EUROPEAN PATENT OFFICE
U.S. PATENT AND TRADEMARK OFFICE

CPC NOTICE OF CHANGES 1759

DATE: AUGUST 1, 2025

PROJECT RP11745

The following classification changes will be effected by this Notice of Changes:

Action	**Subclass**	**Group(s)**
SCHEME:		
Symbols Deleted:	B05B	3/022, 3/023, 3/0404, 3/0409, 3/0413, 3/0418, 3/0422, 3/0427, 3/0431, 3/0436, 3/044, 3/0445, 3/045, 3/0454, 3/0459, 3/0463, 3/0468, 3/0472, 3/0477, 3/0481, 3/0486
Symbols Deleted Pending Reclassification: (frozen (F))	B05B	1/185
	B05B	3/049, 3/0495
Symbols New:	B05B	1/085, 1/0852, 1/0854, 1/0856, 1/1421, 1/1422, 1/1423, 1/1424, 1/1425, 1/182, 1/1821, 1/1822, 1/1823, 1/1824, 1/1825, 1/188, 1/1881, 1/1882, 1/1884, 1/1886, 1/1887, 1/189, 1/1892, 1/1894, 1/1896, 1/192
	B05B	3/0202, 3/0204, 3/0412, 3/0417, 3/0419, 3/0421, 3/0423, 3/0425, 3/0426, 3/0429, 3/043, 3/0432, 3/0435, 3/0438, 3/0444, 3/0446, 3/0453, 3/0455, 3/0461
	B05B	13/002, 13/0433
Titles Changed:	B05B	1/00, 1/044, 1/08, 1/083, 1/1609, 1/1627, 1/18, 1/20, 1/202, 1/28, 1/3006, 1/3013, 1/302, 1/3026, 1/3073, 1/308, 1/323, 1/326, 1/3402, 1/3484
	B05B	3/008, 3/021, 3/028, 3/04, 3/06, 3/10, 3/16
	B05B	13/00, 13/0431, 13/0452, 13/0457
Warnings New:	B05B	1/085, 1/0852, 1/0854, 1/14, 1/1421, 1/18, 1/182, 1/185, 1/188, 1/192
	B05B	3/02, 3/0202, 3/04, 3/0417, 3/0419, 3/0421, 3/049, 3/0495
	B05B	12/04, 12/1472
	B05B	13/002, 13/0431, 13/0433, 13/0452, 13/0457
Notes Modified:	B05B	SUBCLASS
DEFINITIONS:		

CPC NOTICE OF CHANGES 1759

DATE: AUGUST 1, 2025

PROJECT RP11745

Action	**Subclass**	**Group(s)**
Definitions New:	B05B	1/00, 1/002, 1/005, 1/042, 1/044, 1/046, 1/048, 1/06, 1/08, 1/085, 1/0852, 1/0854, 1/0856, 1/086, 1/10, 1/12, 1/14, 1/1422, 1/1423, 1/1424, 1/1425, 1/1609, 1/1618, 1/1627, 1/1636, 1/1645, 1/1654, 1/1663, 1/1672, 1/169, 1/1822, 1/1823, 1/1824, 1/1825, 1/1881, 1/1882, 1/1884, 1/1886, 1/1887, 1/189, 1/1892, 1/1894, 1/1896, 1/20, 1/202, 1/207, 1/22, 1/26, 1/262, 1/265, 1/267, 1/30, 1/3006, 1/3013, 1/302, 1/3026, 1/3046, 1/3053, 1/306, 1/3066, 1/3073, 1/308, 1/3086, 1/32, 1/323, 1/326, 1/3402, 1/3405, 1/3415, 1/3426, 1/3436, 1/3442, 1/3447, 1/3457, 1/3463, 1/3473, 1/3478, 1/3484, 1/3489, 1/3494, 1/36
	B05B	3/00, 3/001, 3/002, 3/003, 3/005, 3/006, 3/007, 3/008, 3/02, 3/0202, 3/0204, 3/021, 3/026, 3/027, 3/028, 3/0412, 3/0417, 3/0419, 3/0421, 3/0423, 3/0425, 3/0426, 3/0429, 3/043, 3/0432, 3/0435, 3/0438, 3/0444, 3/0446, 3/0453, 3/0455, 3/0461, 3/06, 3/063, 3/066, 3/08, 3/082, 3/085, 3/087, 3/10, 3/1014, 3/1021, 3/1028, 3/1042, 3/105, 3/1057, 3/1064, 3/1078, 3/1092, 3/12, 3/14, 3/16, 3/18
	B05B	13/00, 13/002, 13/0431, 13/0447
Definitions Modified:	B05B	SUBCLASS
	B05B	1/28

The following subgroups are also impacted by this Notice of Changes (indicate subclasses or subgroups outside of the project scope, such as those listed in the CRL): A01M7/00, A01M7/005, A47L9/00, A01M9/0076, A47K3/28, A47L15/4278, A61H2033/021, A61H33/026, A61H33/6021, A62C31/00, B01L3/0268, B05B12/06, B05B12/085, B25J, C10B, E03C1/00, F16L, F21V33/004, F24F6/00

This Notice of Changes includes the following *[Check the ones included]:*

1. CLASSIFICATION SCHEME CHANGES
   - ☒ A. New, Modified or Deleted Group(s)
   - ☒ B. New, Modified or Deleted Warning(s)
   - ☒ C. New, Modified or Deleted Note(s)
   - ☐ D. New, Modified or Deleted Guidance Heading(s)
2. DEFINITIONS
   - ☒ A. New or Modified Definitions (Full definition template)
   - ☐ B. Modified or Deleted Definitions (Definitions Quick Fix)
3. ☒ REVISION CONCORDANCE LIST (RCL)

4. ☒ CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)
5. ☒ CHANGES TO THE CROSS-REFERENCE LIST (CRL)

CPC NOTICE OF CHANGES 1759

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PROJECT RP11745

1. CLASSIFICATION SCHEME CHANGES

A. New, Modified or Deleted Group(s)

SUBCLASS B05B - SPRAYING APPARATUS; ATOMISING APPARATUS; NOZZLES (spray-mixers with nozzles B01F 25/72; processes for applying liquids or other fluent materials to surfaces by spraying B05D)

Type*	Symbol	Indent Level Number of dots (e.g. 0, 1, 2)	Title "CPC only" text should normally be enclosed in {curly brackets}**	Transferred to#
M	B05B1/00	0	Nozzles, spray heads or other outlets, with or without auxiliary devices such as valves, heating means (B05B 3/00, B05B 5/00, B05B 7/00 take precedence; devices for applying liquids or other fluent materials to surfaces by contact B05C; nozzles for ink-jet printing mechanisms B41J 2/135; nozzles for liquid-dispensing, e.g. in vehicle service stations, B67D 7/42)	
M	B05B1/044	3	{Slits, e.g. narrow openings defined by two straight and parallel lips; Elongated outlets for producing very wide discharges, e.g. fluid curtains (B05B 1/046 takes precedence)}	
M	B05B1/08	2	of pulsating nature, e.g. delivering liquid in successive separate quantities	
M	B05B1/083	3	{the pulsating mechanism comprising movable parts}	
N	B05B1/085	4	{rotated by the liquid or other fluent material discharged, e.g. liquid rotated turbines}	
N	B05B1/0852	5	{the liquid or other fluent material actuating several pulsating mechanisms}	
N	B05B1/0854	5	{the pulsating mechanism being provided with means for preventing rotation}	
N	B05B1/0856	5	{the pulsating mechanism comprising movable balls}	
C	B05B1/14	1	with multiple outlet openings (B05B 1/02, B05B 1/26 take precedence); with strainers in or outside the outlet opening	B05B1/14, B05B1/1421, B05B1/1422, B05B1/1423, B05B1/1424, B05B1/1425, B05B13/002
N	B05B1/1421	2	{the multiple outlet openings arranged in plural groups or rows (for roses or shower heads B05B 1/1821)}	
N	B05B1/1422	3	{with all groups or rows being identical}	
N	B05B1/1423	3	{comprising concentric or coaxial groups}	

Type*	**Symbol**	**Indent Level Number of dots (e.g. 0, 1, 2)**	**Title "CPC only" text should normally be enclosed in {curly brackets}****	**Transferred to#**
N	B05B1/1424	4	{the outlet openings traversing a concavo-convex wall}	
N	B05B1/1425	3	{having three or more dissimilar groups or rows}	
M	B05B1/1609	3	{with a selecting mechanism comprising a lift valve (B05B 1/1681 takes precedence)}	
M	B05B1/1627	3	{with a selecting mechanism comprising a gate valve, a sliding valve or a cock (B05B 1/1681 takes precedence)}	
C	B05B1/18	2	Roses; Shower heads	B05B1/18, B05B1/188, B05B1/1881, B05B1/1882, B05B1/1884, B05B1/1886, B05B1/1887, B05B1/189, B05B1/1892, B05B1/1894, B05B1/1896, B05B1/192
N	B05B1/182	3	{characterised by their outlet openings or elements; Mounting arrangements therefor}	
N	B05B1/1821	4	{the outlet openings arranged in plural groups or rows}	
N	B05B1/1822	5	{with all groups or rows being identical}	
N	B05B1/1823	5	{Concentric or coaxial groups}	
N	B05B1/1824	6	{the outlet openings traversing a concavo-convex outlet wall}	
N	B05B1/1825	5	{with three or more dissimilar groups or rows}	
F	B05B1/185	3	{characterised by their outlet element; Mounting arrangements therefor}	B05B1/182, B05B1/1821, B05B1/1822, B05B1/1823, B05B1/1824, B05B1/1825
N	B05B1/188	3	{with user-actuated controlling members}	
N	B05B1/1881	4	{associated with position or movement indicating means}	
N	B05B1/1882	4	{actuated by a linear movement, e.g. push buttons}	
N	B05B1/1884	5	{actuated by a sliding movement along an outer surface of the roses or of the shower heads}	
N	B05B1/1886	5	{the linear movement of the controlling member being converted into a rotational movement of the controlled element}	
N	B05B1/1887	4	{actuated by a pivoting movement}	

Type*	**Symbol**	**Indent Level Number of dots (e.g. 0, 1, 2)**	**Title "CPC only" text should normally be enclosed in {curly brackets}****	**Transferred to#**
N	B05B1/189	4	{actuated by a rotating movement}	
N	B05B1/1892	4	{located in or on the handle}	
N	B05B1/1894	4	{located in or on the outlet wall}	
N	B05B1/1896	4	{located in or on the housing}	
N	B05B1/192	3	{combined with features functioning other than as a support or as a portion of the fluid handling elements, e.g. audio systems, speakers or lights}	
M	B05B1/20	2	Perforated pipes or troughs, e.g. spray booms; Outlet elements therefor	
M	B05B1/202	3	{comprising inserted outlet elements}	
M	B05B1/28	1	with integral means for shielding the discharged liquid or other fluent material, e.g. to limit area of spray; with integral means for catching drips or collecting surplus liquid or other fluent material	
M	B05B1/3006	2	{the controlling element being actuated by the pressure of the fluid to be sprayed (B05B 1/323 takes precedence; single-unit outlet valves actuated by the pressure of the fluid to be sprayed B05B 11/0062)}	
M	B05B1/3013	2	{Lift valves (B05B 1/3033 takes precedence)}	
M	B05B1/302	3	{with a ball shaped valve member}	
M	B05B1/3026	2	{Gate valves; Sliding valves; Cocks (B05B 1/326 takes precedence)}	
M	B05B1/3073	3	{the controlling element being a deflector acting as a valve in co-operation with the outlet orifice}	
M	B05B1/308	3	{the controlling element comprising both a lift valve and a deflector separated from the lift valve}	
M	B05B1/323	3	{the valve member being actuated by the pressure of the fluid to be sprayed (single unit outlet valves actuated by the pressure of the fluid to be sprayed B05B 11/0062)}	
M	B05B1/326	3	{Gate valves; Sliding valves; Cocks}	
M	B05B1/3402	2	{to avoid or reduce turbulence, e.g. with fluid flow straightening means}	
M	B05B1/3484	4	{with a return channel extending from the swirl chamber by-passing the swirl imparting means}	
U	B05B3/00	0	Spraying or sprinkling apparatus with moving outlet elements or moving deflecting elements	
M	B05B3/008	1	{comprising a wobbling or nutating element, e.g. rotating about an axis describing a cone during spraying (B05B 3/043 takes precedence)}	
C	B05B3/02	1	with rotating elements (electric spraying discharge apparatus characterised by having rotary outlet or deflecting elements B05B 5/04)	B05B3/02, B05B3/0202

Type*	**Symbol**	**Indent Level Number of dots (e.g. 0, 1, 2)**	**Title "CPC only" text should normally be enclosed in {curly brackets}****	**Transferred to#**
N	B05B3/0202	2	{being deflecting elements (the liquid driven rotor being a deflecting rotating element B05B 3/0426; discharging over substantially the whole periphery of the rotating member B05B 3/10)}	
N	B05B3/0204	3	{being a ventilator or fan}	
M	B05B3/021	2	{with means for regulating the jet relative to the horizontal angular position of the nozzle, e.g. for spraying non-circular areas by changing the elevation of the nozzle or by varying the nozzle flow-rate (when the rotating elements are rotated by the liquid or other fluent material discharged B05B 3/0453)}	
D	B05B3/022	2	{the rotating deflecting element being a ventilator or a fan (B05B 3/105 takes precedence; agricultural atomisers or mist blowers A01M 7/0003)}	<administrative transfer to B05B3/0204>
D	B05B3/023	2	{comprising a pneumatic motor actuated by a depression created by the liquid flow}	<administrative transfer to B05B3/02>
M	B05B3/028	2	{the rotation being orbital (comprising liquid driven rotors wherein the movement of the outlet elements are a combination of two movements, one being rotational B05B 3/0444; when the rotating elements are rotated by jet reaction of the liquid or other fluent material discharged B05B 3/066)}	
C	B05B3/04	2	driven by the liquid or other fluent material discharged, e.g. the liquid actuating a motor before passing to the outlet	B05B3/04, B05B3/0417, B05B1/085
D	B05B3/0404	3	{the motor comprising a movable ball}	<administrative transfer to B05B1/0856>
D	B05B3/0409	3	{with moving, e.g. rotating, outlet elements (B05B 3/0486, B05B 3/06 take precedence)}	<administrative transfer to B05B3/04>
N	B05B3/0412	3	{comprising a liquid driven piston motor}	
D	B05B3/0413	4	{comprising a liquid driven piston motor}	<administrative transfer to B05B3/0412>
N	B05B3/0417	3	{comprising a liquid driven rotor, e.g. a turbine}	
D	B05B3/0418	4	{comprising a liquid driven rotor, e.g. a turbine (B05B 3/0463, B05B 3/0468 take precedence)}	<administrative transfer to B05B3/0417>
N	B05B3/0419	4	{the liquid or other fluent material powering several rotors}	
N	B05B3/0421	4	{provided with means for preventing rotation}	

Type*	**Symbol**	**Indent Level Number of dots (e.g. 0, 1, 2)**	**Title "CPC only" text should normally be enclosed in {curly brackets}****	**Transferred to#**
D	B05B3/0422	5	{with rotating outlet elements}	<administrative transfer to B05B3/0417>
N	B05B3/0423	4	{the rotor axis not being parallel to the rotation axis of the moving outlet elements, e.g. being perpendicular thereto}	
N	B05B3/0425	4	{actuated downstream of the outlet elements}	
N	B05B3/0426	5	{the liquid driven rotor being a deflecting rotating element}	
D	B05B3/0427	6	{the outlet elements being directly attached to the rotor or being an integral part of it}	<administrative transfer to B05B3/0429>
N	B05B3/0429	4	{the rotating outlet elements being directly attached to the rotor or being an integral part thereof}	
N	B05B3/043	5	{Rotor nozzles}	
D	B05B3/0431	6	{the rotative movement of the outlet elements being reversible (B05B 3/0445 takes precedence)}	<administrative transfer to B05B3/0432>
N	B05B3/0432	4	{the rotation of the outlet elements being reversible (B05B 3/0444 takes precedence)}	
N	B05B3/0435	5	{by reversing the direction of rotation for the rotor}	
D	B05B3/0436	7	{by reversing the direction of rotation of the rotor itself}	<administrative transfer to B05B3/0435>
N	B05B3/0438	5	{Tubular elements holding several outlets, e.g. apertured tubes, oscillating about an axis substantially parallel to the tubular element}	
D	B05B3/044	7	{Tubular elements holding several outlets, e.g. apertured tubes, oscillating about an axis substantially parallel to the tubular element}	<administrative transfer to B05B3/0438>
N	B05B3/0444	4	{the movement of the outlet elements being a combination of two movements, one being rotational}	
D	B05B3/0445	6	{the movement of the outlet elements being a combination of two movements, one being rotational}	<administrative transfer to B05B 3/0444>
N	B05B3/0446	4	{with automatic means for regulating the discharged jet (B05B3/0444 takes precedence)}	
D	B05B3/045	6	{with automatic means for regulating the jet (B05B 3/0445 takes precedence)}	<administrative transfer to B05B3/0446>

Type*	**Symbol**	**Indent Level Number of dots (e.g. 0, 1, 2)**	**Title "CPC only" text should normally be enclosed in {curly brackets}****	**Transferred to#**
N	B05B3/0453	5	{relative to the angular position of the outlet elements or to the direction of rotation for the outlet elements, e.g. when spraying non-circular areas}	
D	B05B3/0454	7	{relative to the angular position of the outlet or to the direction of rotation of the outlet, e.g. for spraying non circular areas}	<administrative transfer to B05B3/0453>
N	B05B3/0455	3	{the outlet elements being rotated by a deflecting element being successively moved into the discharged jet by the action of a biasing means and out of the discharged jet by the discharged jet}	
D	B05B3/0459	6	{the rotor axis not being parallel to the rotation axis of the outlet, e.g. being perpendicular thereto}	<administrative transfer to B05B3/0423>
N	B05B3/0461	4	{the rotation of the outlet elements being reversible}	
D	B05B3/0463	4	{Rotor nozzles, i.e. nozzles consisting of an element having an upstream part rotated by the liquid flow, and a downstream part connected to the apparatus by a universal joint}	<administrative transfer to B05B3/043>
D	B05B3/0468	4	{the liquid actuating a motor after passing the spray outlet (B05B 3/0472 takes precedence)}	<administrative transfer to B05B3/0425>
D	B05B3/0472	4	{the spray jet actuating a movable deflector which is successively moved out of the jet by jet action and brought back into the jet by spring action}	<administrative transfer to B05B3/0455>
D	B05B3/0477	5	{the spray outlet having a reversible rotative movement, e.g. for covering angular sector smaller than 360°}	<administrative transfer to B05B3/0461>
D	B05B3/0481	5	{Impact motive means}	<administrative transfer to B05B3/0455>
D	B05B3/0486	3	{the spray jet being generated by a rotary deflector rotated by liquid discharged onto it in a direction substantially parallel its rotation axis}	<administrative transfer to B05B3/0426>
F	B05B3/049	3	{comprising mechanical means for preventing a rotor from rotating despite being submerged in a streaming fluid}	B05B1/0854, B05B3/0421
F	B05B3/0495	3	{the liquid or other fluent material discharged powering several motors, e.g. several turbines}	B05B1/0852, B05B3/0419
M	B05B3/06	3	by jet reaction	
M	B05B3/10	2	discharging over substantially the whole periphery of the rotating member {(B05B 3/082 takes precedence)}	

Type*	**Symbol**	**Indent Level Number of dots (e.g. 0, 1, 2)**	**Title "CPC only" text should normally be enclosed in {curly brackets}****	**Transferred to#**
M	B05B3/16	2	driven or controlled by the liquid or other fluent material discharged, e.g. the liquid actuating a motor before passing to the outlet {(comprising liquid driven rotors wherein the rotation of the outlet element is reversible B05B 3/0432; the outlet elements being rotated by a deflecting element successively moved into the discharged jet by the action of a biasing means and out of the discharged jet by the discharged jet with the rotation of the outlet elements being reversible B05B 3/0461)}	
C	B05B12/04	2	for sequential operation or multiple outlets	B05B12/04, B05B13/002
C	B05B12/1472	2	{separate supply lines supplying different materials to separate outlets of the spraying apparatus (B05B 12/1454 takes precedence)}	B05B12/1472, B05B13/002
M	B05B 13/00	0	Machines or plants for applying liquids or other fluent materials to surfaces of objects or other work by spraying, not covered by groups B05B 1/00 - B05B 11/00 (means for supplying or discharging liquid or other fluent material for this purpose, see the relevant one of groups B05B1/00 - B05B12/00; processes for applying liquids or other fluent materials to surfaces in general B05D)	
N	B05B13/002	1	{Machines or plants for applying coating liquids or other fluent materials by inkjet}	
U	B05B13/02	1	Means for supporting work; Arrangement or mounting of spray heads; Adaptation or arrangement of means for feeding work (B05B 13/06 takes precedence)	
U	B05B13/04	2	the spray heads being moved during {spraying} operation	
C	B05B13/0431	3	{with spray heads moved by robots or articulated arms, e.g. for applying liquid or other fluent material to three-dimensional [3D] surfaces}	B05B13/0431, B05B13/002, B05B13/0433
N	B05B13/0433	4	{the work being vehicle components, e.g. vehicle bodies}	
U	B05B13/0447	3	{Installation or apparatus for applying liquid or other fluent material to conveyed separate articles (B05B 13/0442 takes precedence)}	
C	B05B13/0452	4	{the objects being vehicle components, e.g. vehicle bodies}	B05B13/0452, B05B13/002, B05B13/0433

CPC NOTICE OF CHANGES 1759

DATE: AUGUST 1, 2025

PROJECT RP11745

Type*	**Symbol**	**Indent Level Number of dots (e.g. 0, 1, 2)**	**Title "CPC only" text should normally be enclosed in {curly brackets}****	**Transferred to#**
C	B05B13/0457	4	{specially designed for applying liquid or other fluent material to three-dimensional [3D] surfaces of the work, e.g. by using several moving spray heads (B05B13/0431, B05B 13/0452 take precedence)}	B05B13/0457, B05B13/0431

*N = new entries where reclassification into entries is involved; C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate entries, as determined by intellectual reclassification; T= existing entries with enlarged file scope, which receive documents from C or D entries, e.g. when a limiting reference is removed from the entry title; M = entries with no change to the file scope (no reclassification); D = deleted entries; F = frozen entries will be deleted once reclassification of documents from the entries is completed; U = entries that are unchanged.

NOTES:

- **No {curly brackets} are used for titles in CPC only subclasses, e.g. C12Y, A23Y; 2000 series symbol titles of groups found at the end of schemes (orthogonal codes); or the Y section titles. The {curly brackets} are used for 2000 series symbol titles found interspersed throughout the main trunk schemes (breakdown codes).
- U groups: it is obligatory to display the required "anchor" symbol (U group), i.e. the entry immediately preceding a new group or an array of new groups to be created (in case new groups are not clearly subgroups of C-type groups). Always include the symbol, indent level and title of the U group in the table above.
- All entry types should be included in the scheme changes table above for better understanding of the overall scheme change picture. Symbol, indent level, and title are required for all types.
- "Transferred to" column must be completed for all C, D, F, and Q type entries. F groups will be deleted once reclassification is completed.
- When multiple symbols are included in the "Transferred to" column, avoid using ranges of symbols in order to be as precise as possible.
- For administrative transfer of documents, the following text should be used: "< administrative transfer to XX>", "<administrative transfer to XX and YY simultaneously>", or "<administrative transfer to XX, YY, ...and ZZ simultaneously>" when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be the source allocation type, unless otherwise indicated.
- Administrative transfer to 2000/Y series groups is assumed to be "additional information".
- If needed, instructions for allocation type should be indicated within the angle brackets using the abbreviations "ADD" or "INV": <administrative transfer to XX ADD>, <administrative transfer to XX INV>, or < administrative transfer to XX ADD, YY INV, ... and ZZ ADD simultaneously>.
- In certain situations, the "D" entries of 2000-series or Y-series groups may not require a destination ("Transferred to") symbol, however it is required to specify "<no transfer>" in the "Transferred to" column for such cases.
- For finalisation projects, the deleted "F" symbols should have <no transfer> in the "Transferred to" column.
- For more details about the types of scheme change, see CPC Guide.

B. New, Modified or Deleted Warning(s)

SUBCLASS B05B - SPRAYING APPARATUS; ATOMISING APPARATUS; NOZZLES (spray-mixers with nozzles B01F 25/72; processes for applying liquids or other fluent materials to surfaces by spraying B05D)

Type*	Location	Old Warning	New/Modified Warning
N	B05B 1/085		Group B05B 1/085 is incomplete pending reclassification of documents from group B05B 3/04. Groups B05B 3/04 and B05B 1/085 should be considered in order to perform a complete search.
N	B05B 1/0852		Group B05B 1/0852 is incomplete pending reclassification of documents from group B05B 3/0495. Groups B05B 3/0495 and B05B 1/0852 should be considered in order to perform a complete search.
N	B05B 1/0854		Group B05B 1/0854 is incomplete pending reclassification of documents from group B05B 3/049. Groups B05B 3/049 and B05B 1/0854 should be considered in order to perform a complete search.
N	B05B 1/14		Group B05B 1/14 is impacted by reclassification into groups B05B 1/1421, B05B 1/1422, B05B 1/1423, B05B 1/1424, B05B 1/1425 and B05B 13/002. All groups listed in this Warning should be considered in order to perform a complete search.
N	B05B 1/1421		Groups B05B 1/1421, B05B 1/1422, B05B 1/1423, B05B 1/1424 and B05B 1/1425 are incomplete pending reclassification of documents from group B05B 1/14. All groups listed in this Warning should be considered in order to perform a complete search.

Type*	Location	Old Warning	New/Modified Warning
N	B05B 1/18		Group B05B 1/18 is impacted by reclassification into groups B05B 1/188, B05B 1/1881, B05B 1/1882, B05B 1/1884, B05B 1/1886, B05B 1/1887, B05B 1/189, B05B 1/1892, B05B 1/1894, B05B 1/1896 and B05B 1/192. All groups listed in this Warning should be considered in order to perform a complete search.
N	B05B 1/182		Groups B05B 1/182, B05B 1/1821, B05B 1/1822, B05B 1/1823, B05B 1/1824 and B05B 1/1825 are incomplete pending reclassification of documents from group B05B 1/185. All groups listed in this Warning should be considered in order to perform a complete search.
N	B05B 1/185		Group B05B 1/185 is no longer used for the classification of documents as of August 1, 2025. The content of this group is being reclassified into groups B05B 1/182, B05B 1/1821, B05B 1/1822, B05B 1/1823, B05B 1/1824 and B05B 1/1825. All groups listed in this Warning should be considered in order to perform a complete search.
N	B05B 1/188		Groups B05B 1/188, B05B 1/1881, B05B 1/1882, B05B 1/1884, B05B 1/1886, B05B 1/1887, B05B 1/189, B05B 1/1892, B05B 1/1894 and B05B 1/1896 are incomplete pending reclassification of documents from group B05B 1/18. All groups listed in this Warning should be considered in order to perform a complete search.
N	B05B 1/192		Group B05B 1/192 is incomplete pending reclassification of documents from group B05B 1/18. Groups B05B 1/18 and B05B 1/192 should be considered in order to perform a complete search.

Type*	Location	Old Warning	New/Modified Warning
N	B05B 3/02		Group B05B 3/02 is impacted by reclassification into group B05B 3/0202. Groups B05B 3/02 and B05B 3/0202 should be considered in order to perform a complete search.
N	B05B 3/0202		Group B05B 3/0202 is incomplete pending reclassification of documents from group B05B 3/02. Groups B05B 3/02 and B05B 3/0202 should be considered in order to perform a complete search.
N	B05B 3/04		Group B05B 3/04 is impacted by reclassification into groups B05B 3/0417 and B05B 1/085. All groups listed in this Warning should be considered in order to perform a complete search.
N	B05B 3/0417		Group B05B 3/0417 is incomplete pending reclassification of documents from group B05B 3/04. Groups B05B 3/04 and B05B 3/0417 should be considered in order to perform a complete search.
N	B05B 3/0419		Group B05B 3/0419 is incomplete pending reclassification of documents from group B05B 3/0495. Groups B05B 3/0495 and B05B 3/0419 should be considered in order to perform a complete search.
N	B05B 3/0421		Group B05B 3/0421 is incomplete pending reclassification of documents from group B05B 3/049. Groups B05B 3/049 and B05B 3/0421 should be considered in order to perform a complete search.
N	B05B 3/049		Group B05B 3/049 is no longer used for the classification of documents as of August 1, 2025. The content of this group is being reclassified into groups B05B 1/0854 and B05B 3/0421. Groups B05B 3/049, B05B 1/0854 and B05B 3/0421 should be considered in order to perform a complete search.

Type*	Location	Old Warning	New/Modified Warning
N	B05B 3/0495		Group B05B 3/0495 is no longer used for the classification of documents as of August 1, 2025. The content of this group is being reclassified into groups B05B 1/0852 and B05B 3/0419. Groups B05B 3/0495, B05B 1/0852 and B05B 3/0419 should be considered in order to perform a complete search.
N	B05B 12/04		Group B05B 12/04 is impacted by reclassification into group B05B 13/002. Groups B05B 12/04 and B05B 13/002 should be considered in order to perform a complete search.
N	B05B 12/1472		Group B05B 12/1472 is impacted by reclassification into group B05B 13/002. Groups B05B 12/1472 and B05B 13/002 should be considered in order to perform a complete search.
N	B05B 13/002		Group B05B 13/002 is incomplete pending reclassification of documents from groups B05B 1/14, B05B 12/04, B05B 12/1472, B05B 13/0431 and B05B 13/0452. All groups listed in this Warning should be considered in order to perform a complete search.
N	B05B 13/0431		Group B05B 13/0431 is incomplete pending reclassification of documents from group B05B 13/0457. Group B05B 13/0431 is also impacted by reclassification into groups B05B 13/002 and B05B 13/0433. All groups listed in this Warning should be considered in order to perform a complete search.
N	B05B 13/0433		Group B05B 13/0433 is incomplete pending reclassification of documents from groups B05B 13/0431 and B05B 13/0452. Groups B05B 13/0431, B05B 13/0452 and B05B 13/0433 should be considered in order to perform a complete search.

Type*	**Location**	**Old Warning**	**New/Modified Warning**
N	B05B 13/0452		Group B05B 13/0452 is impacted by reclassification into groups B05B 13/002 and B05B 13/0433. Groups B05B 13/0452, B05B 13/002 and B05B 13/0433 should be considered in order to perform a complete search.
N	B05B 13/0457		Group B05B 13/0457 is impacted by reclassification into group B05B 13/0431. Groups B05B 13/0457 and B05B 13/0431 should be considered in order to perform a complete search.

*N = new warning, M = modified warning, D = deleted warning

NOTE: The “Location” column only requires the symbol PRIOR to the location of the warning. No further directions such as “before” or “after” are required.

C. New, Modified or Deleted Note(s)

SUBCLASS B05B - SPRAYING APPARATUS; ATOMISING APPARATUS; NOZZLES (spray-mixers with nozzles B01F 25/72; processes for applying liquids or other fluent materials to surfaces by spraying B05D)

Type*	Location	Old Note	New/Modified Note
M	B05B	1. This subclass covers particularly apparatus for the release or projection of drops or droplets into the atmosphere or into a chamber to form a mist or the like. For this purpose, the materials to be projected may be suspended in a stream of gas or vapour. 2. Attention is drawn to the Note following the title of class B05. 3. In this subclass, "means for controlling volume of flow" is used in the most general meaning and includes also means allowing only starting and stopping the flow 4. In this subclass, the meaning of the expression "apparatus carried on or by a person" includes all apparatus comprising at least one container for the material to be sprayed carried on or by a person during use 5. In this subclass, the word "container" is to be understood as the innermost enclosure containing the material to be sprayed	1. This subclass covers particularly apparatus for the release or projection of drops or droplets into the atmosphere or into a chamber to form a mist or the like. For this purpose, the materials to be projected may be suspended in a stream of gas or vapour. 2. {Attention is drawn to the Note following the title of class B05.} 3. {In this subclass, "means for controlling volume of flow" is used in the most general meaning and includes also means allowing only starting and stopping the flow.} 4. {In this subclass, the meaning of the expression "apparatus carried on or by a person" includes all apparatus comprising at least one container for the material to be sprayed carried on or by a person during use.} 5. {In this subclass, the word "container" is to be understood as the innermost enclosure containing the material to be sprayed.}

*N = new note, M = modified note, D = deleted note

NOTE: The “Location” column only requires the symbol PRIOR to the location of the note. No further directions such as “before” or “after” are required.

2. A. DEFINITIONS (new)

B05B1/00

References

Limiting references

This place does not cover:

Spraying or sprinkling apparatus with moving outlet elements or moving deflecting elements	B05B3/00
Electrostatic spraying apparatus; Spraying apparatus with means for charging the spray electrically; Apparatus for spraying liquids or other fluent materials by other electric means	B05B5/00
Spraying apparatus for discharge of liquids or other fluent materials from two or more sources, e.g. of liquid and air, of powder and gas	B05B7/00
Devices for applying liquids or other fluent materials to surfaces by contact	B05C
Nozzles for ink-jet printing mechanisms	B41J2/135
Nozzles for liquid-dispensing, e.g. in vehicle service stations	B67D7/42

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Nozzles for baths with water or gas jets	A61H33/00
Nozzles specially adapted for fire-extinguishing	A62C31/02
Nozzles for generating high velocity abrasive fluid jets	B24C5/04

Additive manufacturing nozzles	B29C64/209
Nozzles, funnels or guides for introducing articles or materials into containers or wrappers	B65B39/00
Fuel-injection nozzles	F02M61/18
Nozzles specially adapted for burners using a direct spraying action of liquid droplets into the combustion space	F23D11/38

Informative references

Attention is drawn to the following places, which may be of interest for search:

Electroforming of hollow bodies, e.g. nozzles	C25D1/02

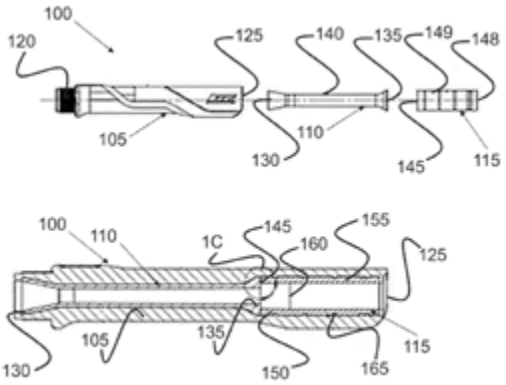
B05B1/002

Definition statement

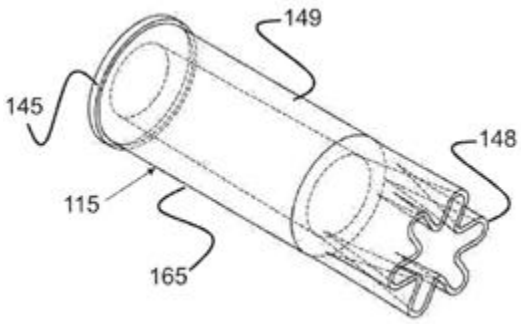
This place covers:

Illustrative examples of subject matter classified in this place:

1a.



1b.



Figures 1a and 1b illustrate a noise suppressor (115) within a nozzle (100). The geometry of a suppressor (115) results in a reduction of aero-acoustic energy at certain operating pressures.

2.

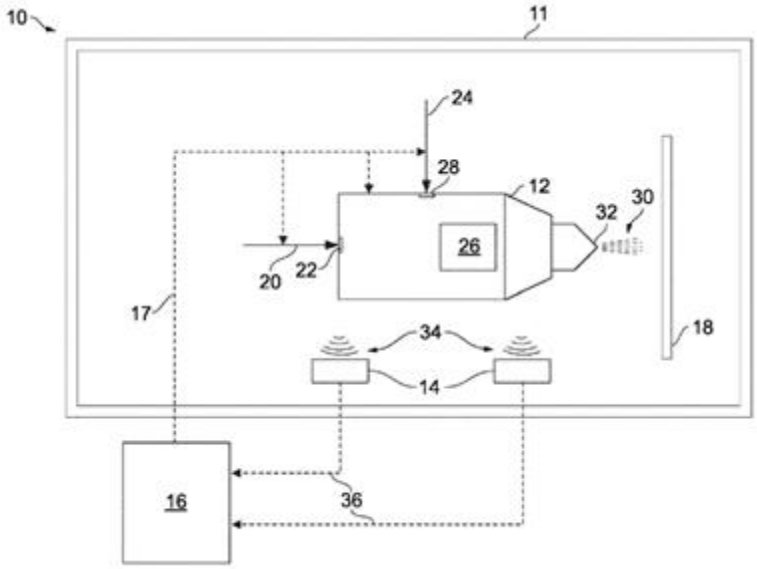


Figure 2 illustrates acoustic sensors (14) configured to sense acoustic signals (34) generated by one or more components or processes of a thermal spray system (10).

3.

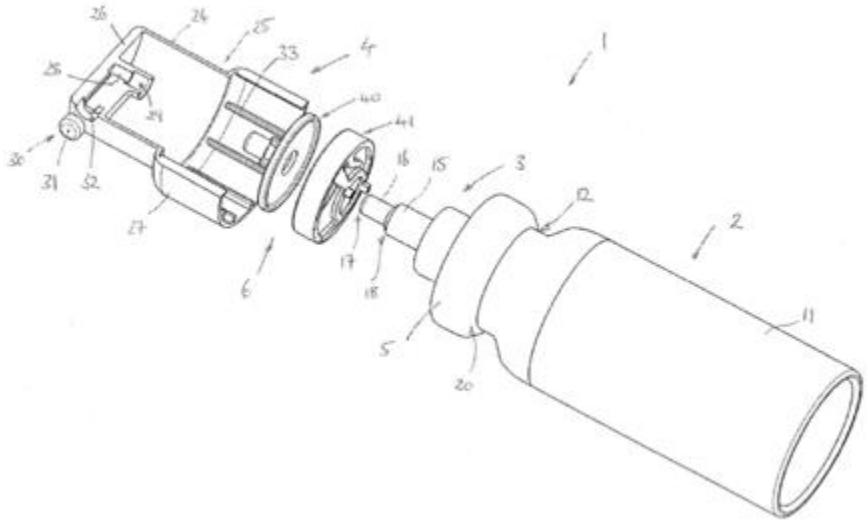


Figure 3 illustrates a handheld pump sprayer (1), wherein depression of an actuator (4) compresses a mechanical clicker (6). This compression is accompanied by an audible clicking sound that provides a clear and reliable indication to a user that stem (18) of a pump (3) has been sufficiently depressed.

4.

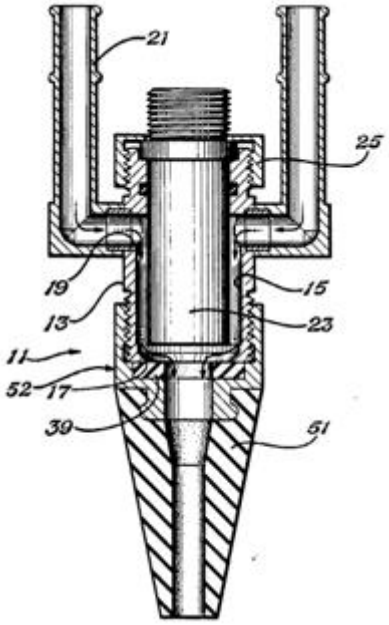


Figure 4 illustrates a ring (39) and nozzle (51) made of an elastomeric material containing metal oxide particles to absorb unwanted sound energy.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Methods or devices for protecting against, or for damping, noise or other acoustic waves in systems with fluid flow in general	G10K11/161

B05B1/005

Definition statement

This place covers:

Illustrative examples of subject matter classified in this place:

1.

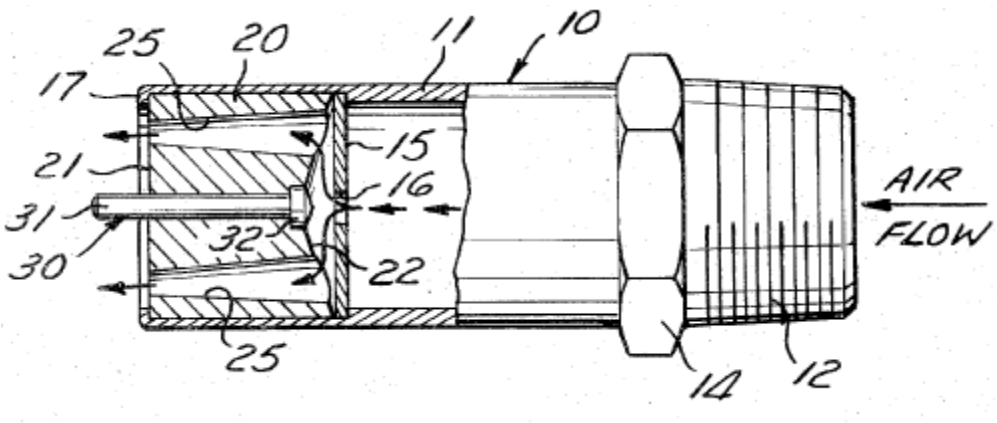


Figure 1 illustrates a nozzle (25) having multiple outlets (25) specially adapted for discharging air.

2.

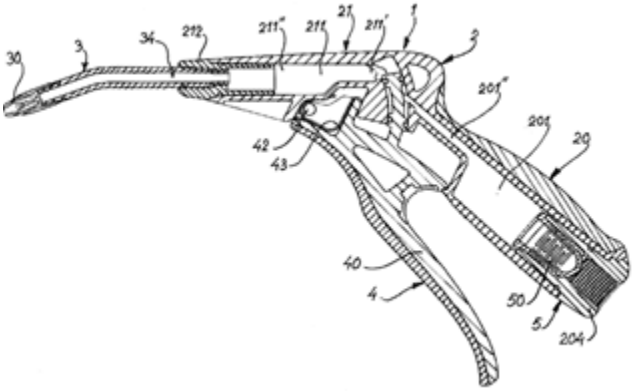


Figure 2 illustrates an air blow gun.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Gas streams controlling the spraying area	B05B12/18
Blower devices for sweeping lawn debris	A01G20/47
Gas nozzles for spreading liquids or other fluent materials already applied to a surface	B05C11/06
Cleaning by the force of air or gas jets	B08B5/02
Air blowing devices for filling or emptying large containers	B65D88/703
Air knives or nozzles for drying	F26B21/004
Compressed-gas guns; Steam guns	F41B11/00

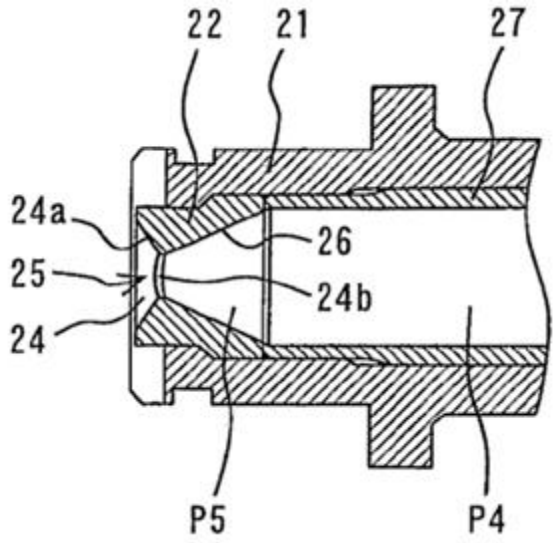
B05B1/042

Definition statement

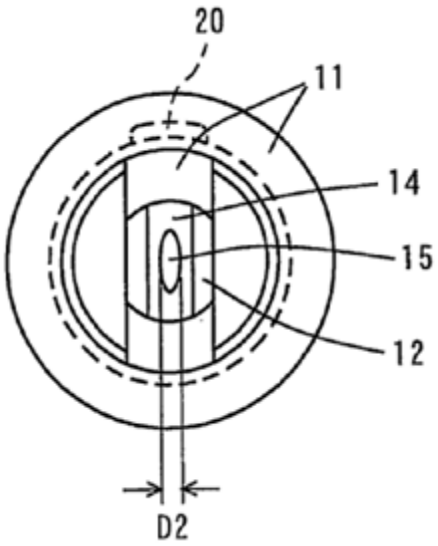
This place covers:

Illustrative example of subject matter classified in this place:

1a.



1b.



Figures 1a and 1b illustrate a perpendicular nozzle defining the plane of the jet.

References

Limiting references

This place does not cover:

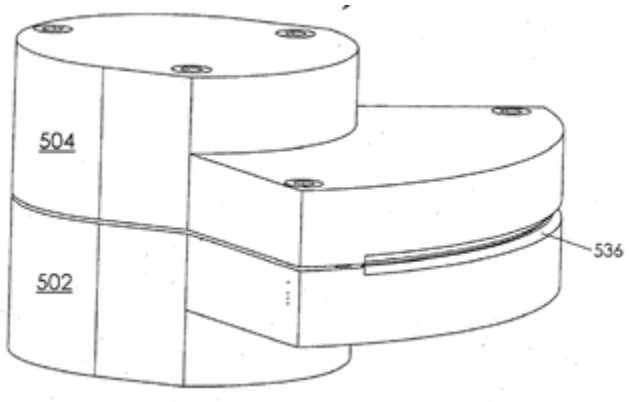
Slits, i.e. narrow openings defined by two straight and parallel lips; Elongated outlets for producing very wide discharges	B05B1/044
Outlets formed, e.g. cut, in the circumference of tubular or spherical elements	B05B1/046

B05B1/044

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates two straight and parallel lips defining an elongated slotted outlet (536).

References

Limiting references

This place does not cover:

Outlets formed, e.g. cut, in the circumference of tubular or spherical elements	B05B1/046

Informative references

Attention is drawn to the following places, which may be of interest for search:

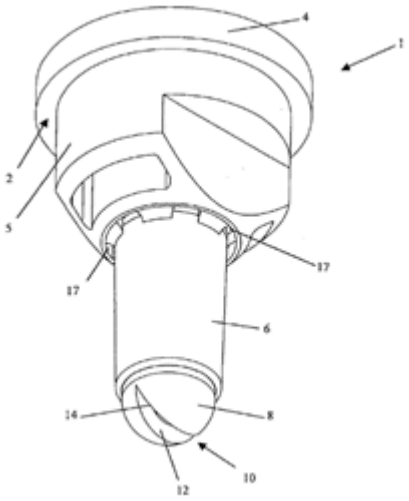
Fountains designed to produce sheets or curtains of liquid	B05B17/085

B05B1/046

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



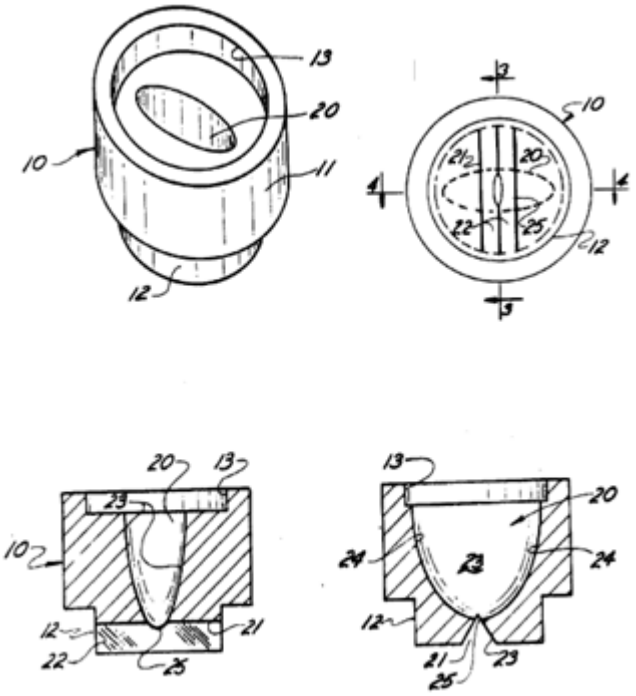
The Figure illustrates an outlet (12) that is formed by a cut in the circumference of a spherical element (8).

B05B1/048

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a conduit (20) having an ellipse shaped cross-section, wherein the major axis of the conduit (20) is perpendicular to that of the plane of the jet.

B05B1/06

Definition statement

This place covers:

Illustrative examples of subject matter classified in this place:

1.

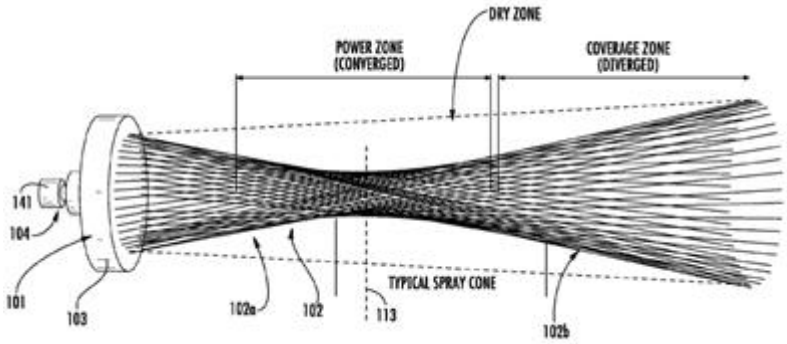


Figure 1 illustrates a spray jet (102) being shaped as a hollow conical form, which includes a dry zone line above and a typical spray zone line below, both divided into a power zone (converged toward the vertical line 113) nearest to the spray jet (101, 103 on the left) and a coverage zone (diverged toward the right side) beyond the power zone.

2.

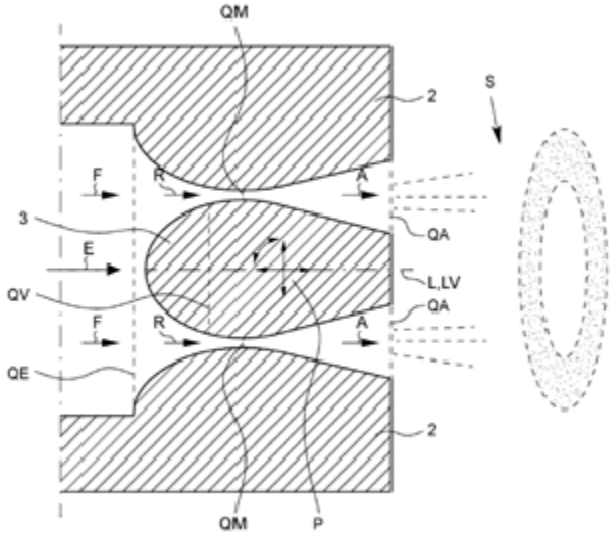


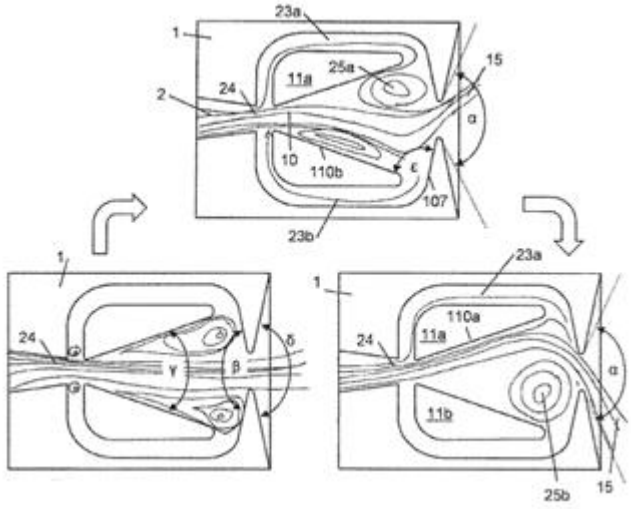
Figure 2 illustrates a spray jet (S) being annularly shaped.

B05B1/08

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates fluidic oscillators.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

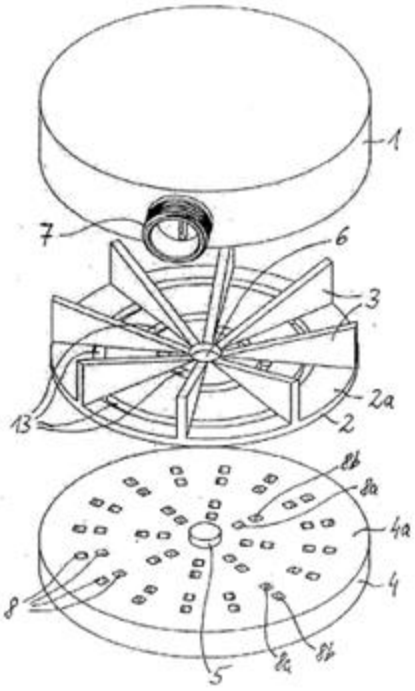
Spraying apparatuses controlled to effect pulsating flow	B05B12/06
Oscillators as circuit elements having no moving parts	F15C1/22

B05B1/085

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a liquid rotated turbine (2) being rotated by the fluid being discharged, thus producing a pulsating discharge.

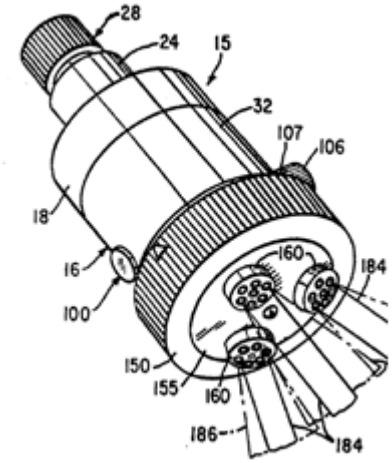
B05B1/0852

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:

1a.



1b.

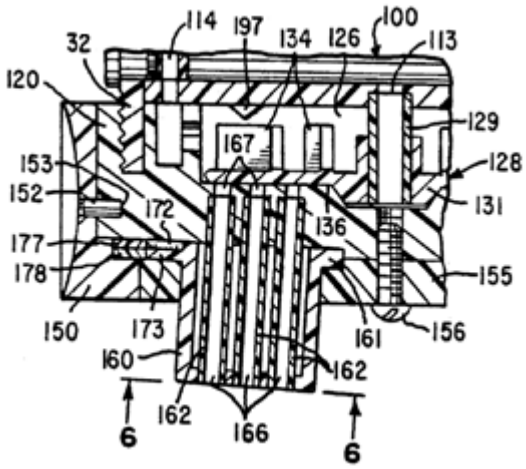


Figure 1a illustrates a shower head (15) comprising three cup-shaped discharge caps (160). Figure 1b illustrates a cap (160) comprising a turbine (128) creating a pulsating discharge.

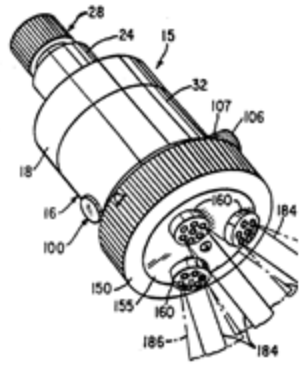
B05B1/0854

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:

1a.



1b.

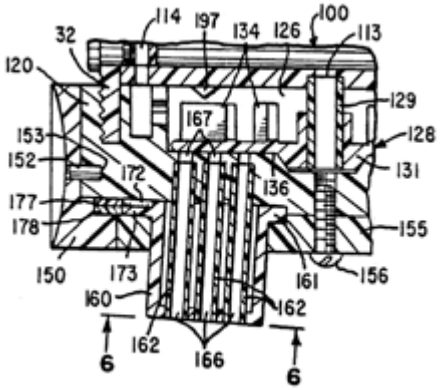


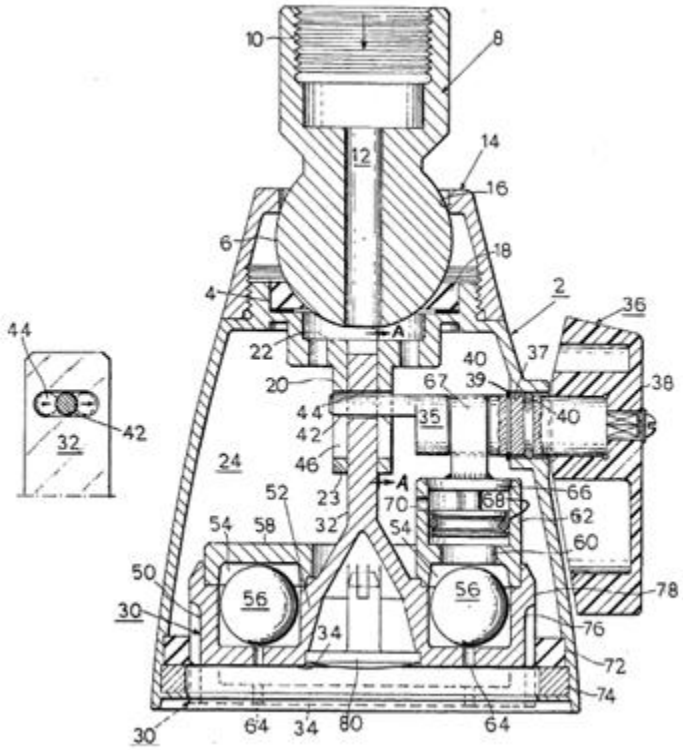
Figure 1a illustrates a shower head (15) comprising three cup-shaped discharge caps (160). Figure 1b illustrates each cap (160) comprising a turbine (128) creating a pulsating discharge. Rotation of the turbine (128) can be prevented by a stop (197).

B05B1/0856

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates how water flowing through openings (70) rotates balls (56) around annular channels (54) to successively cover and uncover openings (64), thereby causing the water to exit from these openings in the form of pulsating jets.

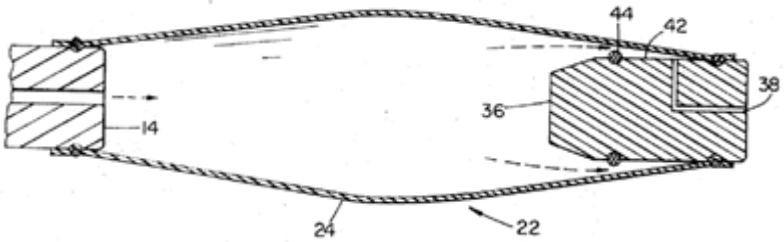
B05B1/086

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:

1a.



1b.

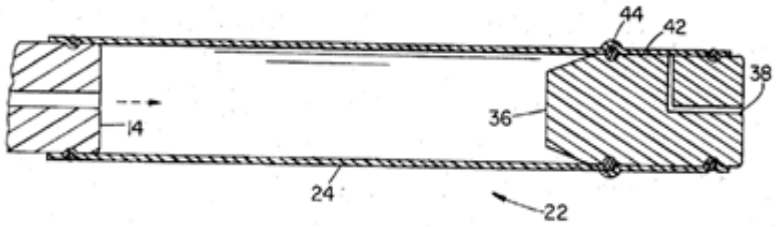


Figure 1a illustrates the expansion of a tube (24) enabling discharge through a channel (38). As the substance rushes out through the channel (38), the tube (24) collapses and returns to a configuration similar to that shown in Figure 1b. As this occurs, the seal between the tube (24) and an O-ring (44) once again becomes effective in Figure 1b, and the cycle will repeat, thus creating a pulsating discharge.

B05B1/10

Definition statement

This place covers:

Illustrative examples of subject matter classified in this place:

1a.

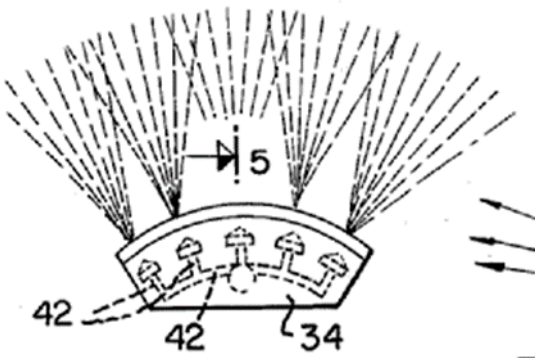


Figure 1a illustrates nozzles forming an array of fine jets.

1b.

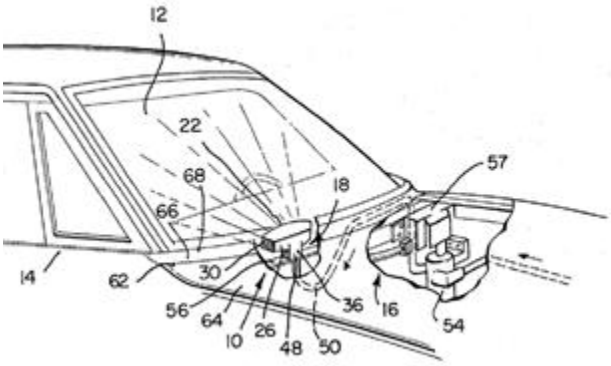


Figure 1b illustrates a nozzle array positioned onto a car windshield.

2.

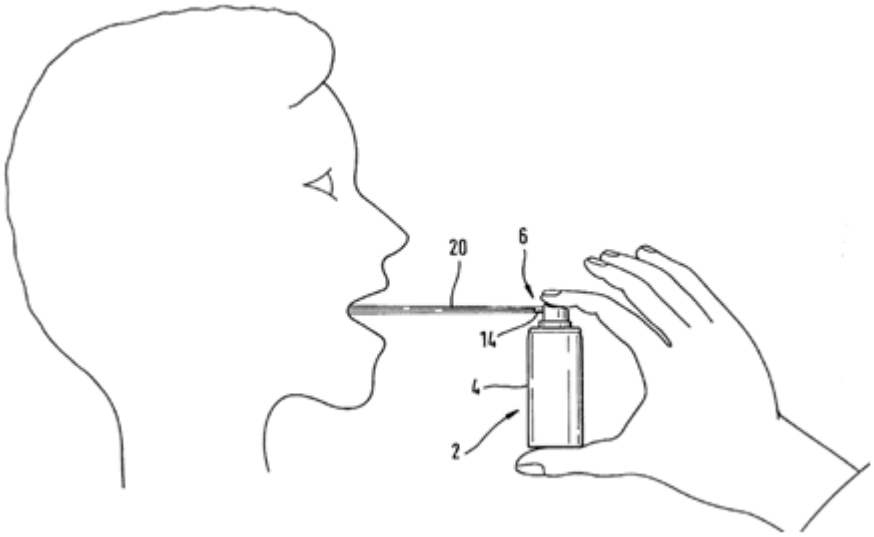


Figure 2 illustrates a nozzle (14) forming a single fine jet (20).

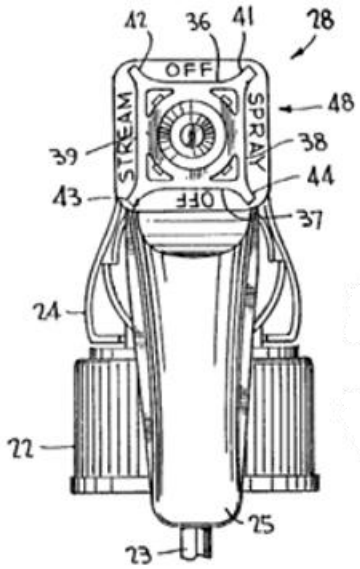
B05B1/12

Definition statement

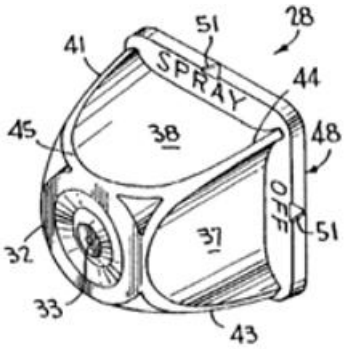
This place covers:

Illustrative example of subject matter classified in this place:

1a.



1b.



Figures 1a and 1b illustrate a singular outlet that is capable of producing different kinds of selected discharge, either spray or stream.

References

Limiting references

This place does not cover:

Nozzles with multiple outlet openings or strainers having selectively-effective outlets in or outside the outlet opening	B05B1/16

B05B1/14

References

Limiting references

This place does not cover:

Nozzles designed to produce a jet, spray or other discharge of particular shape or nature, or having an outlet of particular shape	B05B1/02
Nozzles with means for mechanically breaking up or deflecting the jet after discharge; Nozzles with means for breaking up the discharged liquid or other fluent material by impinging jets	B05B1/26

Informative references

Attention is drawn to the following places, which may be of interest for search:

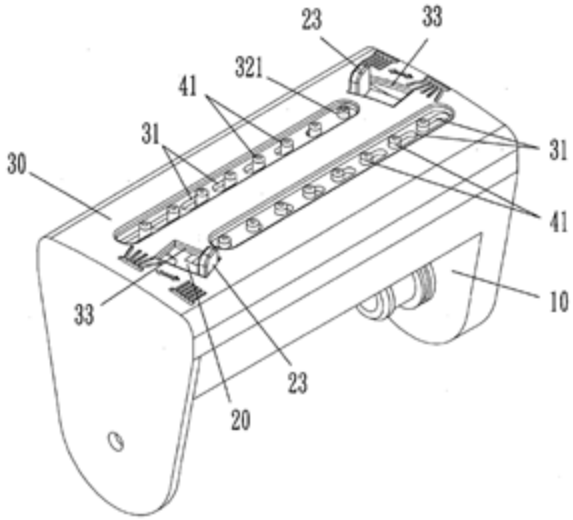
Filters located upstream of the spraying outlets	B05B15/40

B05B1/1422

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



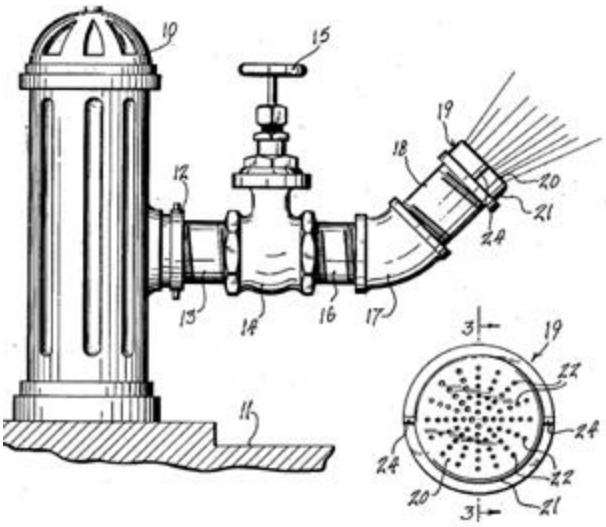
The Figure illustrates two identical rows or groups of outlet openings (41).

B05B1/1423

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



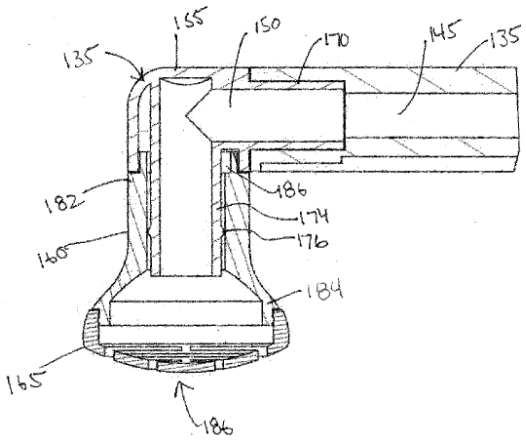
The Figure illustrates radial concentric or coaxial groups of outlet openings (22).

B05B1/1424

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



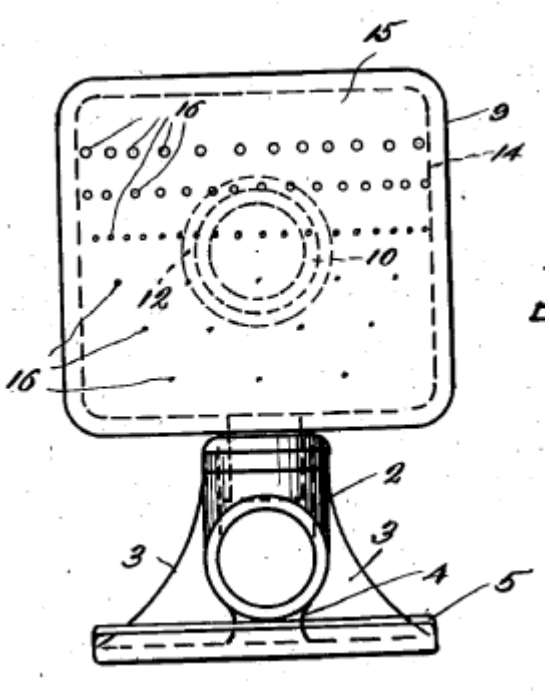
The Figure illustrates multiple outlet openings (186) that go through a convex wall (165).

B05B1/1425

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a plurality of dissimilar rows of orifices (16), the orifices (16) being arranged in three or more dissimilar rows.

B05B1/1609

References

Limiting references

This place does not cover:

Nozzles with a selecting mechanism comprising a gate valve, sliding valve or cock and a lift valve	B05B1/1681

Informative references

Attention is drawn to the following places, which may be of interest for search:

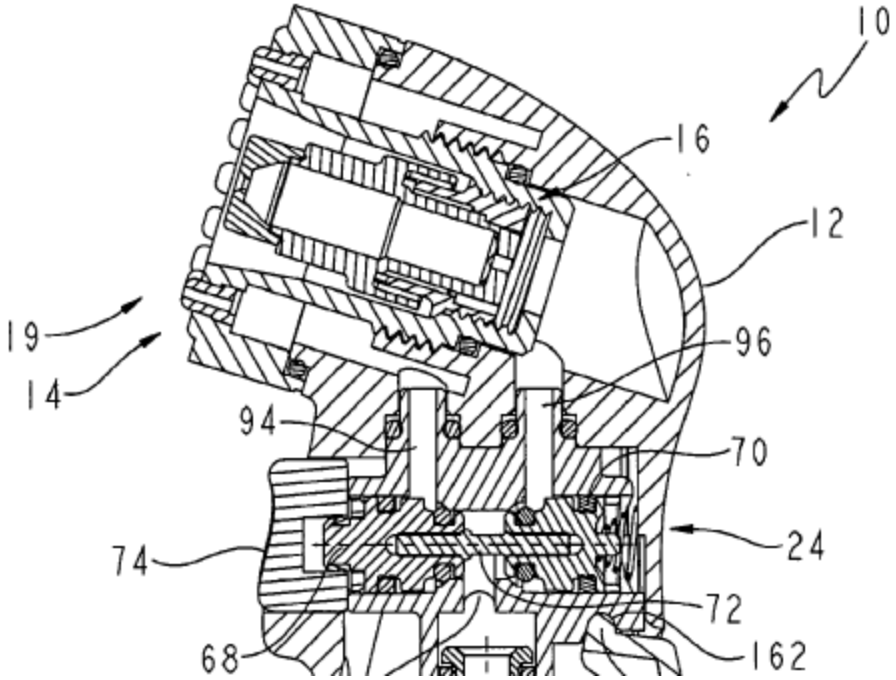
Lift valves in general	F16K1/00

B05B1/1618

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a valve assembly (24) that is actuated by a button (74), the valve assembly (24) having two valve seats allowing for two separate flows to be utilised.

B05B1/1627

References

Limiting references

This place does not cover:

Nozzles with a selecting mechanism comprising a gate valve, sliding valve or cock and a lift valve	B05B1/1681

Informative references

Attention is drawn to the following places, which may be of interest for search:

Gate or sliding valves in general	F16K3/00
Cocks in general	F16K5/00

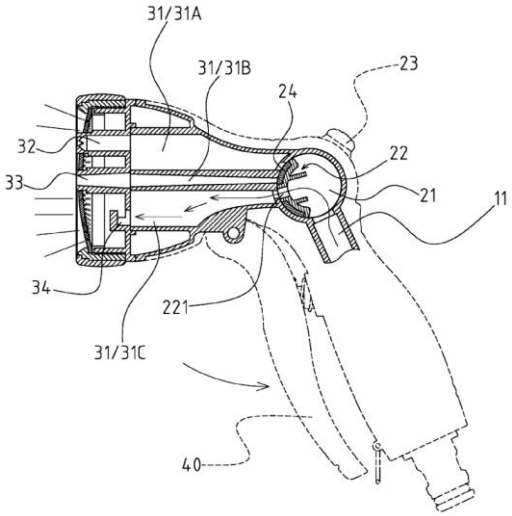
B05B1/1636

Definition statement

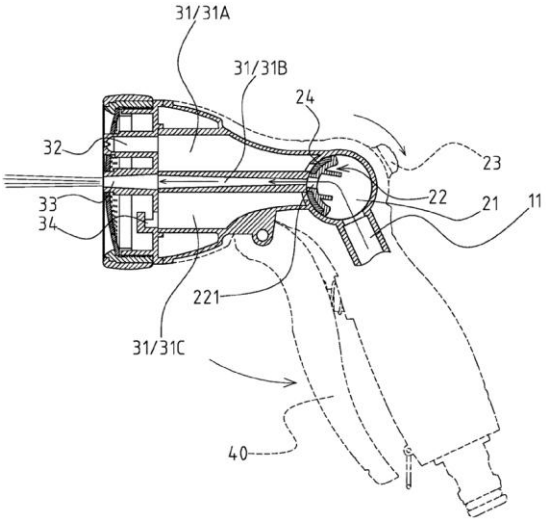
This place covers:

Illustrative example of subject matter classified in this place:

1a.



1b.



Figures 1a and 1b illustrate a water passage (221) that can be rotated to selectively bring either of the outlets (32) and (33) into fluid communication with a passage (11).

References

Limiting references

This place does not cover:

Nozzles with multiple outlet openings having selectively-effective outlets being arranged on a tube or pipe	B05B1/1672

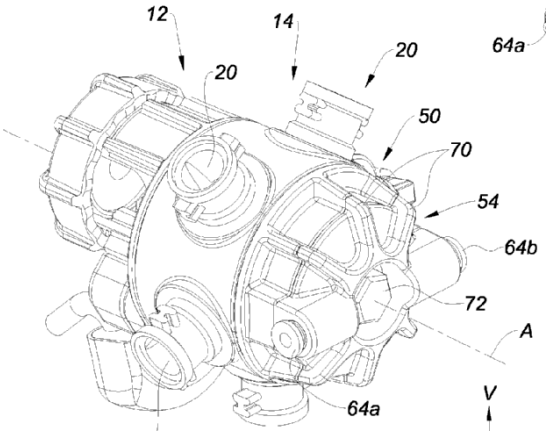
B05B1/1645

Definition statement

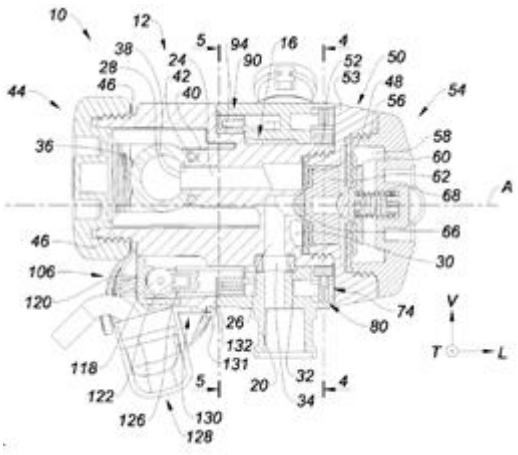
This place covers:

Illustrative examples of subject matter classified in this place:

1a.



1b.



Figures 1a and 1b illustrate a turret (14) rotatably mounted on a body (12) around an axis (A) to bring one of the outlets (20) into fluid communication with an inlet passage (24).

2a.

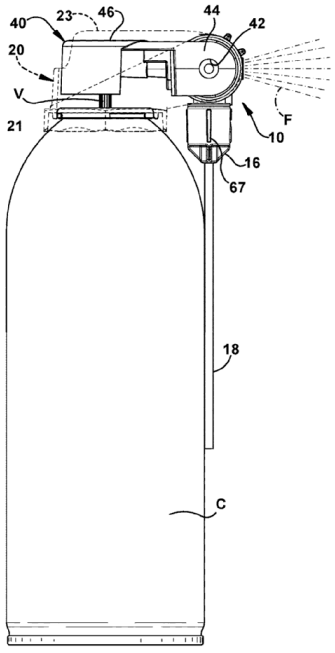


Figure 2a illustrates a downward position of an outlet tube (18) supplied by a rotatable valve assembly.

2b.

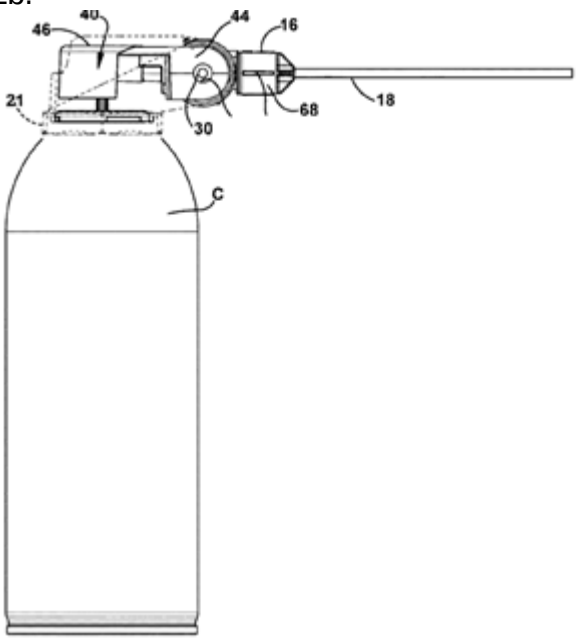


Figure 2b illustrates a horizontal position of an outlet tube (18) supplied by a rotatable valve assembly.

2c.

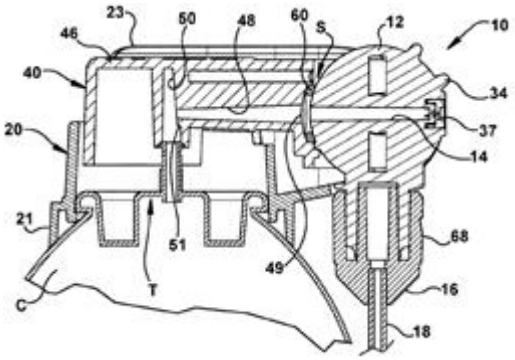


Figure 2c illustrates an expanded view of a rotatable valve assembly (12) enabling outlets (37) and (18) to be brought selectively into fluid communication with a passage (48).

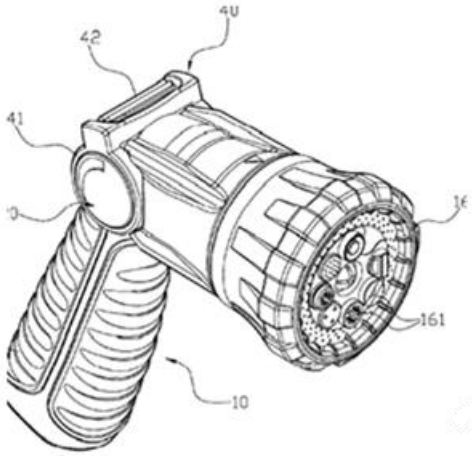
B05B1/1654

Definition statement

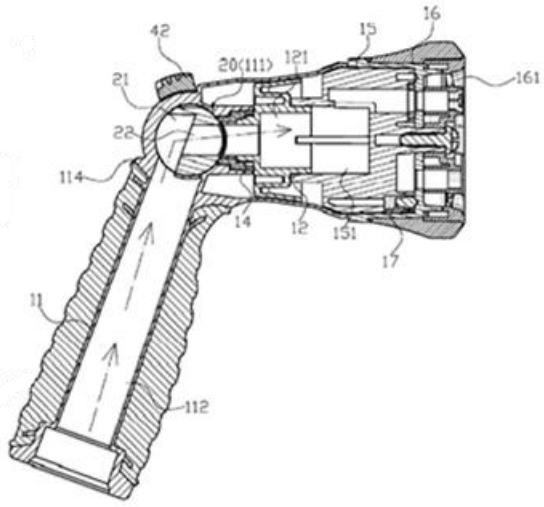
This place covers:

Illustrative example of subject matter classified in this place:

1a.



1b.



Figures 1a and 1b illustrate various outlets (161) rotatably mounted about an axis parallel to the liquid passage of the valve element.

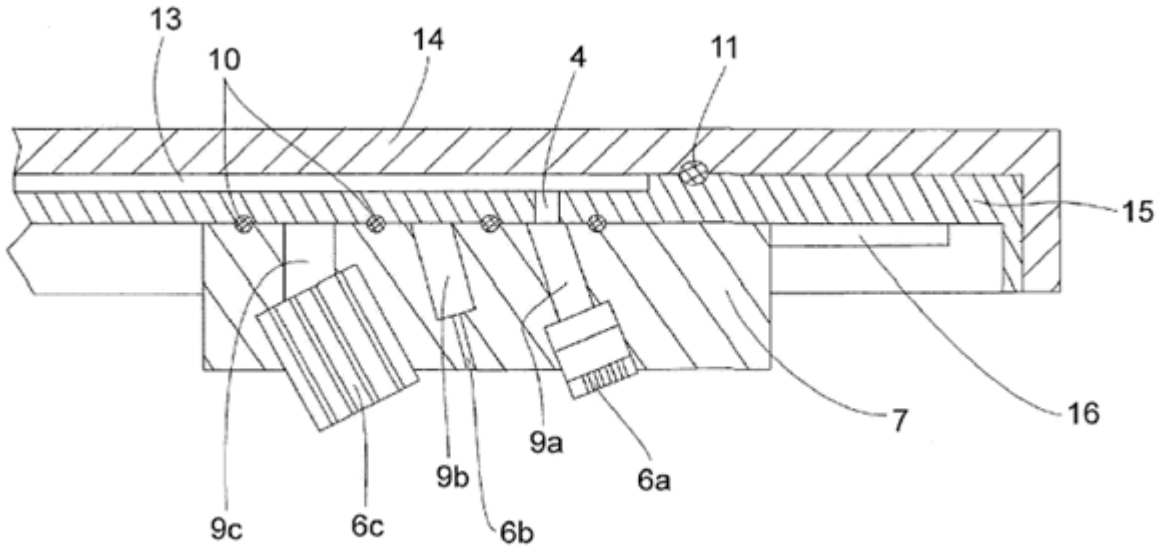
B05B1/1663

Definition statement

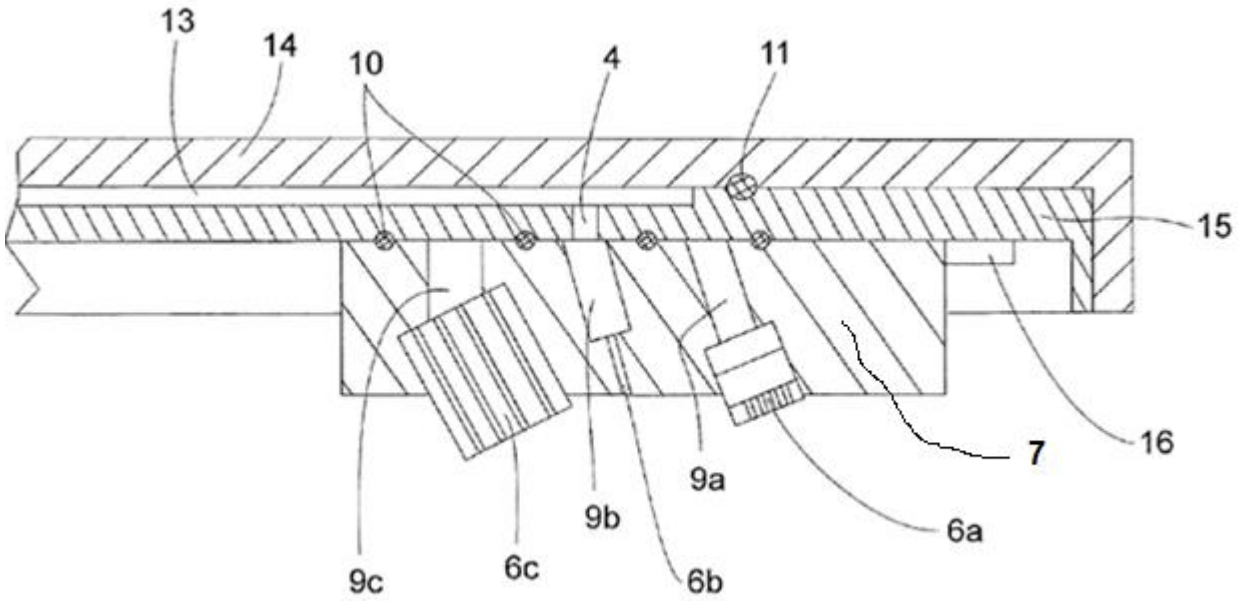
This place covers:

Illustrative example of subject matter classified in this place:

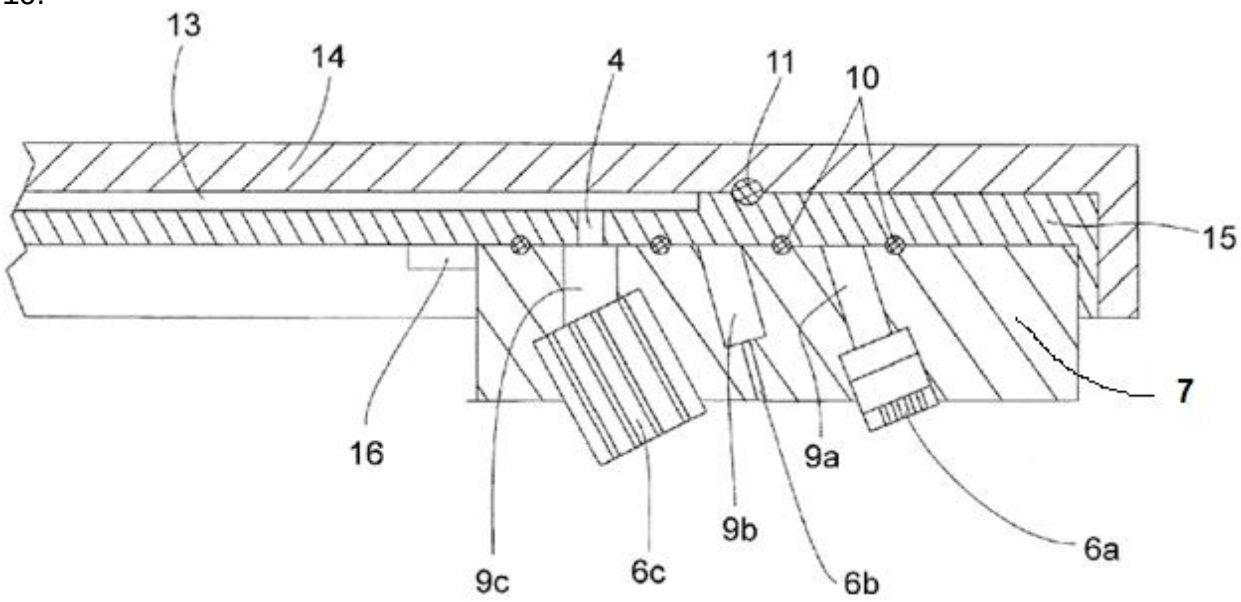
1a.



1b.



1c.



Figures 1a, 1b and 1c illustrate a jet selection plate (7) repositionable to the left or to the right, bringing stationary water outlet (4) into fluid communication with jet chambers in three positions (9a, 9b or 9c) and thus into fluid communication with corresponding outlets of jet-forming bodies (6a, 6b or 6c) of the jet selection plate (7).

References

Limiting references

This place does not cover:

Nozzles with multiple outlet openings having selectively-effective outlets being arranged on a tube or pipe	B05B1/1672

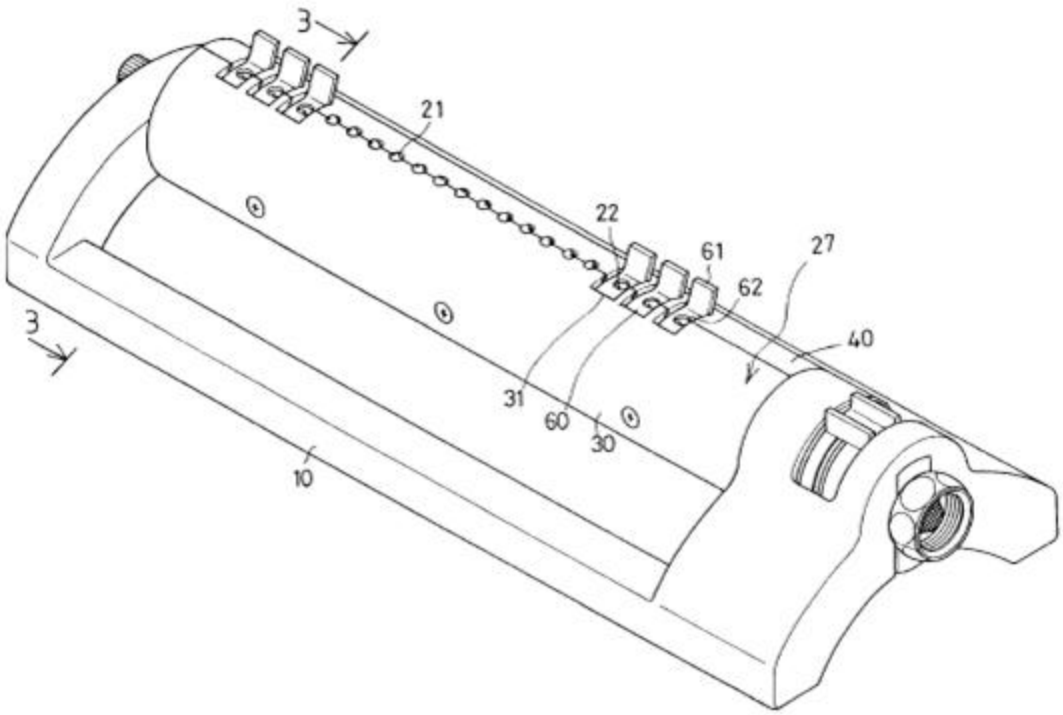
B05B1/1672

Definition statement

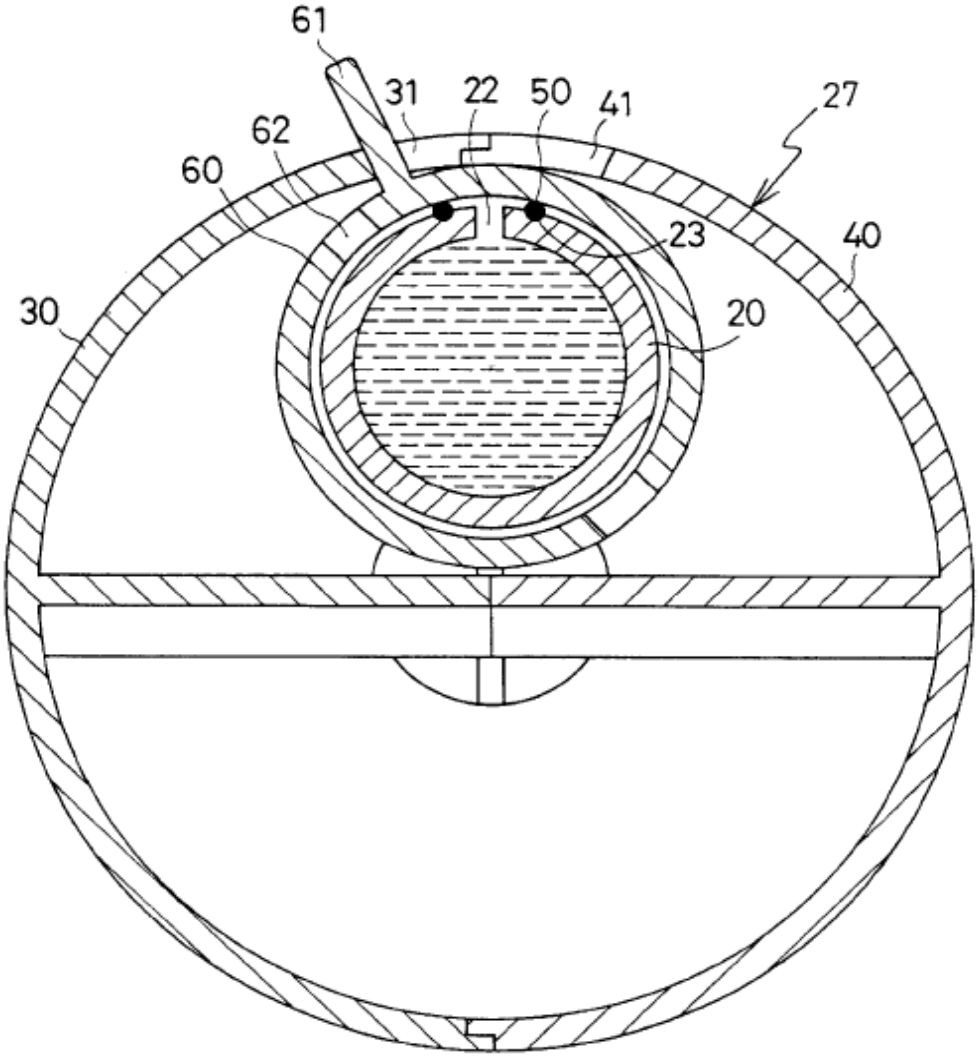
This place covers:

Illustrative example of subject matter classified in this place:

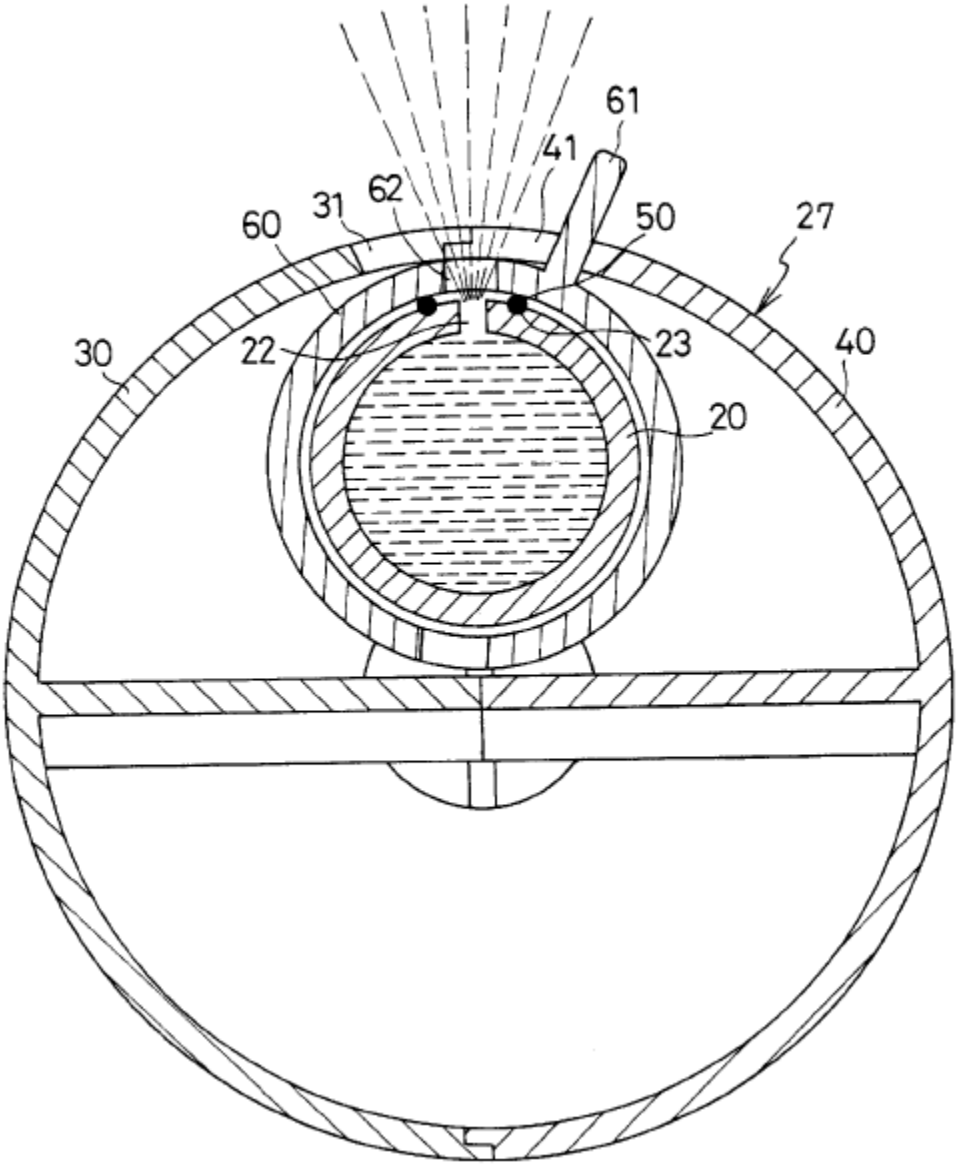
1a.



1b.



1c.



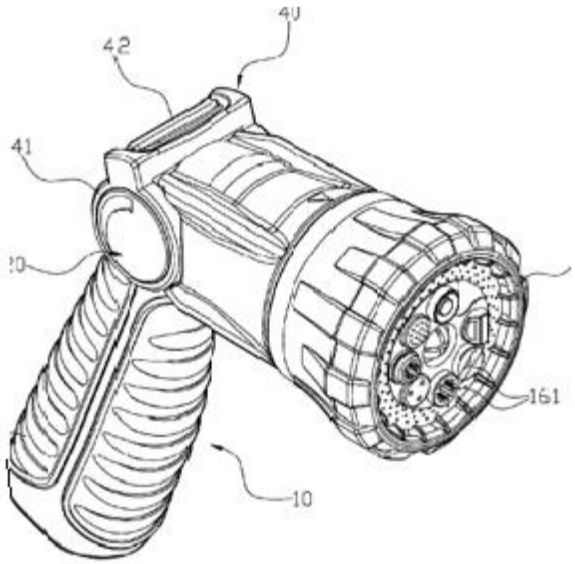
Figures 1a, 1b and 1c illustrate selectively effective outlets (21, 22) being arranged on pipe (20).

B05B1/169

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



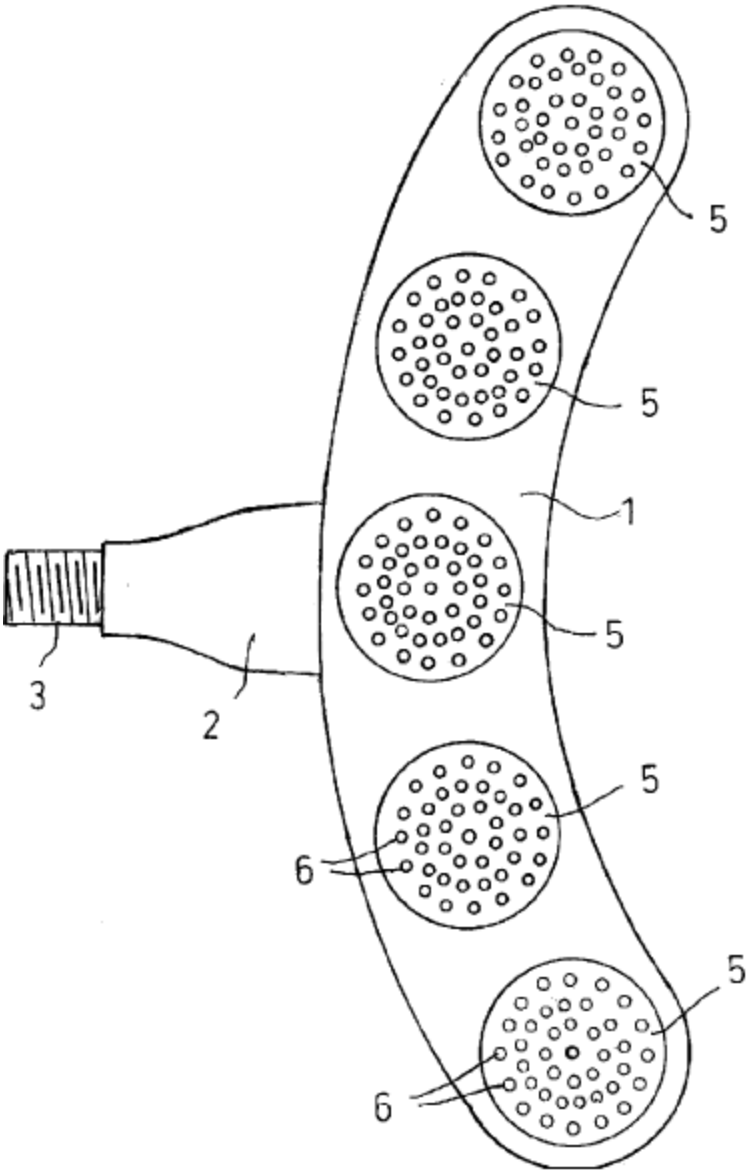
The Figure illustrates a spray head having three or more selectively effective outlets (161).

B05B1/1822

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



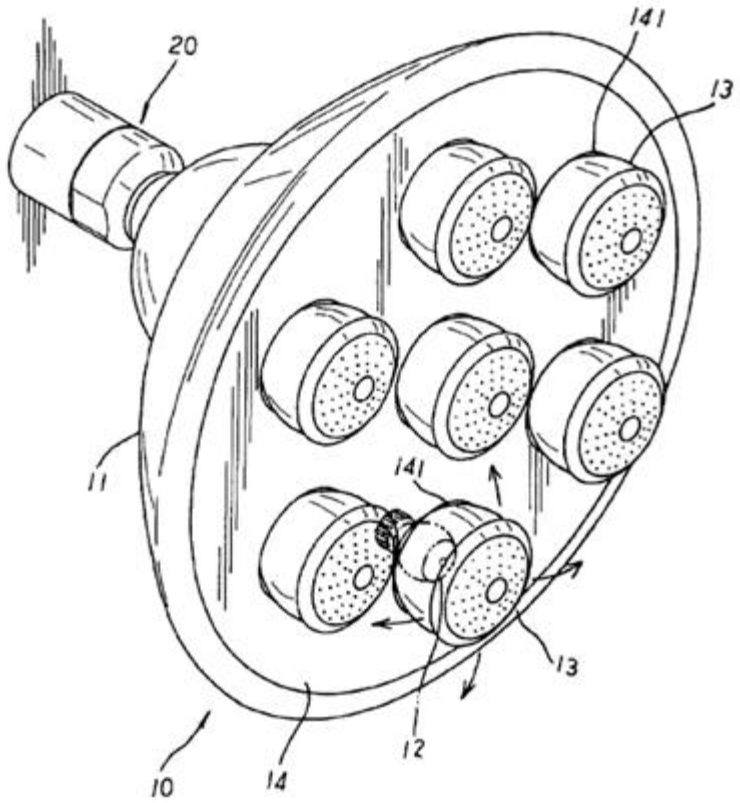
The Figure illustrates a shower head having multiple identical groups.

B05B1/1823

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a shower head having multiple outlet groups that are concentric.

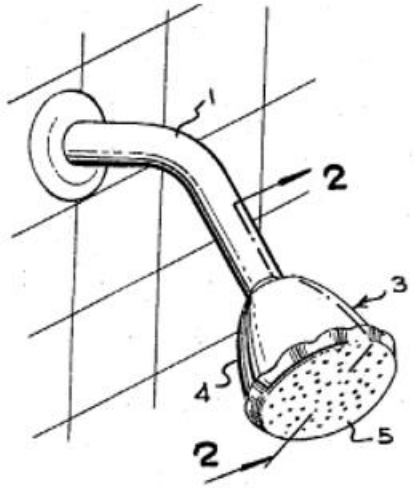
B05B1/1824

Definition statement

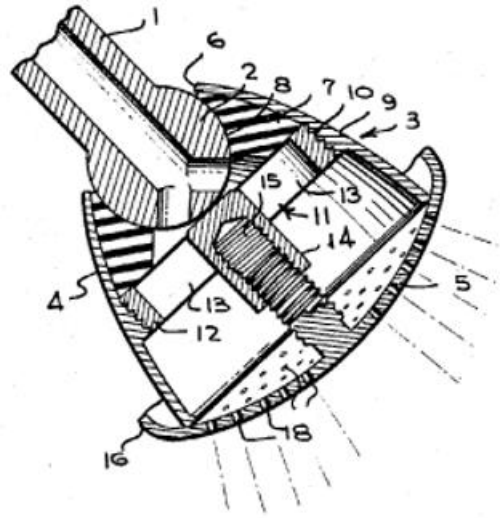
This place covers:

Illustrative example of subject matter classified in this place:

1a.



1b.



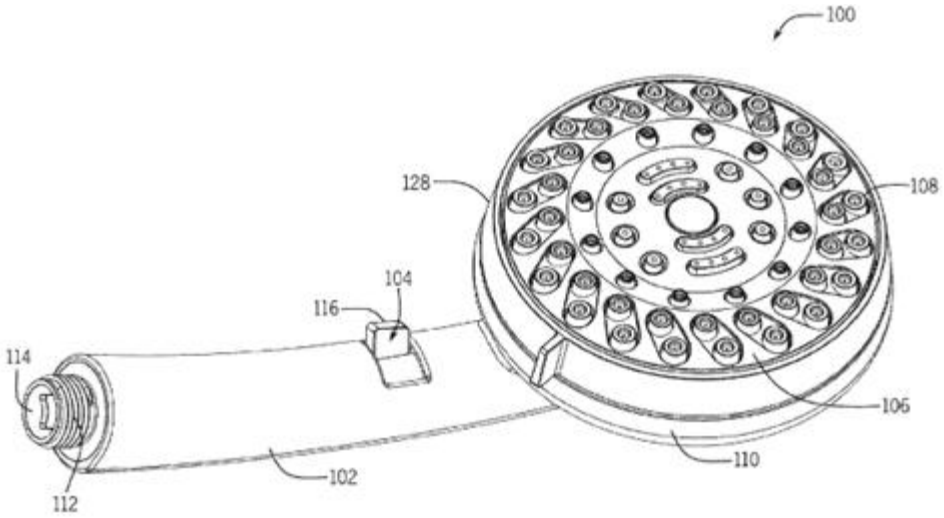
Figures 1a and 1b illustrate a shower head having multiple outlet groups that are concentric and wherein the outlets traverse a concavo-convex outlet wall.

B05B1/1825

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



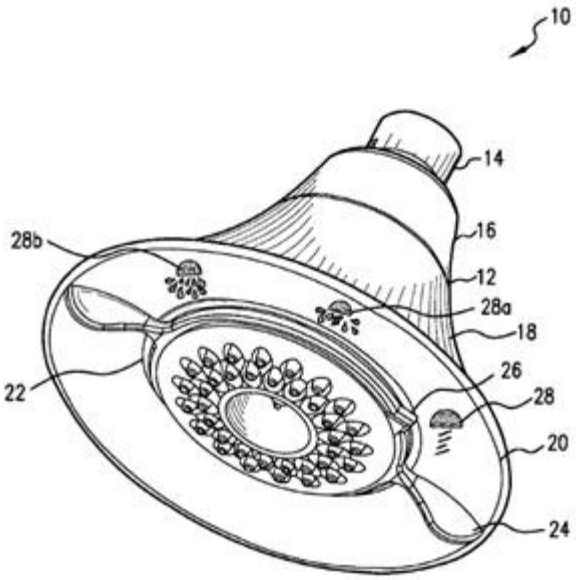
The Figure illustrates a shower head (100) with three or more dissimilar outlet groups.

B05B1/1881

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



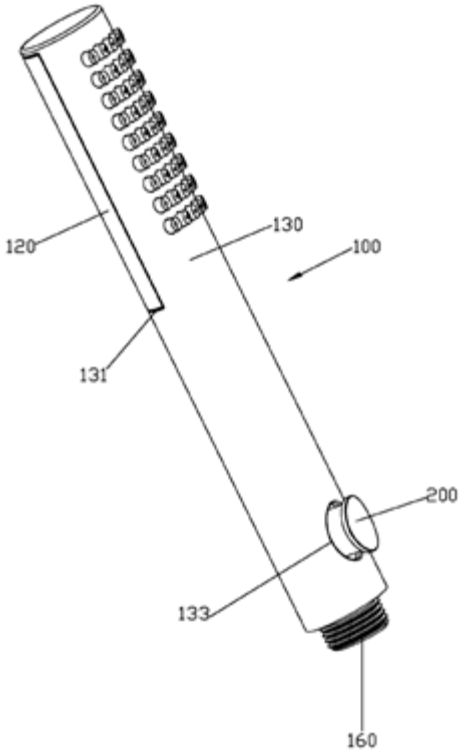
The Figure illustrates a shower head (10) having multiple elements (28, 28a, 28b) that show the corresponding spray pattern when selected by indicator (26).

B05B1/1882

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



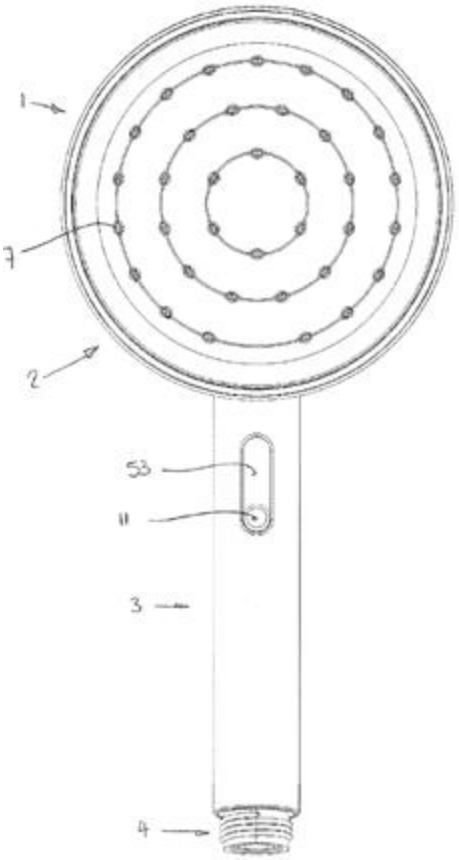
The Figure illustrates a shower head provided with a push-button (200).

B05B1/1884

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a shower head (1) provided with a linearly slidable actuator (11).

B05B1/1886

Definition statement

This place covers:

Illustrative examples of subject matter classified in this place:

1a.

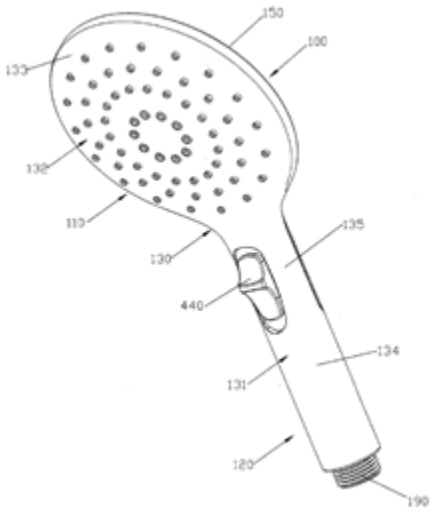


Figure 1a illustrates a shower head having linear actuation converted into rotational movement.

1b.

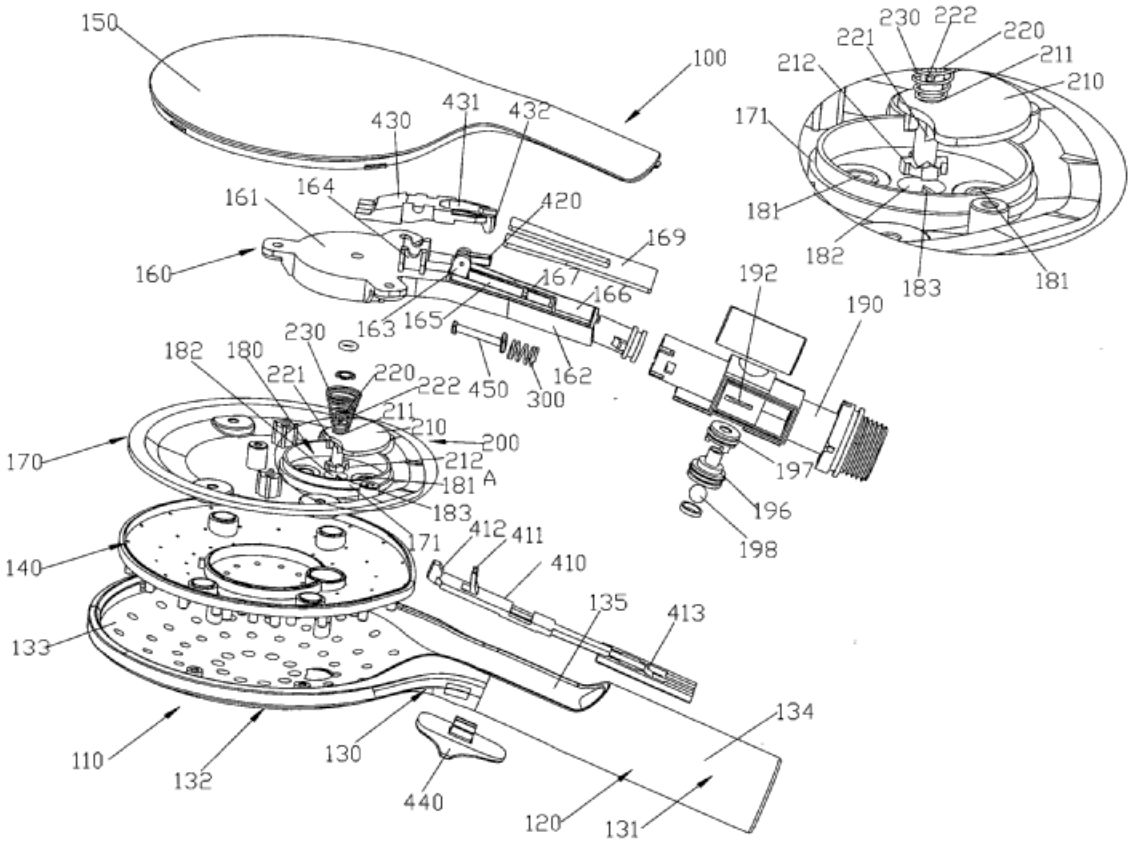


Figure 1b illustrates a shower head provided with a linearly slidable actuator (440) whose actuation rotates element (430).

2.

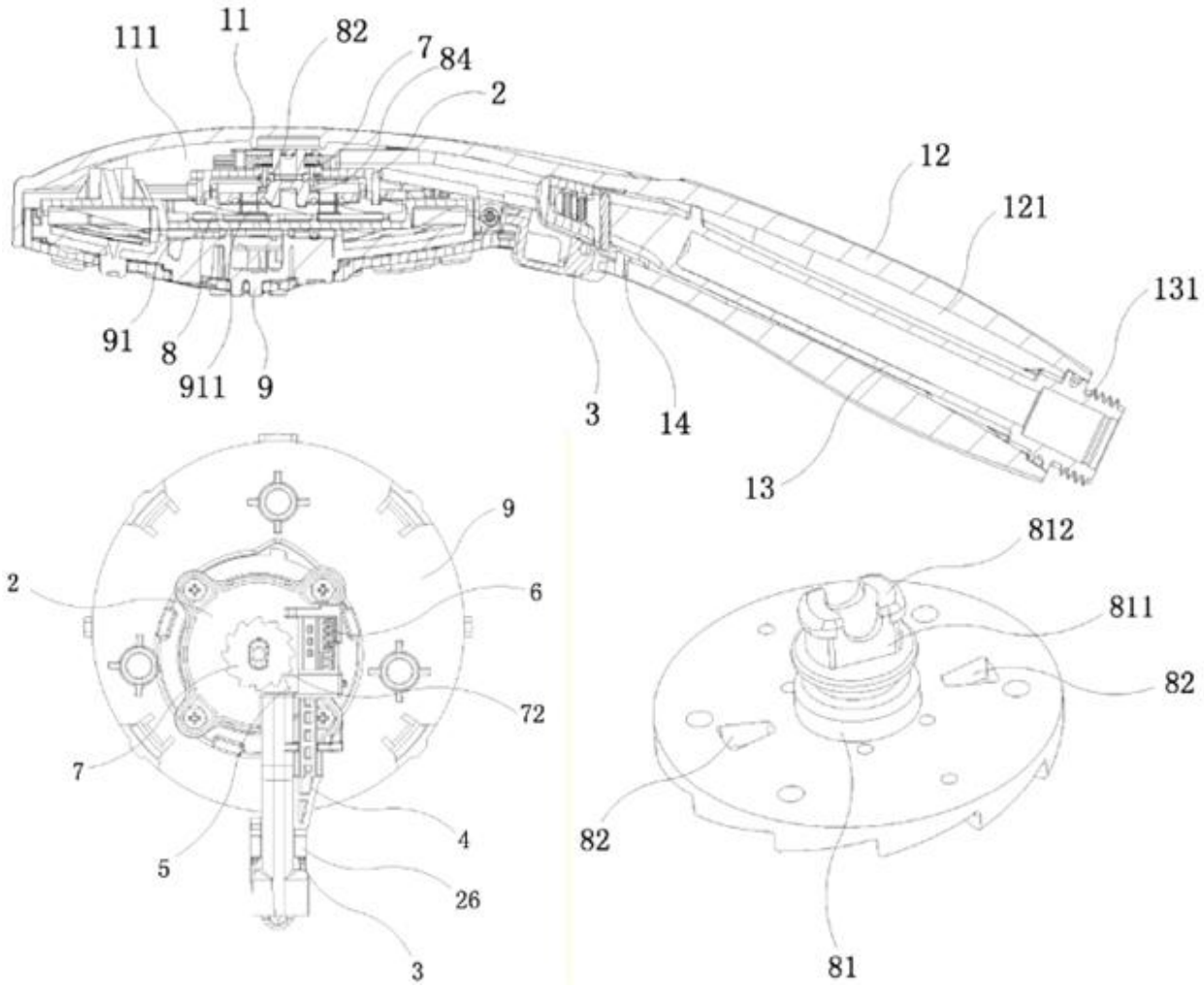


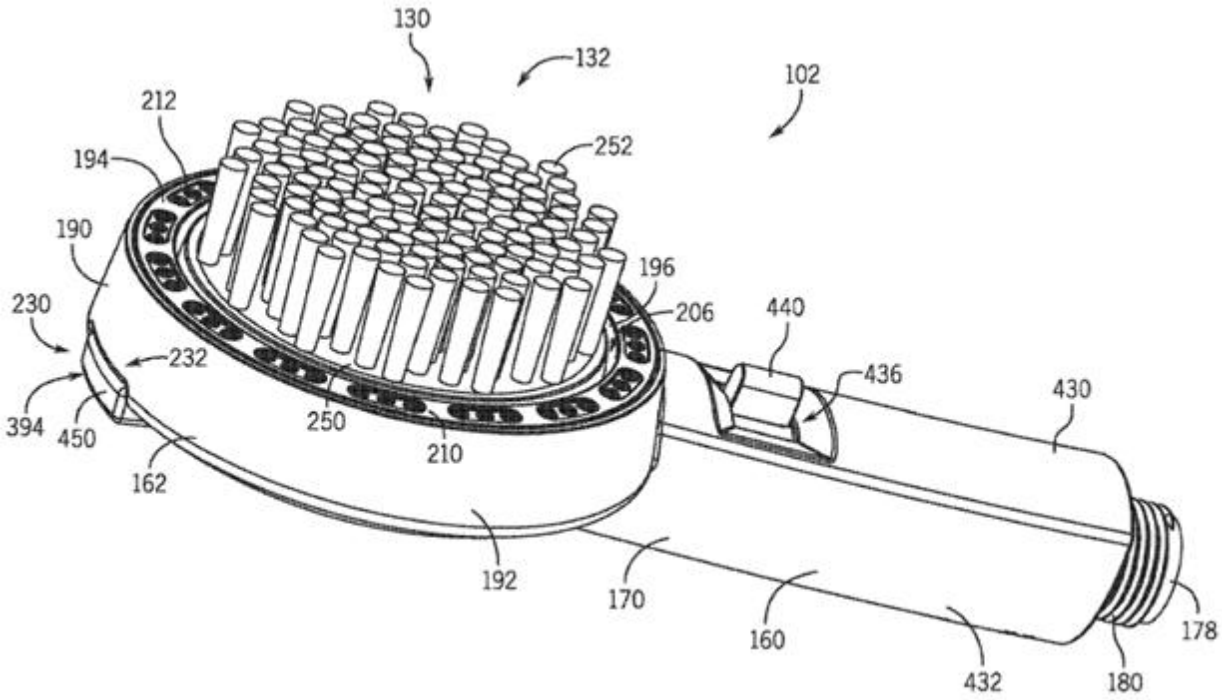
Figure 2 illustrates a shower head provided with a push-button (3) whose actuation rotates a ratchet wheel (7).

B05B1/1887

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



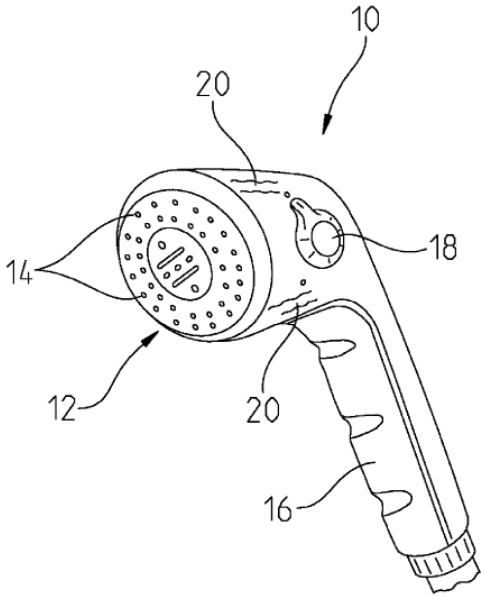
The Figure illustrates a shower head (102) provided with a pivoting lever (440).

B05B1/189

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



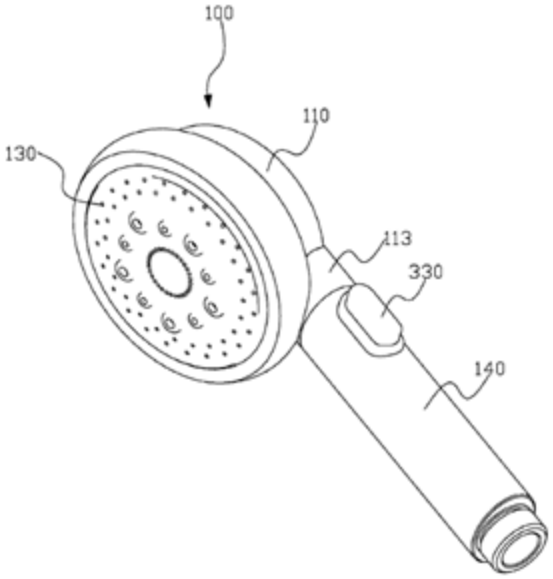
The Figure illustrates a shower head (10) provided with a rotating controlling element (18).

B05B1/1892

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a shower head (100) provided with a controlling member (330) located on a handle (140).

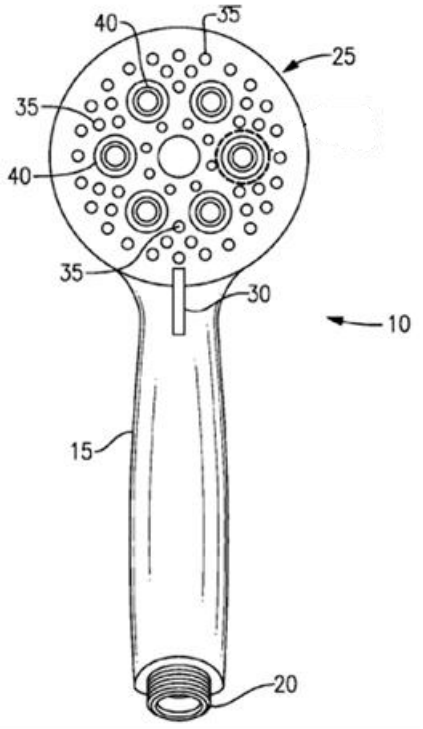
B05B1/1894

Definition statement

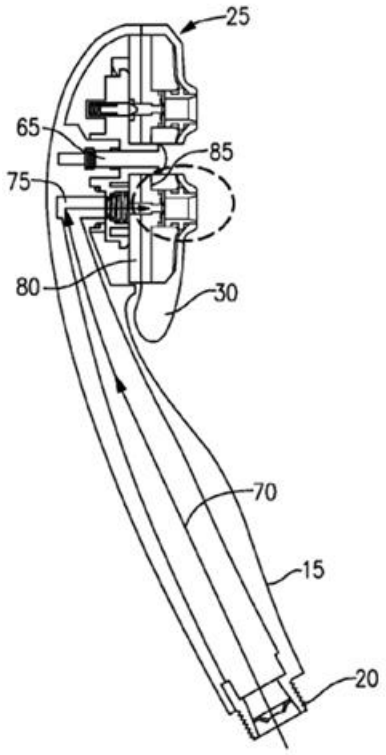
This place covers:

Illustrative example of subject matter classified in this place:

1a.



1b.



Figures 1a and 1b illustrate a shower head (10) provided with a controlling element (30) located on the outlet wall (25).

B05B1/1896

Definition statement

This place covers:

Illustrative examples of subject matter classified in this place:

1.

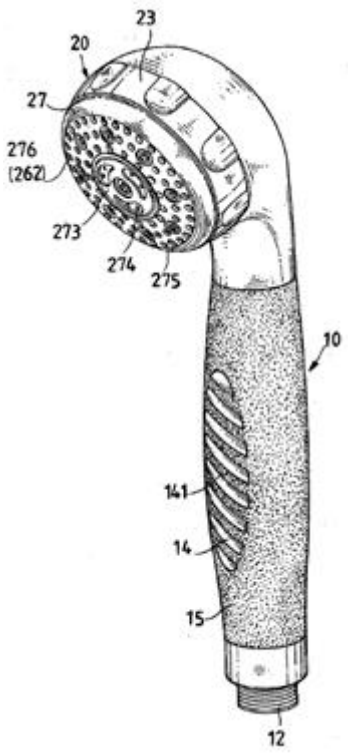


Figure 1 illustrates a shower head (10) provided with a ring controlling element (20) being part of the shower head housing.

2.

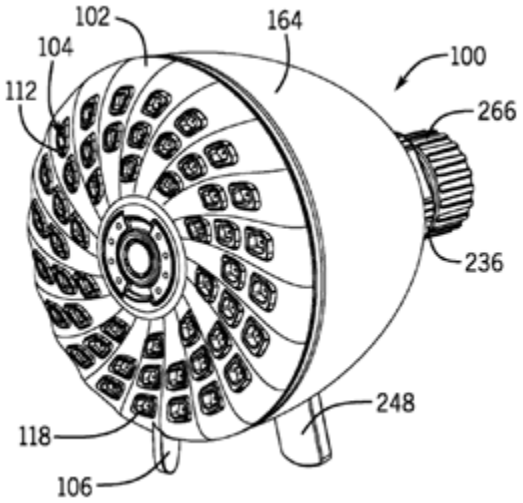


Figure 2 illustrates a shower head (100) provided with a lever controlling element (248) being located on the shower head housing (164).

B05B1/20

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

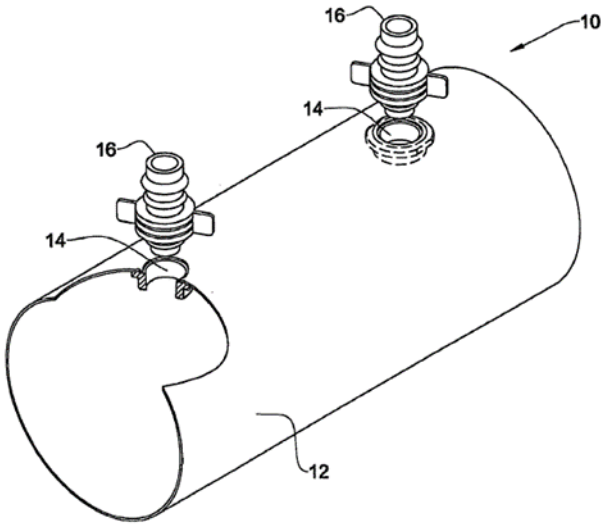
Spray booms for agricultural uses	A01M7/0071
Spray bars for treating roads	E01C19/176

B05B1/202

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates outlets (14) comprising inserted elements (16) along an elongated tubular body (12).

B05B1/207

Definition statement

This place covers:

Illustrative examples of subject matter classified in this place:

1.

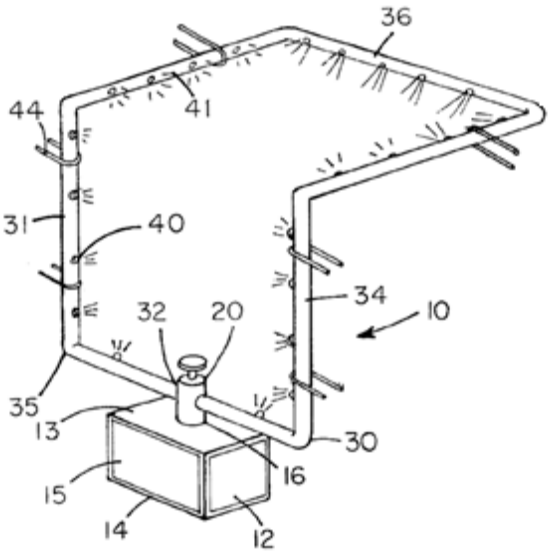


Figure 1 illustrates a first arrangement (10) of several nozzles (40) along a closed loop (31).

2.

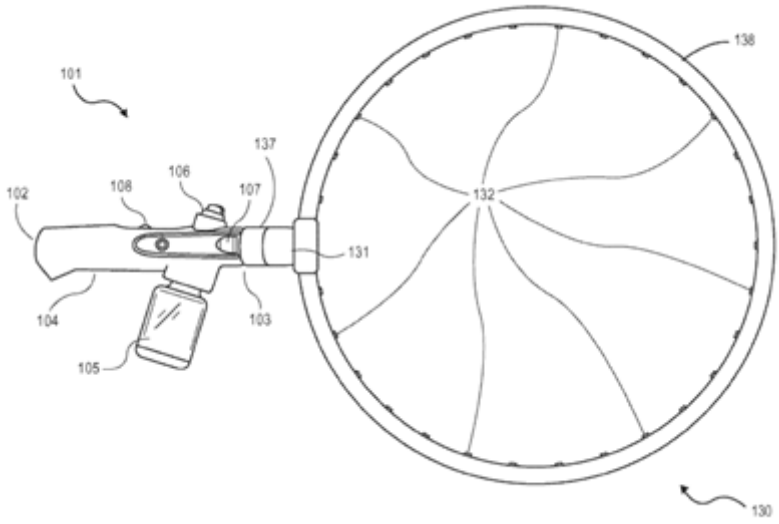


Figure 2 illustrates a second arrangement (130) of several openings (132) along a closed loop (138).

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Shower rings	A47K3/287

B05B1/22

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:

1a.

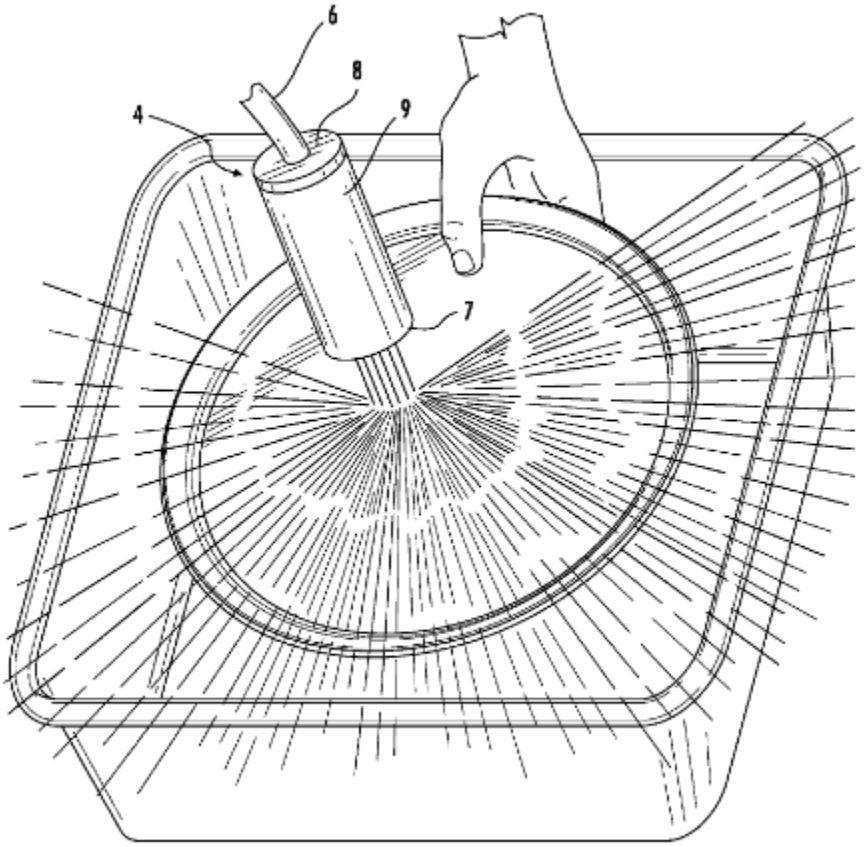
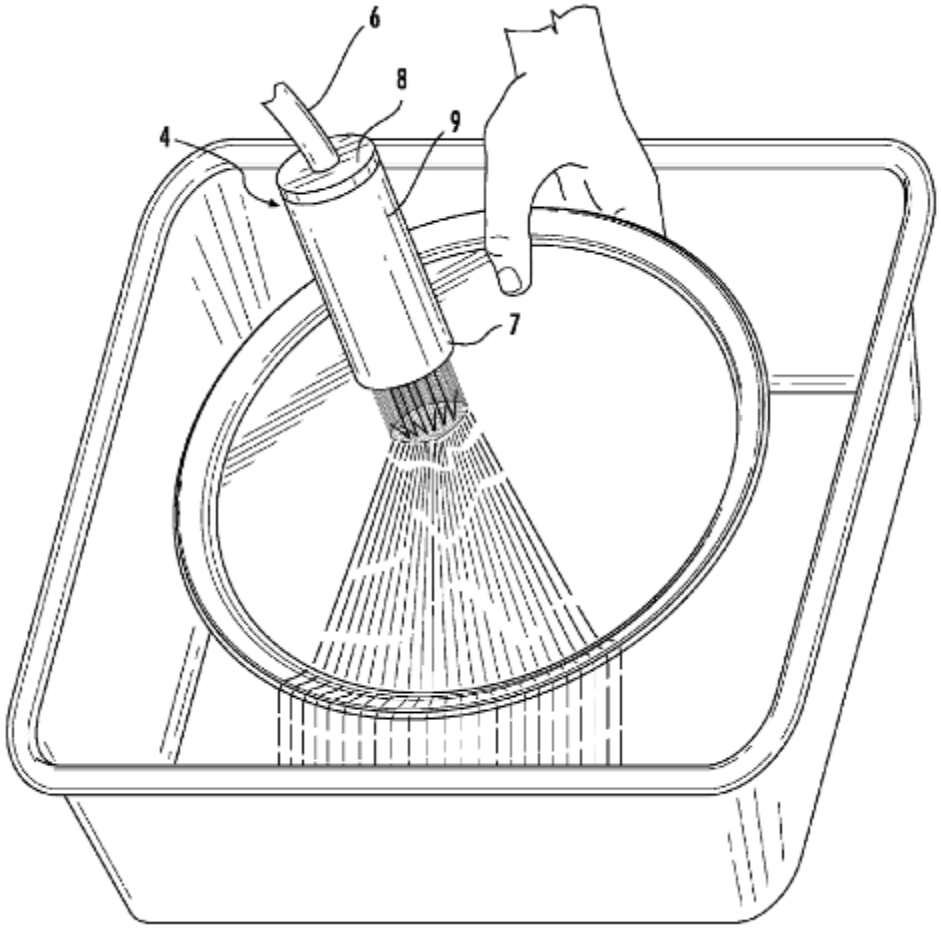
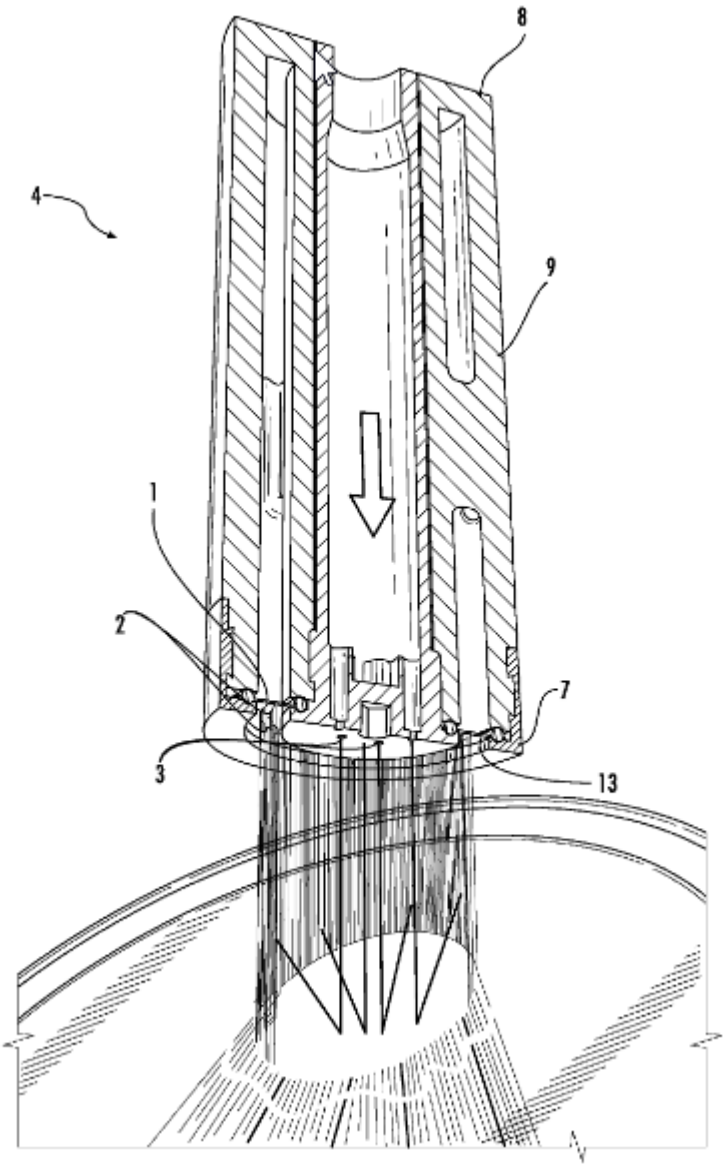


Figure 1a illustrates splashing from a stream of water discharged by a nozzle (7) from a spout (9).

1b.



1c.



Figures 1b and 1c illustrate how an outer stream of water discharged by nozzles (2) prevents unwanted splashing from an inner stream of water discharged by nozzles (3) in a spout (4).

References

Limiting references

This place does not cover:

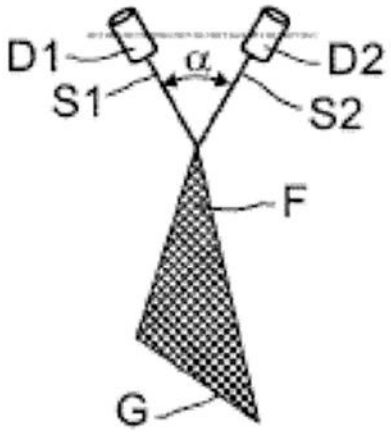
Anti-splash devices for water-taps	E03C1/08

B05B1/26

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates two impinging jets (S1) and (S2).

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Valves acting as deflectors	B05B1/3073
Flow controlling element comprising both a lift valve and a deflector	B05B1/308

B05B1/262

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

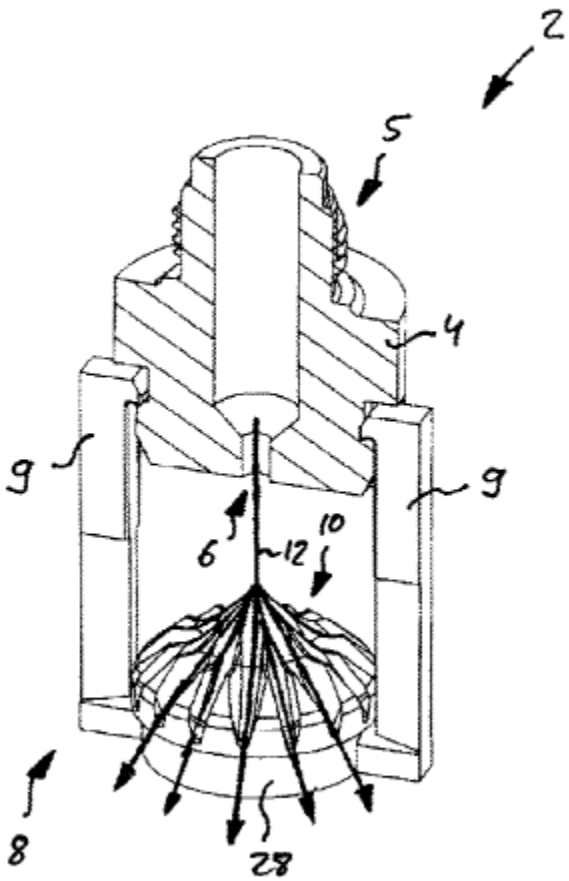
Spraying with rotating elements in association with stationary outlet or deflecting elements	B05B3/08

B05B1/265

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a fluid (12) being discharged from nozzle (6) and symmetrically deflected over a deflector (10).

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Rotary deflector rotated by the liquid discharged	B05B3/0426

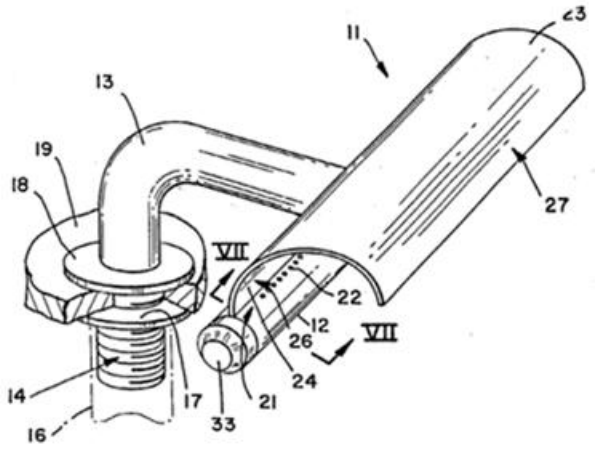
B05B1/267

Definition statement

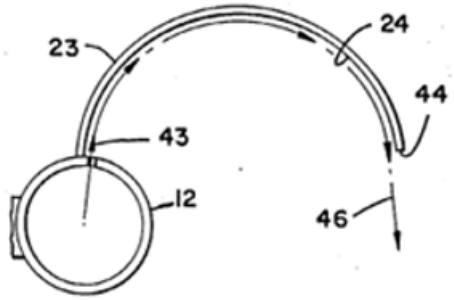
This place covers:

Illustrative example of subject matter classified in this place:

1a.



1b.



Figures 1a and 1b illustrate a deflector element (11) allowing for deflection in a determined direction (46).

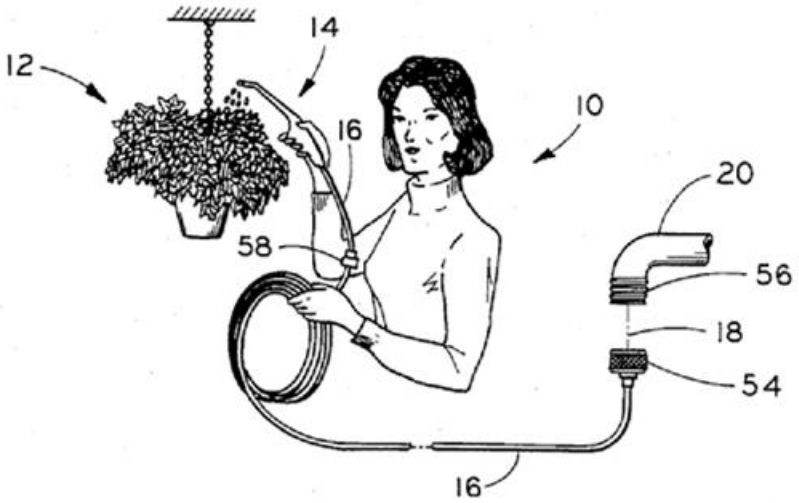
B05B1/30

Definition statement

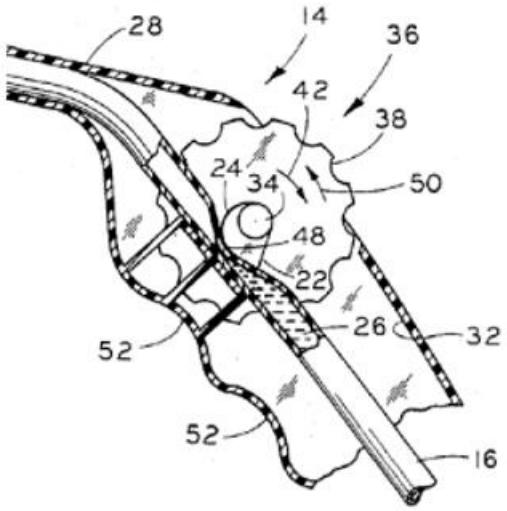
This place covers:

Illustrative example of subject matter classified in this place:

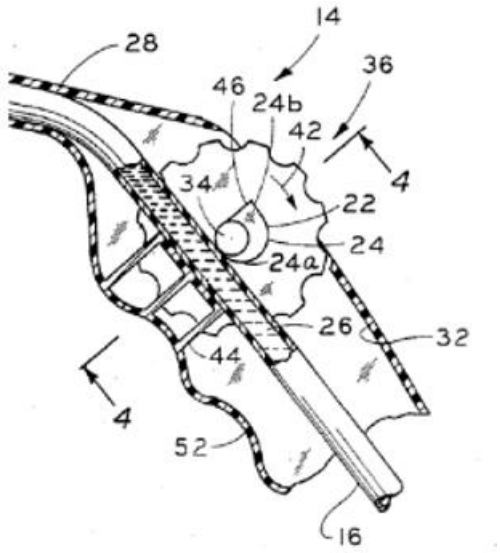
1a.



1b.



1c.



Figures 1a, 1b and 1c illustrate fluid control by pinching of supply tube (16) for watering a plant (12).

References

Limiting references

This place does not cover:

Single-unit, hand-held apparatus comprising a container and a discharge nozzle attached thereto, in which flow of liquid or other fluent material is produced by the muscular energy of the operator at the moment of use or by an equivalent manipulator independent from the apparatus components or details including movable dispensing tubes, e.g. articulated on the sprayer	B05B11/0094

Informative references

Attention is drawn to the following places, which may be of interest for search:

Control of flow in apparatuses discharging fluid from an orifice in contact with the surface of a work to be coated	B05C5/0225
Control of flow in installations for distributing water	E03B7/075
Valves; Taps; Cocks; Actuating-floats; Devices for venting or aerating	F16K
Control of flow in general	G05D7/00

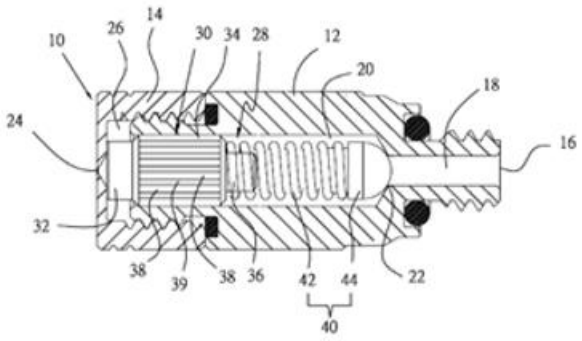
B05B1/3006

Definition statement

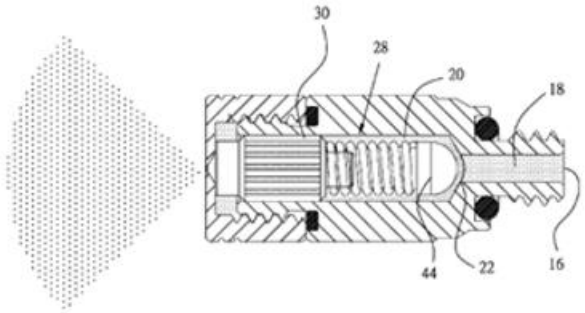
This place covers:

Illustrative example of subject matter classified in this place:

1a.



1b.



Figures 1a and 1b illustrate a nozzle (10) with an internal valve in the first image that is actuated to open when fluid is applied to the sprayer, as shown in the second image.

References

Limiting references

This place does not cover:

Nozzles, spray heads or other outlets designed to control volume of flow, in which a valve member forms part of the outlet opening and in which the valve member is actuated by the pressure of the fluid to be sprayed	B05B1/323
Single-unit, hand-held apparatus comprising a container and a discharge nozzle attached thereto, in which flow of liquid or other fluent material is produced by the muscular energy of the operator at the moment of use or by an equivalent manipulator independent from the apparatus, components or details including outlet valves actuated by the pressure of the fluid to be sprayed	B05B11/0062

Informative references

Attention is drawn to the following places, which may be of interest for search:

Flow or pressure regulators	B05B12/087
Diaphragms actuated by fluid pressure in valves in general	F16K7/17
Deformable sensing element acting as a valve for controlling flow in general	G05D7/012

B05B1/3013

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:

1a.

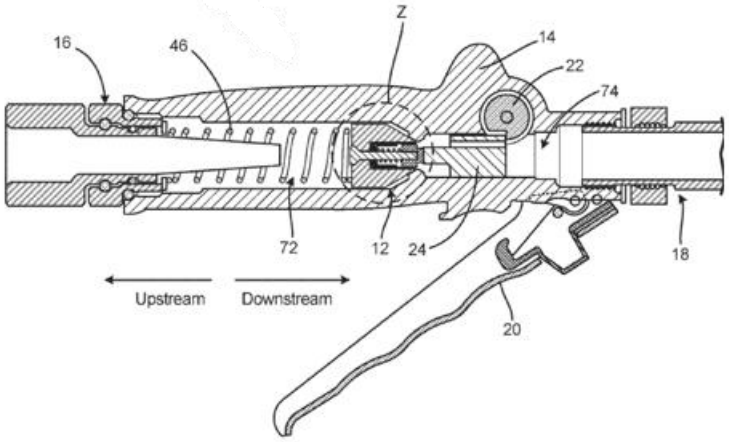


Figure 1a illustrates a lift valve (12) indicating upstream flow to the left and downstream flow to the right.

1b.

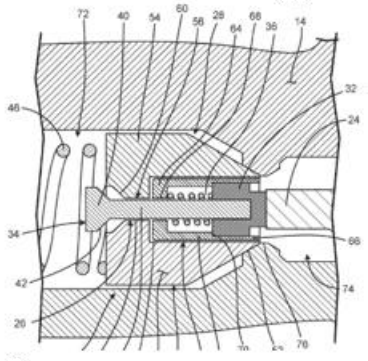


Figure 1b illustrates the valve (12) closed as achieved by the lever (20) in Figure 1a.

1c.

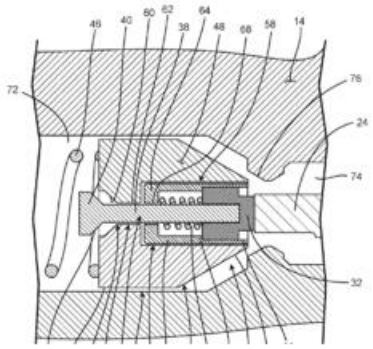


Figure 1c illustrates the valve (12) open in position, as achieved by the lever (20) in Figure 1a.

References

Limiting references

This place does not cover:

Nozzles, spray heads or other outlets designed to control volume of flow, the control being effected by relative coaxial longitudinal movement of the controlling element and the spray head	B05B1/3033

Informative references

Attention is drawn to the following places, which may be of interest for search:

Nozzles, spray heads or other outlets designed to control volume of flow, the controlling element being actuated by the pressure of the fluid to be sprayed	B05B1/3006
Lift valves in general	F16K1/00

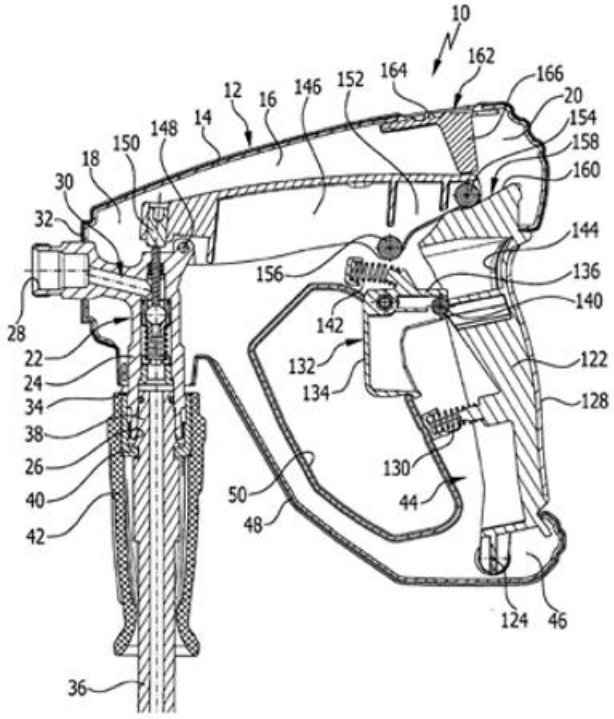
B05B1/302

Definition statement

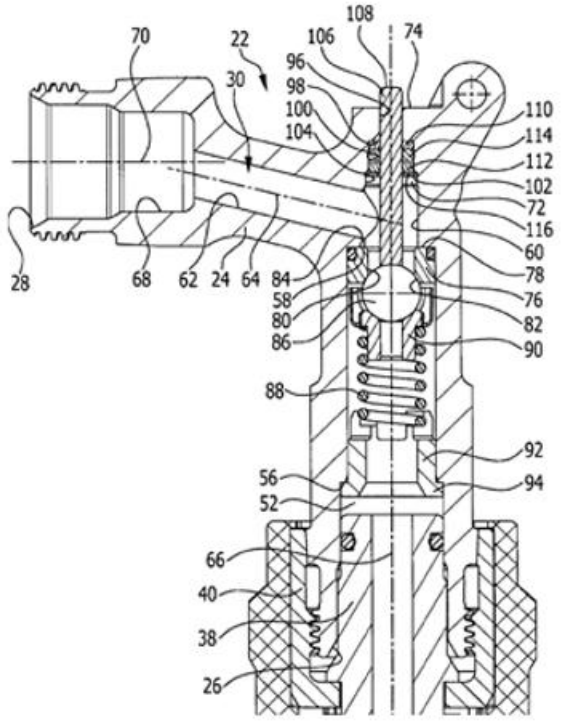
This place covers:

Illustrative example of subject matter classified in this place:

1a.



1b.



Figures 1a and 1b illustrate a lift valve (22), which includes a ball shaped valve member (86) depicted in Figure 1b.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Ball-shaped valve members in general	B05B1/3006

B05B1/3026

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:

1a.

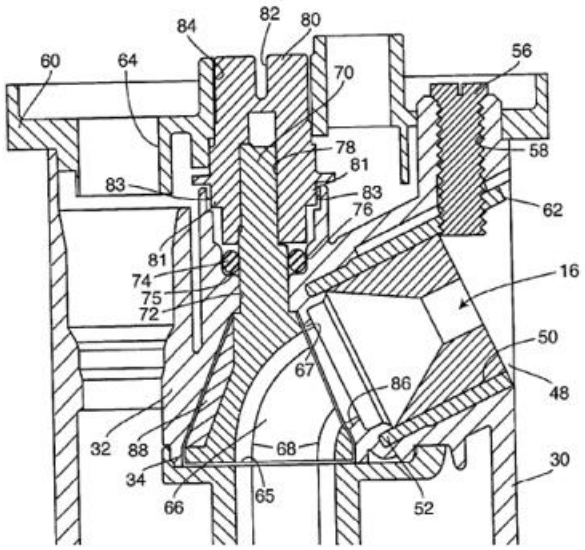


Figure 1a illustrates a cock in an open position (80), which acts as the controlling element to control the flow of fluid upward to an outlet (16).

1b.

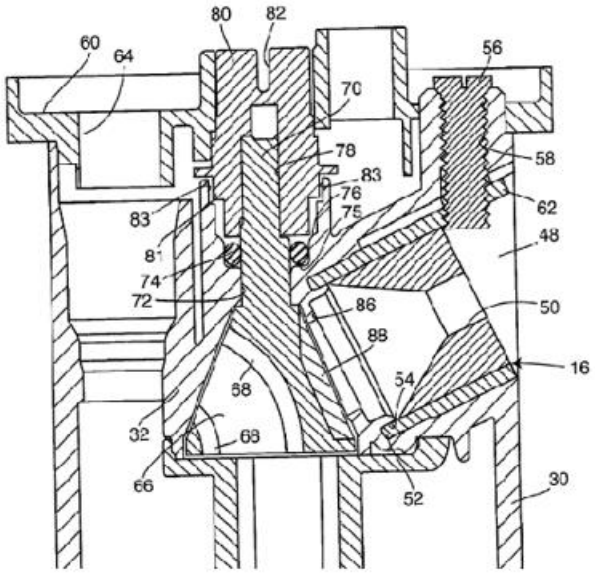


Figure 1b illustrates the cock (80) in a closed position.

References

Limiting references

This place does not cover:

Nozzles, spray heads or other outlets designed to control volume of flow, in which a valve member forms part of the outlet opening and in which the valve is a gate valve, a sliding valve or a cock	B05B1/326

Informative references

Attention is drawn to the following places, which may be of interest for search:

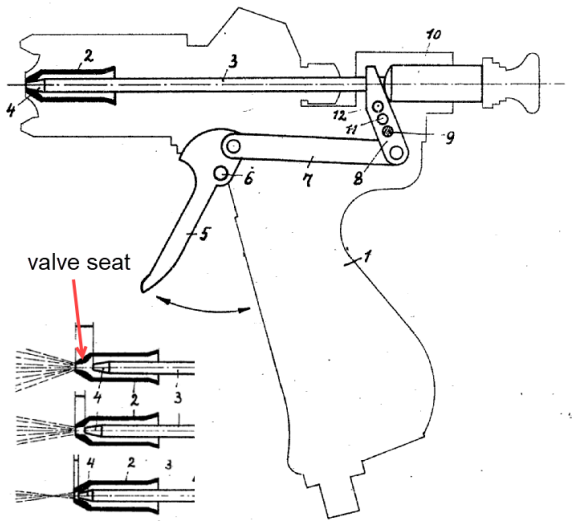
Nozzles, spray heads or other outlets designed to control volume of flow, the controlling element being actuated by the pressure of the fluid to be sprayed	B05B1/3006
Gate or sliding valves in general	F16K3/00
Cocks in general	F16K5/00

B05B1/3046

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a spray gun with a “valve seat” located downstream of a movable valve element (4).

References

Limiting references

This place does not cover:

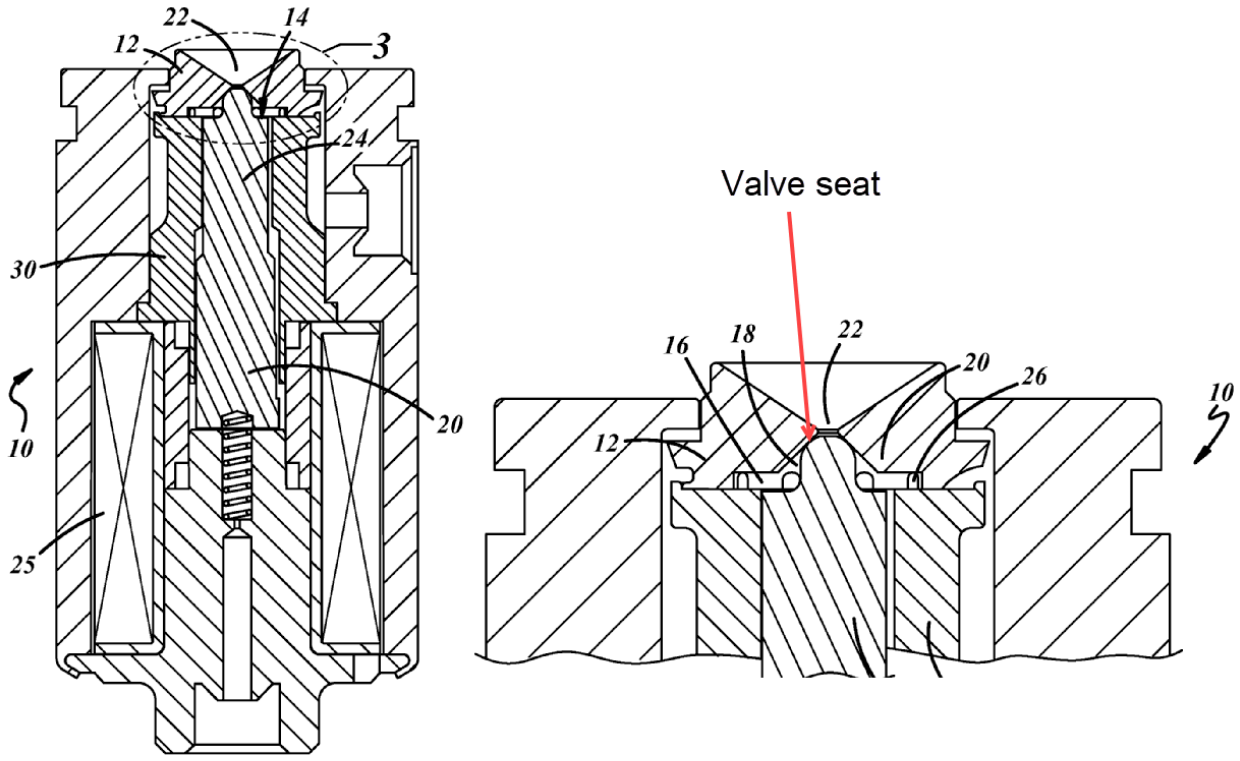
Nozzles, spray heads or other outlets designed to control volume of flow, in which the control is effected by relative coaxial longitudinal movement of the controlling element and the spray head, and in which the controlling element comprises both a lift valve and a deflector	B05B1/308

B05B1/3053

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



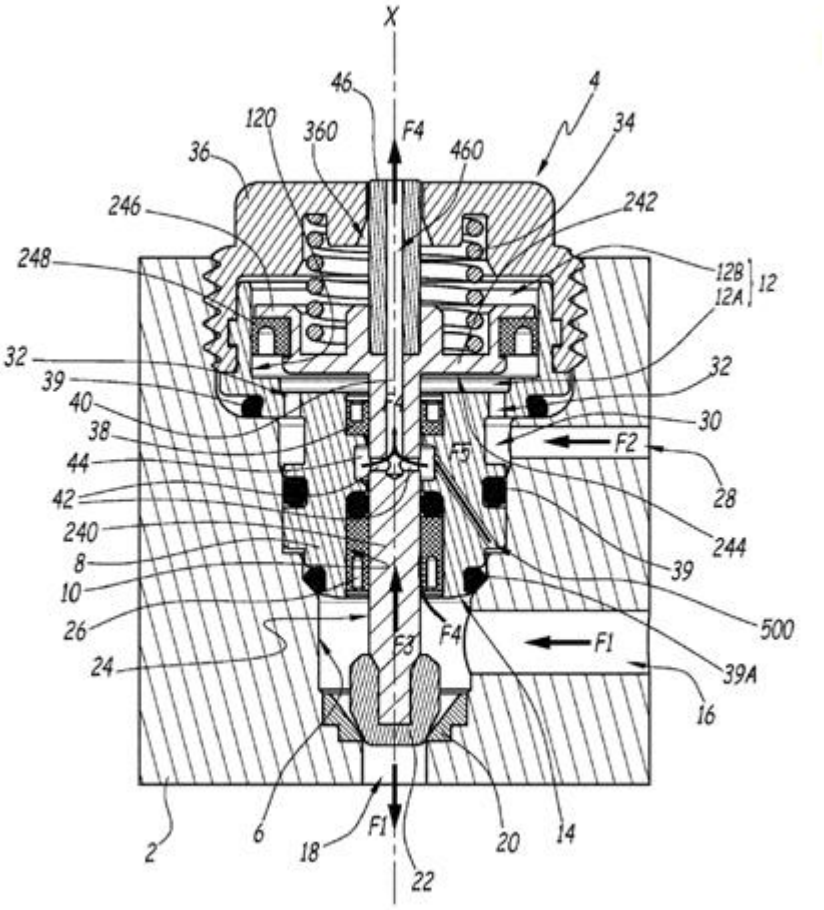
The Figure illustrates a solenoid (25) that controls the movement of a lift valve element (20) for controlling the volume of flow through the outlet towards (22), wherein the valve seat is located downstream of a movable lift valve element (20).

B05B1/306

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



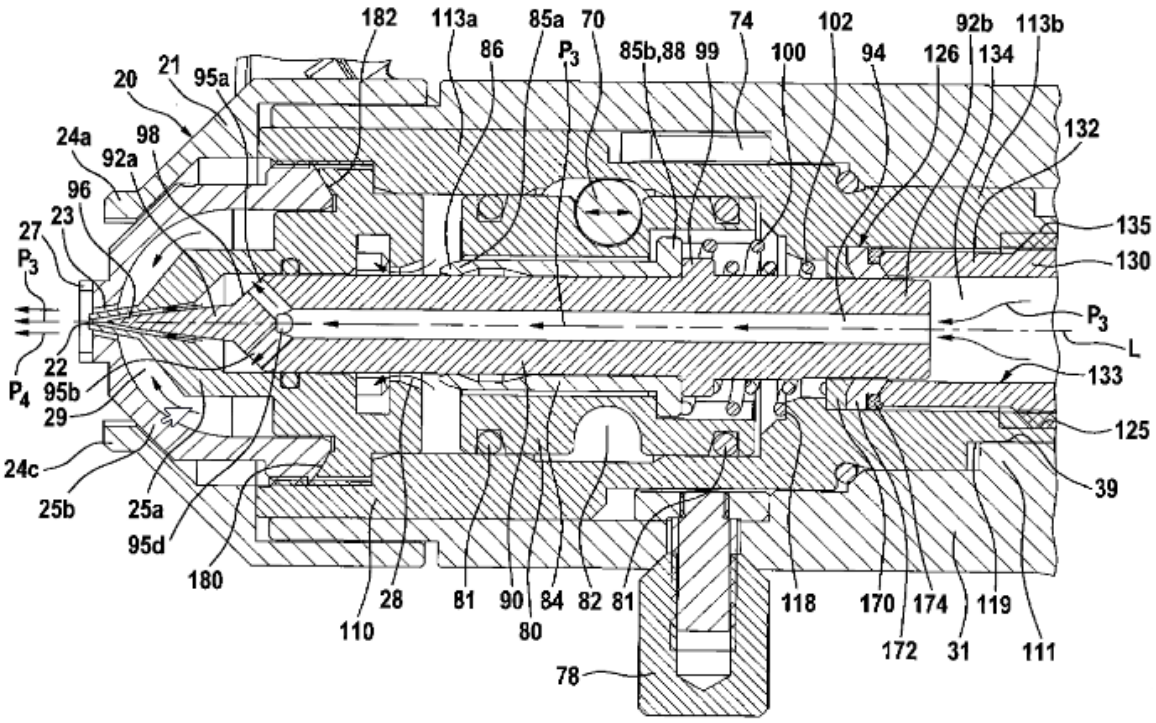
The Figure illustrates an intake duct (28) for a pressurized control fluid flow (F2), e.g. compressed air, which controls the movement of lift valve element (240) for controlling the volume of flow (F1) through outlet (18), wherein a valve seat (20) is located downstream of a movable valve element (240).

B05B1/3066

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



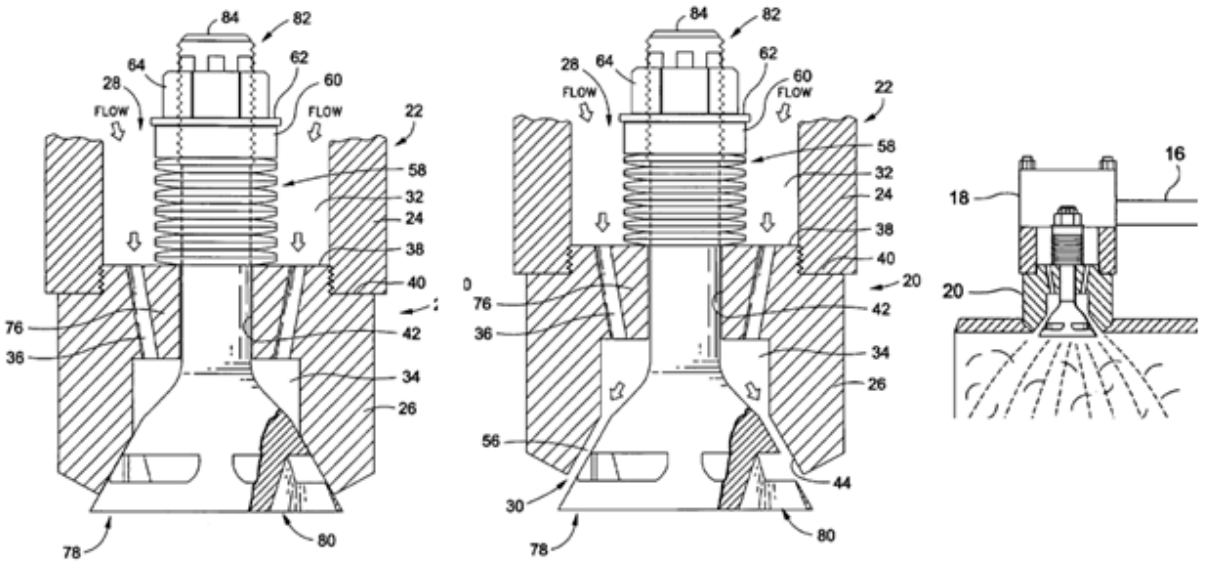
The Figure illustrates a spray device with a valve seat (22) located downstream of movable valve element (90), wherein needle (90) comprises an internal channel (94).

B05B1/3073

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a deflector on a valve body (80), which acts as both a valve and a deflector.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

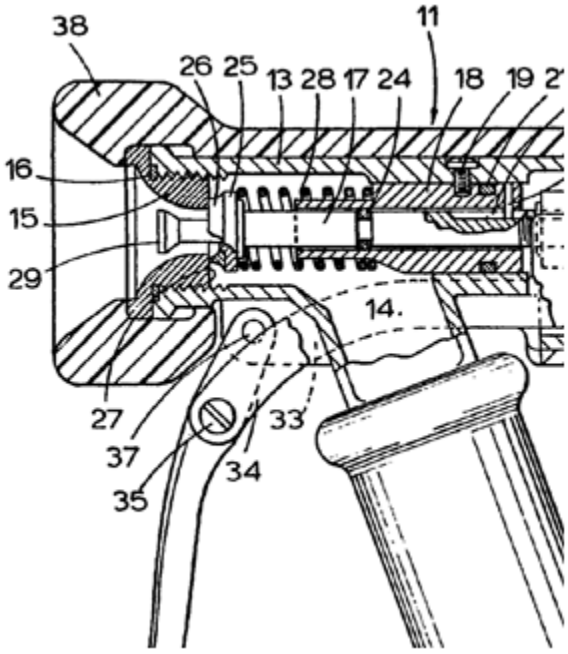
Nozzles, spray heads or other outlets designed to control volume of flow with fixed deflectors	B05B1/262
Nozzles, spray heads or other outlets designed to control volume of flow, in which the control is effected by relative coaxial longitudinal movement of the controlling element and the spray head, and in which the controlling element comprises both a lift valve and a deflector	B05B1/308

B05B1/308

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a movable controlling element (18) comprising a lift valve (26) and a deflector (29) separated from the lift valve (26), wherein the deflector (29) itself does not act as a valve.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Controlling elements comprising a deflector acting as a valve in co-operation with the outlet orifice	B05B1/3073

B05B1/3086

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:

1a.

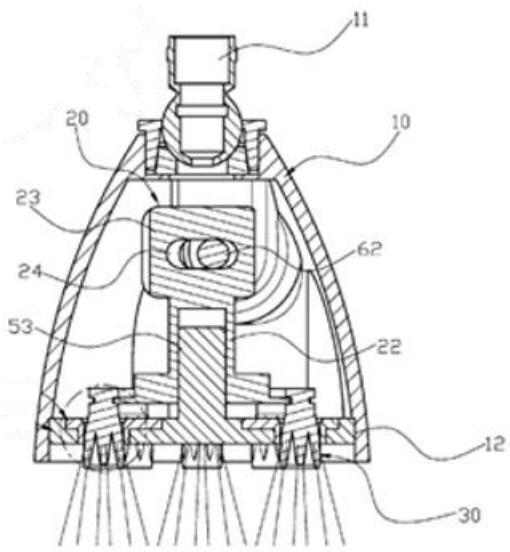


Figure 1a illustrates three or more valve bodies (30).

1b.

Figure 1b illustrates a valve body (30) which is provided with grooves (33).

1c.

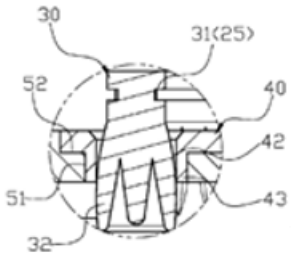


Figure 1c illustrates the movement of each valve body (30) within a corresponding outlet orifice (42) that controls the amount of water flowing out of the outlet orifice (42).

B05B1/32

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:

1a.

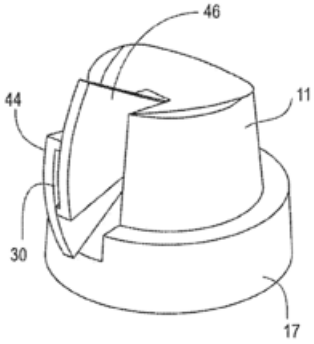


Figure 1a illustrates that the movement of one or both vanes (44, 46) reduce the slotted outlet dimension of outlet opening (30).

1b.

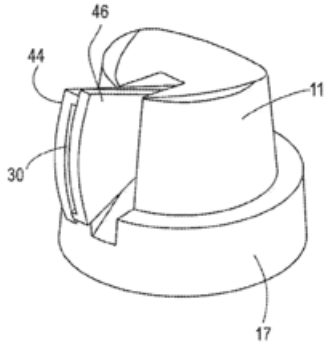


Figure 1b illustrates that the movement of one or both vanes (44, 46) enlarge the slotted outlet dimension of outlet opening (30).

References

Limiting references

This place does not cover:

Nozzles, spray heads or other outlets designed to control volume of flow, the control being effected by relative coaxial longitudinal movement of the controlling element and the spray head	B05B1/3033

B05B1/323

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:

1a.

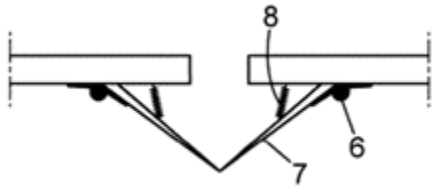


Figure 1a illustrates the closed position of an outlet opening (7) lacking fluid pressure.

1b.

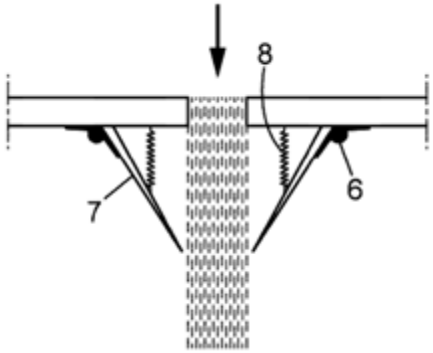


Figure 1b illustrates an outlet opening (7) actuated by the pressure of the fluid to be sprayed through the opening (7) with the fluid flowing downward though the opening (7), as indicated by the arrow.

References

Limiting references

This place does not cover:

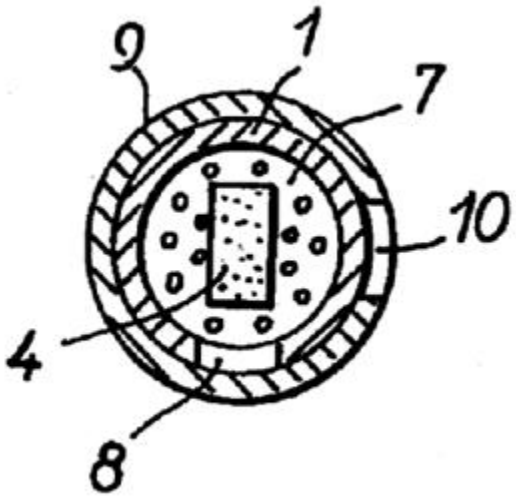
Single-unit outlet valves actuated by the pressure of the fluid to be sprayed	B05B11/0062

B05B1/326

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a rotatable outer sleeve (9) closing hole (8), in which the outer sleeve (9) has a first hole (10) that can be located in alignment with a second hole (8) in an inner member (1) by turning the rotatable outer sleeve (9) suitably.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Gate or sliding valves in general	F16K3/00
Cocks in general	F16K5/00

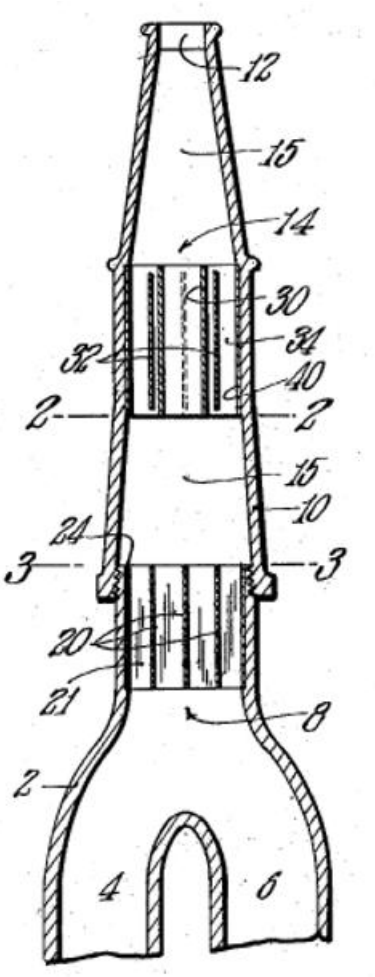
B05B1/3402

Definition statement

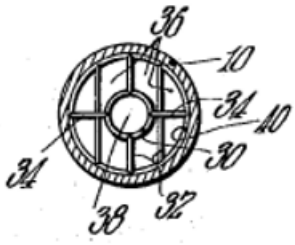
This place covers:

Illustrative example of subject matter classified in this place:

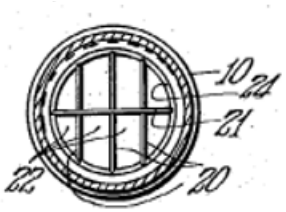
1a.



1b.



1c.



Figures 1a, 1b and 1c illustrate fins (20, 30) acting as flow straightening means to reduce turbulence.

B05B1/3405

References

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

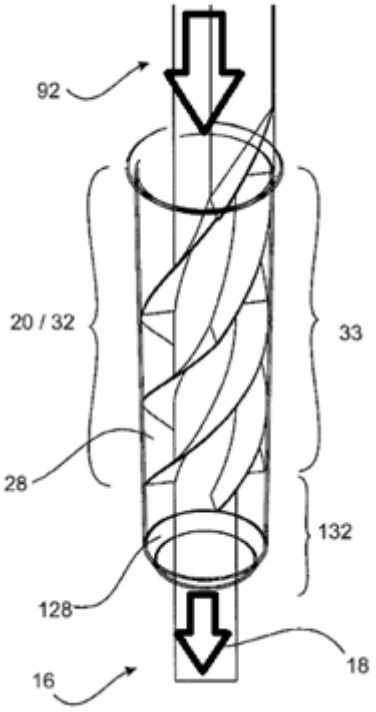
Fuel-injectors provided with means to impart a whirling motion to fuel for combustion engines	F02M61/162
Burners using a direct spraying action obtained by centrifugal action	F23D11/04
Burner nozzles provided with swirl means	F23D11/383

B05B1/3415

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates an insert inside of a tube (28) that imparts swirl upstream of a swirl chamber.

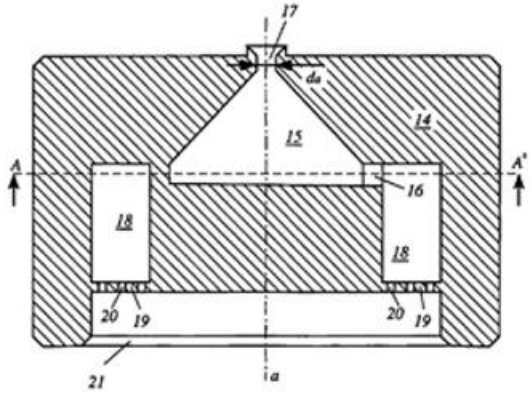
B05B1/3426

Definition statement

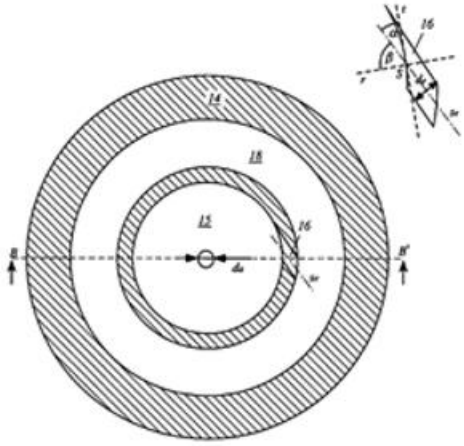
This place covers:

Illustrative example of subject matter classified in this place:

1a.



1b.



Figures 1a and 1b illustrate channels (16) emerging in a swirl chamber (15) perpendicularly to an axis “a” in Figure 1b.

References

Limiting references

This place does not cover:

Channels that are formed at the interface of cooperating elements and the interface is a plane perpendicular to the outlet axis	B05B1/3436

B05B1/3436

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:

1a.

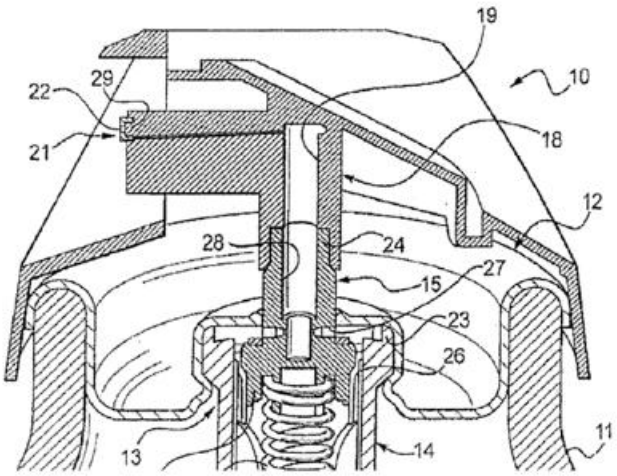


Figure 1a illustrates channels formed at the planar interface between end wall (29) and insert (21).

1b.

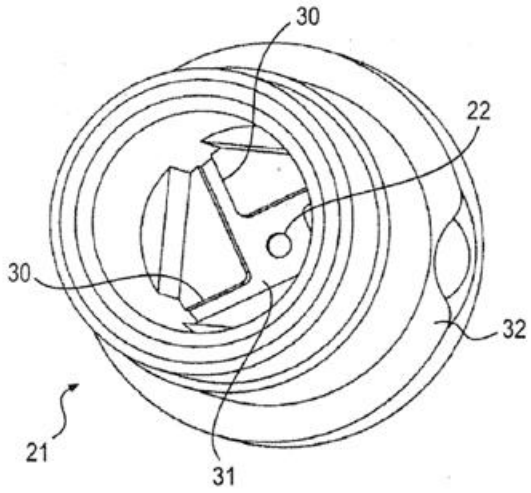


Figure 1b illustrates channels (30) formed at the planar interface between end wall and insert (21).

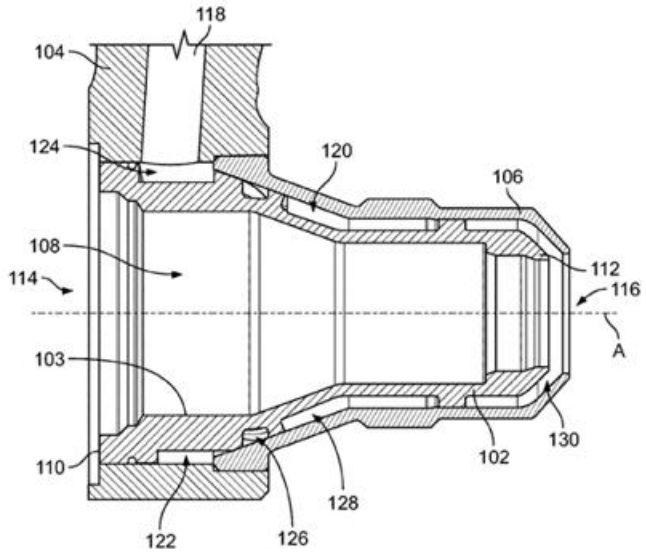
B05B1/3442

Definition statement

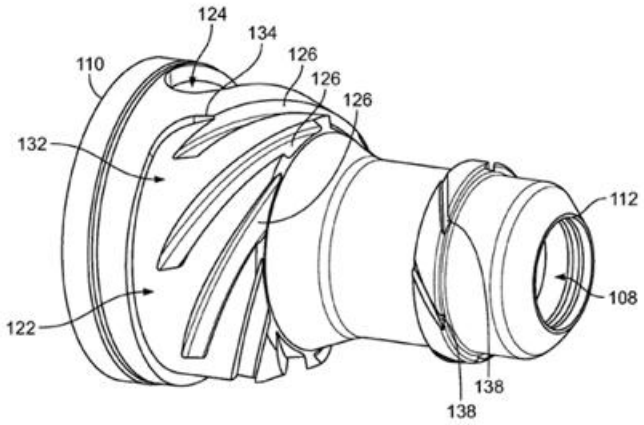
This place covers:

Illustrative example of subject matter classified in this place:

1a.



1b.



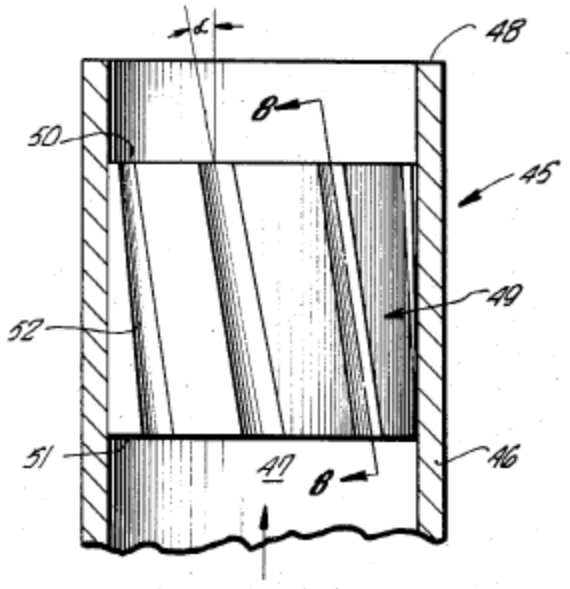
Figures 1a and 1b illustrate channels (126) formed at the conical interface between outer member (106) and inner member (102).

B05B1/3447

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates channels (52) formed at the cylinder interface between housing (46) and plug (49) that shares the same axis as the outlet (end of 48).

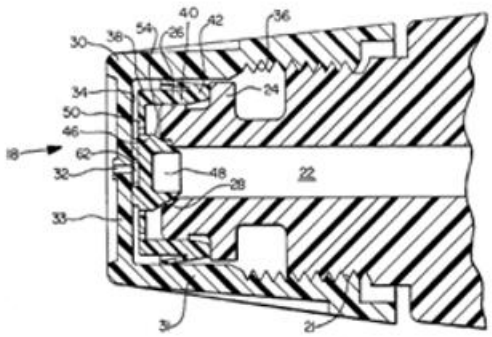
B05B1/3457

Definition statement

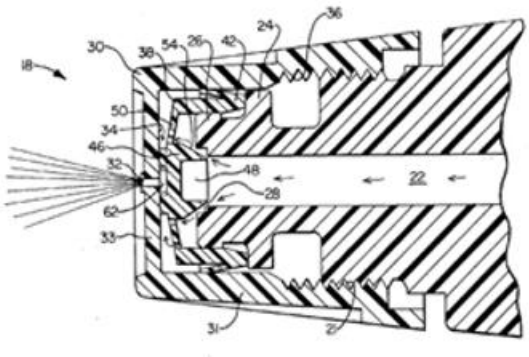
This place covers:

Illustrative example of subject matter classified in this place:

1a.



1b.



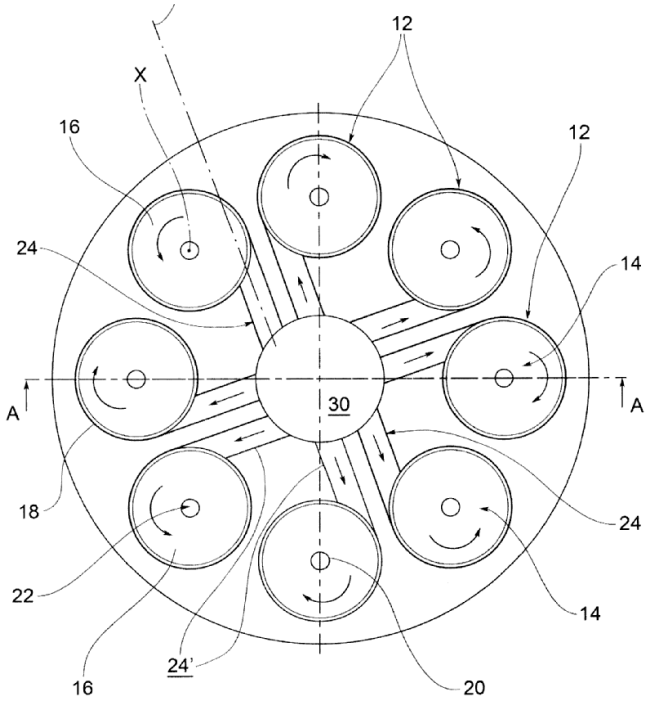
Figures 1a and 1b illustrate a cooperative element (having grooves 50) being movable in response to fluid pressure.

B05B1/3463

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



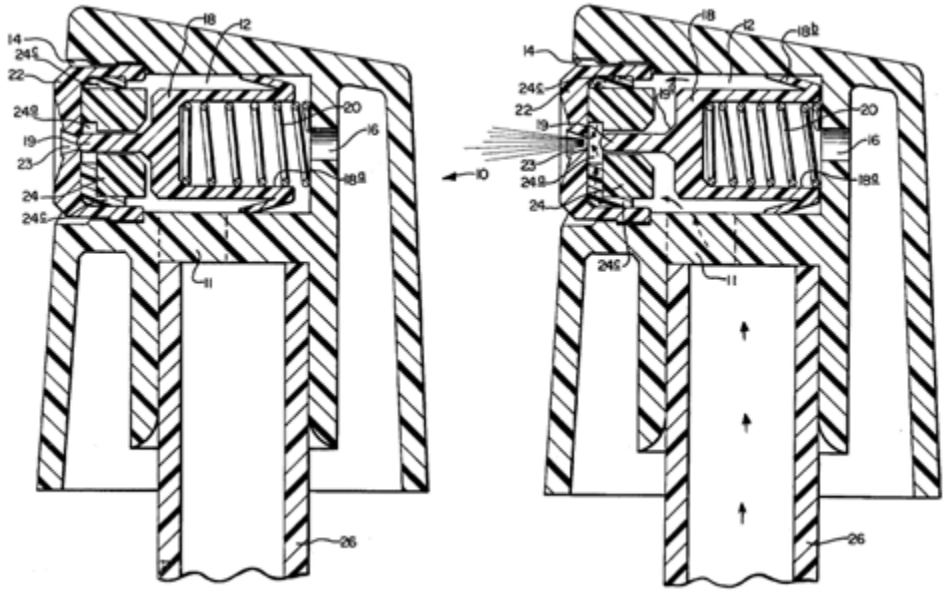
The Figure illustrates channels (24) extending from inside (30) to the outside of a swirl plate for imparting a swirling motion within swirl chambers (14).

B05B1/3473

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



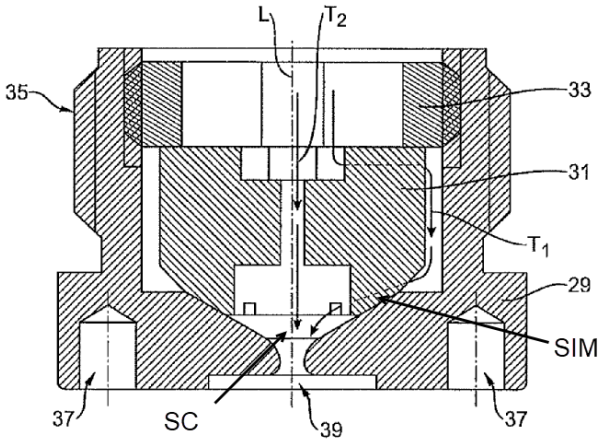
The Figure illustrates a controlling means (valve 19), which controls a fluid that is entering or leaving a swirl chamber (24a) in response to the fluid (via fluid moving valve 19).

B05B1/3478

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



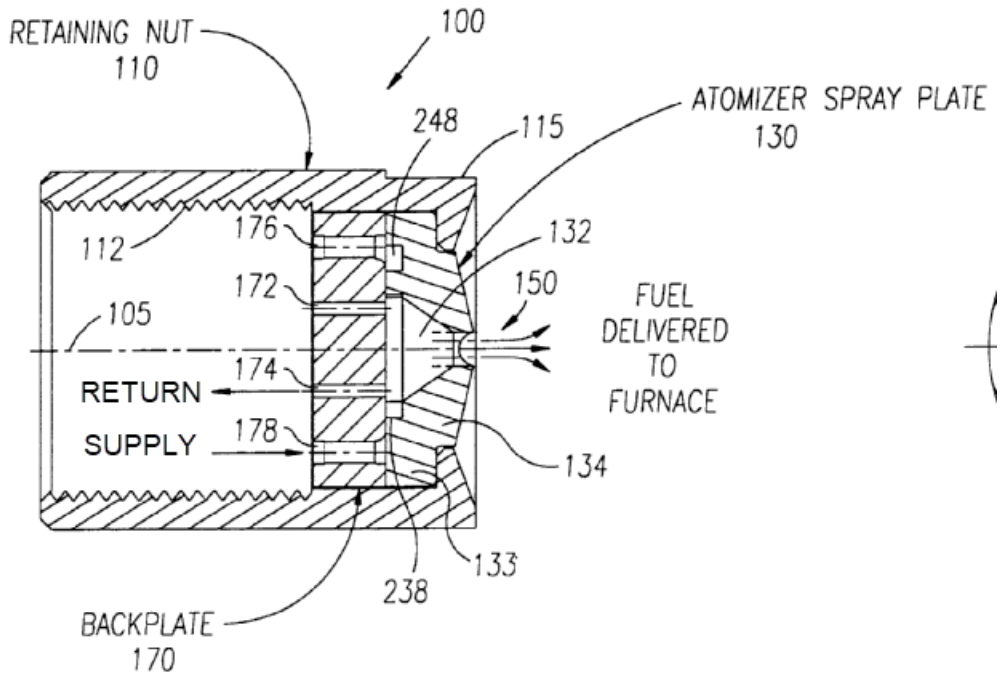
The Figure illustrates a first path (T1) and a second path (T2) reaching swirl chamber (SC).

B05B1/3484

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



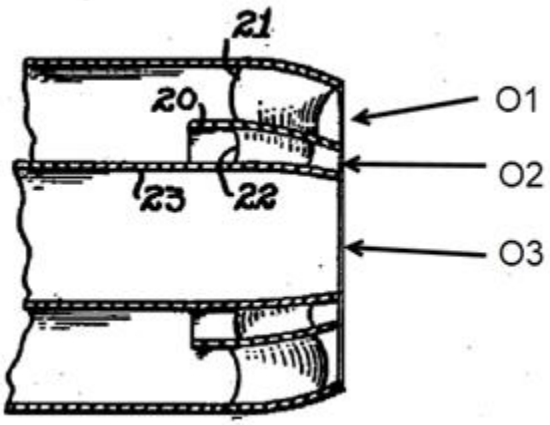
The Figure illustrates channels (172, 174) that bypass the swirl imparting means (248, 238) from a swirl chamber (132) back to a supply flow (178) toward the right side and the return flow (174). Further aspects include: fuel delivered to furnace toward the right side beyond the fuel outlet (150), atomizer spray plate (130), retaining nut (110) and backplate (170).

B05B1/3489

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



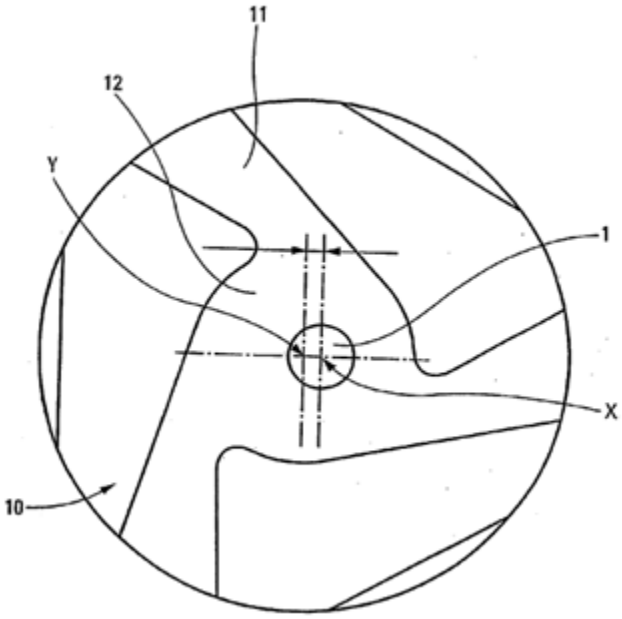
The Figure illustrates a spray nozzle having three concentric outlets (O1, O2, O3) dispensing a swirling discharge from vanes (21, 22).

B05B1/3494

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates an outlet (1) on a different axis than that of a swirl chamber (12).

B05B1/36

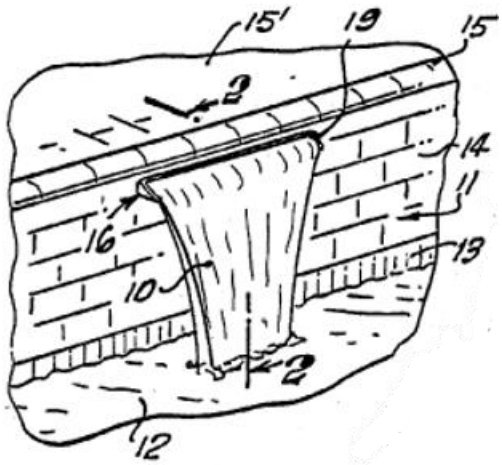
Definition statement

This place covers:

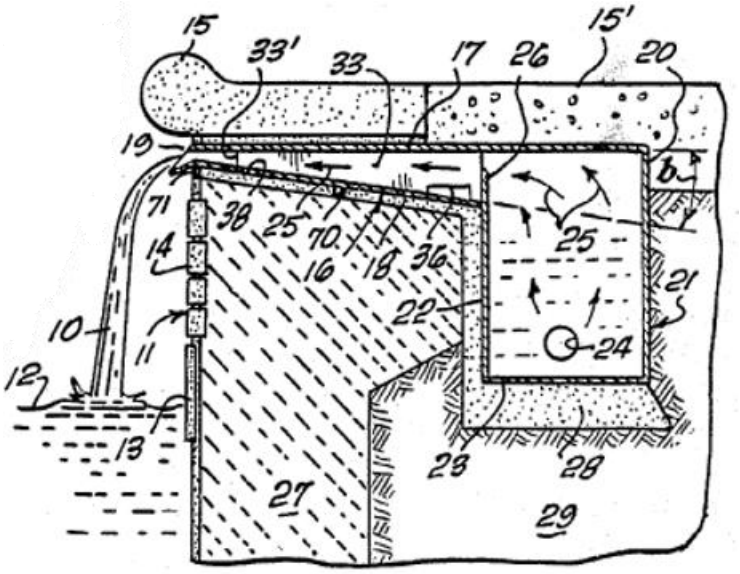
Nozzles, spray heads or other outlets for discharging by overflow. For example, an outlet having a trough, open tank or holder type fluid handling means, which depends for its distributing function upon accumulated fluid running over a top or an edge of a retaining wall or through a depression or notch in a wall.

Illustrative example of subject matter classified in this place:

1a.



1b.



Figures 1a and 1b illustrate an outlet (19) discharging by overflow of water (from 21).

B05B3/00

Relationships with other classification places

Spray heads classified in this place are provided with moving elements, whereas spray heads classified in group B05B13/04 move in their entirety, relative to an object to be sprayed.

Illustrative examples of subject matter classified in this place compared to subject matter classified in group B05B13/04:

1.

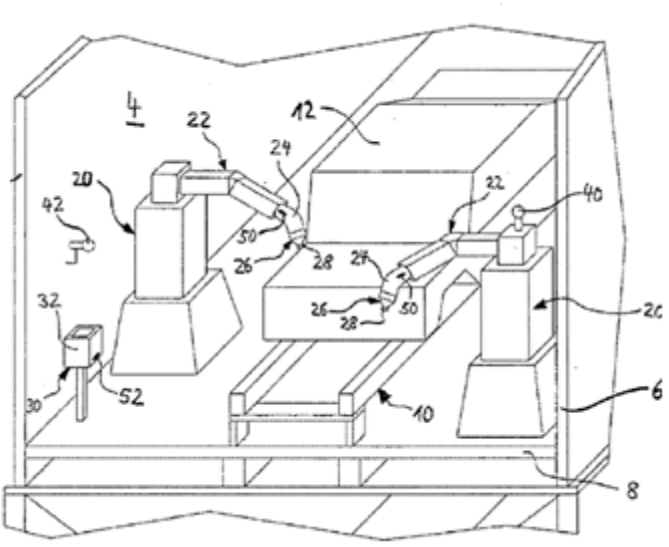


Figure 1 illustrates a moving spray head (24) provided with a rotary bell cup (28) that is classified in group B05B3/1014 by itself. Spray head (24) is further moved by a supporting robot (20) having an articulated arm to paint work (12) that is classified in group B05B13/0431.

2.

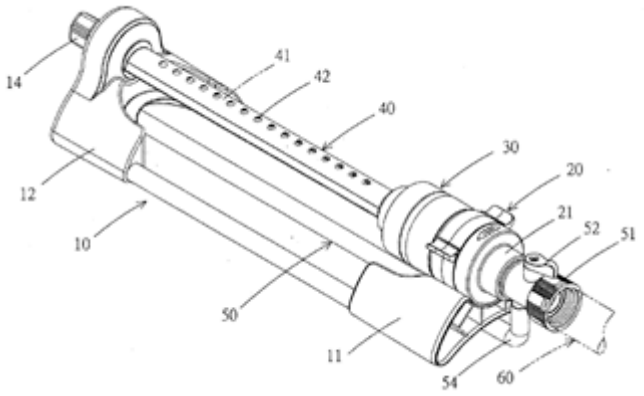


Figure 2 illustrates a sprinkler having an oscillating arm (40) that is classified in group B05B3/0438. Since the sprinkler lies in its entirety on the ground and does not move during operation, this sprinkler shall not be classified in group B05B13/04.

References

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

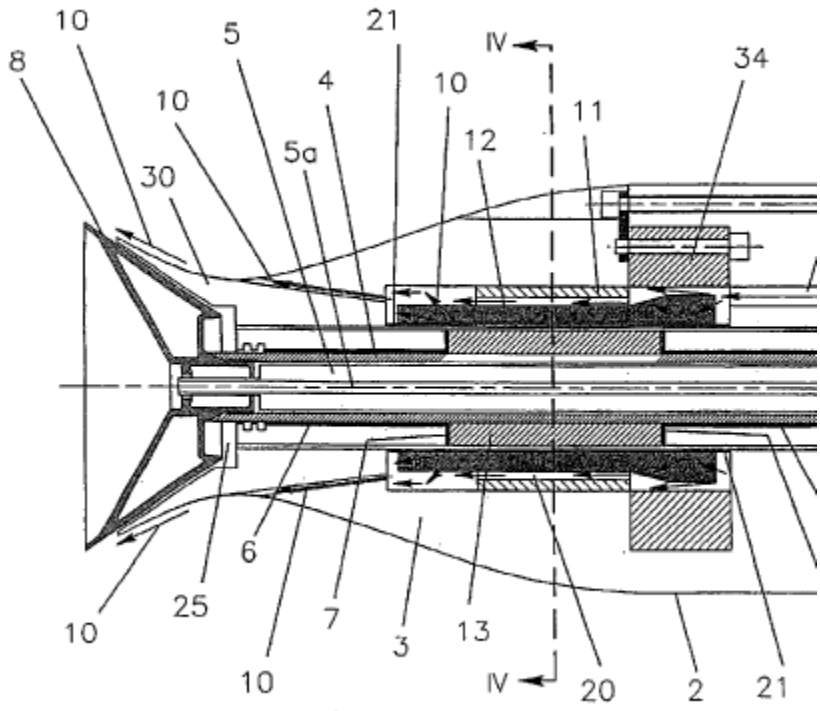
Washing or rinsing machines for crockery or tableware with movably-mounted spraying devices	A47L15/18

B05B3/001

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



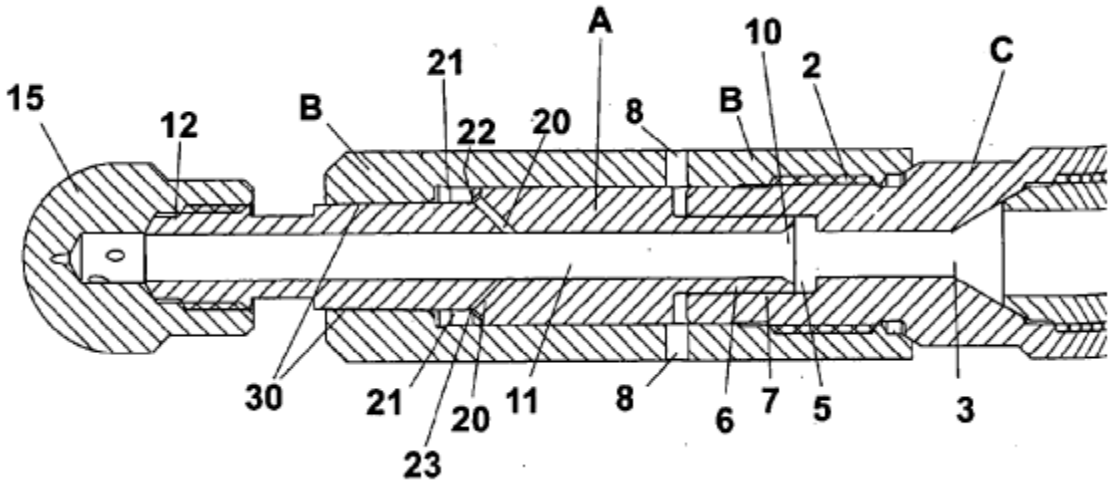
The Figure illustrates shaping air (10) used as cooling air passing in ducts (20) to cool a rotor (13) and a stator (12).

B05B3/002

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



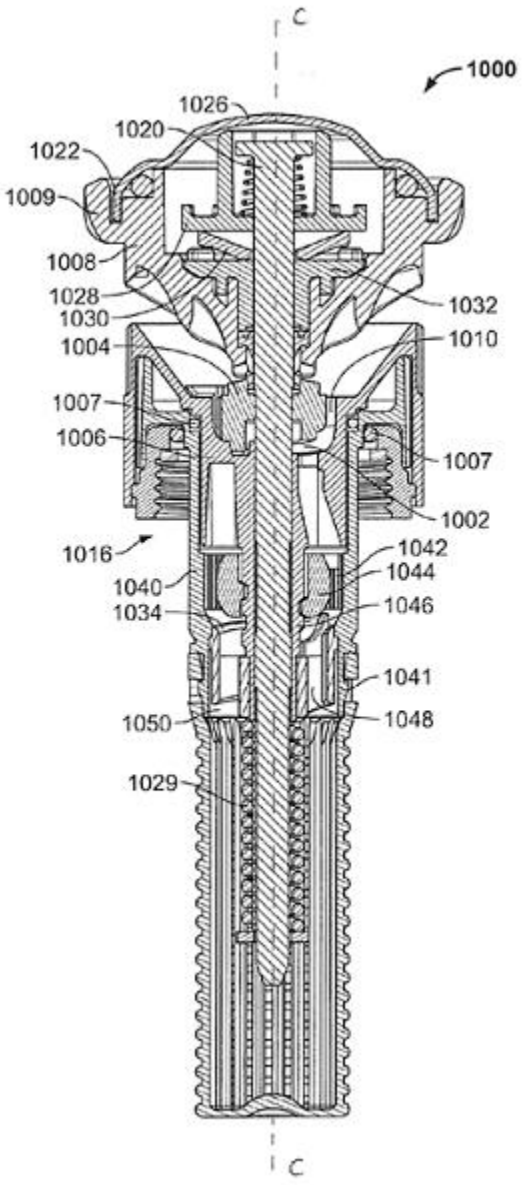
The Figure illustrates an annular interface (7) in between a housing (C) and shaft (A) sized so as to minimize leakage while still allowing rotation of the shaft (A) with a slight cushion of liquid. Passages (20) enable liquid to enter chamber (21). Liquid pressure upon surface (23) creates a thrust force capable of countering the input force applied by the liquid onto an inlet end (6).

B05B3/003

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a frustoconical brake pad (1030) being part of a brake disposed in deflector (1008), which maintains rotation of the deflector (1008) at a relatively constant

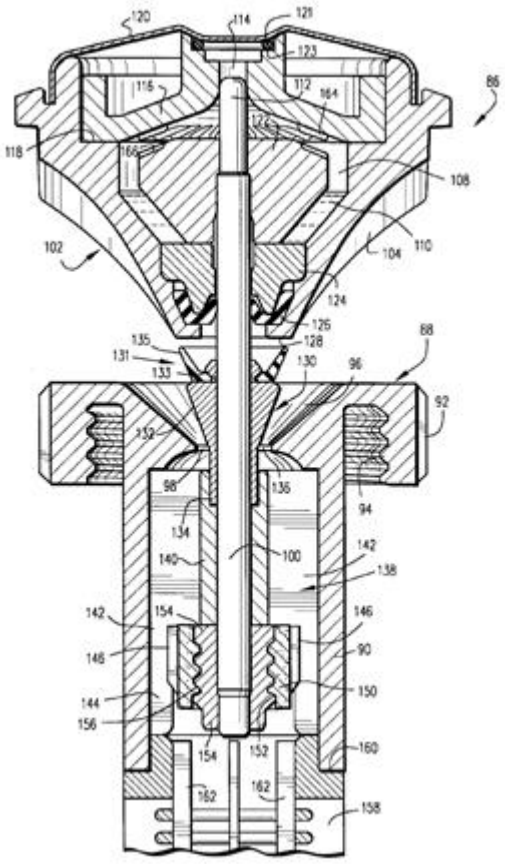
speed irrespective of flow-rate, fluid pressure or temperature. The brake includes brake pad (1030) sandwiched in between a friction disk (1028, above brake pad 1030) and seal retainer (1032, below brake pad 1030). Friction disk (1028) is held relatively stationary by shaft (1020), while seal retainer (1032) rotates with the deflector (1008). During operation of nozzle (1000), seal retainer (1032) is urged upwardly against brake pad (1030), which results in a variable frictional resistance that maintains a relatively constant rotational speed of deflector (1008), irrespective of the rate of fluid flow, fluid pressure or operating temperature.

B05B3/005

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



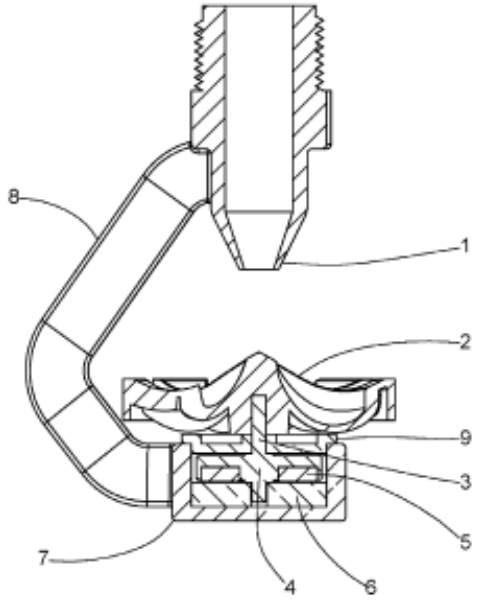
The Figure illustrates how rotation of deflector (102) will be slowed by the viscous shearing of fluid (110) in between stator (124 on central shaft 112) and the deflector wall forming a chamber (108).

B05B3/006

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates magnets (5) being used to dampen rotation of distributor (2).

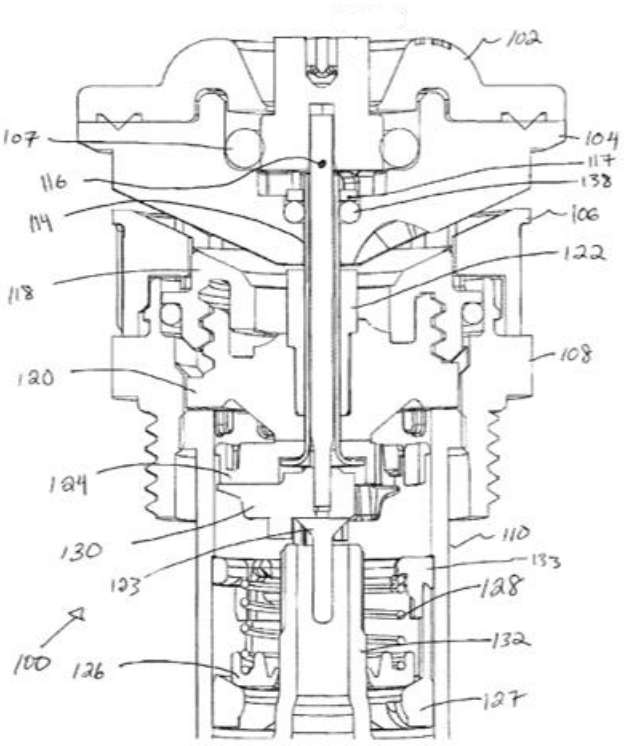
B05B3/007

Definition statement

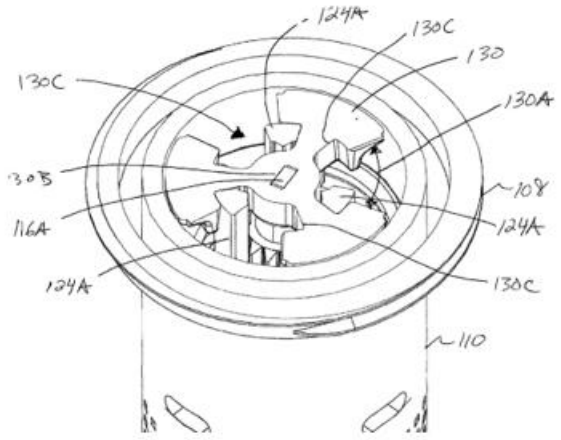
This place covers:

Illustrative example of subject matter classified in this place:

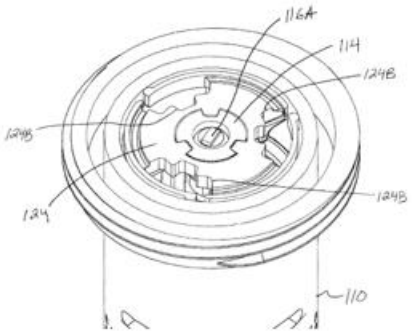
1a.



1b.



1c.



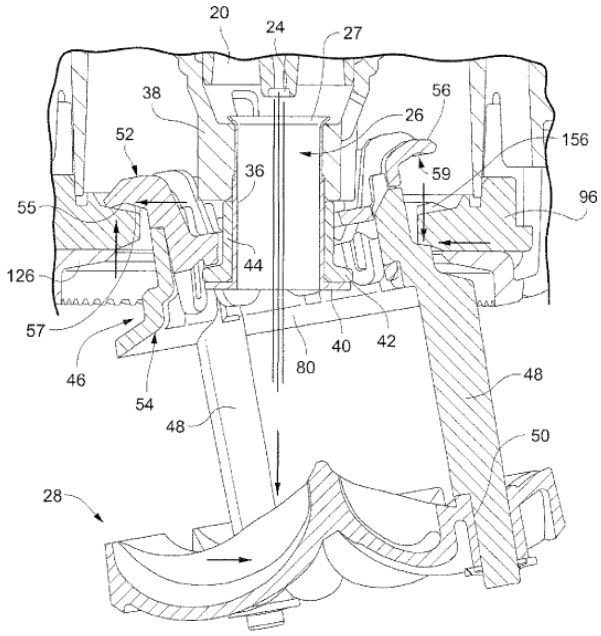
Figures 1a, 1b and 1c illustrate a sprinkler (100). The water flow through sprinkler (100) is adjusted by aligning spaces or apertures (130A) formed by throttle plate (130) with apertures (124B) in drive plate (124). Therefore, increasing alignment of apertures (130A, 124B) increases the flow out of sprinkler (100), while decreasing alignment of apertures (130A, 124B) decreases the flow. Throttle plate (130) is located below drive plate (124) and includes centre aperture (130B that engages with mating lower end (116A) of flow adjustment shaft (116). In this respect, rotating flow adjustment shaft (116) also rotates throttle plate (130) relative to drive plate (124). Throttle plate (130) is frictionally engaged to the bottom of drive plate (124), rotating throttle plate (130) with drive plate (124). Additionally, the flow of water through sprinkler (100) may cause slight movement and pressure of throttle plate (130) upwards against drive plate (124), further increasing friction. The frictional or clutching force between throttle plate (130) and drive plate (124) is such that it can be overcome when the user adjusts flow adjustment member (112) and therefore the flow of sprinkler (100).

B05B3/008

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a water deflection plate (28) carried by a starter sleeve (44) and a hanger tube (26) for wobbling or nutating motion.

References

Limiting references

This place does not cover:

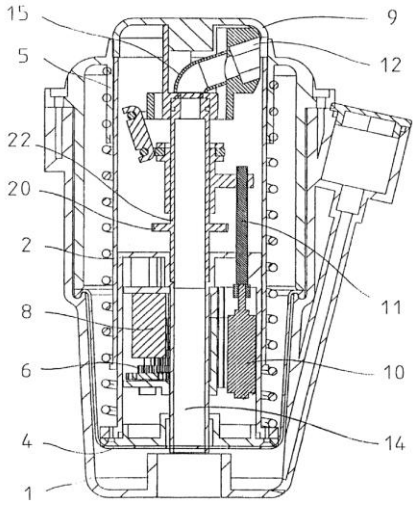
Rotor nozzles	B05B3/043

B05B3/02

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates an electric motor (8) connected to a reduction gear (6) that is in mesh with a tooth wheel (20). Operation of the motor (8) rotates part (22) and nozzle (12).

References

Limiting references

This place does not cover:

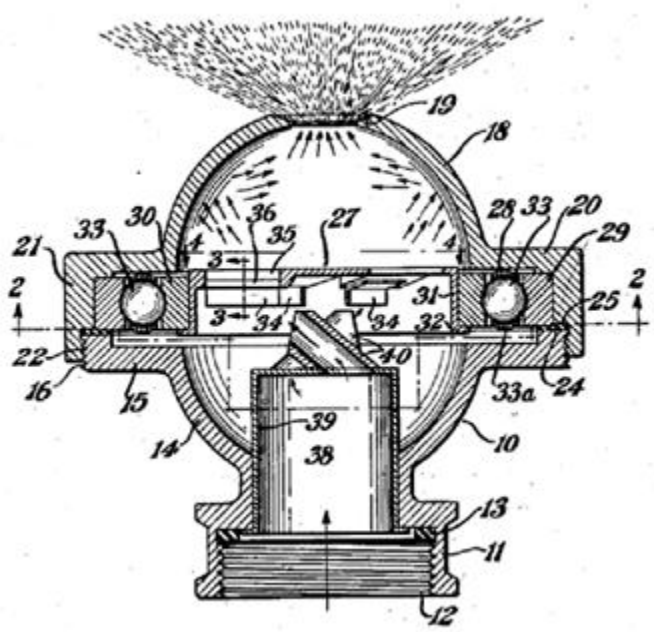
Electric spraying discharge apparatus characterised by having rotary outlet or deflecting elements	B05B5/04

B05B3/0202

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a deflecting rotating element (27).

References

Limiting references

This place does not cover:

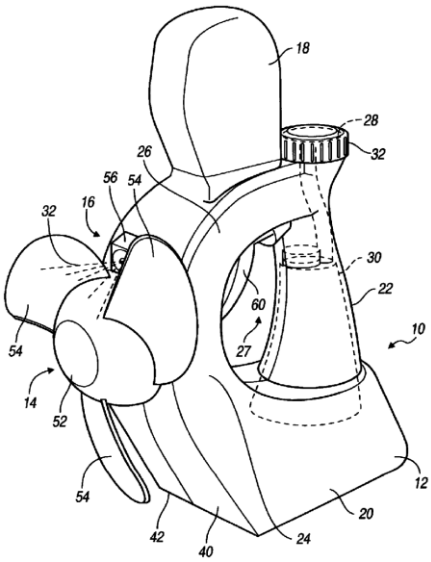
Spraying or sprinkling apparatus with moving outlet elements or moving deflecting elements driven by the liquid or other fluent material discharged, comprising a liquid driven rotor, actuated downstream of the outlet elements, and the liquid driven rotor being a deflecting rotating element	B05B3/0426
Spraying or sprinkling apparatus with moving outlet elements or moving deflecting elements discharging over substantially the whole periphery of the rotating member	B05B3/10

B05B3/0204

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a fan assembly (14) having blades (54) that deflect a stream (32).

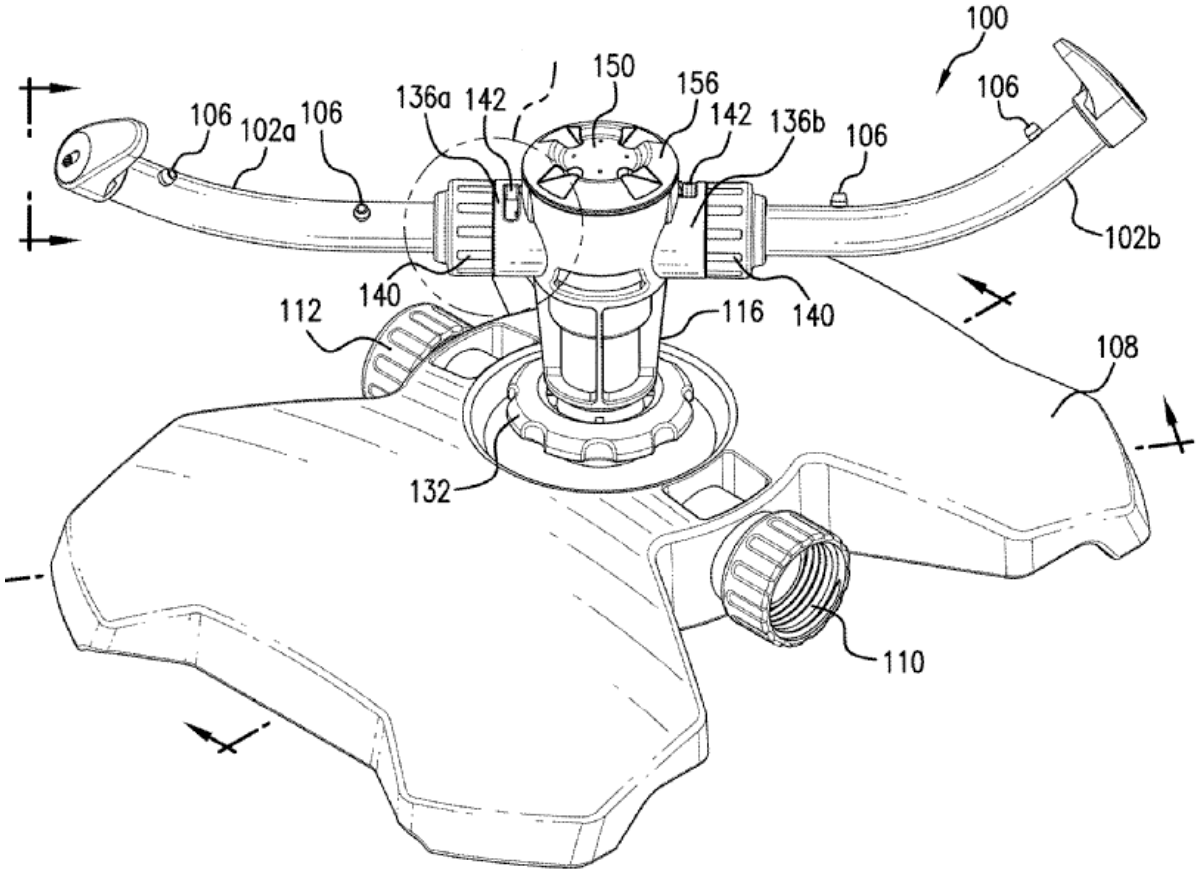
B05B3/021

Definition statement

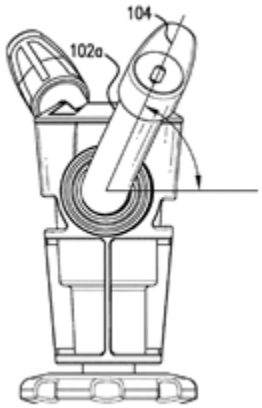
This place covers:

Illustrative examples of subject matter classified in this place:

1a.



1b.



Figures 1a and 1b illustrate rotating jet arms (102a, 102b) of a sprinkler adjusting an angle of inclination (104) of nozzles (106), which is inversely proportional to the area of coverage of sprinkler (100), the rotation being driven by reaction of the water discharged nozzles (106) on the respective nozzle body.

2.

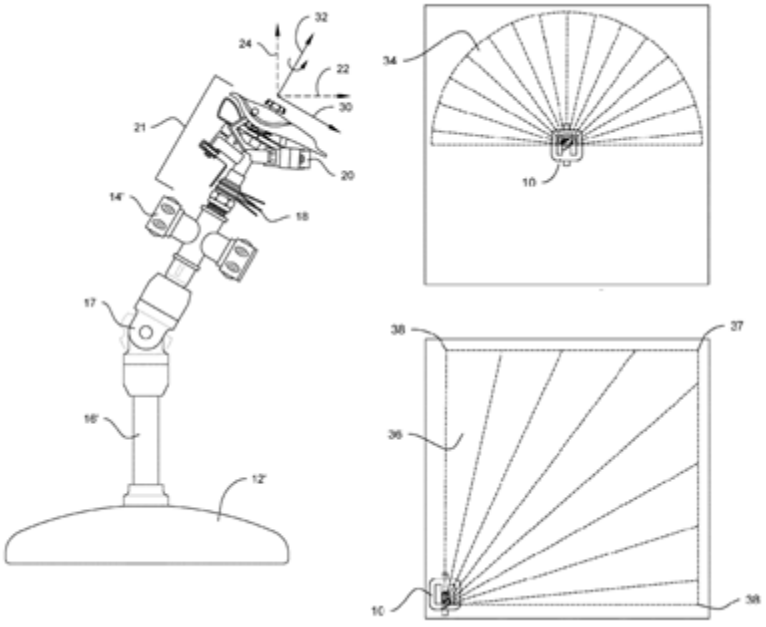


Figure 2 illustrates the angular position of the outlet element (20) that allows for the rotating impact sprinkler to spray noncircular areas.

3.

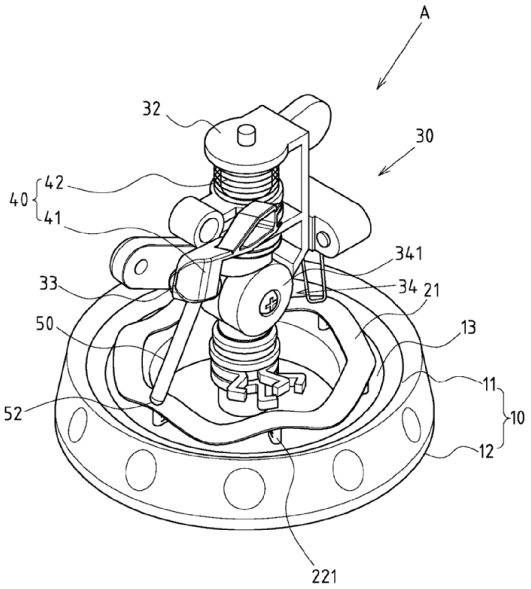


Figure 3 illustrates a percussive sprinkler (A) having a main body (30) that is rotated with vertical variation, a sprinkler head driving rod (50) shifting vertically along a circumferential path on a driving rod retaining surface (21, shaped for vertical variation during rotation) of an adjusting ring, so that the sprinkler head (33) is driven to swing vertically with changes of the discharge angle.

References

Limiting references

This place does not cover:

Spraying or sprinkling apparatus with moving outlet elements or moving deflecting elements driven by the liquid or other fluent material discharged, comprising a liquid driven rotor with automatic means for regulating the discharged jet relative to the angular position of the outlet elements or to the direction of rotation of the outlet elements	B05B3/0453

B05B3/026

Definition statement

This place covers:

Illustrative examples of subject matter classified in this place:

1.

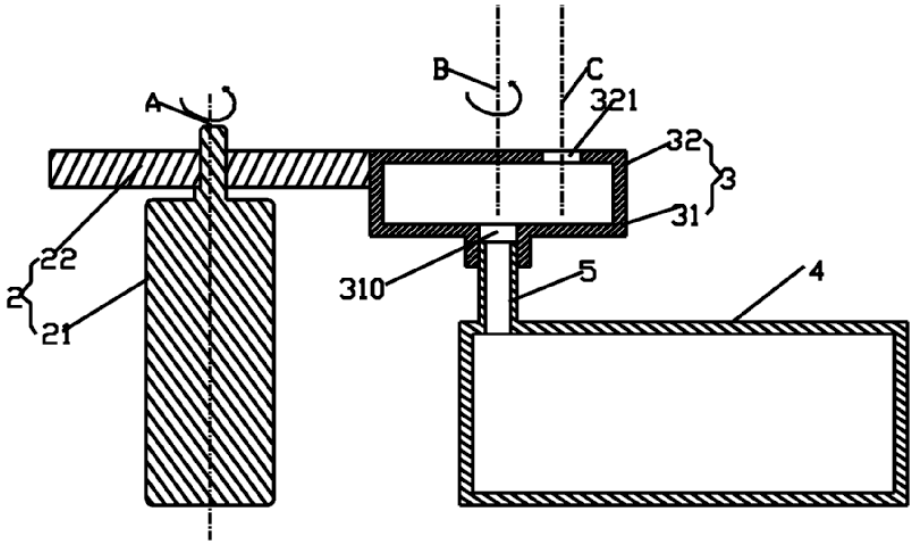


Figure 1 illustrates a rotational joint between a fixed tube (5) that contains a rotary bearing on the end connected to rotating tube (310).

2.

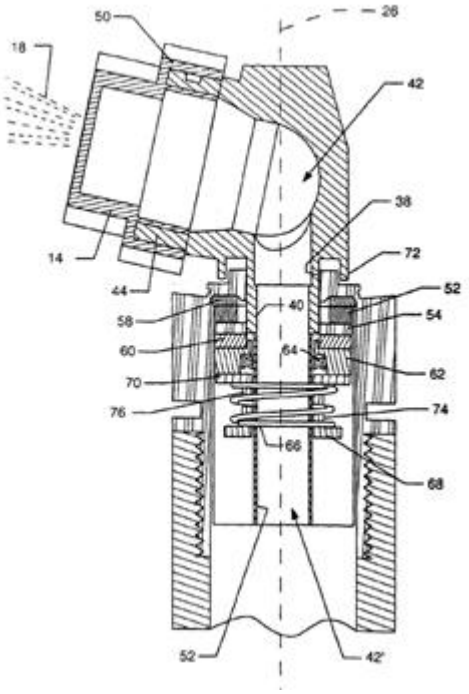


Figure 2 illustrates fluid passing from (42') into (42) to be sprayed (18), passing axially from the bottom member to that of the nozzle member (14), both elements being jointed to one another via bearing sleeve (40) so that the spray (18) sweeps over a surface due to rotation about central axis (26).

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

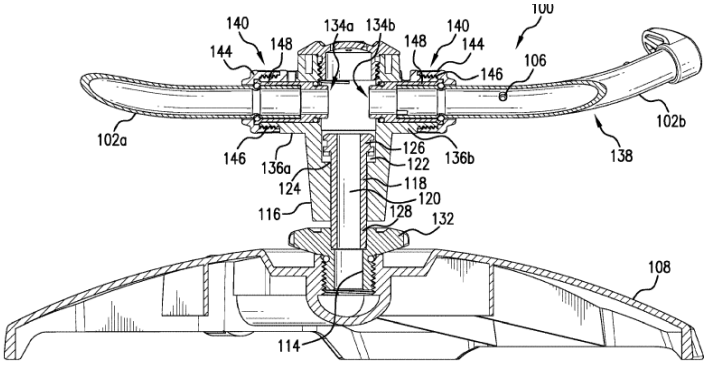
Pipes having adjustable joints with axial fluid passages in general	F16L27/0804

B05B3/027

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates rotational joints of arms (102a, 102b) having inner radial fluid passages extending from the central fluid passage (120) to the outlets of holes (106).

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

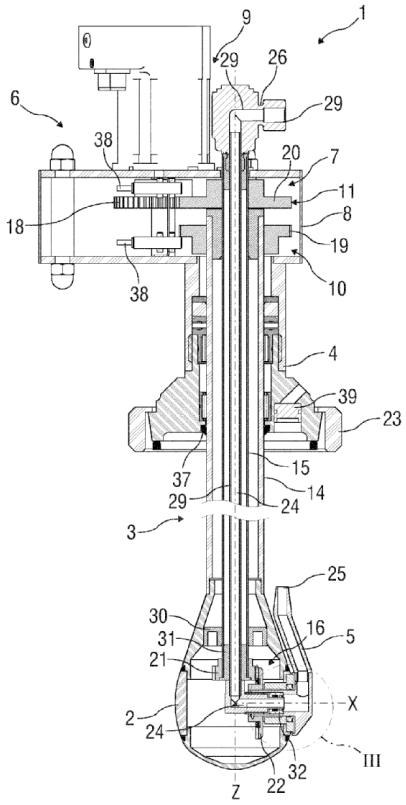
Pipes having adjustable joints with radial fluid passages in general	F16L27/087

B05B3/028

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a nozzle (25) rotating about both axes (X) and (Z).

References

Limiting references

This place does not cover:

Spraying or sprinkling apparatus with rotating outlet elements driven by the liquid or other fluent material discharged, the movement of the outlet elements being a combination of two movements, one being rotational	B05B3/0444
Spraying or sprinkling apparatus with rotating elements, driven by the liquid or other fluent material discharged by jet reaction, the movement of the outlet elements being a combination of two movements, one being rotational	B05B3/066

B05B3/0412

Definition statement

This place covers:

Illustrative examples of subject matter classified in this place:

1.

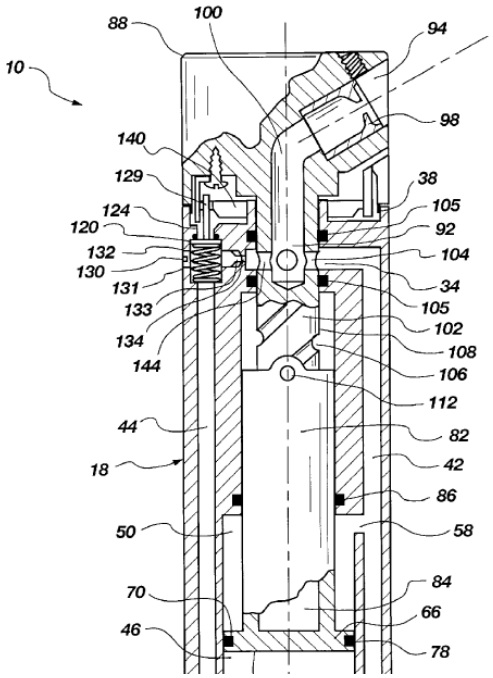


Figure 1 illustrates a sprinkler device (10) having a helical track (106) and a tracking element (112) coupled between a reciprocating piston (66) and a rotating head or nozzle (98) to convert the reciprocal linear motion of the piston to rotation motion of the head or nozzle.

2.

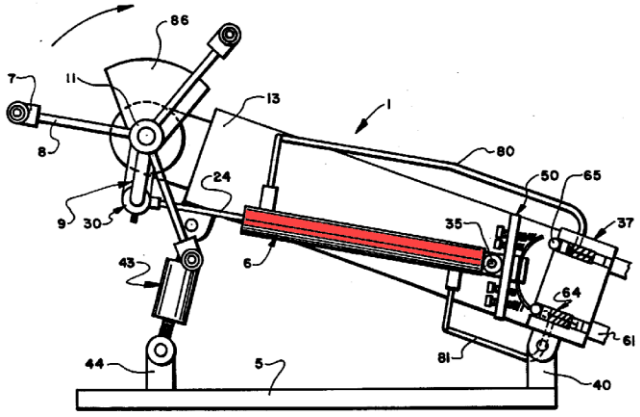


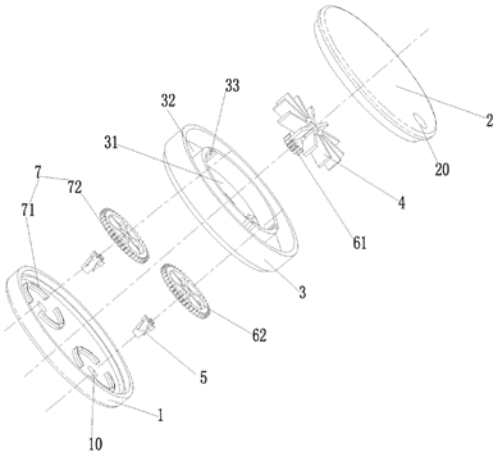
Figure 2 illustrates rotating nozzles (7) actuated by piston (6).

B05B3/0417

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates nozzles (5) rotated by rotor (4) via gears (61) and (62,72), wherein rotor (4) is driven by water.

Synonyms and Keywords

In patent documents, the following words/expressions are often used as synonyms:

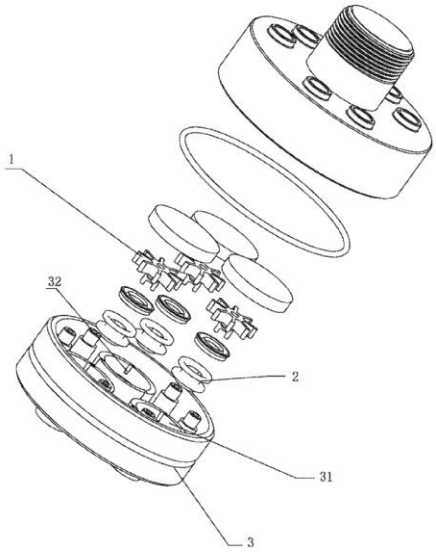
- "rotor", "impeller", "turbine" and "rotator"

B05B3/0419

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates several rotors (1) driven by water, wherein each rotor (1) actuates the rotation of a corresponding nozzle (2).

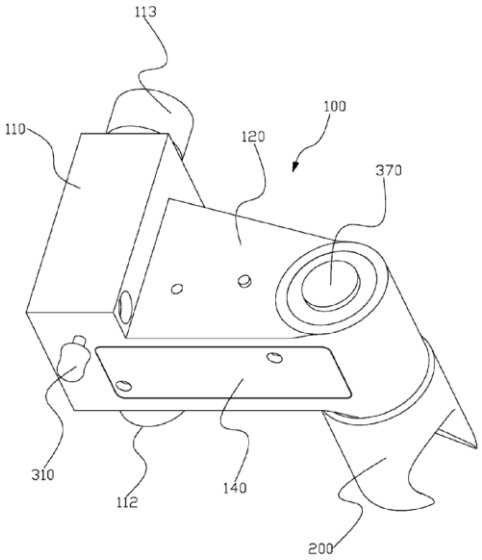
B05B3/0421

Definition statement

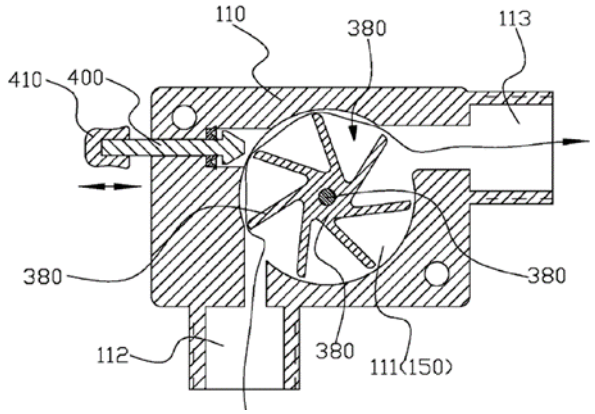
This place covers:

Illustrative example of subject matter classified in this place:

1a.



1b.



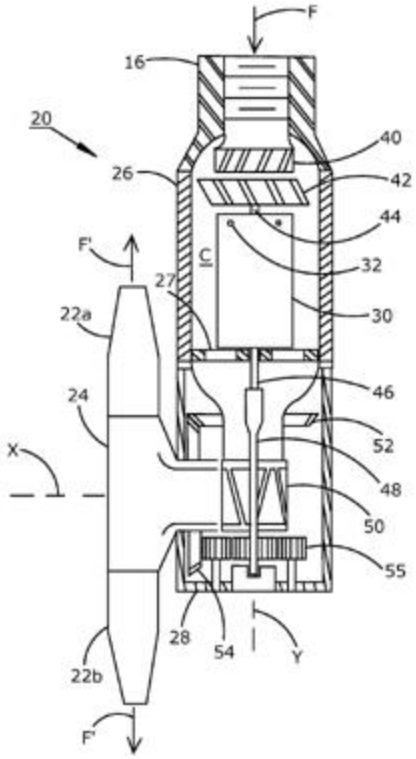
Figures 1a and 1b illustrate a stop (410) to disable rotation of rotor (380), wherein rotation of rotor (380, in Figure 1b) drives rotation of nozzle (113, in Figure 1a).

B05B3/0423

Definition statement

This place covers:

Illustrative examples of subject matter classified in this place:



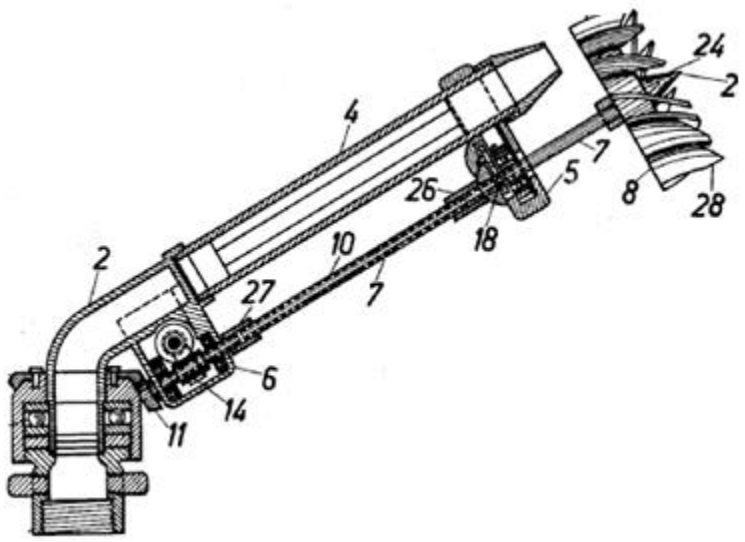
The Figure illustrates rotation of a rotor (42) not being parallel to the rotation axis of an outlet element (22a, 22b, 24).

B05B3/0425

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



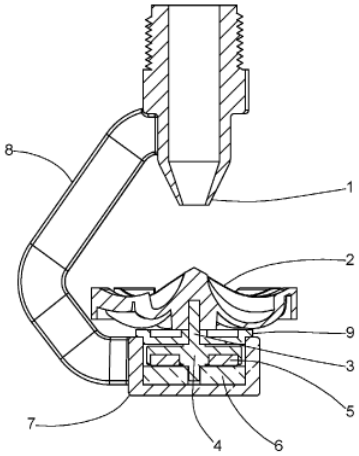
The Figure illustrates a rotor (8) actuated downstream of nozzle (4) outlet, wherein the rotor (8) actuates rotation of the nozzle (4).

B05B3/0426

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



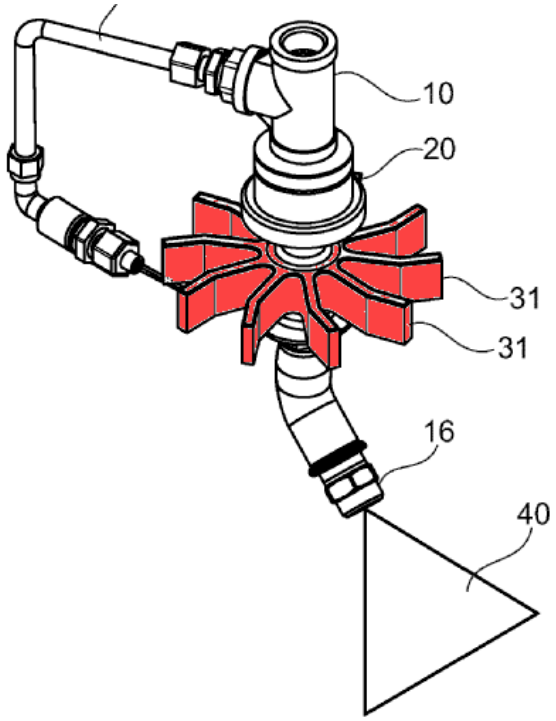
The Figure illustrates a liquid driven rotor (2) that is a deflecting rotating element.

B05B3/0429

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a rotor (31) directly attached on the outside of a nozzle (16) supply.

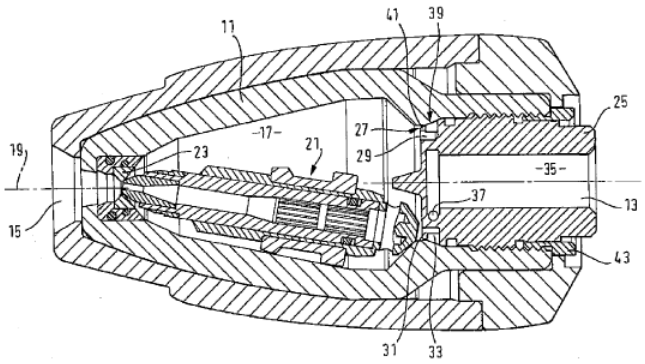
B05B3/043

Definition statement

This place covers:

Nozzles consisting of an element having an upstream part rotated by the liquid flow and a downstream part connected to the apparatus by a universal joint.

Illustrative example of subject matter classified in this place:



The Figure illustrates a rotor nozzle having an upstream part rotated inside a housing (11) and a downstream part connected to universal joint (23).

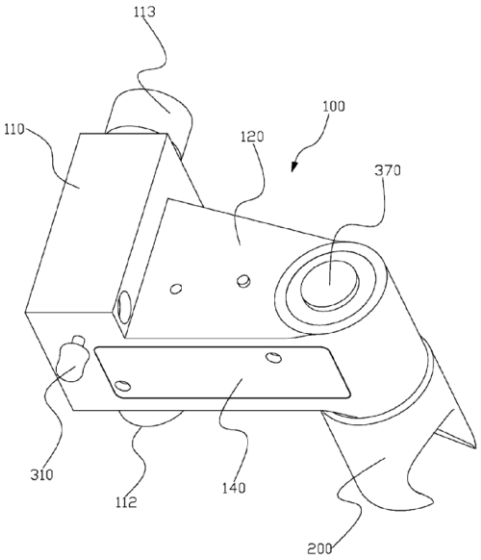
B05B3/0432

Definition statement

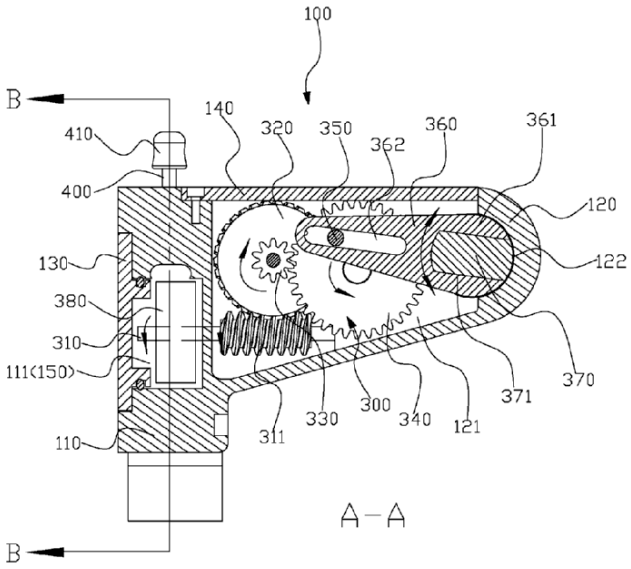
This place covers:

Illustrative example of subject matter classified in this place:

1a.



1b.



Figures 1a and 1b illustrate rotation of a rotor (380) that causes oscillation of a nozzle (113).

References

Limiting references

This place does not cover:

Spraying or sprinkling apparatus with rotating outlet elements driven by the liquid or other fluent material discharged, the movement of the outlet elements being a combination of two movements, one being rotational	B05B3/0444

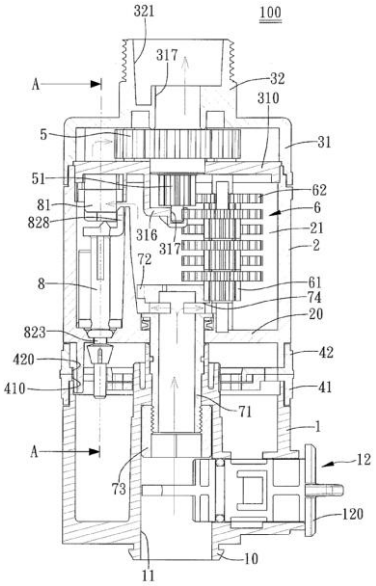
B05B3/0435

Definition statement

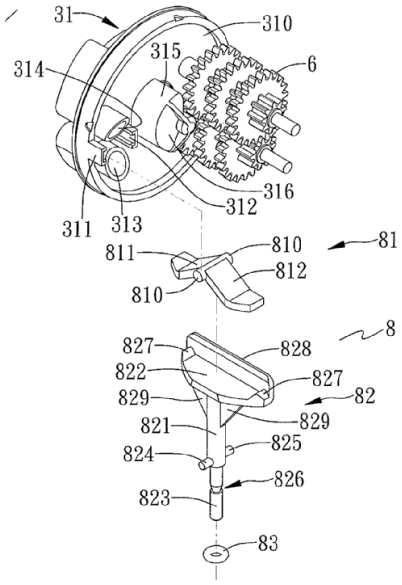
This place covers:

Illustrative example of subject matter classified in this place:

1a.



1b.



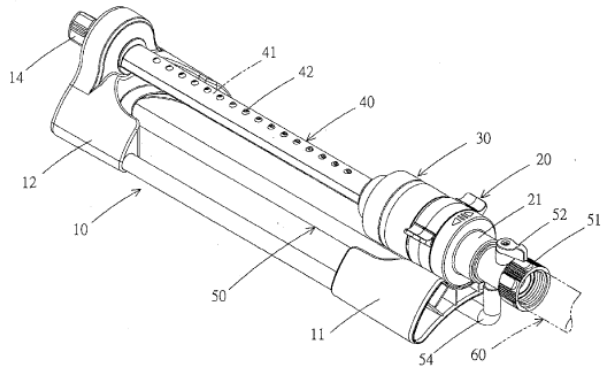
Figures 1a and 1b illustrate that when water reaches an impeller (5) through inlet (313), the water flow drives the impeller (5) in one rotational direction and when water reaches the impeller (5) through inlet (314) the water flow drives the impeller (5) in the other rotational direction.

B05B3/0438

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a tubular element (40) that has several outlets (42) and oscillates around an axis (axis of 40) parallel to the tubular element (40).

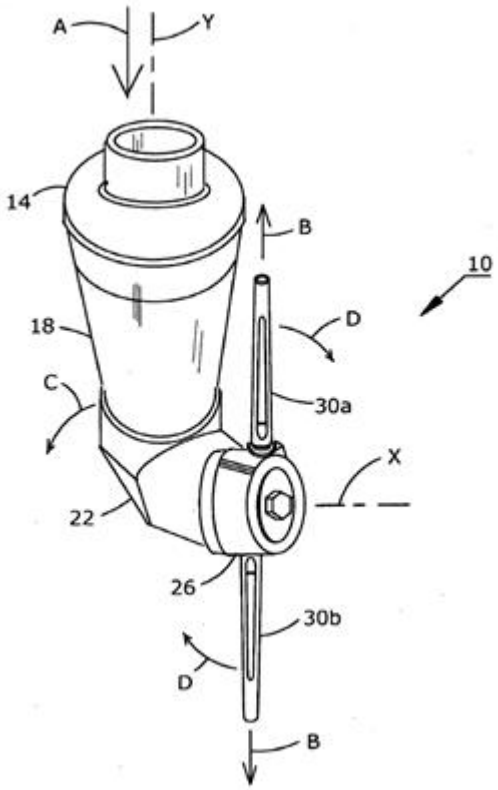
B05B3/0444

Definition statement

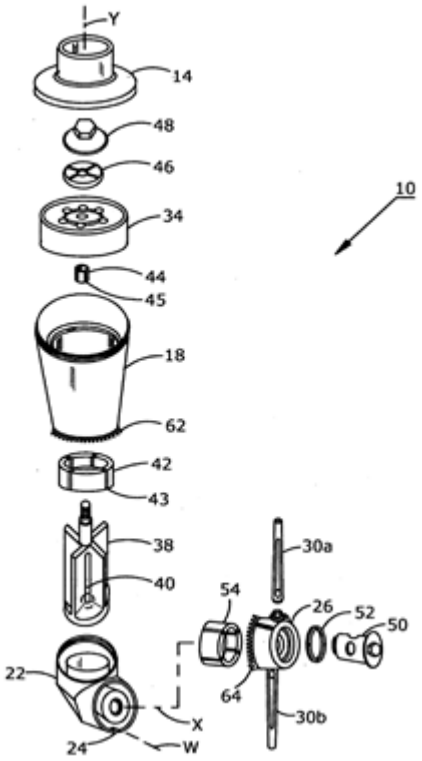
This place covers:

Illustrative example of subject matter classified in this place:

1a.



1b.



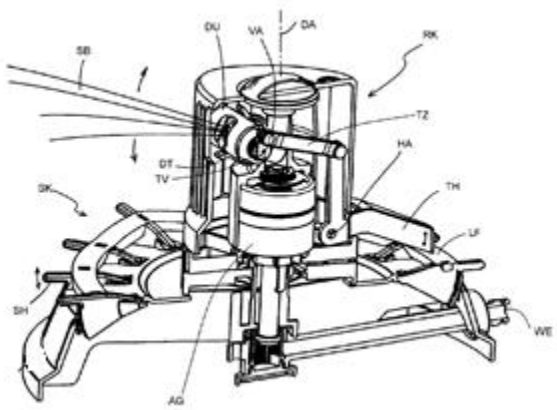
Figures 1a and 1b illustrate nozzles (30a, 30b) rotating about both axes (X) and (Y), i.e. a combination of two movements, at least one being rotational, wherein both rotations are actuated by a rotor (38) driven by a cleaning fluid.

B05B3/0446

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a rotating irrigating nozzle (DU) having an outlet opening area that is varied according to a curved tread (LF), wherein rotation of the nozzle (DU) is actuated by a rotor within a driving housing (AG) the rotor being driven by water.

References

Limiting references

This place does not cover:

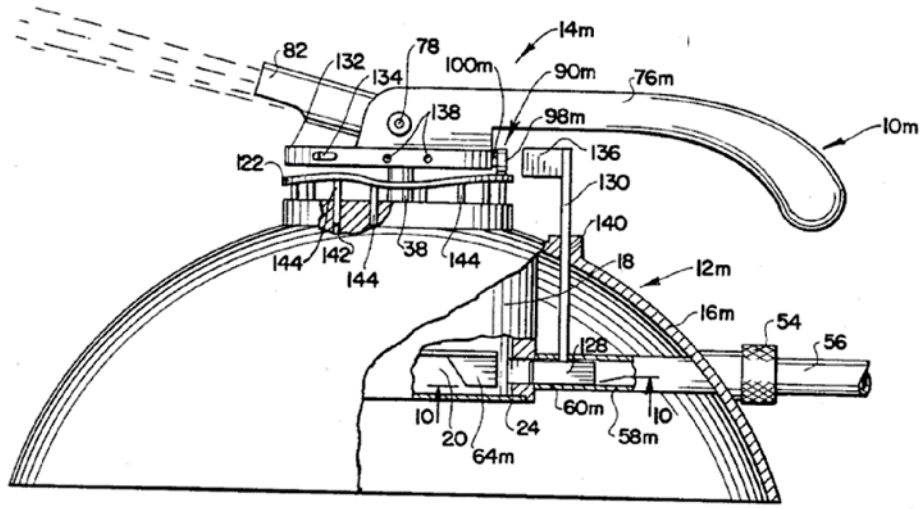
Spraying or sprinkling apparatus with rotating outlet elements driven by the liquid or other fluent material discharged, the movement of the outlet elements being a combination of two movements, one being rotational	B05B3/0444

B05B3/0453

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



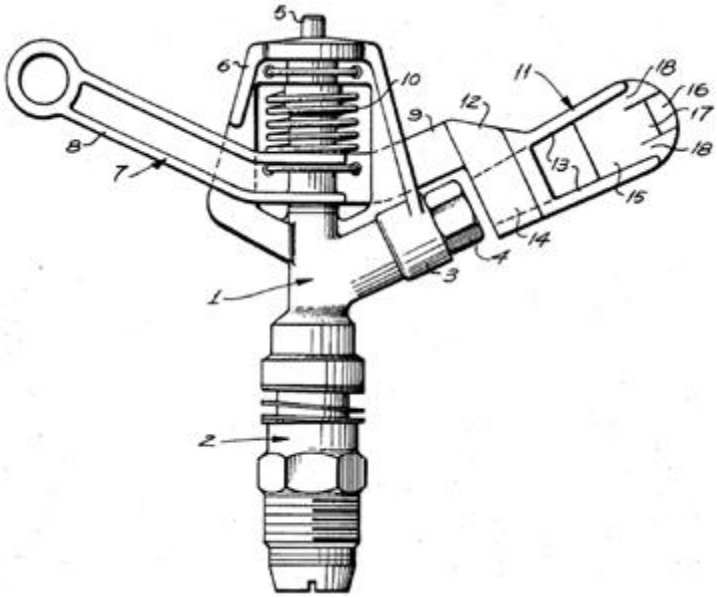
The Figure illustrates a lawn sprinkler, when roller (98m) rolls along the top of cam track (122), a rotary nozzle (82) raises and lowers about pivot pin (78), wherein rotation of the nozzle (82) about a vertical axis is actuated by rotor (64m), driven by water.

B05B3/0455

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates how the spray jet discharged from the outlet (4) actuates a movable deflector (11) which is successively moved out of the jet-by-jet action and brought back into the jet by the action of the spring (10).

Synonyms and Keywords

In patent documents, the following words/expressions are often used as synonyms:

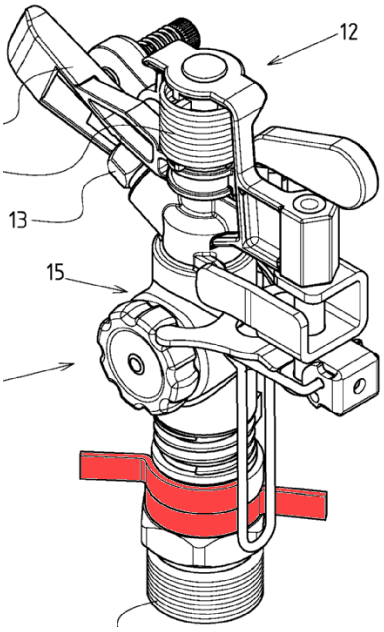
- "impact sprinkler", hammer sprinkler", "impulse type sprinkler" and "percussive sprinkler"

B05B3/0461

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



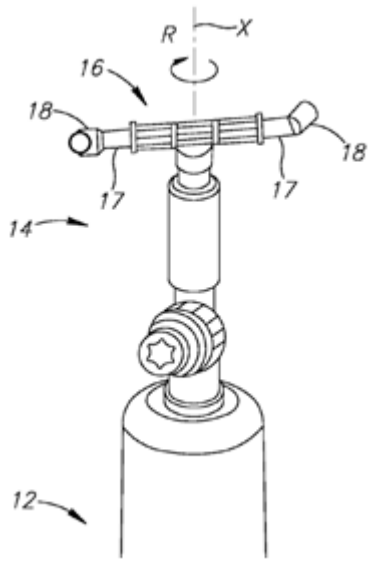
The Figure illustrates an impact sprinkler (12) in which the rotation of outlet element (13) is reversed by the abutments (as stops extending outward on both sides from the outside of the supply pipe).

B05B3/06

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a rotating portion including two arms (17) and two nozzles (18), each nozzle attached to an end of a respective arm (17). Nozzles (18) are adapted to discharge liquid received from device (12) to the outside environment along directions that form moments of force urging the rotating portion to rotate in a direction (R) about an axis (X).

References

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

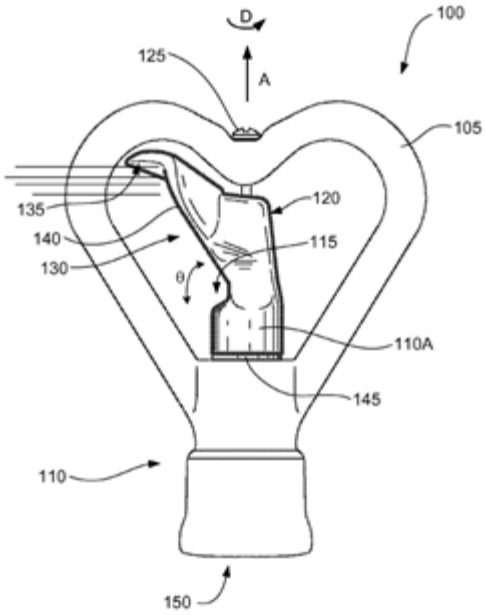
Washing or rinsing machines for crockery or tableware with rotary spraying devices moved by means of the sprays	A47L15/23

B05B3/063

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



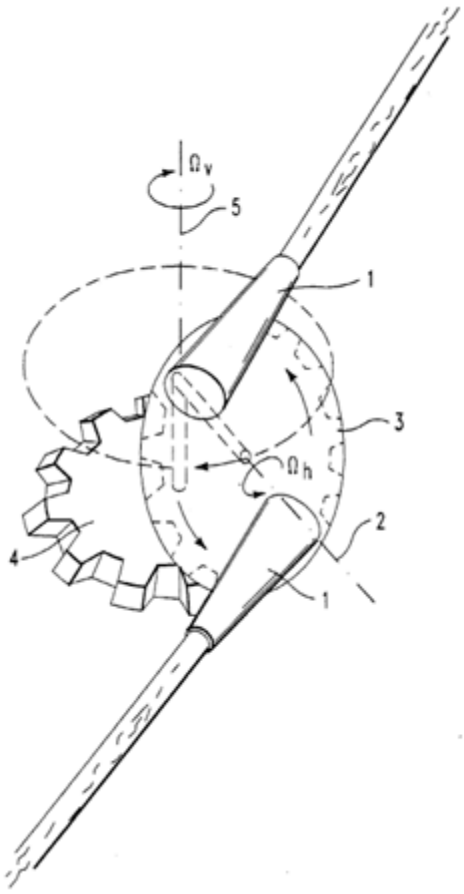
The Figure illustrates a deflector (120) that creates a tangential component of the jet as indicated by the lines leaving the deflector, this tangential component causing sprinkler (100) to rotate.

B05B3/066

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates nozzles (1), whose movement is a combination of two rotations, i.e. a combination of two movements, at least one being rotational, the rotations being driven by reaction of water discharged by nozzles (1) on the respective nozzle body.

B05B3/08

Definition statement

This place covers:

Illustrative examples of subject matter classified in this place:

1.

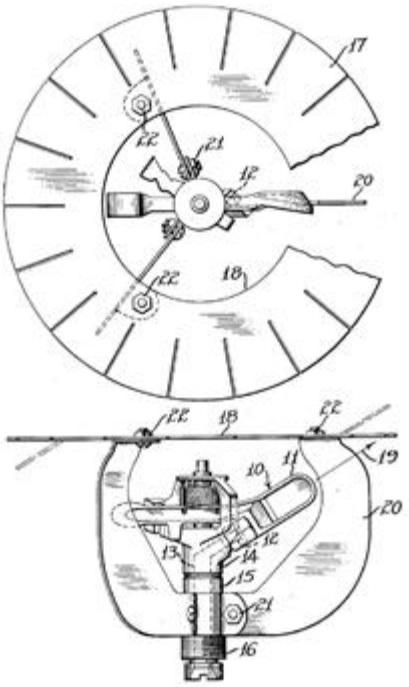
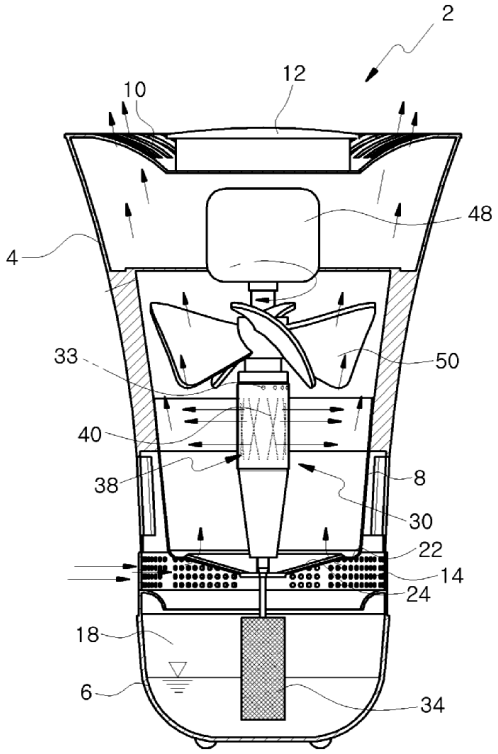
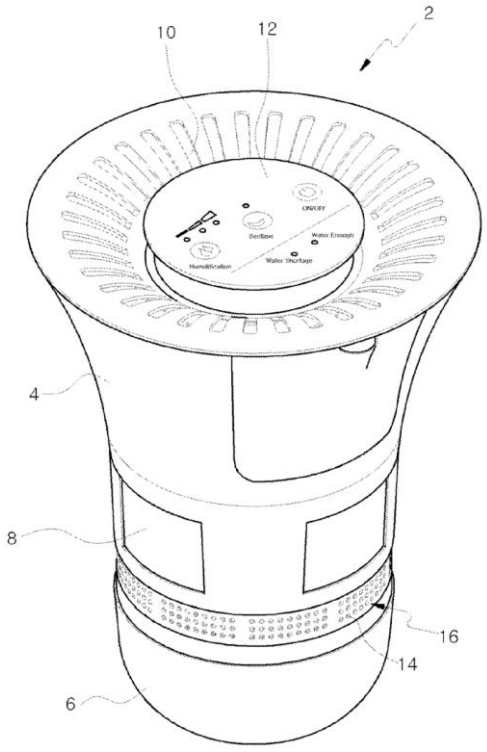


Figure 1 illustrates a rotary sprinkler (10) in association with a stationary deflecting element (18), wherein individual segments (17) on the annular disc (18) may be deformed to restrict the range of the stream of water in any desired direction.

2a.



2b.



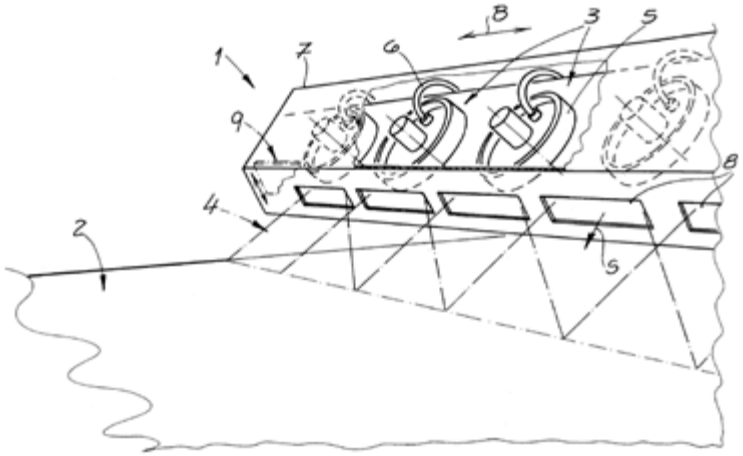
Figures 2a and 2b illustrate a rotary outlet element (30) and rotary deflecting elements (50), both in association with stationary outlets (10).

B05B3/082

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a rotary spraying disk (5) as a deflecting element, in association with stationary outlets (8).

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

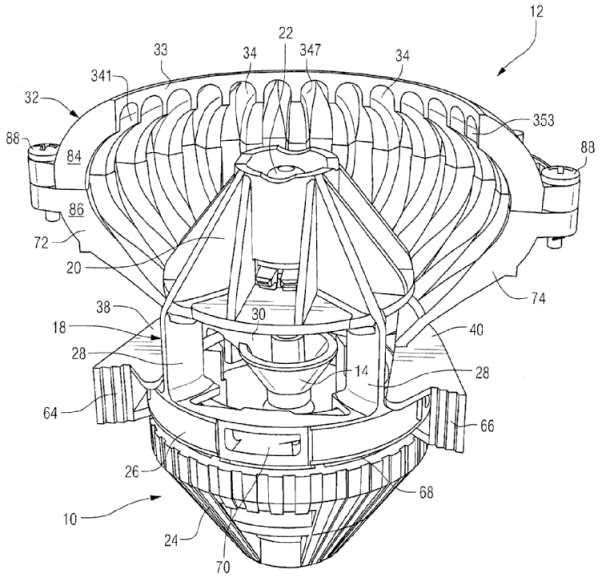
Air-humidification by forming water dispersions in the air using rotating elements	F24F6/16

B05B3/085

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



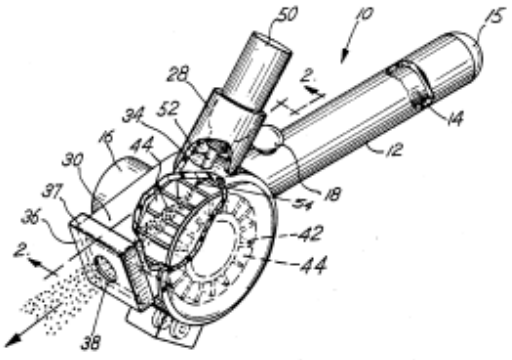
The Figure illustrates a stationary fixed deflector (12) in association with a rotary sprinkler (10), wherein a deflector (12) limits distribution of a stream emitted by the sprinkler (10) to less than the 360-degree circle pattern that would otherwise be irrigated by the stream.

B05B3/087

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates an air brush (10), wherein spraying is effected by centrifugal forces from rotary deflecting elements (42), in association with sectorial stationary deflecting element (30).

B05B3/10

References

Limiting references

This place does not cover:

Spraying or sprinkling apparatus with rotating elements in association with stationary outlet or deflecting elements, the spraying being effected by centrifugal forces	B05B3/082

Informative references

Attention is drawn to the following places, which may be of interest for search:

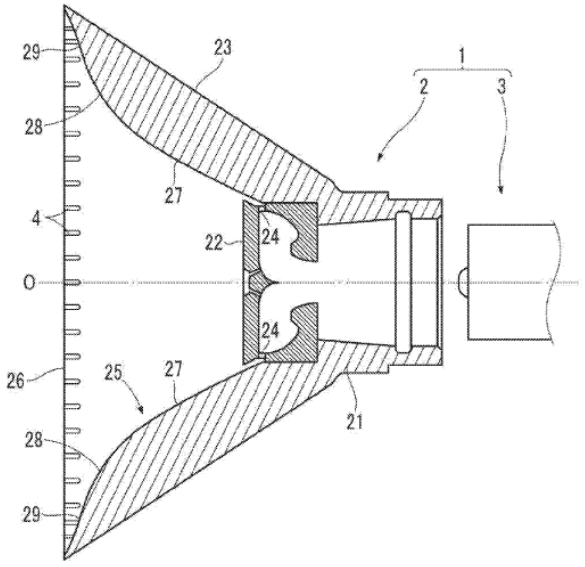
Making metallic powder or suspensions thereof by spraying using centrifugal force	B22F9/10

B05B3/1014

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



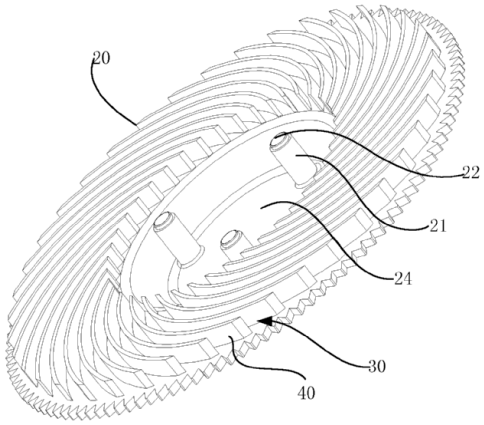
The Figure illustrates a cup-shaped spray head (23) being part of a rotary nozzle.

B05B3/1021

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



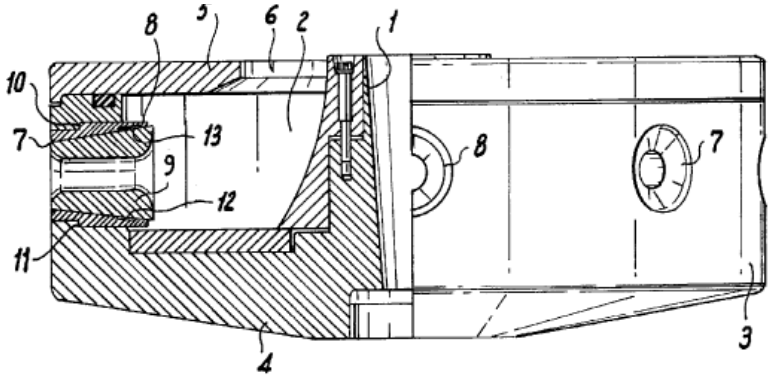
The Figure illustrates a rotary spraying plate provided with individual passages (30).

B05B3/1028

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



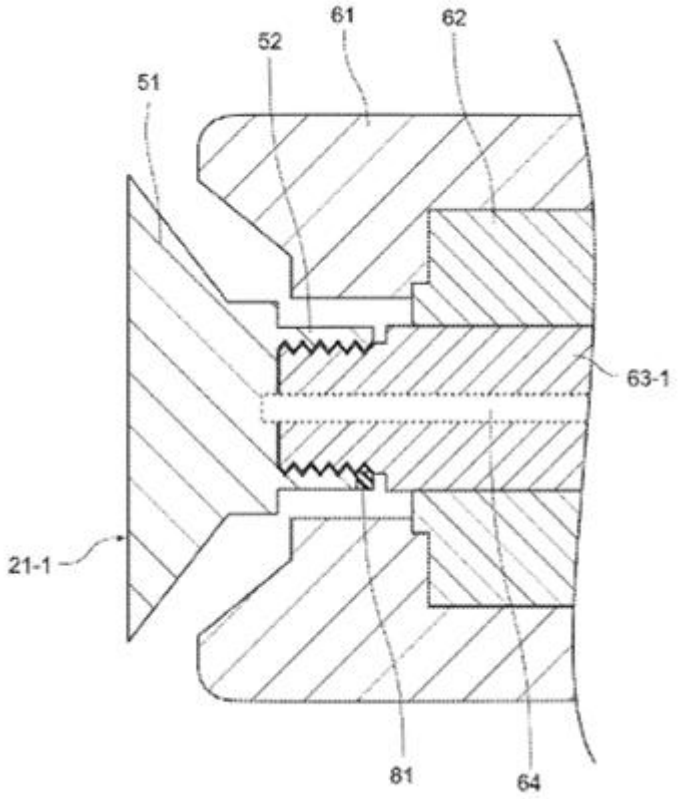
The Figure illustrates an insert (7) that forms an individual passage at the periphery of the rotating member (4).

B05B3/1042

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



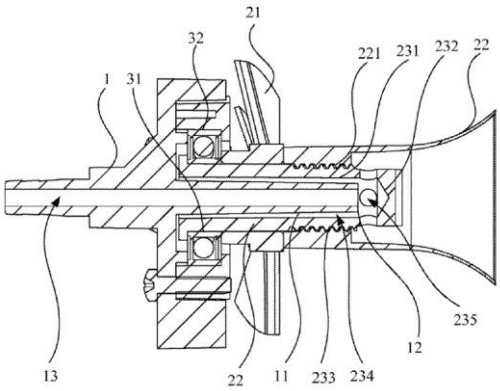
The Figure illustrates means for connecting a rotating spray head (51) to its driving shaft (64) being reversible (a threaded connection allows the head to be screwed on and off).

B05B3/105

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



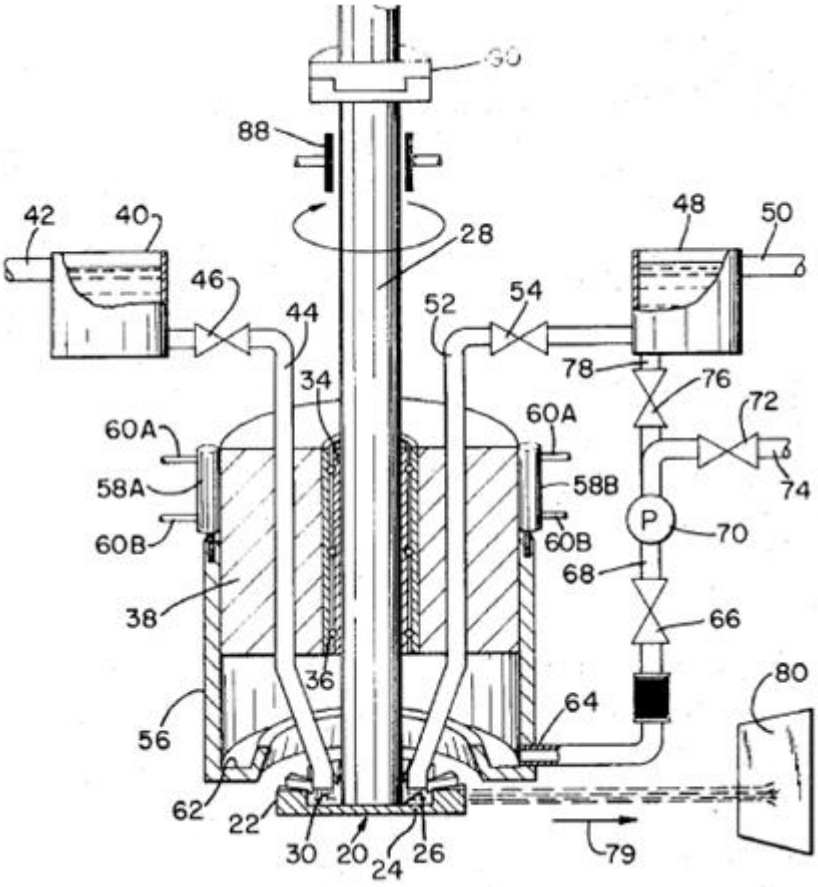
The Figure illustrates a rotary cup-shaped spray head (22) associated with fan blades (21).

B05B3/1057

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



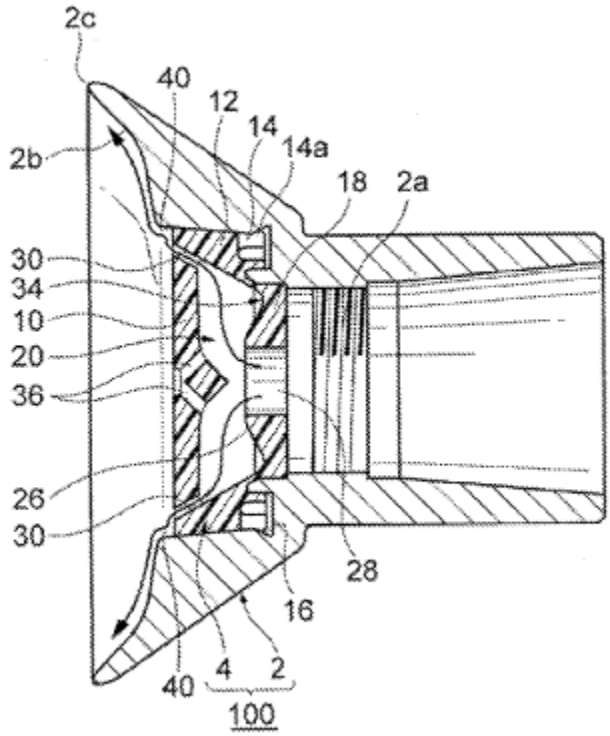
The Figure illustrates two outlets (44) and (52), which supply two liquids (42) and (50) to a rotating element (20).

B05B3/1064

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a fluid sprayed as axially supplied to rotating member (2) from a hollow rotating shaft (tube that affixes to 2a).

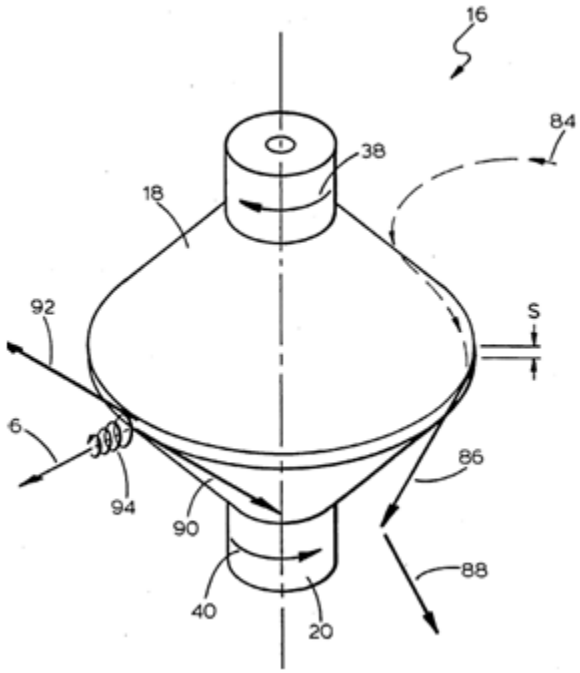
B05B3/1078

Definition statement

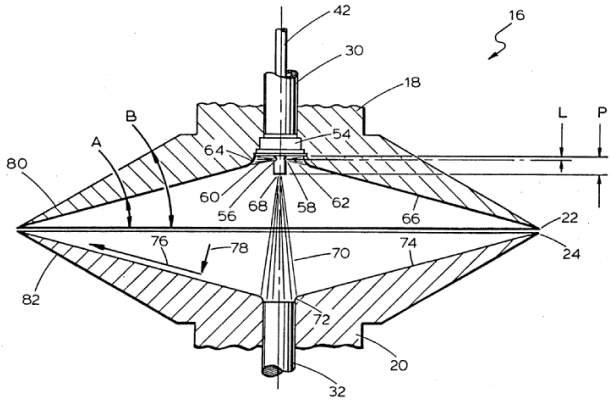
This place covers:

Illustrative example of subject matter classified in this place:

1a.



1b.



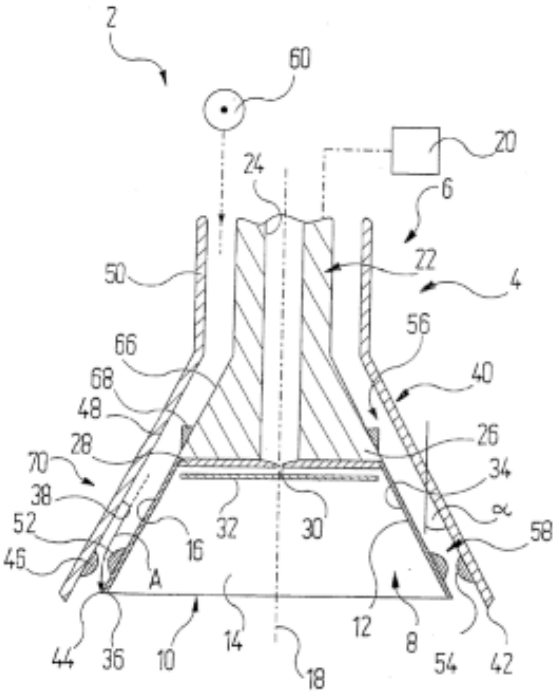
Figures 1a and 1b illustrate two rotating members (20) and (38) that rotate in opposite directions.

B05B3/1092

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a gas being supplied from a compressed air source (60) out of a sleeve (40) to shape the fluid being discharged from a rotary bell-shaped disc (8).

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

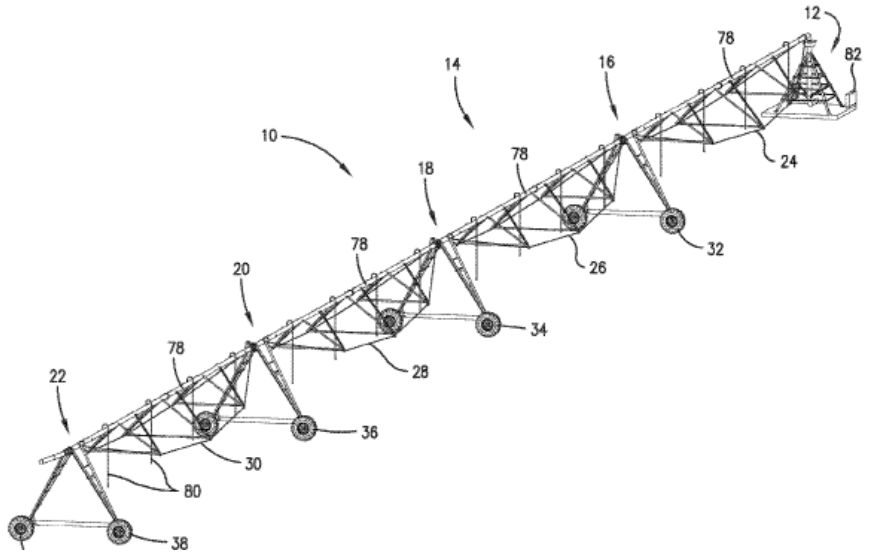
Means for supplying shaping gas associated with rotary outlet or deflecting elements of apparatus spraying liquids or other fluent materials by electric or electrostatic means	B05B5/0426
Means for supplying shaping gas associated with spraying apparatuses without any moving outlet or deflecting elements	B05B7/0815

B05B3/12

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a spray boom (10, system) rotating about axis (12) by means independent of the liquid or material discharged, wheels (32, 34, 36, 38) having integrated motors rotating them independently from the fluid in the system.

References

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Watering arrangements movable around a pivot centre for agricultural watering of gardens, fields, sports grounds or the like	A01G25/092
Special adaptations or arrangements of liquid-spraying apparatus for agricultural uses, e.g. spray booms	A01M7/00

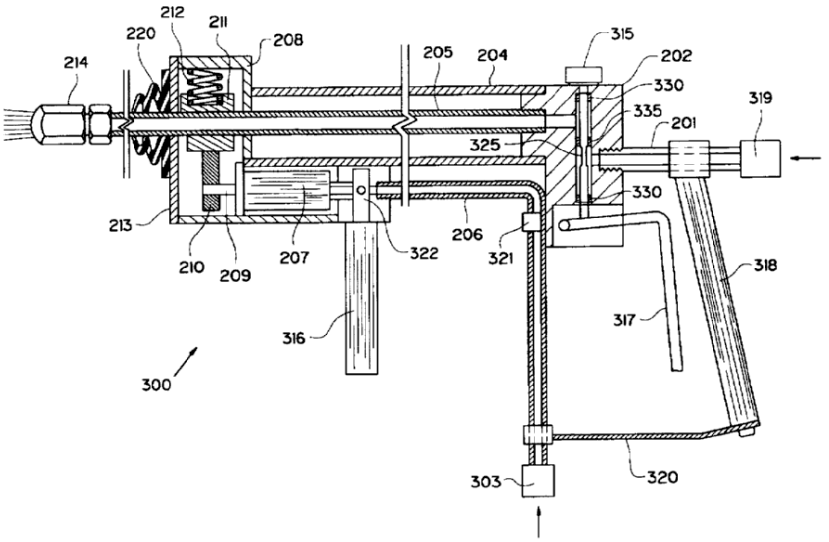
B05B3/14

Definition statement

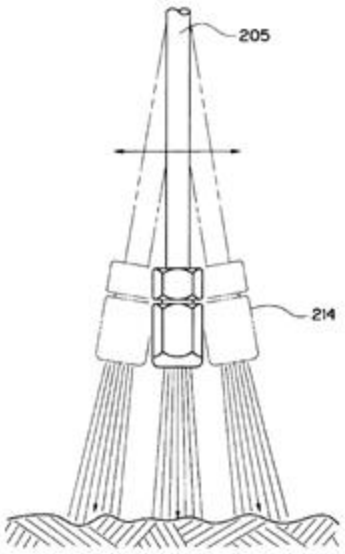
This place covers:

Illustrative example of subject matter classified in this place:

1a.



1b.



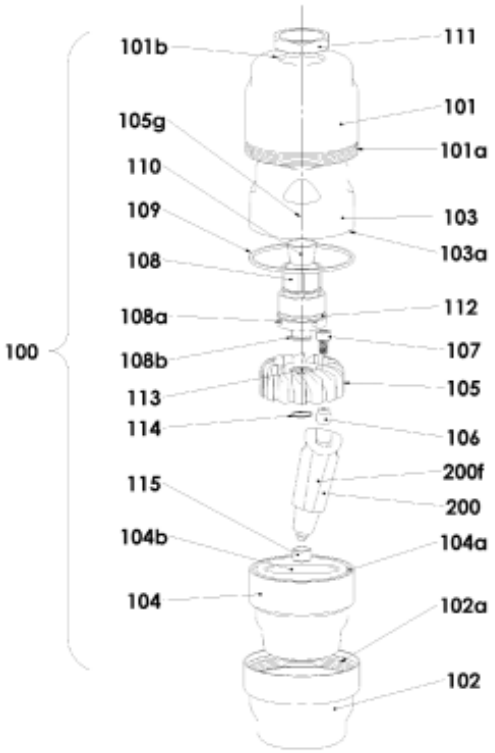
Figures 1a and 1b illustrate an oscillating nozzle (214), the oscillation being driven by a motor (207).

B05B3/16

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a fluid driving rotation of turbine (105) that actuates the movement of rocker assembly (200) of nozzle assembly (100), wherein rotation of the turbine (105) is converted into an oscillatory, back-and-forth linear motion of the rocker assembly (200).

References

Limiting references

This place does not cover:

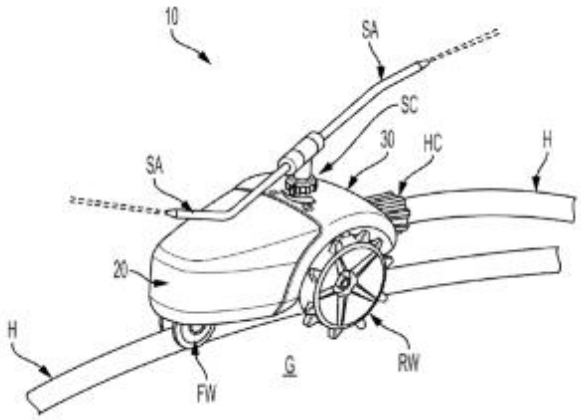
Spraying or sprinkling apparatus with rotating outlet elements, comprising a liquid driven rotor wherein rotation of an outlet element is reversible	B05B3/0432
Spraying or sprinkling apparatus with rotating outlet elements, which are rotated by a deflecting element being successively moved into the discharged jet by the action of a biasing means and out of the discharged jet by the discharged jet with the rotation of the outlet elements being reversible	B05B3/0461

B05B3/18

Definition statement

This place covers:

Illustrative example of subject matter classified in this place:



The Figure illustrates a mobile sprinkler (10) moving along a track (H).

References

Limiting references

This place does not cover:

Watering arrangements making use of movable installations on wheels or the like	A01G25/09

B05B13/00

References

Limiting references

This place does not cover:

Processes for applying liquids or other fluent materials to surfaces in general	B05D

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Watering arrangements making use of movable installations on wheels or the like	A01G25/09

Special rules of classification

Reference B05D is non-limiting in group B05B13/00. CPC will be updated or corrected once this inconsistency is resolved in IPC.

Group B05B 13/00 is used to classify subject matter that is not fully covered by groups B05B 1/00 - B05B 11/00, so group B05B 13/00 can be used in addition to groups B05B 1/00 - B05B 11/00 when subject matter for B05B 1/00 - B05B 11/00 is also to be classified. For example, a means for supporting work can be classified in subgroup B05B 13/02 when it is used with a nozzle not requiring classification in group B05B

1/00, or a means for supporting work can be classified in subgroup B05B13/02, in addition to classifying the nozzle used therewith in group B05B 1/00.

Means for supplying or discharging of liquid or other fluent material for applying liquids or other fluent materials to surfaces of objects or other work by spraying are covered by one of groups B05B 1/00 - B05B 12/00.

B05B13/002

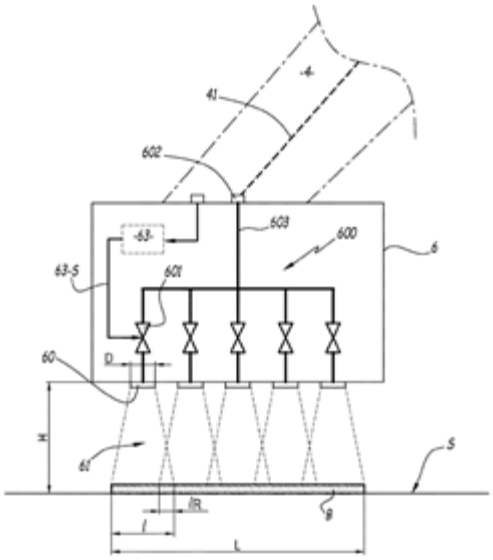
Definition statement

This place covers:

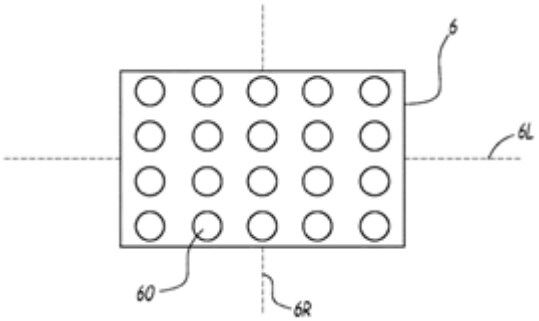
Machines or plants for inkjet coating onto work surfaces, e.g. by using nozzle heads provided with numerous closely spaced outlets. The resulting coating formed is a plain coating layer that is not patterned when applied onto the work surfaces.

Illustrative examples of subject matter classified in this place:

1a.



1b.



Figures 1a and 1b illustrate an inkjet coating head (6) provided with several spraying nozzles (60) aligned along one or several columns, or along one or more of several rows.

2.

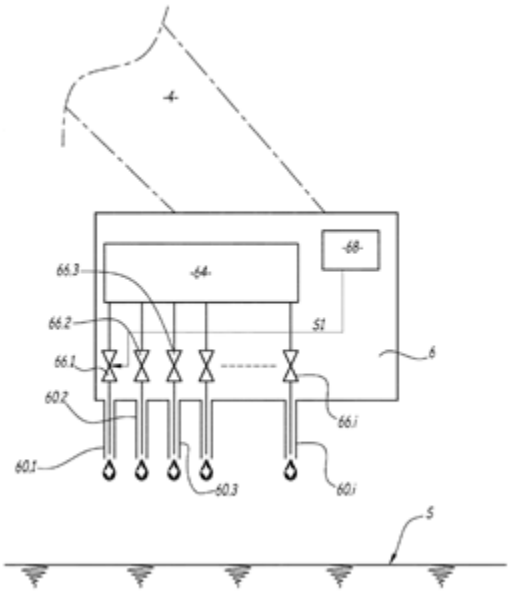


Figure 2 illustrates an inkjet coating head (6) provided with several nozzles (60.1, 60.2, 60.3 up to 60.i), each of the nozzles being configured to coat a surface (S) dropwise.

Relationships with other classification places

Subclass B41J and group B41J 3/4073 cover the projection of ink droplets for printing to form a meaningful pattern. Group B41J 11/0015 covers uniform or plain coating of copy material, e.g. paper, either before or after printing.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Selective printing on three-dimensional objects not being in sheet or web form	B41J3/4073

Synonyms and Keywords

In patent documents, the following words/expressions are often used as synonyms:

- "inkjet printing", "selective printing", "incremental printing", "drop on demand [DOD] printing", "non-impact printing [NPI]", "direct printing" and "drop discharge"

B05B13/0431

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Manipulators for painting or coating	B25J11/0075

B05B13/0447

References

Limiting references

This place does not cover:

Installation or apparatus for applying liquid or other fluent material to separate articles rotated during spraying operations	B05B13/0442

Informative references

Attention is drawn to the following places, which may be of interest for search:

Programme-controlled manipulators cooperating with conveyor means	B25J9/0093

2. A. DEFINITIONS (modified)

B05B

Replace: The existing Definition statement text with the following updated text.

Definition statement

This place covers:

Apparatus for the release or projection of drops or droplets into the atmosphere or into a chamber to form a mist or the like. The materials to be projected may be suspended in a stream of gas or vapour.

Apparatus as above, for the release or projection of streams or sprays of other fluent materials, e.g. particulate material entrained in a gas, into the atmosphere or into a chamber.

Nozzles or guns for the release of gas only, e.g. air or blowing guns or nozzles.

Projection of droplets of coating material out of numerous closely spaced nozzles by using an inkjet technology to form plain, i.e. not patterned, coating.

Examples of such apparatus, and subcomponents thereof covered by this subclass, include:

- Nozzles, spray heads, shower heads, roses, perforated pipes, spouts or other outlets, with or without auxiliary devices such as valves or heating means.
- Spraying or sprinkling apparatus with moving outlet elements or moving deflecting elements.
- Electrostatic spraying apparatus or installations.
- Spraying apparatus for discharge of liquids or other fluent materials from two or more sources, e.g. of liquid and air or powder and gas.
- Single-unit, i.e. unitary, hand-held apparatus in which flow of liquid is produced by the operator at the moment of use, e.g. by pumping, by squeezing a liquid container or by compressing a compressible bulb.
- Spraying plants, e.g. with means for supporting or feeding work; spray booths.
- Other spraying-type machines or apparatus, including fountains.
- Means for heating, mixing or pressurising of gases, liquids or other fluent materials that are sprayed, sprinkled, misted, released or projected using the apparatus of this subclass.
- Delivery control means or other details or accessories for use with the apparatus of this subclass.

Replace: The existing Relationships text with the following updated text.

Relationships with other classification places

Subclass B05C relates to apparatus for applying liquids or other fluent materials to surfaces in general. This subject matter generally relates to contact methods, e.g. spreading, pouring, dipping, rubbing, or using rollers or fluidized bed techniques, but not to spraying or atomising apparatus that is covered by subclass B05B. Also, subclass B05C relates to apparatus for projecting liquids or other fluent materials onto surfaces (group B05C5/00) or to the inside of hollow work (subgroup B05C7/02), and further to apparatus specially adapted for the projection of particulate material onto surfaces (subgroup B05C19/04). In subclass B05C, 'projection' relates to the application of a continuous stream of liquid or other fluent (e.g. particulate) material to a surface. In subclass B05B, 'projection' relates to the release of a discontinuous stream of drops, droplets or a cloud of particulate material into the atmosphere or into a chamber to form a mist or the like.

Subclass B05D relates to processes (including processes performed by spraying) for applying liquids or other fluent materials to surfaces, in general.

References

Delete: The following two references from the Limiting references table.

Limiting references

This place does not cover:

Aerosol containers	B65D83/14
Drinking fountains	E03B9/20

Replace: The existing Application-oriented references table with the following updated table.

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Dispensing fittings for drip irrigation, e.g. drippers	A01G25/023

Special adaptations or arrangements of liquid-spraying apparatus for the destruction of noxious animal or plants	A01M 7/00
Nozzles for bathing devices for special therapeutic or hygienic purposes	A61H33/00
Sprayers or atomisers specially adapted for therapeutic purposes	A61M11/00
Inhalators	A61M15/00
Nozzles specially adapted for fire-extinguishing	A62C31/02
Dispensers for soap	A47K 5/06
Apparatus for spreading or distributing liquids or other fluent materials already applied to a surface with a blast of gas or vapour	B05C11/06
Cleaning by the force of jets, e.g. blowing-out cavities	B08B5/02
Spray nozzles, nozzle headers or spray systems for cooling in metal-rolling mills	B21B 45/0233
Nozzles for working by laser beam using a fluid stream	B23K 26/14
Machines or devices for abrasive blasting with particulate material	B24C3/00
Multi-way nozzles specially adapted for injection moulding in making multilayered or multicoloured articles	B29C45/1603
Nozzles for injection moulding	B29C45/20
Nozzles for ink-jet printing mechanisms	B41J2/135
Arrangement of nozzles specially adapted for liquid supply in the cleaning of windscreens, windows or optical devices of vehicles	B60S1/52
Dropping or releasing powdered, liquid or gaseous matter in flight by spraying, e.g. insecticides	B64D1/18
Nozzles for introducing articles or materials into containers or wrappers	B65B39/00
Nozzles for delivery of liquid or semi-liquid contents by internal gaseous pressure	B65D83/28
Filling nozzles for transferring liquid from bulk storage containers or reservoirs into vehicles or into portable containers, e.g. in vehicle service stations	B67D7/42
Spray quenching devices for heat treatment of metals or alloys	C21D1/667
Nozzles for drilling by liquid or gas jets	E21B7/18
Supplying combustion engines in general with combustible mixtures or constituents thereof	F02M
Nozzles used in connection with end fittings of hoses	F16L 35/005
Atomising devices for mist lubrication	F16N7/34
Burners	F23D

Replace: The existing Informative references table with the following updated table.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Watering gardens, fields, sports grounds or the like	A01G25/00
Concentration, evaporation or drying of dairy by spraying into a gas stream	A23C 1/04
Processes for coating of sweetmeats or confectionery with atomised liquid, droplet bed or liquid spray	A23G 3/0089
Apparatus for coating or filling sweetmeats or confectionery with atomised liquid or liquid spray	A23G 3/2092
Pouring spouts of cooking-vessels	A47J 36/14
Spraying devices for supplying cleaning or surface treating agents for cleaning floors, carpets, furniture, walls or wall coverings	A47L 11/4088
Dish washing or rinsing machines with spraying devices	A47L15/00
Disinfection, sterilisation or deodorisation of air using sprayed or atomised substances	A61L9/14
Separation	B01D
Processes or devices for granulating materials by dividing liquid material into drops and solidifying the drops	B01J 2/02
Making microcapsules or microballoons by physical processes	B01J13/04
Cleaning in general by methods involving the use or presence of a liquid	B08B3/00
Making metallic powder by atomising or spraying	B22F9/08
Accessories fitted to machine tools for keeping tools or parts of the machine in good working condition or for cooling work	B23Q 11/00
Manipulators for painting or coating	B25J 11/0075
Severing by means of a fluid jet	B26F 3/004
Coating by incorporating preformed parts or layers for making articles of definite length during shaping by casting of material in a plastic state	B29C39/10
Coating by incorporating preformed parts or layers for making articles of indefinite length during shaping by casting of material in a plastic state	B29C39/18
Coating by incorporating preformed parts or layers for making articles of definite length during shaping by coating a mould, core or other substrate of material in a plastic state	B29C41/20
Coating by incorporating preformed parts or layers for making articles of indefinite length during shaping by coating a mould, core or other substrate of material in a plastic state	B29C41/30

Coating by incorporating preformed parts or layers for making articles of definite length during shaping by compression moulding of material in a plastic state	B29C43/18
Coating by incorporating preformed parts or layers for making articles of indefinite length during shaping by compression moulding of material in a plastic state	B29C43/28
Coating by incorporating preformed parts or layers by injection moulding during shaping of material in a plastic state	B29C45/14
Coating by incorporating preformed parts or layers by extrusion moulding during shaping of material in a plastic state	B29C48/15
Layered products, methods or apparatus for making layered products, methods or apparatus for laminating, ancillary operations in connection with laminating processes or operations specially adapted for layered products and not otherwise provided for	B32B
Aerosol containers	B65D83/14
Conveying articles or workpieces through baths of liquid	B65G49/02
Surface treatment of glass, not in the form of fibres or filaments, by coating	C03C17/00
Surface treatment of fibres made from glass, minerals or slags by coating	C03C25/10
Coating or impregnating after-treatment of mortars, concrete, stone or ceramics	C04B41/45
Coating or impregnation after-treatment of only artificial stone	C04B41/61
Coating or impregnation after-treatment of only ceramics	C04B41/81
Coating compositions, e.g. paints, varnishes or lacquers	C09D
Coating metallic material; Coating material with metallic material; Surface treatment of metallic material by diffusion into the surface, by chemical conversion or substitution; Coating by vacuum evaporation, by sputtering, by ion implantation or by chemical vapour deposition, in general	C23C
Processes for the electrolytic or electrophoretic production of coatings, e.g. electroplating; Electroforming; Apparatus therefor	C25D
Treating of textile materials by liquids, gases or vapours	D06B
Treating roads	E01C
Pillar fountains or like apparatus for dispensing drinking water, e.g. drinking fountains	E03B9/20
Jet regulators or jet guides, e.g. anti-splash devices, for fresh water taps	E03C1/08
Positive-displacement machines for liquids; Pumps for liquids or elastic fluids	F04
Valves; Taps, e.g. water-taps	F16K
Burners using a direct spraying action of liquid droplets or vaporised liquid into the combustion space	F23D11/00

Liquid ejecting guns, e.g. water pistols	F41B 9/00
Measuring volume, flow or liquid level, e.g. dosing	G01F
Manufacturing of record carriers	G11B7/26
Manufacture or treatment of semiconductors or solid-state devices, or of parts thereof	H01L21/00
Manufacture or treatment of individual inorganic light-emitting semiconductor devices having potential barriers, e.g. light-emitting diodes [LED]	H10H20/01

Replace: The existing Special rules text with the following updated text.

Special rules of classification

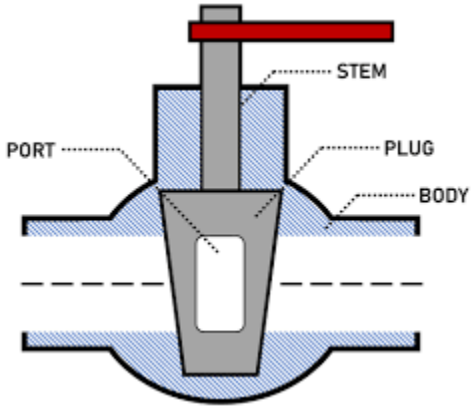
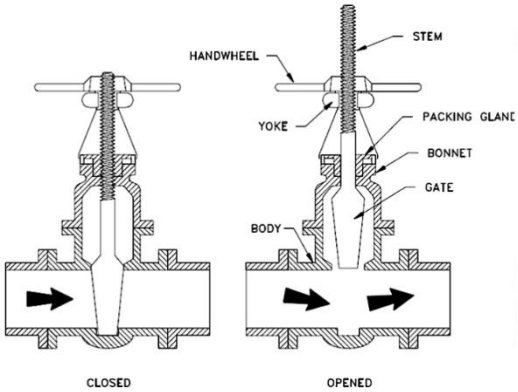
Apparatus for applying fluent materials to surfaces, in general, e.g. arrangements for cleaning discharge openings, devices or dispensing heads, of apparatus belonging to subclass B05C are classified in the relevant place of B05C, as well as in B05B15/50.

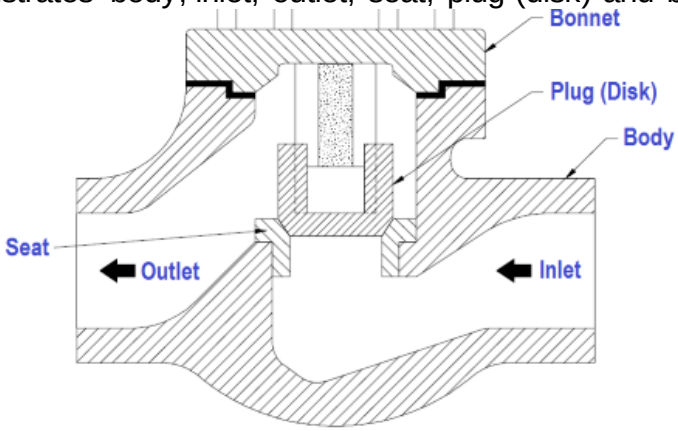
Considering the possible broad interpretation of the scope of subclass B05B, it is essential to pay attention to all references appearing in many titles of the B05B places. All devices relating to specific application fields are normally not classified in B05B unless some general function aspects are considered of relevance and are therefore (also) classified in subclass B05B.

Replace: The existing Glossary of terms table with the following updated table.

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

coating	the applied material. A coating may be a solidified layer originally applied as a liquid (e.g. dried paint) or a layer of material which, once applied, remains in a liquid or semi-liquid state (e.g. lubricant).
cock	a valve as defined in group F16K5/00, i.e. a cut-off apparatus having at least one of the sealing faces shaped as a more or less complete surface of a solid of revolution, the opening and closing movement being predominantly rotary. The Figure illustrates body, plug, port and stem: 
gate valve or sliding valve	a valve as defined in group F16K3/00, i.e. a cut-off apparatus with closure members having a sliding movement along the seat for opening and closing. The Figure illustrates a closed valve position and an opened valve position with body, gate, bonnet, packing gland, yoke, handwheel and stem: 
lift valve	a valve as defined in group F16K1/00, i.e. a cut-off apparatus with closure members having at least a component of their opening and

	closing motion perpendicular to the closing faces. The Figure illustrates body, inlet, outlet, seat, plug (disk) and bonnet: 
liquid or fluent	designates materials that can flow, e.g. liquids, including solutions, dispersions, suspensions, semi-liquids, pastes, melts or particulate materials
particulate materials	solid materials in the form of very small pieces, e.g. powders, granules, short fibres or chips

Insert: The following new Synonyms and Keywords section.

Synonyms and Keywords

In patent documents, the following words/expressions are often used as synonyms:

- "to atomize", "to spray", "to nebulize", "to disperse", "to project", "to release", "to discharge" and "to dispense"
- "spray", "jet", "mist" and "discharge"

B05B1/28

Insert: The following new Definition statement.

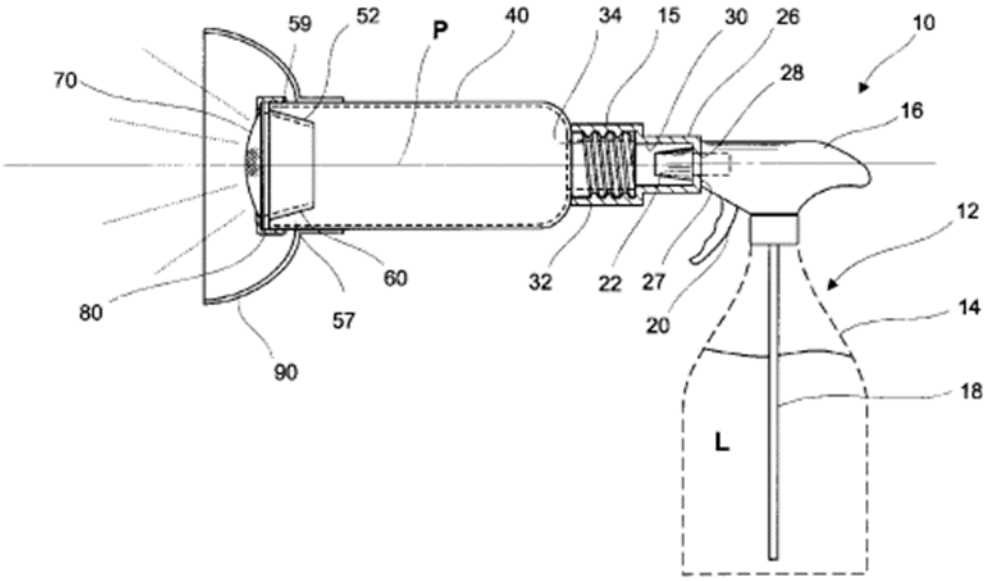
Definition statement

This place covers:

- Nozzles, spray heads or other fluid spraying outlets in combination with shielding elements attached to or integrally formed with the outlet elements, which block or shield a portion of the fluid discharged from the outlet elements, e.g. in order to limit the area of fluid spray.

- Nozzles, spray heads or other fluid spraying outlets in combination with integrally formed means for catching drips or collecting surplus liquid or other fluent material, e.g. in order to collect undesired surplus fluid.

Illustrative example of subject matter classified in this place:



The Figure illustrates a spray shield (90) to limit the area of spray.

Replace: The existing Application-oriented references table with the following updated table.

References

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Arrangements for controlling the spray area	B05B12/16
Shielding elements for controlling the spray area	B05B12/32
Arrangements for collecting, re-using or eliminating excess spraying material	B05B14/00

3. REVISION CONCORDANCE LIST (RCL)

Type*	**From CPC Symbol (existing)**	**To CPC Symbol(s)**
C	B05B 1/14	B05B 1/14, B05B 1/1421, B05B 1/1422, B05B 1/1423, B05B 1/1424, B05B 1/1425, B05B 13/002
C	B05B 1/18	B05B 1/18, B05B 1/188, B05B 1/1881, B05B 1/1882, B05B 1/1884, B05B 1/1886, B05B 1/1887, B05B 1/189, B05B 1/1892, B05B 1/1894, B05B 1/1896, B05B 1/192
F	B05B 1/185	B05B 1/182, B05B 1/1821, B05B 1/1822, B05B 1/1823, B05B 1/1824, B05B 1/1825
C	B05B 3/02	B05B 3/02, B05B 3/0202
D	B05B 3/022	<administrative transfer to B05B 3/0204>
D	B05B 3/023	<administrative transfer to B05B 3/02>
C	B05B 3/04	B05B 3/04, B05B 3/0417, B05B 1/085
D	B05B 3/0404	<administrative transfer to B05B 1/0856>
D	B05B 3/0409	<administrative transfer to B05B 3/04>
D	B05B 3/0413	<administrative transfer to B05B 3/0412>
D	B05B 3/0418	<administrative transfer to B05B 3/0417>
D	B05B 3/0422	<administrative transfer to B05B 3/0417>
D	B05B 3/0427	<administrative transfer to B05B 3/0429>
D	B05B 3/0431	<administrative transfer to B05B 3/0432>
D	B05B 3/0436	<administrative transfer to B05B 3/0435>
D	B05B 3/044	<administrative transfer to B05B 3/0438>
D	B05B 3/0445	<administrative transfer to B05B 3/0444>
D	B05B 3/045	<administrative transfer to B05B 3/0446>
D	B05B 3/0454	<administrative transfer to B05B 3/0453>
D	B05B 3/0459	<administrative transfer to B05B 3/0423>
D	B05B 3/0463	<administrative transfer to B05B 3/043>
D	B05B 3/0468	<administrative transfer to B05B 3/0425>
D	B05B 3/0472	<administrative transfer to B05B 3/0455>
D	B05B 3/0477	<administrative transfer to B05B 3/0461>
D	B05B 3/0481	<administrative transfer to B05B 3/0455>
D	B05B 3/0486	<administrative transfer to B05B 3/0426>
F	B05B 3/049	B05B 1/0854, B05B 3/0421
F	B05B 3/0495	B05B 1/0852, B05B 3/0419
C	B05B 12/04	B05B 12/04, B05B 13/002
C	B05B 12/1472	B05B 12/1472, B05B 13/002
C	B05B 13/0431	B05B 13/0431, B05B 13/002, B05B 13/0433
C	B05B 13/0452	B05B 13/0452, B05B 13/002, B05B 13/0433
C	B05B 13/0457	B05B 13/0457, B05B 13/0431

* C = entries with modified file scope where reclassification of documents from the entries is involved; Q = new entries which are firstly populated with documents via administrative transfers from deleted (D) entries. Afterwards, the transferred documents into the Q entry will either stay or be moved to more appropriate entries, as determined by intellectual reclassification; D = deleted entries; F = frozen entries will be deleted once reclassification of documents from the entries is completed.

NOTES:

- Only C, D, F, and Q type entries are included in the table above.
- When multiple symbols are included in the “To” column, do not use ranges of symbols.

- For administrative transfer of documents, the following text should be used: "< administrative transfer to XX>", "<administrative transfer to XX and YY simultaneously>", or "<administrative transfer to XX, YY, ...and ZZ simultaneously>" when administrative transfer of the same documents is to more than one place.
- Administrative transfer to main trunk groups is assumed to be the source allocation type, unless otherwise indicated.
- Administrative transfer to 2000/Y series groups is assumed to be "additional information".
- If needed, instructions for allocation type should be indicated within the angle brackets using the abbreviations "ADD" or "INV": <administrative transfer to XX ADD>, <administrative transfer to XX INV>, or < administrative transfer to XX ADD, YY INV, ... and ZZ ADD simultaneously>.
- In certain situations, the "D" entries of 2000-series or Y-series groups may not require a destination ("To") symbol, however it is required to specify "<no transfer>" in the "To" column for such cases.
- RCL is not needed for finalisation projects.

4. CHANGES TO THE CPC-TO-IPC CONCORDANCE LIST (CICL)

CPC	**IPC**	**Action***
B05B 1/085	B05B 1/08	NEW
B05B 1/0852	B05B 1/08	NEW
B05B 1/0854	B05B 1/08	NEW
B05B 1/0856	B05B 1/08	NEW
B05B 1/1421	B05B 1/14	NEW
B05B 1/1422	B05B 1/14	NEW
B05B 1/1423	B05B 1/14	NEW
B05B 1/1424	B05B 1/14	NEW
B05B 1/1425	B05B 1/14	NEW
B05B 1/182	B05B 1/18	NEW
B05B 1/1821	B05B 1/18	NEW
B05B 1/1822	B05B 1/18	NEW
B05B 1/1823	B05B 1/18	NEW
B05B 1/1824	B05B 1/18	NEW
B05B 1/1825	B05B 1/18	NEW
B05B 1/188	B05B 1/18	NEW
B05B 1/1881	B05B 1/18	NEW
B05B 1/1882	B05B 1/18	NEW
B05B 1/1884	B05B 1/18	NEW
B05B 1/1886	B05B 1/18	NEW
B05B 1/1887	B05B 1/18	NEW
B05B 1/189	B05B 1/18	NEW
B05B 1/1892	B05B 1/18	NEW
B05B 1/1894	B05B 1/18	NEW
B05B 1/1896	B05B 1/18	NEW
B05B 1/192	B05B 1/18	NEW
B05B 3/0202	B05B 3/02	NEW
B05B 3/0204	B05B 3/02	NEW
B05B 3/022		DELETE
B05B 3/023		DELETE
B05B 3/0404		DELETE
B05B 3/0409		DELETE
B05B 3/0412	B05B 3/04	NEW
B05B 3/0413		DELETE
B05B 3/0417	B05B 3/04	NEW
B05B 3/0418		DELETE
B05B 3/0419	B05B 3/04	NEW
B05B 3/0421	B05B 3/04	NEW
B05B 3/0422		DELETE
B05B 3/0423	B05B 3/04	NEW

CPC NOTICE OF CHANGES 1759

DATE: AUGUST 1, 2025

PROJECT RP11745

CPC	**IPC**	**Action***
B05B 3/0425	B05B 3/04	NEW
B05B 3/0426	B05B 3/04	NEW
B05B 3/0427		DELETE
B05B 3/0429	B05B 3/04	NEW
B05B 3/043	B05B 3/04	NEW
B05B 3/0431		DELETE
B05B 3/0432	B05B 3/04	NEW
B05B 3/0435	B05B 3/04	NEW
B05B 3/0436		DELETE
B05B 3/0438	B05B 3/04	NEW
B05B 3/044		DELETE
B05B 3/0444	B05B 3/04	NEW
B05B 3/0445		DELETE
B05B 3/0446	B05B 3/04	NEW
B05B 3/045		DELETE
B05B 3/0453	B05B 3/04	NEW
B05B 3/0454		DELETE
B05B 3/0455	B05B 3/04	NEW
B05B 3/0459		DELETE
B05B 3/0461	B05B 3/04	NEW
B05B 3/0463		DELETE
B05B 3/0468		DELETE
B05B 3/0472		DELETE
B05B 3/0477		DELETE
B05B 3/0481		DELETE
B05B 3/0486		DELETE
B05B 13/002	B05B 13/00	NEW
B05B 13/0433	B05B 13/04	NEW

*Action column:

- For an (N) or (Q) entry, provide an IPC symbol and complete the Action column with “NEW.”
- For an existing CPC main trunk entry or indexing entry where the existing IPC symbol needs to be changed, provide an updated IPC symbol and complete the Action column with “UPDATED.”
- For a (D) CPC entry or indexing entry complete the Action column with “DELETE.” IPC symbol does not need to be included in the IPC column.
- For an (N) 2000 series CPC entry which is positioned within the main trunk scheme (breakdown code) provide an IPC symbol and complete the action column with “NEW”.
- For an (N) 2000 series CPC entry positioned at the end of the CPC scheme (orthogonal code), with no IPC equivalent, complete the IPC column with “CPCONLY” and complete the action column with “NEW”.

NOTES:

- F symbols are <u>not</u> included in the CICL table above.
- T and M symbols are not included in the CICL table above unless a change to the existing IPC is desired.

5. CROSS-REFERENCE LIST (CRL)

Scheme references impacted by this revision project

Location of reference to be changed	**Referenced subclass or group to be changed**	**Action; New text**
A01M7/005	B05B 1/00	REPLACE existing text with the following text: {Special arrangements or adaptations of the spraying or distributing parts, e.g. adaptations or mounting of the spray booms, mounting of the nozzles, protection shields (nozzles, spray heads or other outlets B05B 1/00; spray pistols B05B 9/01)}
A01M9/0076	B05B 1/00	REPLACE existing text with the following text: {Special arrangements or adaptations of the dusting or distributing parts, e.g. mounting of the spray booms, the protection shields (nozzles, spray heads or other outlets B05B 1/00; spray pistols B05B 9/01)}
A47K3/28	B05B 1/00	REPLACE existing text with the following text: Showers {or bathing douches}(combined with baths A47K 3/20; nozzles, spray heads or other outlets B05B 1/00{; means for suspending or supporting the supply pipe or supply hose E03C 1/06})
B05B12/06	B05B 1/08	REPLACE existing text with the following text: for effecting pulsating flow {(nozzles, spray heads or other outlets with means for generating a discharge of pulsating nature B05B 1/08)}
B05B12/085	B05B 1/3006, B05B 1/323	REPLACE existing text with the following text: {responsive to flow or pressure of liquid or other fluent material to be discharged

Location of reference to be changed	**Referenced subclass or group to be changed**	**Action; New text**
		(B05B 1/3006, B05B 1/323 take precedence; spray pistols designed to control volume of flow with the controlling means being fluid actuated B05B 7/1254)}
F16L NOTE 2.	B05B 1/20	REPLACE existing text with the following text: B05B 1/20 Perforated pipes {or troughs, e.g. spray booms; Outlet elements therefor}

Definitions references impacted by this revision project

Location of reference to be changed	**Referenced subclass or group to be changed**	**Section of definition**	**Action; New reference symbol; New text**
A01M7/00	B05B 1/00	Informative references	REPLACE existing text and reference with the following text and reference: Nozzles, spray heads or other outlets, with or without auxiliary devices such as valves or heating means B05B 1/00
A47L9/00	B05B 1/00	Informative references	REPLACE existing text and reference with the following text and reference: Nozzles, spray heads or other outlets, with or without auxiliary devices such as valves or heating means B05B 1/00
A47L15/4278	B05B 1/00	Informative references	REPLACE existing text and reference with the following text and reference: Nozzles, spray heads or other outlets, with or without auxiliary devices such as valves or heating means B05B 1/00

Location of reference to be changed	**Referenced subclass or group to be changed**	**Section of definition**	**Action; New reference symbol; New text**
A61H2033/021	B05B 1/00	Informative references	REPLACE existing text and reference with the following text and reference: Nozzles, spray heads or other outlets, with or without auxiliary devices such as valves or heating means B05B 1/00
A61H33/026	B05B 1/00	Informative references	REPLACE existing text and reference with the following text and reference: Nozzles, spray heads or other outlets, with or without auxiliary devices such as valves or heating means B05B 1/00
A61H33/6021	B05B 1/00	Limiting references	REPLACE existing text and reference with the following text and reference: Nozzles, spray heads or other outlets, with or without auxiliary devices such as valves or heating means B05B 1/00
A62C31/00	B05B 1/00	Informative references	REPLACE existing text and reference with the following text and reference: Nozzles, spray heads or other outlets, with or without auxiliary devices such as valves or heating means B05B 1/00
B01L3/0268	B05B 1/00	Informative references	REPLACE existing text and reference with the following text and reference: Nozzles, spray heads or other outlets, with or without auxiliary devices such as valves or heating means B05B 1/00
B05B12/085	B05B 1/3006	Limiting references	REPLACE existing text and reference with the following text and reference: Nozzles, spray heads or other outlets designed to control volume of flow, the controlling element being actuated by the pressure of the fluid to be sprayed B05B 1/3006

Location of reference to be changed	**Referenced subclass or group to be changed**	**Section of definition**	**Action; New reference symbol; New text**
B05B12/085	B05B 1/323	Limiting references	REPLACE existing text and reference with the following text and reference: Nozzles, spray heads or other outlets designed to control volume of flow in which a valve member forms part of the outlet opening, the valve member being actuated by the pressure of the fluid to be sprayed B05B 1/323
B25J	B05B 13/0431	Application-oriented references	REPLACE existing text and reference: Spray heads moved by robots or articulated arms, e.g. for applying liquid or other fluent material to 3D surfaces B05B 13/0431
C10B	B05B 1/00	Informative references	REPLACE existing text and reference with the following text and reference: Nozzles, spray heads or other outlets, with or without auxiliary devices such as valves or heating means B05B 1/00
E03C1/00	B05B 1/18	Limiting references	REPLACE existing text and reference with the following text and reference: Roses; Shower heads B05B 1/18
F21V33/004	B05B 1/00	Informative references	REPLACE existing text and reference with the following text and reference: Nozzles, spray heads or other outlets, with or without auxiliary devices such as valves or heating means B05B 1/00
F24F6/00	B05B 3/10	Informative references	REPLACE existing text and reference with the following text and reference: Spraying or sprinkling apparatus with rotating elements discharging liquid, e.g. water, over substantially the whole periphery of each rotating element by centrifugal forces B05B 3/10

NOTES:

- The CRL tables above are used for changes to locations **outside** of the project scope. Changes to references in scheme titles or definitions inside the project scope will be reflected in the "scheme change" template or one of the "definition" templates.
- In addition to other changes proposed in the tables above, in the column titled "Referenced subclass or group to be changed," **referenced** D symbols should indicate an action of "delete" or should indicate a replacement symbol and **referenced** F symbols should indicate a replacement symbol.
- When a reference is deleted, text related to that reference will also be deleted unless other references or a range of references associated with the same text remain.