

**B26 HAND CUTTING TOOLS; CUTTING; SEVERING**

**B26B HAND-HELD CUTTING TOOLS NOT OTHERWISE PROVIDED FOR** (for harvesting A01D; for horticulture, for forestry A01G; for butchering or meat treatment A22; for manufacturing or repairing footwear A43D; nail clippers or cutters A45D 29/02; kitchen equipment A47J; for surgical purposes A61B 17/00; for metal B23D; cutting by abrasive fluid jets B24C 5/02; plier-like tools with cutting edges B25B 7/22; pincers B25C 11/02; handles for hand implements, in general B25G; guillotine-type cutters B26D; for erasing B43L 19/00; for textile materials D06H)

**Subclass Index**

|                                       |                            |                     |
|---------------------------------------|----------------------------|---------------------|
| KNIVES                                | CLIPPERS OR RAZORS.....    | 19/00, 21/00        |
| Structural features.....              | AXES OR HATCHETS.....      | 23/00               |
| Knife blades.....                     | OTHER CUTTING TOOLS .....  | 25/00, 27/00        |
| Combinations with other articles..... | GUARDS, SHEATHS OR GUIDING |                     |
| SHEARS, SCISSORS, NIPPERS, OR         | ARRANGEMENTS .....         | 29/00               |
| PINCERS WITH CUTTING ACTION .....     |                            |                     |
|                                       |                            | 13/00, 15/00, 17/00 |

**Hand knives**

**1/00 Hand knives with adjustable blade; Pocket knives**  
(B26B 11/00 takes precedence)

- 1/02 . with pivoted blade
- 1/04 . . lockable in adjusted position
- 1/06 . . with loosely-inserted spring
- 1/08 . with sliding blade
- 1/10 . Handles [3]

**3/00 Hand knives with fixed blades**

- 3/02 . Table-knives (B26B 9/02 takes precedence)
- 3/03 . specially adapted for cutting-off slices one by one
- 3/04 . for performing several incisions simultaneously;  
Multiple-blade knives
- 3/06 . Scout or similar sheath knives (sheaths therefor  
B26B 29/02)
- 3/08 . specially adapted for cutting cardboard, or wall, floor,  
or like covering materials

**5/00 Hand knives with one or more detachable blades**  
(surgical scalpels or knives with detachable blades  
A61B 17/3213)

**7/00 Hand knives with reciprocating motor-driven blades**

**9/00 Blades for hand knives**

- 9/02 . characterised by the shape of the cutting edge,  
e.g. wavy

**11/00 Hand knives combined with other implements,  
e.g. with corkscrew, with scissors, with writing  
implement** (combined table-ware A47G 21/06)

**Hand shears; Scissors**

**13/00 Hand shears; Scissors**

- 13/02 . with moulded-in blades
- 13/04 . with detachable blades
- 13/06 . characterised by the shape of the blades
- 13/08 . . with cutting edges wavy or toothed in the plane of  
the blade
- 13/10 . . for producing wavy, zig-zag, or like cuts
- 13/12 . characterised by the shape of the handles
- 13/14 . . without gripping bows in the handle
- 13/16 . . . spring loaded, e.g. with provision for locking  
the blades or the handles

- 13/18 . . . without joint, i.e. having blades interconnected  
by a resilient member

- 13/20 . . with gripping bows in the handle

- 13/22 . combined with auxiliary implements, e.g. with cigar  
cutter, with manicure instrument (cigar cutters per se  
A24F 13/24)

- 13/24 . . to aid hair cutting

- 13/26 . with intermediate links between the grips and the  
blades, e.g. for remote actuation

- 13/28 . Joints (B25B 7/06 takes precedence)

**15/00 Hand-held shears with motor-driven blades**

**17/00 Hand cutting tools with two jaws which come into  
abutting contact** (nail clippers or cutters A45D 29/02;  
joints therefor B25B 7/06)

- 17/02 . with jaws operated indirectly by the handles,  
e.g. through cams or toggle levers

**19/00 Clippers or shavers operating with a plurality of  
cutting edges, e.g. hair clippers, dry shavers**

- 19/02 . of the reciprocating-cutter type
- 19/04 . . Cutting heads therefor; Cutters therefor; Securing  
equipment thereof

- 19/06 . . . involving co-operating cutting elements both of  
which have shearing teeth

- 19/08 . . . . of nipper type

- 19/10 . . . involving two or more different types of  
reciprocating cutting elements, e.g. a pair of  
toothed shearing elements combined with a pair  
of perforated cutting elements or a combined  
toothed and perforated cutting assembly

- 19/12 . of the oscillating-cutter type; Cutting heads therefor;  
Cutters therefor (B26B 19/04 takes precedence)

- 19/14 . of the rotary-cutter type; Cutting heads therefor;  
Cutters therefor (B26B 19/04 takes precedence)

- 19/16 . . involving a knife cylinder or a knife cone or  
separate cutting elements moved like a rotating  
cylinder or a rotating cone

- 19/18 . . . in combination with a fixed razor-blade without  
shearing perforations

- 19/20 . with provision for shearing hair of preselected or  
variable length

- 19/22 . with provision for thinning-out hair

- 19/24 . specially adapted for shearing animals, e.g. sheep

- 19/26 . . . of the type performing different methods of operation simultaneously, e.g. reciprocating and oscillating; of the type having two or more heads of differing mode of operation
- 19/28 . Drive layout for hair clippers or dry shavers, e.g. providing for electromotive drive (electric motors per se H02)
- 19/30 . . . providing for muscle drive, e.g. by rolling over the skin
- 19/32 . . . providing for mechanical drive, e.g. installation of a spring motor
- 19/34 . . . providing for fluid drive
- 19/36 . . . providing for remote drive by means of a flexible shaft; Transmission means therefor
- 19/38 . Details of, or accessories for, hair clippers, or dry shavers, e.g. housings, casings, grips, guards (cutters, cutting heads B26B 19/04, B26B 19/12, B26B 19/14; cleaning or disinfecting devices A45D 27/46; drying devices A45D 27/48; casings for electric apparatus in general H05K)
- 19/40 . . . Lubricating
- 19/42 . . . providing for straightening the hair to be cut, e.g. by means of bristles; providing for tensioning the skin, e.g. by means of rollers, ledges (skin-stretchers for shaving per se A45D 27/38)
- 19/44 . . . Suction means for collecting severed hairs or for the skin to be shaved
- 19/46 . . . providing for illuminating the area to be shaved or clipped
- 19/48 . . . Accessory implements for carrying out a function other than cutting hair, e.g. attachable appliances for manicuring (massage means per se A61H 7/00 to A61H 23/00)
- 21/00 **Razors of the open or knife type; Safety razors or other shaving implements of the planing type; Hair-trimming devices involving a razor-blade; Equipment therefor**
- 21/02 . . . involving unchangeable blades
- 21/04 . . . Razors of the knife type
- 21/06 . . . Safety razors with fixed blade, e.g. with moulded-in blade
- 21/08 . . . involving changeable blades
- 21/10 . . . Safety razors with one or more blades arranged longitudinally to the handle
- 21/12 . . . . combined with combs or other means for hair trimming
- 21/14 . . . Safety razors with one or more blades arranged transversely to the handle
- 21/16 . . . . involving blades with only one cutting edge (B26B 21/22 to B26B 21/38 take precedence)
- 21/18 . . . . involving blades with two cutting edges (B26B 21/22 to B26B 21/38 take precedence)
- 21/20 . . . . involving blades with more than two cutting edges; involving disc blades (B26B 21/22 to B26B 21/38 take precedence)
- 21/22 . . . . involving several blades to be used simultaneously
- 21/24 . . . . of the magazine type; of the injector type (containers for storing razor-blades A45D 27/24)
- 21/26 . . . . of the continuous ribbon type
- 21/28 . . . . of the drawing cut type, i.e. with the cutting edge of the blade arranged obliquely to the handle
- 21/30 . . . . of the type carrying pivotally-mounted caps
- 21/32 . . . . . in razors involving double-edged blades
- 21/34 . . . . of the type carrying rollers
- 21/36 . . . . . with provision for reciprocating the blade (reciprocating the cutting elements of clippers or dry shavers B26B 19/00)
- 21/38 . . . . with provision for reciprocating the blade by means other than rollers (reciprocating the cutting elements of clippers or dry shavers B26B 19/00)
- 21/40 . Details or accessories
- 21/42 . . . for cutting hair of preselected or variable length (combs, stencils or guides specially adapted for hair trimming devices A45D 24/36)
- 21/44 . . Means integral with, or attached to, the razor for storing shaving-cream, styptic, or the like
- 21/46 . . . for illuminating the skin (B26B 19/46 takes precedence)
- 21/48 . . Heating means
- 21/50 . . Means integral with, or attached to, the razor for stropping the blade
- 21/52 . . Handles, e.g. tiltable, flexible
- 21/54 . Razor-blades
- 21/56 . . characterised by the shape [3]
- 21/58 . . characterised by the material [3]
- 21/60 . . . by the coating material [3]
- 23/00 **Axes; Hatchets**
- 25/00 **Hand cutting tools involving disc blades, e.g. motor-driven** (details or components, e.g. casings, bodies, of portable power-driven tools not particularly related to the operation performed B25F 5/00) [4]
- 27/00 **Hand cutting tools not provided for in groups B26B 1/00 to B26B 25/00, e.g. finger rings for cutting string, devices for cutting by means of wires**
- 29/00 **Guards or sheaths for hand cutting tools; Arrangements for guiding hand cutting tools** (guards for hair clippers or dry shavers B26B 19/38) [5]
- 29/02 . Guards or sheaths for knives
- 29/04 . Guards or sheaths for scissors, e.g. combined with manicuring appliances (manicuring implements per se A45D 29/00)
- 29/06 . Arrangements for guiding hand cutting tools (guiding equipment or arrangements for specific cutting tools, see the particular places, e.g. for hair trimming devices A45D 24/36, for saw blades B27B 11/02, B27B 13/10) [5]

**B26D CUTTING; DETAILS COMMON TO MACHINES FOR SEVERING, E.G. BY CUTTING, PERFORATING, PUNCHING, STAMPING-OUT** (soil-working A01B; for growing crops or plants A01D, A01G; for fodder or straw A01F; for bulk butter A01J; for dough A21C; slaughtering A22B; for tobacco, cigars or cigarettes A24; marking-out, perforating or making buttonholes A41H 25/00; manufacturing footwear A43D; brushmaking A46D; surgery A61B; disintegrating, mincing or shredding in general B02C; cutting wire, making pins or nails B21F, B21G; of the kind used for metal B23; cutting by abrasive fluid jets B24C 5/02; hand-held cutting tools B26B; perforating, cutting-out, stamping-out or punching, or severing by means other than cutting B26F; for wood B27; for stone B28D; working of plastics or substances in a plastic state B29; making boxes, cartons, envelopes or bags, of paper or similarly worked materials, e.g. metal foil, B31B; article or web delivery apparatus incorporating cutting or line-perforating devices B65H 35/00; for leather or upholstery B68, C14B; for glass C03B; making matches C06F; for peat C10F; for sugar C13H; for textile materials D06H; civil engineering, building, mining, see section E; devices for withdrawing samples by cutting G01N 1/04; for light guides G02B 6/25; cutting processed photographic material G03D 15/04) [2,5]

### Notes

- (1) This subclass covers :
- cutting non-metallic sheet material or metal foil in general;
  - cutting other forms of non-metallic material not otherwise provided for;
  - features specific to machines for cutting, perforating, punching, cutting-out, stamping-out, or severing by means other than cutting, which relate to a requirement or problem of a nature which is not peculiar to a machine for these purposes, that is, details of or arrangements for operating or controlling such machines, although the realisation of such features may differ according to the kind of machine concerned. This subclass covers such features in general even if the feature, in any particular case, is to some extent peculiar to, or is claimed only for, a machine designed for perforating, punching, cutting-out, stamping-out, or for severing other than by cutting.
- (2) If the details or arrangements have no essential features specific to cutting, perforating, punching, cutting-out, stamping-out or severing machines, the more general classes, e.g. F16, take precedence.

### Subclass Index

CUTTING CHARACTERISED BY THE  
CUTTING MEMBER OR BY THE NATURE  
OF THE CUT PERFORMED..... 1/00, 3/00  
ARRANGEMENTS FOR OPERATING AND  
CONTROLLING; DETAILS OF APPARATUS  
FOR SEVERING ..... 5/00; 7/00  
COMBINED APPARATUS ..... 9/00, 11/00

|              |   |             |   |
|--------------|---|-------------|---|
| <b>1/00</b>  | <b>Cutting through work characterised by the nature or movement of the cutting member; Apparatus or machines therefor; Cutting members therefor [3]</b> | <b>1/18</b> | . . . . . mounted on a movable carriage [3]   |
|              |   | <b>1/20</b> | . . . . . coating with a fixed member [3]   |
|              |   | <b>1/22</b> | . . . . . coating with a movable member, e.g. a roller (B26D 1/24 takes precedence) [3]   |
| <b>1/01</b>  | . involving a cutting member which does not travel with the work [3]  | <b>1/24</b> | . . . . . coating with another disc cutter [3]  |
| <b>1/02</b>  | . . having a stationary cutting member (B26D 1/547 takes precedence) [3]  | <b>1/25</b> | . . . . . with a non-circular cutting member [3]  |
| <b>1/03</b>  | . . . with a plurality of cutting members [3]   | <b>1/26</b> | . . . . . moving about an axis substantially perpendicular to the line of cut [3]   |
| <b>1/04</b>  | . . having a linearly-movable cutting member (B26D 1/46, B26D 1/547 take precedence) [3]  | <b>1/28</b> | . . . . . and rotating continuously in one direction during cutting [3]   |
| <b>1/06</b>  | . . . wherein the cutting member reciprocates (cup or like cutting members B26D 1/44) [3]   | <b>1/29</b> | . . . . . with cutting member mounted in the plane of a rotating disc, e.g. for slicing beans [3]   |
| <b>1/08</b>  | . . . . of the guillotine type [3]  | <b>1/30</b> | . . . . . with limited pivotal movement to effect cut [3]   |
| <b>1/09</b>  | . . . . . with a plurality of cutting members [3]   | <b>1/34</b> | . . . . . moving about an axis parallel to the line of cut [3]  |
| <b>1/10</b>  | . . . . in, or substantially in, a direction parallel to the cutting edge [3]   | <b>1/36</b> | . . . . . and rotating continuously in one direction during cutting, e.g. mounted on a rotary cylinder (for flying cutting B26D 1/62) [3] |
| <b>1/11</b>  | . . . . . with a plurality of cutting members [3]   | <b>1/38</b> | . . . . . and coating with a fixed blade or other fixed member [3]  |
| <b>1/12</b>  | . . having a cutting member moving about an axis (B26D 1/547 takes precedence; cup or like cutting members B26D 1/44) [3]                               | <b>1/40</b> | . . . . . and coating with a rotary member [3]  |
| <b>1/14</b>  | . . . with a circular cutting member, e.g. disc cutter [3]  | <b>1/42</b> | . . . . . and slidably mounted in a rotary member [3]   |
| <b>1/143</b> | . . . . rotating about a stationary axis (B26D 1/20 to B26D 1/24 take precedence) [3]   | <b>1/43</b> | . . . . . moving about another axis, e.g. mounted on the surface of a cone or curved body [3]   |
| <b>1/147</b> | . . . . . with horizontal cutting member [3]  | <b>1/44</b> | . . having a cup or like cutting member [3]   |
| <b>1/15</b>  | . . . . . with vertical cutting member [3]  |             |   |
| <b>1/153</b> | . . . . . with inclined cutting member [3]  |             |   |
| <b>1/157</b> | . . . . rotating about a movable axis (B26D 1/20 to B26D 1/24 take precedence) [3]  |             |   |
| <b>1/16</b>  | . . . . . mounted on a movable arm or the like [3]  |             |   |

## B26D

- 1/45 . . . having a cutting member the movement of which is not covered by any preceding group [3]
- 1/46 . . . having an endless band-knife or the like [3]
- 1/48 . . . with tensioning means [3]
- 1/50 . . . with a plurality of band-knives or the like [3]
- 1/52 . . . having adjustable spacing between knives [3]
- 1/54 . . . Guides for band-knives or the like [3]
- 1/547 . . . having a wire-like cutting member (endless wire B26D 1/46; severing using a heated wire B26F 3/12) [3]
- 1/553 . . . with a plurality of wire-like cutting members [3]
- 1/56 . . . involving a cutting member which travels with the work, i.e. flying cutter (flying shears for metal B23D 25/00; flying saws for metal B23D 45/18) [3]
- 1/58 . . . and is mounted on a movable arm or the like [3]
- 1/60 . . . and is mounted on a movable carriage [3]
- 1/62 . . . and is rotating about an axis parallel to the line of cut, e.g. mounted on a rotary cylinder [3]
- 3/00 Cutting work characterised by the nature of the cut made; Apparatus therefor [3]**
- 3/02 . . . Bevelling
- 3/06 . . . Grooving involving removal of material from the surface of the work
- 3/08 . . . Making a superficial cut in the surface of the work without removal of material, e.g. scoring, incising
- 3/10 . . . Making cuts of other than simple rectilinear form (cutting-out B26F)
- 3/11 . . . to obtain pieces of spiral or helical form [3]
- 3/12 . . . Slitting marginal portions of the work, i.e. forming cuts, without removal of material, at an angle, e.g. a right angle, to the edge of the work
- 3/14 . . . Forming notches in marginal portion of work by cutting (by punching B26F 1/12)
- 3/16 . . . Cutting rods or tubes transversely
- 3/18 . . . to obtain cubes or the like (ice harvesting F25C 5/02) [3]
- 3/20 . . . using reciprocating knives
- 3/22 . . . using rotating knives
- 3/24 . . . to obtain segments other than slices, e.g. cutting pies
- 3/26 . . . specially adapted for cutting fruit or vegetables, e.g. for onions
- 3/28 . . . Splitting layers from work; Mutually separating layers by cutting (B26D 3/30 take precedence; recovery of plastics or other constituents of waste material containing plastics B29B 17/00) [3]
- 3/30 . . . Halving devices, e.g. for halving buns [3]

### Note

In groups B26D 5/00 and B26D 7/00, the following term is used with the meaning indicated:

- “cutting” includes cutting-out, stamping-out, punching, perforating or severing by means other than cutting.

- 5/00 Arrangements for operating and controlling machines or devices for cutting, cutting-out, stamping-out, punching, perforating, or severing by means other than cutting**
- 5/02 . . . Means for moving the cutting member into its operative position for cutting
- 5/04 . . . by fluid pressure
- 5/06 . . . by electrical means

- 5/08 . . . Means for actuating the cutting member to effect the cut
- 5/10 . . . Hand or foot actuated means
- 5/12 . . . Fluid-pressure means
- 5/14 . . . Crank and pin means
- 5/16 . . . Cam means
- 5/18 . . . Toggle-link means (B26D 5/10 to B26D 5/16 take precedence)
- 5/20 . . . with interrelated action between the cutting member and work feed
- 5/22 . . . having the cutting member and work feed mechanically connected
- 5/24 . . . including a metering device
- 5/26 . . . wherein control means on the work feed means renders the cutting member operative
- 5/28 . . . the control means being responsive to presence or absence of work
- 5/30 . . . having the cutting member controlled by scanning a record carrier
- 5/32 . . . with the record carrier formed by the work itself
- 5/34 . . . scanning being effected by a photosensitive device
- 5/36 . . . scanning being effected by magnetic means
- 5/38 . . . with means operable by the moving work to initiate the cutting action
- 5/40 . . . including a metering device
- 5/42 . . . with interrelated action between work feed and clamp (work clamping arrangements B26D 7/02)
- 7/00 Details of apparatus for cutting, cutting-out, stamping-out, punching, perforating, or severing by means other than cutting (cutters B26D 1/00; arrangements for guiding hand cutting tools B26B 29/06; punching tools or dies, cutting-out knives or dies B26F) [5]**
- 7/01 . . . Means for holding or positioning work [3]
- 7/02 . . . with clamping means [3]
- 7/04 . . . providing adjustable clamping pressure [3]
- 7/06 . . . Arrangements for feeding or delivering work of other than sheet, web, or filamentary form (feeding or discharging sheets, webs, or filaments B65H)
- 7/08 . . . Means for treating work or cutting member to facilitate cutting (tensioning band cutters B26D 1/48)
- 7/10 . . . by heating (severing by heating B26F)
- 7/12 . . . by sharpening the cutting member
- 7/14 . . . by tensioning the work
- 7/18 . . . Means for removing cut-out material or waste
- 7/20 . . . Cutting beds
- 7/22 . . . Safety devices specially adapted for cutting machines (safety devices in general F16P)
- 7/24 . . . arranged to disable the operating means for the cutting member
- 7/26 . . . Means for mounting or adjusting the cutting member; Means for adjusting the stroke of the cutting member
- 7/27 . . . Means for performing other operations combined with cutting (B26D 9/00 takes precedence) [3]
- 7/28 . . . for counting the number of cuts or measuring cut lengths (B26D 5/24, B26D 5/40 take precedence) [3]
- 7/30 . . . for weighing cut product [3]

|      |  |       |   |
|------|--|-------|---|
| 7/32 | . . for conveying or stacking cut product (means for removing cut-out material or waste B26D 7/18) [3] | 9/00  | <b>Cutting apparatus combined with punching or perforating apparatus or with dissimilar cutting apparatus</b> |
| 7/34 | . . for applying a coating, such as butter, to cut product [3]   | 11/00 | <b>Combinations of several similar cutting apparatus</b>  |

**B26F PERFORATING; PUNCHING; CUTTING-OUT; STAMPING-OUT; SEVERING BY MEANS OTHER THAN CUTTING** (marking-out, perforating or making buttonholes A41H 25/00; manufacturing footwear A43D; surgery A61B; punching metal B21D; drilling metal B23B; cutting of metal by applying heat locally, e.g. flame cutting, B23K; cutting by abrasive fluid jets B24C 5/02; details common to machines for severing B26D; drilling wood B27C; drilling stone B28D; working of plastics or substances in a plastic state B29; making boxes, cartons, envelopes or bags, of paper or similarly worked materials, e.g. metal foil, B31B; of glass C03B; of leather C14B; of textile materials D06H; for light guides G02B 6/25; of tickets G07B) [2,5]

### Notes

- (1) This subclass covers:
- perforating, punching, cutting-out, stamping-out;
  - severing, by means other than cutting, non-metallic sheet material or metal foil in general;
  - severing, by means other than cutting, other forms of non-metallic materials not otherwise provided for.
- (2) Attention is drawn to Notes (1) and (2) following the title of subclass B26D.

|             |   |             |  |
|-------------|---|-------------|--|
| <b>1/00</b> | <b>Perforating; Punching; Cutting-out; Stamping-out; Apparatus therefor</b> (perforating by laser beam B23K 26/00; subjecting the grinding tools or the abrading medium to vibration, e.g. grinding with ultrasonic frequency, B24B 1/04; perforating by sand-blasting B24C; punching cards or tapes for statistical and record purposes G06K 1/00) | 1/28        | . . by electrical discharges   |
|             |   | 1/31        | . . by radiation [3]   |
|             |   | 1/32        | . Hand-held perforating or punching apparatus, e.g. awls   |
|             |   | 1/34        | . . power actuated (details or components, e.g. casings, bodies, of portable power-driven tools not particularly related to the operation performed B25F 5/00) [4] |
| 1/02        | . Perforating by punching, e.g. with relatively-reciprocating punch and bed   | 1/36        | . . Punching or perforating pliers   |
| 1/04        | . . with selectively-operable punches   | 1/38        | . Cutting-out; Stamping-out  |
| 1/06        | . . with punching tools moving with the work  | 1/40        | . . using a press, e.g. of the ram type (presses in general B30B)  |
| 1/08        | . . . wherein the tools are carried by, and in operation move relative to, a rotative drum or similar support   | 1/42        | . . . having a pressure roller   |
| 1/10        | . . . Roller type punches   | 1/44        | . . Cutters therefor; Dies therefor  |
| 1/12        | . . to notch margins of work  | 1/46        | . . . Loose press knives   |
| 1/14        | . . Punching tools; Punching dies   | <b>3/00</b> | <b>Severing by means other than cutting; Apparatus therefor</b> (severing by grinding B24B 27/06)  |
| 1/16        | . Perforating by tool or tools of the drill type  | 3/02        | . Tearing  |
| 1/18        | . Perforating by slitting, i.e. forming cuts closed at their ends without removal of material   | 3/04        | . Severing by squeezing (B26F 3/08 takes precedence)   |
| 1/20        | . . with tools carried by a rotating drum or similar support (B26F 1/22 takes precedence)   | 3/06        | . Severing by using heat (severing by laser beam B23K 26/00)   |
| 1/22        | . . to form non-rectilinear cuts, e.g. for tabs   | 3/08        | . . with heated members  |
| 1/24        | . Perforating by needles or pins  | 3/10        | . . . with heated rollers or discs   |
| 1/26        | . Perforating by non-mechanical means, e.g. by fluid jet  | 3/12        | . . . with heated wires  |
|             |   | 3/16        | . . by radiation [3]   |