 81 | 5 | 5710 | $89 \times 160$ | 3-1/2 | $\times 6-5 / 16$ | 1900 | 57 | 10 | 81 | 5 | $89 \times 160$ | 3-1/2 | $x$ | 6-5/16 | 1900 |
| 82 | 11 | 8816 | $108 \times 132$ | 4-1/4 | x 5-3/16 | 1900 | 58 | 10 | 87 | 5 | $89 \times 160$ | 3-1/2 | $x$ | 6-5/16 | 1912 |
| 83 | 13 | 7813 | $95 \times 171$ | 3-3/4 | $\times 6-3 / 4$ | 1900 | 59 | 10 | 90 | 5 | $89 \times 160$ | 3-1/2 | $x$ | 6-5/16 | 1913 |
| 84 | 4 | 459 | $92 \times 149$ | 3-5/8 | x 5-7/8 | 1900 | 60 | 10 | 99 | 5 | $89 \times 160$ | 3-1/2 | $x$ | 6-5/16 | 1915 |
| 85 | 10 | 8414 | $90 \times 117$ | 3-1/2 | x 4-5/8 | 1900 | 64 | 11 | 86 | 14 | $95 \times 160$ | 3-3/4 | $\times$ | 6-5/16 | 1900 |
| 86 | 14 | 6411 | $95 \times 160$ | 3-3/4 | x 6-5/16 | 1900 | 65 | 11 | 93 | 14 | $95 \times 160$ | 3-3/4 | $x$ | 6-5/16 | 1912 |
| 87 | 5 | 5810 | $89 \times 160$ | 3-1/2 | x 6-5/16 | 1912 | 66 | 12 | 107 | 6.8 | $92 \times 165$ | 3-5/8 | x | 6-1/2 | 1960 |
| 88 | 11 | 8917 | $108 \times 140$ | 4-1/4 | x 5-1/4 | 1912 | 67 | 12 | 108 | 6.8 | $92 \times 165$ | 3-5/8 | $x$ | 6-1/2 | 1960 |
| 89 | 13 | 7913 | $95 \times 171$ | 3-3/4 | $\times 6-3 / 4$ | 1912 | 68 | 12 | 110 | 6.8 | $92 \times 165$ | 3-5/8 | $x$ | 6-1/2 | 1965 |
| 90 | 5 | 5910 | $89 \times 160$ | 3-1/2 | x 6-5/16 | 1913 | 69 | 12 | 112 | 6.8 | $92 \times 165$ | 3-5/8 | $x$ | 6-1/2 | 1974 |
| 91 | 8 | 11023 | $105 \times 241$ | 4-1/8 | x 9-1/2 | 1912 | 70 | 12 | NL | NL | $93 \times 166$ | 3-5/8 | $x$ | 6-1/2 | 2008 |
| 92 | 3 | 428 | $85 \times 149$ | 3-3/8 | x 5-7/8 | 1912 | 78 | 13 | 83 | 13 | $95 \times 171$ | 3-3/4 | $x$ | 6-3/4 | 1900 |
| 93 | 14 | 6511 | $95 \times 160$ | 3-3/4 | $\times 6-5 / 16$ | 1912 | 79 | 13 | 89 | 13 | $95 \times 171$ | 3-3/4 | $\times$ | 6-3/4 | 1912 |
| 94 | 2 | 357 | $82 \times 139$ | 3-1/4 | x 5-1/2 | 1912 | 80 | 13 | 98 | 13 | $95 \times 171$ | 3-3/4 | $x$ | 6-3/4 | 1914 |
| 95 | 4 | 469 | $92 \times 149$ | 3-5/8 | x 5-7/8 | 1912 | 81 | 21 | 101 | 13 | $95 \times 171$ | 3-3/4 | $x$ | 6-3/4 | 1915 |
| 96 | 7 | 10321 | $98 \times 225$ | 3-7/8 | x 8-7/8 | 1921 | 84 | 14 | 85 | 10 | $90 \times 117$ | 3-1/2 | x | 4-5/8 | 1900 |
| 97 | 8 | 11123 | $105 \times 241$ | 4-1/8 | $\times$ 9-1/2 | 1965 | 88 | 16 | 82 | 11 | $108 \times 132$ | 4-1/4 | x | 5-3/16 | 1900 |
| 98 | 13 | 8013 | $95 \times 171$ | 3-3/4 | x 6-3/4 | 1914 | 89 | 17 | 88 | 11 | $108 \times 140$ | 4-1/4 | $x$ | 5-1/4 | 1912 |
| 99 | 5 | 6010 | $89 \times 160$ | 3-1/2 | $\times 6-5 / 16$ | 1915 | 91 | 19 | 105 | 7.5 | $98 \times 190$ | 3-7/8 | $x$ | 7-1/2 | 1931 |
| 101 | 13 | 8121 | $95 \times 171$ | 3-3/4 | $\times 6-3 / 4$ | 1915 | 92 | 20 | 103 | 6 | $92 \times 219$ | 3-5/8 | $x$ | 8-5/8 | 1929 |
| 102 | 8 | 11223 | $105 \times 241$ | 4-1/8 | $\times$ 9-1/2 | 1915 | 93 | 20 | 106 | 6 | $92 \times 219$ | 3-5/8 | $x$ | 8-5/8 | 1949 |
| 103 | 6 | 9220 | $92 \times 219$ | 3-5/8 | x 8-5/8 | 1929 |  |  |  | 7 |  | $3-7 / 8$ | x | 8-718 |  |
| 104 | 7 | 10421 | $98 \times 225$ | 3-7/8 | x 8-7/8 | 1916 | 100 | 21 | 51 | 7 | $98 \times 225$ | 3-7/8 | $x$ | 8-7/8 | 1874 |
| 105 | 8 | 9119 | $98 \times 190$ | 3-7/8 | $\times 7-1 / 2$ | 1931 | 103 | 21 | 96 | 7 | $98 \times 225$ | 3-7/8 | $x$ | 8-7/8 | 1921 |
| 106 | 6 | 9320 | $92 \times 219$ | 3-5/8 | x 8-5/8 | 1949 | 104 | 21 | 104 | 7 | $98 \times 225$ | 3-7/8 | $x$ | 8-7/8 | 1916 |
| 107 | 7 | 6612 | $92 \times 165$ | 3-5/8 | x 6-1/2 | 1960 | 104A | 21 | NL | NL | $98 \times 230$ | 3-7/8 | $x$ | 9 | 2008 |
| 108 | 7 | 6712 | $92 \times 165$ | 3-5/8 | x 6-1/2 | 1960 | 106 | 23 | 59 | H | $105 \times 241$ | 4-1/8 | $x$ | 9-1/2 | 1890 |
| 109 | 10(8) | 11323 | $110 \times 241$ | 4-1/4 | x 9-1/2 | 1961 | 110 | 23 | 91 | 8 | $105 \times 241$ | 4-1/8 | $x$ | 9-1/2 | 1912 |
| 110 |  | 6812 | $92 \times 165$ | 3-5/8 | x 6-1/2 | 1965 | 111 | 23 | 97 | 8 | $105 \times 241$ | 4-1/8 | $x$ | 9-1/2 | 1965 |
| 111 | 10 | 11423 | $110 \times 241$ | 4-1/4 | x 9-1/2 | 1965 | 112 | 23 | 102 | 8 | $105 \times 241$ | 4-1/8 | $x$ | 9-1/2 | 1915 |
| 112 | 7 | 6912 | $92 \times 165$ | 3-5/8 | x 6-1/2 | 1974 | 113 | 23 | 109 | 10(8) | $110 \times 241$ | 4-1/4 | x | 9-1/2 | 1961 |
| 113 | 10 | 11523 | $110 \times 241$ |  | $\times \mathrm{9}-1 / 2$ | 1973 | 114 | 23 | 111 | 10 | $110 \times 241$ | 4-1/4 | $x$ | 9-1/2 | 1965 |
|  |  |  |  |  |  |  | 115 | 23 | 113 | 10 | $110 \times 241$ | 4-1/4 | $x$ | 9-1/2 | 1973 |
|  |  |  |  |  |  |  | 115A | 23 | NL | NL | $112 \times 246$ | 4-3/8 | $x$ | 9-3/4 | 2008 |
|  |  |  |  |  |  |  | 116 | 23 | 59 | 8(H) | $105 \times 241$ | 4-1/8 | $x$ | 9-1/2 | 1890 |
|  |  |  |  |  |  |  | 124 | 25 | 61 | $9(1)$ | $111 \times 257$ | 4-3/8 | $x$ | 10-1/8 | 1890 |
|  |  |  |  |  |  |  | 126 | 19B | NL | NL | $91 \times 201$ | 3-9/16 | $x$ | 8-15/16 | 1987 |
|  |  |  |  |  |  |  | 127 | 19A | NL | NL | $127 \times 190$ | 7-1/2 | x | 5 | 1988 |
|  |  |  |  |  |  |  | 128 | 21 | NL | NL | $98 \times 226$ | 3-7/8 | $x$ | 9 | 1989 |
|  |  |  |  |  |  |  | 129 | 21A | NL | NL | $112 \times 226$ | 4-3/8 | $x$ | 9 | 1990 |
|  |  |  |  |  |  |  | 130 | 21A | NL | NL | $112 \times 226$ | 4-3/8 | x | 9 | 2008 |

## $20^{\text {th }}$ Century Watermark Illustrations

| $19^{\text {th }}$ Century Watermarks on $20^{\text {th }}$ Century Envelopes |
| :---: |
| $12 \leftrightarrows$ |
| 界回回 <br> 13 ת <br> ＂回回 |



The＇9＇of 15A is thicker，has a smaller，round circle at top and the stem curves around under the＇1＇unlike the＇9＇of 15； bottom of vertical line of＇7｀curves right on wmk 15.

## © 0 O 0 USSE US－SE <br> 16 <br> 17 <br> 18 <br> 1911－1915 <br> Watermarks $17 \& 18$ are more widely spaced than shown．

Previous watermarks（ $18 \&$ prior）on laid paper while
following watermarks（19 \＆after）are on wove paper．


19


20
1915－1919

22

23 1919－1920


40



International Paper Company

33 1933－1936

$35 \quad 36$

$$
1937-1940
$$


$\begin{array}{ll}38 & 39 \\ 1941-1944\end{array}$

$$
1941-1944
$$



43

Watermarks 34 \＆ 37 were assigned but never issued．

## $20^{\text {th }}$ Century Watermarks



47
International Paper Co. 1961 to 1965
High back envelopes only
Champion Paper Co. 1967 to 1987
Low-back envelopes only
Some have labeled the Champion paper watermark as 47A since the star was larger ( 20 versus 16 mm across) and the " $A$ " was smaller across the base (14 versus 18 mm ). This catalog uses 47 for both because no die was issued with both watermarks.


48
Howard Paper Co. 1961 to 1968

P.H Glatfelter Paper Co. 1970 to 1990

Rubber plate watermark rather than dandy roll watermark as all previous; larger star than watermark 48.

 1965 to 1967

The Westvaco watermark 50 is 6 mm taller, the star is larger and the bottom of the " $U$ " is more square.


51
WESTVACO 1991 to early 1992
Used only on Savings Bond envelopes.

For more information on $20^{\text {th }}$ Century watermarks see Bill Geijsbeek, $20^{\text {th }}$ Century Watermarks - Overview. Postal Stationery Vol 51(2) pp 34-37. 2009.

## Recycled Logo Type Illustrations

Type A


Printed under flap

Type B


Printed lower right on back

## Type C

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printed on recycled paper in keeping
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WITH OUR COMMITMENT TO THE ENVIRONMENT

Type D

$$
\begin{aligned}
& \text { THIS ENVELOPE IS RECYCLABLE AND MADE WITH 100\% } \\
& \text { RECYCLED PAPER, } 30 \% \text { POST-CONSUMER CONTENT }
\end{aligned}
$$

Printed on bottom flap in two lines
Type E
THIS ENVELOPE IS RECYCLABLE AND MADE WITH 30\% POST CONSUMER CONTENT.

Printed on bottom flap in two lines
Type F THIS ENVELOPE IS RECYCLABLE AND MADE WTH 30\% POST CONSUMER CONTENT.

Printed on center of bottom flap in one line.
Type $\mathbf{G}$ as Type F, printed on top, right side flap in one line (hidden when flap closed).
Type $\mathbf{H}$ as Type F printed on the left of the bottom flap in one line.

## Type I

THIS ENVELOPE IS RECYCLABLE AND MADE WITH 30\% POST CONSUMER CONTENT
Printed on the left of the bottom flap in one line. Logo appears after text.

Type J
SUSTAINABLE

With Sustainable Forestry Initiative logo


As $J$ but with recycle logo ahead of text

Recycled Logos Continued

Type L


As K but with Cradle-to-Cradle logo between SFI logo and text
Note: The Sustainable Forest Initiative images on Recycle Logos Type J and L for the earlier issues of Seabiscuit and Liberty Bell vary in height according to the size of the envelope - Size $12=16 \mathrm{~mm}$, size $21=18 \mathrm{~mm}$ and size $23=20 \mathrm{~mm}$. All subsequent issues are printed with a SFI logo height of 16 mm .

As L but with Cradle-to-Cradle logo at right


As M but with copyright year of 2011


As N but without Cradle-to-Cradle logo


As O but with copyright year of 2012

Type Q


As P but with copyright year of 2013

Recycled Logos Continued


As Q but with copyright year of 2014

Type S


THIS ENVELOPE IS RECYCLABLE ANO MADE WTH 30\% POST CONSUMER CONTENT As
© USPS 2012
As R but with SFI logo replaced by FSC logo (new paper supplier) with copyright year of 2012


As S but with copyright year of 2013


As S but with copyright year of 2015


As S but with copyright year of 2016


As T but with FSC logo including number of paper supplier

Type X


THIS ENELOPE IS RECYCLABLE AND MADE WTH $30 \%$ POST CONSUMER CONTENT \&
O USPS 2016
As W but with FSC logo with copyright year of 2016

Type Y

As X but with FSC logo with copyright year of 2019

