

ECLA EUROPEAN CLASSIFICATION

- E01H STREET CLEANING; CLEANING OF PERMANENT WAYS; CLEANING BEACHES; DISPERSING [N: or preventing] FOG IN GENERAL [N: Cleaning street or railway furniture or tunnel walls] (cleaning in general [B08B](#))**
- E01H1/00 Removing undesirable matter from roads or like surfaces, with or without moistening of the surface (for snow or ice [E01H5/00](#); cleaning tramway rails [E01H8/00](#); obstruction removers on vehicles [B60R19/00](#); in combination with application of bitumen or the like [E01C19/16](#); in combination with application of traffic line [E01C23/16](#); [N: Sweeping apparatus, particularly for lawns [A01G1/12](#); Removing undesirable matter from floors and similar surfaces [A47L5/00](#) to [A47L13/00](#))] [C1203]**
- E01H1/00B** . [N: Treatment of dispersed oil or similar pollution on roads, for instance devices for applying treating agents (hydraulic loosening or removal of liquids [E01H1/10](#); from surface of open water [E02B15/04](#))] [C9609]
- E01H1/00C** . [N: Upkeep of road sides along the pavement, for instance cleaning devices particularly for side strips (control of undesirable vegetation [E01H11/00](#); mowers for embankments [A01D34/86](#); soil working [E02F](#); trimming pavement edges [E01C23/09](#))]
- E01H1/00D** . [N: Mobile installations, particularly for upkeeping in situ road or railway furniture, for instance road barricades, traffic signs; Mobile installations particularly for upkeeping tunnel walls (built-in cleaning devices [E21D11/00B](#))]
- E01H1/00E** . [N: Specially adapted for removing excrements (hand implements [E01H1/12](#))] [C0309]
- E01H1/00E2** . . [N: in situ treatment of excrements] [N0309]
- E01H1/02** . Brushing apparatus, [N: e.g. with auxiliary instruments for mechanically loosening dirt] ([N: [E01H1/00C](#), [E01H1/00D](#), [E01H1/00E](#) and] [E01H1/08](#) to [E01H1/14](#) take precedence; [N: loosening by means of gas jets or streams [E01H1/08B2](#), [E01H1/08D2](#); with brushes functioning under vacuum or combined with independent suction nozzles [E01H1/08C](#); loosening by means of liquid streams [E01H1/10B](#); mechanical loosening instruments other than brushes [E01H1/10C](#); for railway tracks [E01H8/00](#)]; brushes in general [A46B](#); [N: for floors or similar surfaces [A47L11/22](#), [A47L11/24](#)])
- E01H1/04** . . taking- up the sweepings, e.g. for collecting, for loading [N: with dust collector; [E01H1/08C3](#) takes precedence; suction machines with brushes [E01H1/08C2B](#), [E01H1/08D2](#); taking- up devices with other mechanical loosening instruments [E01H1/10C2](#)]
- E01H1/04B** . . . [N: the loading means being an endless belt or an auger]
- E01H1/04C** . . . [N: the loading means being a rotating brush with horizontal axis ([E01H1/04B](#) takes precedence)]
- E01H1/04D** . . . [N: Collecting apparatus characterised by the hopper or by means for unloading the hopper]
- E01H1/05** . . with driven brushes ([E01H1/04](#) takes precedence) [N: rotary brushes for snow removal [E01H5/09B](#)]
- E01H1/05B** . . . [N: having vertical axes]
- E01H1/05C** . . . [N: having horizontal axes]
- E01H1/08** . Pneumatically dislodging or taking-up undesirable matter [N: or small objects] ([N: [E01H1/00E](#) and [E01H1/00D](#) take precedence;] suction cleaners in general [A47L5/00](#))

- to A47L9/00; [N: sucking-off liquids or semi-liquids E01H1/10D]); Drying by heat only or by streams of gas (permanently-installed heating or blowing devices E01C11/26; heating or drying for road- building or repairing E01C23/14; [N: devices for melting snow or ice in situ E01H5/10, E01H8/08; for scorching undesirable vegetation E01H11/00]); Cleaning by projecting abrasive particles (sand-blasting in general B24C; [N: roughening of road surfaces E01C23/08; cleaning of road joints E01C23/09B])
- E01H1/08B . . [N: Loosening or dislodging by blowing (with steam E01H1/10 combined with suction E01H1/08D; removing snow by blowing E01H5/10D; removing fog by blowing E01H13/00; cleaning rails by blowing E01H8/10B, E01H8/12B; cleaning joints in road construction by blowing E01C23/09B); Drying by means of gas streams (by heat only E01H1/08; combined with snow or ice melting E01H5/10, E01H5/10D, E01H5/10E)]
- E01H1/08B2 . . . [N: in apparatus with mechanical loosening or feeding instruments, e.g. brushes, scrapers (brushing devices per se E01H1/02, other loosening devices per se E01H1/10C)]
- E01H1/08C . . [N: Dislodging by suction; Mechanical dislodging-cleaning apparatus with independent or dependent exhaust, e.g. dislodging-sweeping machines with independent suction nozzles (combined with blowing E01H1/08D2); Mechanical loosening devices working under vacuum]
- E01H1/08C2 . . . [N: Apparatus dislodging all of the dirt by suction (liquids or semi-liquids 1/10D; combined with loosening by blowing E01H1/08D; for cleaning rails E01H8/10B, E01H8/12B; removing snow by suction E01H5/10D, E01H8/08); Suction nozzles (independent suction nozzles in mechanical dislodging-cleaning devices E01H1/08C; suction and blowing nozzles E01H1/08D)]
- E01H1/08C2B [N: with mechanical loosening or feeding instruments for the dirt to be sucked- up, e.g. brushes, scrapers (brushing installations per se E01H1/02; other loosening devices per se E01H1/10C)]
- E01H1/08C3 . . . [N: Apparatus in which the mechanically dislodged dirt is partially sucked-off, e.g. dislodging- sweeping apparatus with dirt collector in brush housing or dirt container (mechanical dislodging machines with independent suction nozzles E01H1/08C; combined with blowing and suction E01H1/08D2)]
- E01H1/08D . . [N: Apparatus loosening or removing the dirt by blowing and subsequently dislodging it at least partially by suction (liquids or semi-liquids E01H1/10D); Combined suction and blowing nozzles]
- E01H1/08D2 . . . [N: with mechanical loosening or feeding instruments for the dirt to be removed pneumatically, e.g. brushes, scrapers (brushing installations per se E01H1/02; other loosening devices per se E01H1/10C)]
- E01H1/10 . . Hydraulically loosening or dislodging undesirable matter (stationary flushing devices E01H3/04); Raking or scraping apparatus (hand implements E01H1/12); [N: Removing liquids or semi-liquids e.g., absorbing water, sliding-off mud (removing pneumatically E01H1/08; steam-cleaning E01H11/00)] [C9810]
- E01H1/10B . . [N: Hydraulic loosening or dislodging, combined or not with mechanical loosening or dislodging, e.g. road washing machines with brushes or wipers (E01H1/00D takes precedence; cleaning rails E01H8/10B, E01H8/12B; applying liquids in general E01H3/00; scrubbing machines for floors or similar surfaces A47L11/26 to A47L11/30)]
- E01H1/10B2 . . . [N: in which the soiled loosening or washing liquid is removed, e.g. by suction (removing liquids in general E01H1/10D)] [C9609]
- E01H1/10C . . [N: Raking, scraping or other mechanical loosening devices, e.g. for caked dirt (loosening ice or hard snow E01H5/12; working the road surface E01C23/08); Apparatus for mechanically moving dirt on road surfaces, e.g. wipers for evacuating mud (wipers as accessories for road washing machines E01H1/10B; of

- devices for removing liquids or semi-liquids [E01H1/10D](#); of snow scrapers for evacuating wet snow [E01H5/06](#); wipers for spreading bitumen or the like [E01C19/16](#), [E01C19/17E](#)] [C9703]
- E01H1/10C2 . . . [N: in which the loosened or dislodged dirt is picked up, e.g. shoveling carts ([E01H1/10D](#) takes precedence)]
- E01H1/10D . . [N: Removing liquids or semi- liquids, e.g. absorbing rain water, sucking-off mud (in road washing machines [E01H1/10B2](#); in snow melting [E01H5/10E](#); applying absorbing agents on oil or the like [E01H1/00B](#); constructional measures for draining roads [E01C11/22C](#))]
- E01H1/12 . Hand implements, e.g. litter pickers ([N: blowing or suction instruments [E01H1/08](#); spraying instruments [E01H1/10B](#)]; rakes [A01D7/00](#); [N: brushes or brooms [A46B](#), [A46D](#); floor scrapers [A47L13/02](#); floor squeegees [A47L13/11](#)]) [C9810]
- E01H1/12B . . [N: for picking up excrements (manure or urine pouches for animal husbandry [A01K23/00](#))] [C0309]
- E01H1/12C . . [N: in situ treatment of excrements] [N0309]
- E01H1/14 . Removing by magnetic effect [N: (general household magnetic cleaning implements [A47L13/41](#); as equipment for road vehicles [B60R19/00](#))] [C9609]
- E01H3/00** **Applying liquids to roads or like surfaces, e.g. for dust control; Stationary flushing devices** (combined with removal of undesirable matter [E01H1/00](#); spray heads, other outlets [B05B](#); [N: applying hot water for melting snow [E01H5/10](#); applicators for melting liquids [E01H10/00](#); weed destruction [E01H11/00](#)]) [C1203]
- E01H3/02 . Mobile apparatus, e.g. watering-vehicles (vehicle features [B60P3/22](#); [N: moistening combined with the removal of undesirable matter [E01H1/00](#); mobile flushing or washing installations [E01H1/10B](#)] applying liquid materials for road paving materials [E01C19/16](#)) [N: applying curing agents on concrete roads [E01C23/03](#); applying marking-out agents [E01C23/16](#); Road moistening devices in cleaning machines per se] [N: (mobile apparatus specially adapted for applying liquid or semi-liquid thawing materials [E01H10/00D](#))]
- E01H3/04 . Fixed devices, e.g. permanently- installed flushing means ([N: fixed applicators for defrosting agents [E01H10/00](#); fixed flushing installations for tramway rails [E01B21/02](#); built-in irrigation devices for sports grounds [E01C13/02](#); hydrants [E03B9/00](#)]) [C1203]
- E01H4/00** **Working on surfaces of snow or ice in order to make them suitable for traffic or sporting purposes, e.g. by compacting snow** (production of artificial snow [F25C3/04](#)) [C0903]
- E01H4/02 . for sporting purposes, e.g. preparation of ski trails; [N: Construction of artificial surfacings for snow or ice sports (construction of ice skating rinks [E01C13/10B](#)); Trails specially adapted for on-the-snow vehicles], e.g. devices adapted for ski-trails (production of snow or ice for winter sports or similar recreational purposes [F25C3/00](#)) [C0903]
- E01H4/02B . . [N: Maintaining surfaces for ice sports, e.g. of skating rinks]
- E01H5/00** **Removing snow or ice from roads or like surfaces; Grading or roughening snow or ice** (by applying de-icing agents [E01H10/00](#); obstruction removers on vehicles [B60R19/00](#); sand, gravel or salt spreaders [E01C19/20](#)) [C9703]
- E01H5/02 . Hand implements ([E01H5/04](#), [E01H5/10](#), [E01H5/12](#) take precedence) [N: shovels or

spades in general [A01B1/02](#); brooms, brushes [A46B](#)]

- E01H5/04 . Apparatus propelled by animal or engine power; Apparatus propelled by hand with driven dislodging or conveying [N: levelling] elements, conveying pneumatically [N: for the dislodged material] ([E01H5/10](#), [E01H5/12](#) take precedence)
- E01H5/04B . . [N: Means per se for conveying or discharging the dislodged material, e.g. rotary impellers, discharge chutes (dislodging apparatus provided therewith [E01H5/07](#), [E01H5/08](#), [E01H5/10C](#), [E01H5/12](#))]
- E01H5/06 . . dislodging essentially by non-driven elements, e.g. scraper blades, [N: snow-plough blades, scoop blades]
- E01H5/06B . . . [N: by scraper blades]
- E01H5/06B2 [N: by scraper blades displaceable for shock-absorbing purposes]
- E01H5/06C [N: by snow-plough blades tiltable for shock-absorbing purposes]
- E01H5/06D [N: characterised by the form of the snow-plough blade, e.g. flexible, or by snow-plough blade accessories ([E01H5/06B](#),[E01H5/06C](#)take precedence)]
- E01H5/06D2 [N: Snow-plough blade accessories, e.g. deflector plates, skid shoes]
- E01H5/06E [N: by side-wing snow-plough blades]
- E01H5/06F [N: by backblades (scraper blades mounted on the rear of a tractor [E02F3/76D](#))]
- E01H5/07 and conveying dislodged material by driven or pneumatic means [N: removing and melting [E01H5/10C](#); picking-up installations scraping off dirt [E01H1/10C](#)]
- E01H5/07B [N: by belt or chain conveyers (dislodging by means of elements secured to endless belts or chains[E01H5/08](#))]
- E01H5/07C [N: by rotary or pneumatic conveying means, e.g. impeller wheels (dislodging by rotary means [E01H5/09](#))]
- E01H5/08 . . dislodging essentially by driven elements, [N: e.g. vibrated; removing and melting [E01H5/10C](#); with heated instruments [E01H5/10](#)]
- E01H5/09 the elements being rotary or moving along a closed circular path, e.g. rotary cutter, digging wheels
- E01H5/09B [N: Brushing elements]
- E01H5/09C [N: about vertical or substantially vertical axes]
- E01H5/09D [N: about axes parallel or substantially parallel to the direction of clearing]
- E01H5/09E [N: about horizontal or substantially horizontal axes perpendicular or substantially perpendicular to the direction of clearing]
- E01H5/10 . . by application of heat [N: for melting snow or ice, whether cleared or not, combined or not with clearing or removing mud or water, e.g. burners for melting in situ, heated clearing instruments] ([N: drying by heat [E01H1/08B](#); melting by application of defrosting agents [E01H10/00](#); weed scorching devices which can also melt snow [E01H11/00](#);) stationary blowing or paving heating means [E01C11/26](#)); [N: Cleaning snow by blowing or suction only] [C9609]
- E01H5/10B . . [N: Self-contained devices for melting dislodged snow or ice, e.g. built-in melting chambers, movable melting tanks (combined with removing devices [E01H5/10C](#))]
- E01H5/10C . . [N: Removing devices for dislodging snow or ice; followed by melting the removed material (removing by suction only and subsequent melting [E01H5/10D](#))]
- E01H5/10D . . [N: Clearing snow or ice exclusively by means of rays or streams of gas or steam, or by suction with or without melting ([E01H5/10E](#) takes precedence; drying by means of gas streams, blowing- off dirt [E01H1/08B](#); sucking-off dirt [E01H1/08C](#))]

- E01H5/10E . . [N: Devices for melting snow or ice in situ and removing subsequently for the mud or melting water (melting in situ [E01H5/10](#); by means of hot gases or steam [E01H5/10D](#); removing water or mud [E01H1/10D](#))]
- E01H5/12 . Apparatus or implements specially adapted for breaking, disintegrating, or loosening layers of ice or hard snow[N: with or without clearing or removing ([E01H5/10](#) takes precedence); Roughening ice or hard snow by means of tools (by means of gritting materials [E01H10/00](#); roughening or breaking-up pavements [E01C23/08](#), [E01C23/12](#))]
- E01H6/00 Apparatus equipped with, or having provisions for equipping with, both elements [N: for especially] removal of refuse or the like and elements for removal of snow or ice ([E01H8/10](#) takes precedence)**
- E01H8/00 Removing undesirable matter from the permanent way of railways; Removing undesirable matter from tramway rails ([E01H1/00](#) to [E01H6/00](#) take precedence; [N: controlling vegetation [E01H11/00](#); removing ballast from rails or sleepers [E01B27/02D](#); removing, cleaning the ballast itself [E01B27/04](#), [E01B27/06](#)] [C1203]**
- E01H8/02 . Methods or apparatus for removing ice or snow from railway tracks, e.g. using snow-ploughs [N: Devices for dislodging snow or ice which are carried or propelled by tramway vehicles] (operating only on rails or flange grooves [E01H8/10](#)); [N: Moving or removing ballast; ([E01B27/02](#), [E01B27/04](#) take precedence; removing snow or ice in general [E01H5/00](#))]
- E01H8/04 . . essentially by non-driven elements [N: Clearing instruments, e.g. scraping blades, scoop plates (with oscillating or vibrating tools [E01H8/06](#); with heated instruments or combined with melting [E01H8/10](#); ballast ploughs [E01B27/02D2](#); track clearing devices [B61F19/06](#))] [C9609]
- E01H8/06 . . essentially by driven tools [N: clearing instruments, e.g. rotary cutting tools or brushes (with heated instruments or combined with melting [E01H8/08](#); for spreading or redistributing ballast [E01B27/02D3](#))] [C9609]
- E01H8/08 . . by application of heat,[N: e.g. by means of heated clearing instruments, melting in situ] ([N: weed scorching devices which may also melt snow [E01H11/00](#);] heated track [E01B19/00](#)); [N: Clearing devices which melt the dislodged snow; Clearing exclusively by means of rays or streams or gas or stream, or by suction][C9609]
- E01H8/10 . Removing undesirable matter from rails, flange grooves, or the like [N: railway parts], e.g. removing ice from contact rails, removing mud from flange grooves (heating, blowing, or fluid-applying devices installed in the track [E01B19/00](#); built-in draining devices for rails [E01B21/02](#); removing ballast from rails [E01B27/04](#))
- E01H8/10B . . [N: Pneumatically or hydraulically loosening, removing or dislodging undesirable matter, e.g. removing by blowing, flushing, suction; Application of melting liquids; Loosening or removing by means of heat, e.g. cleaning by plasma torches, drying by burners ([E01H8/12B](#) takes precedence; drying, blowing or liquid-applying devices incorporated in the permanent way [E01B19/00](#); heating or cooling rails during construction or maintenance [E01B31/18](#); wetting or lubricating rails [B61K3/00](#); plasma torches [H05H1/26](#))]
- E01H8/12 . . specially adapted to grooved rails, flange-ways, or like [N: parts of the permanent way, e.g. level crossings or switches]
- E01H8/12B . . . [N: Pneumatically or hydraulically loosening, removing or dislodging undesirable matter, e.g. removing by blowing, suction or flushing (flushing devices incorporated in tram tracks [E01B21/02](#)); Loosening or removing by means of heat (built-in heating, blowing or liquid applying devices for switches [E01B7/24](#))] [C9609]
- E01H10/00 Improving gripping of ice-bound or other slippery traffic surfaces, e.g. using**

gritting or thawing materials [N: Roadside storage of gritting or solid thawing materials; Permanently installed devices for applying gritting or thawing materials; Mobile apparatus specially adapted for treating wintry roads by applying liquid, semi-liquid or granular materials] (roughening ice by means of tools [E01H5/12](#); applying de-icing agents to rails [E01H8/10](#); thawing materials [C09K3/18](#); by constructional features [E01C11/24](#); [N: apparatus for distributing granular materials for road building purposes [E01C19/20](#); treatment of dispersed oil or similar pollution on roads [E01H1/00B](#)])

- E01H10/00B . [N: Roadside storage of gritting or solid thawing materials, e.g. grit or salt bins]
- E01H10/00C . [N: Permanently-installed devices for applying gritting or thawing materials, e.g. for preading grit, for spraying de-icing liquids]
- E01H10/00D . [N: Mobile apparatus specially adapted for preparing or applying liquid or semi-liquid thawing material or spreading granular material on wintry roads]

E01H11/00 **Control of undesirable vegetation on roads [N: or similar surfaces] or permanent ways of railays**, [N: e.g. devices for scorching weeds or for applying herbicides] (destruction of undesirable vegetation in general [A01M7/00](#) to [A01M15/00](#), [A01M21/00](#); weeding involving working the ballast [E01B27/00](#); [N: mowers for embankments [A01D34/86](#); hedge shearing machines [A01G3/04](#)]; **Applying liquids, e.g. water, weed-killer bitumen, to permanent ways** (specially to rails [E01H8/10](#) [N: [E01H8/10B](#), [E01H8/12B](#)]; for preserving sleepers [E01B31/20](#))

E01H12/00 **Cleaning beaches [N: or sandboxes]** [[C0708](#)]

- E01H12/00B . [N: Treatment in situ (E01H12/00D takes precedence)] [[N0708](#)]
- E01H12/00C . [N: using floating devices] [[N0708](#)]
- E01H12/00D . [N: Oil removal] [[N0708](#)]
- E01H12/00E . [N: cleaning sandboxes] [[N0708](#)]

E01H13/00 **Dispersing [N: or preventing] fog in general, e.g. on roads, on airfields** [N: (condensing atmospheric humidity in general [A01G15/00](#); obtaining drinking water from atmospheric humidity [E03B3/28](#); heating or blowing devices for keeping roads or the like free from snow or ice [E01C11/26](#))]

E01H15/00 **Removing undesirable matter, e.g. rubbish, from the land, not otherwise provided for** (gatherers for removing stones, roots or the like from the soil [A01B43/00](#))