

## SECTION B — PERFORMING OPERATIONS; TRANSPORTING

### B31 MAKING PAPER ARTICLES; WORKING PAPER

**B31B MAKING BOXES, CARTONS, ENVELOPES, OR BAGS** (incising, scoring, in general B26D 3/08; combined making and filling B65B)

#### Note(s)

1. In this subclass, envelopes or bags are regarded as being essentially flexible containers, the final shape of which is determined by their contents.
2. In this subclass, the following expression is used with the meaning indicated:
  - "boxes or cartons" includes bags formed similarly to cartons, trays with upstanding side-walls, barrels, tubes and cups, other than articles formed by winding.

#### Subclass index

MAKING IN GENERAL.....	1/00, 47/00, 49/00
MAKING BOXES OR CARTONS	
Characterised by the method of making	
by folding a single piece.....	3/00, 5/00
by assembling pieces.....	13/00, 17/00
by other shaping under pressure.....	43/00
Characterised by the kind of articles	
lined or reinforced articles.....	7/00, 9/00, 15/00
other specified articles.....	11/00, 13/00, 45/00
MAKING ENVELOPES OR BAGS	
Characterised by the method of making	
from sheets.....	21/00, 31/00-35/00
from webs.....	23/00, 37/00
by other shaping under pressure.....	43/00
Characterised by the kind of articles	
flat rectangular articles.....	19/00-23/00
articles with bases provided for thickness.....	29/00-37/00
other specified articles.....	25/00, 27/00, 39/00, 41/00, 45/00

<b>1/00</b>	<b>Box, carton, envelope or bag making machinery characterised by performing specific operations</b> (machinery for performing operations of general application, <u>see</u> the appropriate subclasses)	1/28	• • around mandrels, including bottom-forming operations
1/02	• Feeding or positioning sheets, blanks, or webs	1/30	• • • the mandrels moving
1/04	• • Feeding sheets or blanks	1/32	• • • • in circular paths
1/06	• • • from stacks	1/34	• • • • about their own axes
1/08	• • • during envelope- or bag-making operations	1/36	• • by continuously feeding same to stationary members, e.g. plates, ploughs, cores
1/10	• • Feeding or positioning webs	1/38	• • • the members being forming-tubes
1/12	• • by air pressure or suction	1/40	• • • • acting internally
1/14	• Cutting, e.g. perforating, punching, slitting, trimming	1/42	• • • • acting externally
1/16	• • Cutting webs to form sheets or blanks	1/44	• • by plungers moving through folding dies
1/18	• • Slitting webs longitudinally	1/46	• • • and interconnecting side walls during such movement
1/20	• • Cutting sheets or blanks	1/48	• • • • by folding or tucking in locking flaps
1/22	• • • Notching; Trimming edges of flaps	1/50	• • • • • by interengaging tongues and slots
1/24	• • • Making window openings	1/52	• • by reciprocating or oscillating members, e.g. fingers other than plungers and dies
1/25	• Surface scoring (cutting through material B31B 1/14) [2]	1/54	• • • operating on moving material
1/26	• Folding sheets, blanks, or webs	1/56	• • by rotary members co-operating with blades
		1/58	• • by moving endless belts

- 1/60 • Uniting opposed surfaces or edges; Taping
- 1/62 • • by adhesives
- 1/64 • • by applying heat or pressure
- 1/66 • • • high-frequency electric heating
- 1/68 • • by stitching, stapling, or riveting
- 1/70 • • • by corner stapling
- 1/72 • • by applying and securing strips or sheets
- 1/74 • Auxiliary operations
- 1/76 • • Opening and distending flattened articles
- 1/78 • • • mechanically
- 1/80 • • • pneumatically
- 1/82 • • Attaching windows
- 1/84 • • Forming valves or applying valve inserts  
(connection of valves to inflatable elastic bodies B60C 29/00)
- 1/86 • • Forming integral handles or mounting separate handles (making separate handles by multi-step processes B31D 1/06)
- 1/88 • • Printing or embossing
- 1/90 • • Attaching accessories not otherwise provided for, e.g. opening or closure devices, tear strings
- 1/92 • • Delivering
- 1/94 • • • singly or in succession
- 1/96 • • • • in overlapping arrangement
- 1/98 • • • in stacks or bundles

#### **Machinery for making boxes or cartons**

- 3/00 Machinery characterised by making boxes or cartons by folding single-piece sheets, blanks, or webs**  
(B31B 5/00 takes precedence)
- 3/02 • and having means for feeding or positioning sheets, blanks, or webs
- 3/14 • and having means for cutting, e.g. perforating, punching, slitting, trimming
- 3/26 • and having means for folding sheets, blanks, or webs
- 3/28 • • around mandrels, including bottom-forming operations
- 3/30 • • • the mandrels moving
- 3/32 • • • • in circular paths
- 3/34 • • • about their own axes
- 3/36 • • by continuously feeding same to stationary members, e.g. plates, ploughs, cores
- 3/44 • • by plungers moving through folding dies
- 3/46 • • • and interconnecting side walls during such movement
- 3/48 • • • • by folding or tucking in locking flaps
- 3/50 • • • • • by interengaging tongues and slots
- 3/52 • • by reciprocating or oscillating members, e.g. fingers other than plungers and dies
- 3/60 • and having means for uniting opposed surfaces or edges, or for taping
- 3/64 • • by applying heat or pressure
- 3/72 • • by applying and securing strips or sheets
- 3/74 • and having means for effecting auxiliary operations
- 5/00 Machinery characterised by making boxes or cartons by folding single-piece sheets which can be set-up from a collapsed condition, including setting-up and recollapsing to break creases**
- 5/02 • and having means for feeding or positioning sheets
- 5/14 • and having means for cutting, e.g. perforating, punching, slitting, trimming
- 5/26 • and having means for folding sheets, blanks, or webs

- 5/36 • • by continuously feeding same to stationary members, e.g. plates, ploughs, cores
- 5/60 • and having means for uniting opposed surfaces or edges, or for taping
- 5/74 • and having means for effecting auxiliary operations
- 5/76 • • Opening and distending flattened articles
- 5/78 • • • mechanically
- 5/80 • • • pneumatically
- 7/00 Machinery characterised by making lined or internally-reinforced boxes or cartons** (B31B 11/00 takes precedence)
- 7/02 • and having means for feeding or positioning sheets, blanks, or webs
- 7/14 • and having means for cutting, e.g. perforating, punching, slitting, trimming
- 7/26 • and having means for folding sheets, blanks, or webs
- 7/28 • • around mandrels, including bottom-forming operations
- 7/30 • • • the mandrels moving
- 7/32 • • • • in circular paths
- 7/44 • • by plungers moving through folding dies
- 7/46 • • • and interconnecting side walls during such movement
- 7/60 • and having means for uniting opposed surfaces or edges, or for taping
- 7/74 • and having means for effecting auxiliary operations
- 9/00 Machinery characterised by making boxes or cartons having shouldered walls**
- 9/02 • and having means for feeding or positioning sheets, blanks, or webs
- 9/14 • and having means for cutting, e.g. perforating, punching, slitting, trimming
- 9/26 • and having means for folding sheets, blanks, or webs
- 9/60 • and having means for uniting opposed surfaces or edges, or for taping
- 9/74 • and having means for effecting auxiliary operations
- 11/00 Machinery characterised by making boxes or cartons having partitions or like inserts not integral with walls** (making partitions, inserts, or reinforcements for boxes or cartons B31D)
- 11/02 • and having means for feeding or positioning sheets, blanks, or webs
- 11/14 • and having means for cutting, e.g. perforating, punching, slitting, trimming
- 11/26 • and having means for folding sheets, blanks, or webs
- 11/60 • and having means for uniting opposed surfaces or edges, or for taping
- 11/74 • and having means for effecting auxiliary operations
- 13/00 Machinery characterised by assembling drawer-and-shell boxes or cartons**
- 13/02 • and having means for feeding or positioning sheets, blanks, or webs
- 13/14 • and having means for cutting, e.g. perforating, punching, slitting, trimming
- 13/26 • and having means for folding sheets, blanks, or webs
- 13/28 • • around mandrels, including bottom-forming operations
- 13/30 • • • the mandrels moving
- 13/32 • • • • in circular paths
- 13/34 • • • about their own axes
- 13/60 • and having means for uniting opposed surfaces or edges, or for taping
- 13/74 • and having means for effecting auxiliary operations

<b>15/00</b>	<b>Machinery characterised by making covered or externally-reinforced boxes or cartons</b>	19/84	• • Forming valves or applying valve inserts (connection of valves to inflatable elastic bodies B60C 29/00)
15/02	• and having means for feeding or positioning sheets, blanks, or webs	19/86	• • Forming integral handles or mounting separate handles (making separate handles by multi-step processes B31D 1/06)
15/14	• and having means for cutting, e.g. perforating, punching, slitting, trimming	19/88	• • Printing or embossing
15/26	• and having means for folding sheets, blanks, or webs	19/90	• • Attaching accessories not otherwise provided for, e.g. opening or closure devices, tear strings
15/60	• and having means for uniting opposed surfaces or edges, or for taping	19/92	• • Delivering
15/74	• and having means for effecting auxiliary operations	19/94	• • • singly or in succession
<b>17/00</b>	<b>Machinery characterised by making other boxes or cartons by assembling several separate sheets, blanks, or webs</b>	19/96	• • • in overlapping arrangement
17/02	• and having means for feeding or positioning sheets, blanks, or webs	19/98	• • • in stacks or bundles
17/14	• and having means for cutting, e.g. perforating, punching, slitting, trimming	<b>21/00</b>	<b>Machinery characterised by making rectangular envelopes or bags of flat form, i.e. without structural provision at the base for thickness of contents, from sheets or blanks, e.g. from flattened tubes</b>
17/26	• and having means for folding sheets, blanks, or webs	21/02	• and having means for feeding or positioning sheets or blanks
17/28	• • around mandrels, including bottom-forming operations	21/14	• and having means for cutting, e.g. perforating, punching, slitting, trimming
17/30	• • • the mandrels moving	21/26	• and having means for folding sheets or blanks
17/32	• • • in circular paths	21/60	• and having means for uniting opposed surfaces or edges, or for taping
17/44	• • by plungers moving through folding dies	21/74	• and having means for effecting auxiliary operations
17/46	• • and interconnecting side walls during such movement	<b>23/00</b>	<b>Machinery characterised by making rectangular envelopes or bags of flat form, i.e. without structural provision at the base for thickness of contents, from webs, e.g. from flattened tubular webs</b> (machinery characterised by cutting sheets or blanks from webs and working them to form such envelopes or bags B31B 21/00)
17/52	• • by reciprocating or oscillating members, e.g. fingers other than plungers and dies	23/02	• and having means for feeding or positioning webs
17/60	• and having means for uniting opposed surfaces or edges, or for taping	23/14	• and having means for cutting, e.g. perforating, punching, slitting, trimming
17/74	• and having means for effecting auxiliary operations	23/26	• and having means for folding webs
<b>Machinery for making envelopes or bags</b>		23/60	• and having means for uniting opposed surfaces or edges, or for taping
<b>Note(s)</b>		23/74	• and having means for effecting auxiliary operations
Machinery for making boxes or cartons as well as envelopes or bags is classified in groups B31B 3/00-B31B 17/00.		<b>25/00</b>	<b>Machinery characterised by making pointed or tapered envelopes or bags</b>
<b>19/00</b>	<b>Machinery characterised by making rectangular envelopes or bags of flat form, i.e. without structural provision at the base for thickness of contents</b> (B31B 21/00, B31B 23/00 take precedence)	25/02	• and having means for feeding or positioning sheets, blanks, or webs
19/02	• and having means for feeding or positioning sheets, blanks, or webs	25/14	• and having means for cutting, e.g. perforating, punching, slitting, trimming
19/10	• • Feeding or positioning webs	25/26	• and having means for folding sheets, blanks, or webs
19/14	• and having means for cutting, e.g. perforating, punching, slitting, trimming	25/60	• and having means for uniting opposed surfaces or edges, or for taping
19/16	• • Cutting webs to form sheets or blanks	25/74	• and having means for effecting auxiliary operations
19/18	• • Slitting webs longitudinally	<b>27/00</b>	<b>Machinery characterised by making interconnected envelopes or bags</b>
19/20	• • Cutting sheets or blanks	27/02	• and having means for feeding or positioning sheets, blanks, or webs
19/26	• and having means for folding sheets, blanks, or webs	27/14	• and having means for cutting, e.g. perforating, punching, slitting, trimming
19/36	• • by continuously feeding same to stationary members, e.g. plates, ploughs, cores	27/26	• and having means for folding sheets, blanks, or webs
19/52	• • by reciprocating or oscillating members, e.g. fingers other than plungers and dies	27/60	• and having means for uniting opposed surfaces or edges, or for taping
19/60	• and having means for uniting opposed surfaces or edges, or for taping	27/74	• and having means for effecting auxiliary operations
19/62	• • by adhesives	<b>29/00</b>	<b>Machinery characterised by making envelopes or bags with structural provision at the base for thickness or contents</b> (B31B 31/00-B31B 37/00 take precedence)
19/64	• • by applying heat or pressure		
19/66	• • • high-frequency electric heating		
19/68	• • by stitching, stapling, or riveting		
19/74	• and having means for effecting auxiliary operations		
19/82	• • Attaching windows		

## B31B

- 29/02 • and having means for feeding or positioning sheets, blanks, or webs
- 29/14 • and having means for cutting, e.g. perforating, punching, slitting, trimming
- 29/26 • and having means for folding sheets, blanks, or webs
- 29/60 • and having means for uniting opposed surfaces or edges, or for taping
- 29/74 • and having means for effecting auxiliary operations
- 29/84 • • Forming valves or applying valve inserts (connection of valves to inflatable elastic bodies B60C 29/00)

### **31/00 Machinery characterised by making envelopes or bags with structural provision at the base for thickness of contents, from sheets or blanks, e.g. from flattened tubes (B31B 33/00, B31B 35/00 take precedence)**

- 31/02 • and having means for feeding or positioning sheets or blanks
- 31/14 • and having means for cutting, e.g. perforating, punching, slitting, trimming
- 31/26 • and having means for folding sheets or blanks
- 31/60 • and having means for uniting opposed surfaces or edges, or for taping
- 31/74 • and having means for effecting auxiliary operations

### **33/00 Machinery characterised by making envelopes or bags with structural provision at the base for thickness of contents, from sheets or blanks, e.g. from flattened tubes, the longitudinal axes of the envelopes or bags being parallel to the direction in which the sheets or blanks are fed**

- 33/02 • and having means for feeding or positioning sheets or blanks
- 33/14 • and having means for cutting, e.g. perforating, punching, slitting, trimming
- 33/26 • and having means for folding sheets or blanks
- 33/60 • and having means for uniting opposed surfaces or edges, or for taping
- 33/74 • and having means for effecting auxiliary operations

### **35/00 Machinery characterised by making envelopes or bags with structural provision at the base for thickness of contents, from sheets or blanks, e.g. from flattened tubes, the longitudinal axes of the envelopes or bags being perpendicular to the direction in which the sheets or blanks are fed**

- 35/02 • and having means for feeding or positioning sheets or blanks
- 35/14 • and having means for cutting, e.g. perforating, punching, slitting, trimming
- 35/26 • and having means for folding sheets or blanks
- 35/60 • and having means for uniting opposed surfaces or edges, or for taping
- 35/74 • and having means for effecting auxiliary operations

### **37/00 Machinery characterised by making envelopes or bags with structural provision at the base for thickness of contents, from webs, e.g. from tubular webs (machinery characterised by cutting sheets or blanks from webs and working them to form such envelopes or bags B31B 31/00)**

- 37/02 • and having means for feeding or positioning webs
- 37/14 • and having means for cutting, e.g. perforating, punching, slitting, trimming
- 37/26 • and having means for folding webs
- 37/60 • and having means for uniting opposed surfaces or edges, or for taping
- 37/74 • and having means for effecting auxiliary operations

### **39/00 Machinery characterised by making lined envelopes or bags**

- 39/02 • and having means for feed or positioning sheets, blanks, or webs
- 39/14 • and having means for cutting, e.g. perforating, punching, slitting, trimming
- 39/26 • and having means for folding sheets, blanks or webs
- 39/60 • and having means for uniting opposed surfaces or edges, or for taping
- 39/74 • and having means for effecting auxiliary operations
- 39/84 • • Forming valves or applying valve inserts (connection of valves to inflatable elastic bodies B60C 29/00)

### **41/00 Machinery characterised by making envelopes or bags of other specific form or construction**

- 41/02 • and having means for feeding or positioning sheets, blanks, or webs
- 41/14 • and having means for cutting, e.g. perforating, punching, slitting, trimming
- 41/26 • and having means for folding sheets, blanks or webs
- 41/60 • and having means for uniting opposed surfaces or edges, or for taping
- 41/74 • and having means for effecting auxiliary operations

### **43/00 Machinery characterised by making containers by shaping, otherwise than by folding, sheet material under pressure**

### **45/00 Machinery characterised by making containers having corrugated or pleated walls**

### **47/00 Hand tools for making envelopes, bags, boxes or cartons**

- 47/02 • for making envelopes or bags without preshaped bottoms
- 47/04 • for making envelopes or bags with preshaped bottoms

### **49/00 Machinery, accessories or processes not provided for in groups B31B 1/00-B31B 47/00 (forms or constructions of boxes, cartons, envelopes or bags B65D) [2]**

#### **Note(s)**

Processes dependent on the use of specific machinery provided for in groups B31B 1/00-B31B 45/00 are classified in those groups.

- 49/02 • for making boxes or cartons
- 49/04 • for making envelopes or bags