

CPC**COOPERATIVE PATENT CLASSIFICATION****B60S****SERVICING, CLEANING, REPAIRING, SUPPORTING, LIFTING, OR MANOEUVRING OF VEHICLES, NOT OTHERWISE PROVIDED FOR****NOTE**

Attention is drawn to the Note following the title of class [B60](#) .

B60S 1/00

Cleaning of vehicles (by apparatus not integral with vehicle [B60S 3/00](#); cleaning in general [B08B](#) ; de-icing of aircraft [B64D](#) ; heating arrangements specially adapted for transparent or reflecting areas [H05B 3/84](#))

- B60S 1/02 . Cleaning windscreens, windows or optical devices { (wind deflectors specially adapted for preventing soiling of windows or windscreens [B60J 1/2002](#)) }
- B60S 1/023 .. {including defroster or demisting means }
- B60S 1/026 ... {using electrical means }
- B60S 1/04 .. Wipers or the like, e.g. scrapers
- B60S 1/0402 ... {completely or partially concealed in a cavity }
- B60S 1/0405 {the cavity being equipped with a movable cover }
- B60S 1/0408 ... {Means for influencing the aerodynamic quality of wipers, e.g. clip-on wind deflectors ([B60S 1/32](#) takes precedence) }
- B60S 1/0411 ... {the windscreens, windows or optical devices being movable with respect to fixed wipers }
- B60S 1/0413 ... {Modular wiper assembly }
- B60S 1/0416 {including other vehicle fittings }
- B60S 1/0419 {the support structure being integrally molded }
- B60S 1/0422 {having a separate transverse element }
- B60S 1/0425 {characterised by the attachment of the wiper shaft holders to the transverse element }
- B60S 1/0427 {characterised by the attachment of the wiper motor holder to the transverse element }
- B60S 1/043 ... {Attachment of the wiper assembly to the vehicle }
- B60S 1/0433 {Attachement of a wiper modular assembly to the vehicle }
- B60S 1/0436 {Attachement of separate wiper shaft holders to the vehicle ([B60S 1/0425](#) takes precedence) }
- B60S 1/0438 {Attachement of separate wiper motor assembly to the vehicle }
- B60S 1/0441 {characterised by the attachment means }
- B60S 1/0444 {comprising vibration or noise absorbing means }
- B60S 1/0447 {non-screw fixation, (e.g. snap-in, bayonet-type..) }
- B60S 1/045 {having a pre-attachment device (i.e. to hold elements in position during mounting) }
- B60S 1/0452 ... {Position of the wipers relative to the vehicle }
- B60S 1/0455 {Device for lifting the wipers off the screen in its parking position or at extremes of wipe }

B60S 1/0458	....	{Arrangement wherein the windscreen frame cooperates with the wipers }
B60S 1/0461	.....	{Arrangement of the side pillars }
B60S 1/0463	.....	{Arrangement of the cow }
B60S 1/0466	....	{Arrangement of wipers on openable windows }
B60S 1/0469	....	{Devices for assisting the wiper positioning on the vehicle }
B60S 1/0472	....	{Arrangement of the wipers on right or left-hand drive vehicles }
B60S 1/0475	...	{Cleaning of wiper blades }
B60S 1/0477	....	{Arrangement for deicing or for removing debris from wiper blades (heated wiper blade B60S 1/3805) }
B60S 1/048	.....	{with a heating device for the wiper parking position }
B60S 1/0483	....	{the cleaning device being separated from the vehicle (renovating blade rubbers B60S 2001/3846) }
B60S 1/0486	....	{the cleaning device being integrated with the vehicle }
B60S 1/0488	...	{Wiper arrangement for crash protection or impact absorption }
B60S 1/0491	...	{Additional elements being fixed on wipers or parts of wipers not otherwise provided for, e.g. covers, antennae or lights }
B60S 1/0494	...	{Wipers actuated by wind force only }
B60S 1/0497	...	{Wiper units as items separate from vehicle, e.g. for emergency use or retro-fittable }
B60S 1/06	...	characterised by the drive (producing other than swinging movement B60S 1/44)
B60S 1/08	....	electrically driven { (conjoint control of windscreen wiper motor and liquid supply of windscreen washer B60S 1/482 ; conjoint control of windscreen wiper motor and means for cleaning parts o parts other than windscreens or front windows B60S 1/56 , B60S 1/58 , B60S 1/606) }
B60S 1/0803	.....	{Intermittent control circuits }
B60S 1/0807	.....	{using electronic control means, e.g. tubes, semiconductors (B60S 1/0818 , B60S 1/0896 take precedence) }
B60S 1/0811	.....	{combined with mechanical control means, e.g. thermal relays }
B60S 1/0814	.....	{using several drive motors; motor synchronisation circuits }
B60S 1/0818	.....	{including control systems responsive to external conditions, e.g. by detection of moisture, dirt or the like }
B60S 1/0822	.....	{ characterized by the arrangement or type of detection means }
B60S 1/0825	.....	{ Capacitive rain sensor }
B60S 1/0829	.....	{ Oscillator-resonator rain sensor }
B60S 1/0833	.....	{ Optical rain sensor }
B60S 1/0837	.....	{ with a particular arrangement of the optical elements }
B60S 1/084	.....	{ including a hologram }
B60S 1/0844	.....	{ including a camera }
B60S 1/0848	.....	{ Cleaning devices for cameras on vehicle }
B60S 1/0851	.....	{ Resistive rain sensor }
B60S 1/0855	.....	{ Ultrasonic rain sensor }
B60S 1/0859	.....	{ Other types of detection of rain, e.g. by measuring friction or rain drop impact }
B60S 1/0862	.....	{ including additional sensors (vehicle speed sensors B60S 1/0896) }

B60S 1/0866	.....	{ including a temperature sensor (heating devices for windshield B60H) }
B60S 1/087	.....	{ including an ambient light sensor (control of vehicle lights B60Q) }
B60S 1/0874	.....	{ characterized by the position of the sensor on the windshield }
B60S 1/0877	.....	{ at least part of the sensor being positioned between layers of the windshield }
B60S 1/0881	.....	{ characterized by the attachment means on the windshield }
B60S 1/0885	.....	{ the sensor being integrated in a rear-view mirror module }
B60S 1/0888	.....	{ characterized by the attachment of the elements in a unit }
B60S 1/0892	.....	{ Testing and production of rain sensors }
B60S 1/0896	.....	{including control systems responsive to a vehicle driving condition, e.g. speed }
B60S 1/10	....	pneumatically driven
B60S 1/105	.....	{with means for stopping or setting the wipers at their limit of movement }
B60S 1/12	....	hydraulically driven
B60S 1/125	.....	{with means for stopping or setting the wipers at their limit of movement }
B60S 1/14	....	personally driven
B60S 1/16	....	Means for transmitting drive
B60S 1/163	.....	{with means for stopping or setting the wipers at their limit of movement }
B60S 1/166	.....	{characterised by the combination of a motor-reduction unit and a mechanism for converting rotary into oscillatory movement }
B60S 1/18	.....	mechanically { (B60S 1/166 takes precedence) }
B60S 1/185	.....	{with means for stopping or setting the wipers at their limit of movement }
B60S 1/20	.....	by cable drives; by flexible shafts
B60S 1/22	.....	by rotary cams
B60S 1/24	.....	by rotary cranks
B60S 1/245	.....	{with particular rod arrangements between the motor driven axle and the wiper arm axle }
B60S 1/26	.....	by toothed gearing
B60S 1/28	...	characterised by a plurality of wipers (B60S 1/06 takes precedence)
B60S 1/30	....	arranged both outside and inside
B60S 1/32	...	characterised by constructional features of wiper blade arms {or blades }
B60S 1/34	....	Wiper arms; Mountings therefor { (wiper arms provided with liquid spreading means B60S 1/522 ; with gas spreading means B60S 1/544) }
B60S 1/3402	.....	{with means for obtaining particular wiping patterns (by varying the effective length of the angularly oscillating arm B60S 1/365) }
B60S 1/3404	.....	{the wiper blades being moved substantially parallel with themselves }
B60S 1/3406	.....	{the wiper blades being rotated with respect to the wiper arms around an axis perpendicular to the wiped field (B60S 1/3404 takes precedence) }
B60S 1/3409	.....	{the wiper arms consisting of two or more articulated elements }
B60S 1/3411	.....	{with means for varying wiper-blade pressure on windshield during operation }
B60S 1/3413	.....	{with means for holding the arm off the glass in an intermediate position }

		between the working position and the fully folded back position }
B60S 1/3415	.....	{with means for supplying cleaning fluid to windscreen cleaners, e.g. washers (arrangement of nozzles B60S 1/52) }
B60S 1/3418	.....	{with means for additionally adjusting the wiper arm working position with respect to the surface to be wiped }
B60S 1/342	.....	{with means for temporarily uncoupling the wiper arm from the drive }
B60S 1/3422	.....	{ Means arranged in the wiper structure to lift the arm at extremes of wipe (means arranged on the vehicle body B60S 1/0455) }
B60S 1/3425	.....	{ Constructional aspects of the arm }
B60S 1/3427	.....	{ Arm piece, link piece and mounting head formed as one element }
B60S 1/3429	.....	{ Arm pieces }
B60S 1/3431	.....	{ Link pieces }
B60S 1/3434	.....	{ Manufacturing details thereof }
B60S 1/3436	.....	{ Mounting heads }
B60S 1/3438	.....	{ Manufacturing details thereof }
B60S 1/344	.....	{ Flat-type mounting heads }
B60S 1/3443	.....	{ Wiper shafts }
B60S 1/3445	.....	{ Joints between elements }
B60S 1/3447	.....	{ the elements being an arm piece and a link piece }
B60S 1/345	.....	{ the elements being a link piece and a mounting head }
B60S 1/3452	.....	{ the joint being a snap fit pivot joint }
B60S 1/3454	.....	{ the joint being at end of mounting head furthest away from blade }
B60S 1/3456	.....	{ Locks or stays for holding arms in fully folded back position }
B60S 1/3459	.....	{ the element being a mounting head and a shaft }
B60S 1/3461	.....	{ with means to adjust the orientation of the head relative to shaft }
B60S 1/3463	.....	{ Means to press blade onto screen }
B60S 1/3465	.....	{ with coil springs }
B60S 1/3468	.....	{ Mountings therefor }
B60S 1/347	.....	{ with adjustment means to adjust wiping pressure (during wiping B60S 1/3411) }
B60S 1/3472	.....	{ with adjustment means to keep wiping pressure constant (varying wiping pressure B60S 1/3411) }
B60S 1/3475	.....	{ with blade or leaf springs }
B60S 1/3477	.....	{ with elastomeric or rubber springs }
B60S 1/3479	.....	{ Means to cover the wiper parts }
B60S 1/3481	.....	{ for mounting head }
B60S 1/3484	.....	{ integral with arm or link piece }
B60S 1/3486	.....	{ Means to allow blade to follow curvature of the screen (i.e. rotation along longitudinal axis of the arm) }
B60S 1/3488	.....	{ Means for mounting wiper arms onto the vehicle }
B60S 1/349	.....	{ Means for mounting the wiper bearing to the vehicle body }
B60S 1/3493	.....	{ Means for mounting the wiper shaft in the wiper bearing }

B60S 1/3495	.....	{ Means for mounting the drive mechanism to the wiper shaft }
B60S 1/3497	.....	{ Additional means for guiding the blade other than the arm or blade joint }
B60S 1/36	.....	Variable-length arms
B60S 1/365	.....	{the effective length being automatically varied during angular oscillation of the arm }
B60S 1/38	....	Wiper blades { (provided with liquid spreading means B60S 1/524 ; provided with gas spreading means B60S 1/546) }
B60S 1/3801	.....	{characterised by a blade support harness consisting of several articulated elements (B60S 1/3803 , B60S 1/3806 take precedence) }
B60S 1/3803	.....	{heated wiper blades }
B60S 1/3805	.....	{electrically }
B60S 1/3806	.....	{ Means, or measures taken, for influencing the aerodynamic quality of the wiper blades }
B60S 1/3808	.....	{ Spoiler integral with the squeegee }
B60S 1/381	.....	{ Spoilers mounted on the squeegee or on the vertebra }
B60S 1/3848	.....	{ Flat-type wiper blade, i.e. without harness }
B60S 1/3849	.....	{ Connectors therefor; Connection to wiper arm; Attached to blade }
B60S 1/3851	.....	{ Mounting of connector to blade assembly }
B60S 1/3853	.....	{ Snap-fit, e.g. elastic connection }
B60S 1/3855	.....	{ by welding, gluing or the like }
B60S 1/3856	.....	{ Gripping the blade }
B60S 1/3858	.....	{ with protrusions cooperating with holes }
B60S 1/386	.....	{ made in two halves }
B60S 1/3862	.....	{ Transport of liquid there through }
B60S 1/3863	.....	{ Connectors having a spoiler }
B60S 1/3865	.....	{ Connectors having an integral pivot pin for connection with the wiper arm }
B60S 1/3867	.....	{ pin formed on the interior of side walls }
B60S 1/3868	.....	{ pin formed on the exterior of side walls }
B60S 1/387	.....	{ the connector being suitable for receiving different types of adapter }
B60S 1/3872	.....	{ without connector, e.g. connection to wiper arm via squeegee or vertebra }
B60S 1/3874	.....	{ with a reinforcing vertebra }
B60S 1/3875	.....	{ rectangular section }
B60S 1/3877	.....	{ embedded in the squeegee }
B60S 1/3879	.....	{ placed in side grooves in the squeegee }
B60S 1/3881	.....	{ in additional element, e.g. spoiler }
B60S 1/3882	.....	{ C-shape section }
B60S 1/3884	.....	{ Wire-shaped section }
B60S 1/3886	.....	{ End caps }
B60S 1/3887	.....	{ Mounting of end caps }
B60S 1/3889	.....	{ cooperating with holes in the vertebra }

B60S 1/3891	.....	{ with locking device }
B60S 1/3893	.....	{ cooperating with holes in the squeegee }
B60S 1/3894	.....	{ having a particular shape }
B60S 1/3896	.....	{ with openings at the longitudinal extremities }
B60S 1/40	....	Connections between blades and arms
B60S 1/4003	.....	{ Multi-purpose connections for two or more kinds of arm ends }

NOTE

Multi-aspect classification is applied for technical subjects relating to the arms and covered by subgroups [B60S 1/4006](#) to [B60S 1/40J](#)

B60S 1/4006	.....	{ for arms provided with a hook-shaped end }
B60S 1/4009	.....	{ comprising a detachable intermediate element mounted on the hook-shaped end }
B60S 1/4016	.....	{ the element being provided with retention means co-operating with the hook-shaped end of the arm }
B60S 1/4019	.....	{ the retention means being protrusions or holes }
B60S 1/4038	.....	{ for arms provided with a channel-shaped end }
B60S 1/4041	.....	{ the channel-shaped end comprising a pivot pin mounted between the side walls }
B60S 1/4045	.....	{ comprising a detachable intermediate element mounted on the channel-shaped end }
B60S 1/4048	.....	{ the element being provided with retention means co-operating with the channel-shaped end of the arm }
B60S 1/4064	.....	{ the channel-shaped end being provided with protrusions on, or holes in, the side walls to create a pivot }
B60S 1/4067	.....	{ for arms provided with a side pin }
B60S 1/407	.....	{ with means provided on the arm for locking the side pin }
B60S 1/4074	.....	{ with means provided on the blade for locking the side pin }
B60S 1/4077	.....	{ characterised by the connecting part of, or an intermediate element mounted on, the wiper blade (means for locking the side pin B60S 1/4074) }
B60S 1/4083	.....	{ for arms provided with a flat end }
B60S 1/4087	.....	{ the end being provided with protrusions or holes }
B60S 1/42	.....	resilient
B60S 1/44	...	the wiper blades having other than swinging movement, e.g. rotary { (the wiper blade support member, e.g. arm, having a swinging movement B60S 1/32) }
B60S 1/46	..	using liquid; Windscreen washers
B60S 1/48	...	Liquid supply therefor
B60S 1/481	.....	{the operation of at least part of the liquid supply being controlled by electric means (electrical washing liquid warming-up means B60S 1/488) }
B60S 1/482	.....	{combined with the operation of windscreen wipers }
B60S 1/483	.....	{using a supply pump driven by the windscreen-wiper motor }
B60S 1/485	.....	{including control systems responsive to external conditions, e.g. by detection of moisture, dirt or the like }
B60S 1/486	.....	{including control systems responsive to a vehicle driving condition,

- e.g. speed }
- B60S 1/487 {the liquid being heated (nozzles provided with heating means [B60S 1/52](#)) }
- B60S 1/488 {electrically }
- B60S 1/50 Arrangement of reservoir
- B60S 1/52 Arrangement of nozzles; {Liquid spreading means } (nozzles per se [B05B](#))
- B60S 1/522 {moving liquid spreading means, e.g. arranged in wiper arms }
- B60S 1/524 {arranged in wiper blades }
- B60S 1/526 {according to vehicle movement characteristics, e.g. speed, or climatic conditions, e.g. wind }
- B60S 1/528 {the spreading means being moved between a rest position and a working position ([B60S 1/526](#) takes precedence) }
- B60S 1/54 . . . using gas, e.g. hot air
- B60S 1/542 . . . {using wiping devices }
- B60S 1/544 . . . {moving gas spreading means, e.g. arranged in wiper arms }
- B60S 1/546 . . . {arranged in wiper blades }
- B60S 1/548 . . . {according to vehicle movement characteristics, e.g. speed, or climatic conditions, e.g. wind }
- B60S 1/56 . . . specially adapted for cleaning other parts or devices than front windows or windscreens { (rear-view mirror arrangements mounted on vehicle exterior including cleaning devices [B60R 1/0602](#)) }
- B60S 1/563 . . . {for registration, licensing or like devices }
- B60S 1/566 . . . {including wiping devices ([B60S 1/563](#), [B60S 1/583](#) take precedence) }
- B60S 1/58 . . . for rear windows
- B60S 1/583 . . . {including wiping devices }
- B60S 1/586 . . . {including defroster or demisting means }
- B60S 1/60 . . . for signalling devices, e.g. reflectors
- B60S 1/603 . . . {the operation of at least a part of the cleaning means being controlled by electric means }
- B60S 1/606 {combined with the operation of windscreen or front window cleaning means }
- B60S 1/62 . . . Other vehicle fittings for cleaning
- B60S 1/64 . . . for cleaning vehicle interiors, e.g. built-in vacuum cleaners
- B60S 1/66 . . . for cleaning vehicle exterior
- B60S 1/68 . . . for freeing wheels or tyres from foreign matter, e.g. wheel scrapers
- B60S 1/685 . . . {for two-wheeled vehicles }
- B60S 3/00** **Vehicle cleaning apparatus not integral with vehicles** (cleaning in general [B08B](#) ; cleaning peculiar to waterborne vessels [B63B 57/00](#), [B63B 59/00](#); ground equipment for cleaning aircraft [B64F 5/00](#); { multistage treatment applied to waste water from vehicle wash installations [C02F 9/00](#) })
- B60S 3/002 . . {Vehicle drying apparatus }
- B60S 3/004 . . {Conveyers for vehicle cleaning apparatus }
- B60S 3/006 . . {specially adapted for railway vehicles ([B60S 3/008](#) takes precedence) }

- B60S 3/008 . {for interiors of land vehicles }
- B60S 3/04 . for exteriors of land vehicles { ([B60S 3/002](#), [B60S 3/004](#) take precedence; specially adapted for railway vehicles [B60S 3/006](#)) }
- B60S 3/041 .. {specially adapted for two-wheeled vehicles }
- B60S 3/042 .. {Wheel cleaning devices (integral with vehicle [B60S 1/00](#)) }
- B60S 3/044 .. {Hand-held cleaning arrangements with liquid or gas distributing means ([B60S 3/045](#) takes precedence) }
- B60S 3/045 .. {Other hand-held cleaning arrangements, e.g. with sponges, brushes, scrapers or the like ([brushes per se A46B](#)) }
- B60S 3/047 ... {using liquid or gas distributing means ([B60S 3/048](#) takes precedence) }
- B60S 3/048 ... {with rotary or vibratory bodies contacting the vehicle }
- B60S 3/06 .. with rotary bodies contacting the vehicle { ([hand-held B60S 3/048](#)) }
- B60S 3/063 ... {the axis of rotation being approximately vertical }
- B60S 3/066 ... {the axis of rotation being approximately horizontal }

- B60S 5/00** **Servicing, maintaining, repairing or refitting of vehicles** ({collecting or removing exhaust gases in workshops [B08B 15/002](#); straightening vehicle body parts [B21D 1/12](#), [B21D 1/14](#) }; vehicles adapted to carry a workshop for servicing or maintenance [B60P 3/14](#); servicing rail locomotives [B61K](#)) ; {registering or indicating the working of vehicles [G07C 5/00](#); testing of vehicles [G01M 17/00](#); arrangements for electrical testing [G01R 31/00](#); devices for monitoring or checking brake systems [B60T 17/22](#); filling or draining lubricant [F01M 11/04](#); means for collecting, retaining, or draining-off lubricant [F16N 31/00](#); draining of lubricant from gearing [F16H 57/0406](#); assembly or repair of springs or dampers [F16F 9/3271](#); tool, instrument or work supports or storage means used in association with vehicles [B25H 5/00](#) }
- B60S 5/02 . Supplying fuel to vehicles; General disposition of plant in filling stations ([apparatus for transferring measured quantities of petrol, oil, or the like from storage space to vehicles B67D](#))
- B60S 5/04 . Supplying air for tyre inflation ([arrangement of tyre inflating devices on vehicles B60C 23/00](#); tyre pressure gauges [G01L 17/00](#); { pumps actuated by muscle power [F04B 33/00](#) }
- B60S 5/043 .. {characterised by the inflation control means or the drive of the air pressure system }
- B60S 5/046 ... {using electrical or electronical means }
- B60S 5/06 . Supplying batteries to, or removing batteries from, vehicles ([circuit arrangements for charging batteries H02J 7/00](#))

- B60S 9/00** **Ground-engaging vehicle fittings for supporting, lifting, or manoeuvring the vehicle, wholly or in part, e.g. built-in jacks** { props for vehicle draw bars [B60D 1/66](#); anti-theft devices acting on vehicle jacking means [B60R 25/001](#) }; ([lifting devices in general B66F](#) , supports in general [F16M](#))
- B60S 9/02 . for only lifting or supporting
- B60S 9/04 .. mechanically
- B60S 9/06 ... of screw-and-nut type

B60S 9/08	....	the screw axis being substantially vertical
B60S 9/10	..	by fluid pressure
B60S 9/12	...	of telescopic type
B60S 9/14	.	for both lifting and manoeuvring
B60S 9/16	..	for operating only on one end of vehicle (B60S 9/205 takes precedence)
B60S 9/18	...	mechanically
B60S 9/20	...	with fluid-pressure lift
B60S 9/205	..	Power driven manoeuvring fittings, e.g. reciprocally driven steppers or rotatably driven cams (vehicles with ground-engaging propulsion means, e.g. walking members, B62D 57/02)
B60S 9/21	...	comprising a rotatably driven auxiliary wheel or endless track, e.g. driven by ground wheel (track vehicles with additional or alternative ground wheels B62D 55/02, B62D 55/04; auxiliary drives from a ground wheel B60K 25/08)
B60S 9/215	....	driven by an auxiliary motor
B60S 9/22	.	Means for attaching lifting, supporting, or manoeuvring devices to vehicles (for separate devices B60S 11/00)
B60S 11/00		Vehicle modifications for receiving separate lifting, supporting, or manoeuvring devices
B60S 13/00		Vehicle-manoeuving devices separate from the vehicle (vehicle lifting {e.g. liftable turntables } or pushing devices B66F ; workshop equipment B25H)
B60S 13/02	.	Turntables; Traversers (incorporated in vehicle-storing garages E04H ; rotary display stands A47F 5/02)
B60S 2001/00		Cleaning of vehicles (by apparatus not integral with vehicle B60S 3/00 ; cleaning in general B08B ; de-icing of aircraft B64D ; heating arrangements specially adapted for transparent or reflecting areas H05B 3/84)
B60S 2001/02	.	Cleaning windscreens, windows or optical devices { (wind deflectors specially adapted for preventing soiling of windows or windscreens B60J 1/2002) }
B60S 2001/04	..	Wipers or the like, e.g. scrapers
B60S 2001/32	...	characterised by constructional features of wiper blade arms {or blades }
B60S 2001/38	....	Wiper blades { (provided with liquid spreading means B60S 1/524 ; provided with gas spreading means B60S 1/546) }
B60S 2001/3812	.....	Means of supporting or holding the squeegee or blade rubber
B60S 2001/3813	.....	characterised by a support harness consisting of several articulated elements
B60S 2001/3815	.....	characterised by the joint between elements
B60S 2001/3817	.....	characterised by a backing strip to aid mounting of squeegee in support
B60S 2001/3818	.....	the backing strip being a channel-like element, e.g. not continuous
B60S 2001/382	.....	the backing strip being an essentially planar reinforcing strip, e.g. vertebra
B60S 2001/3822	.....	characterised by additional means to prevent longitudinal sliding of

		squeegee in support, e.g. clips
B60S 2001/3824	.....	the blade or squeegee pivoting about an axis parallel to blade longitudinal axis
B60S 2001/3825	.....	the squeegee mounted directly to or in wiper blade arm
B60S 2001/3827	.....	characterised by the squeegee or blade rubber or wiping element
B60S 2001/3829	.....	characterised by the material of the squeegee or coating thereof
B60S 2001/3831	.....	cleaning by scrubbing or abrasive action
B60S 2001/3832	.....	cleaning by rigid or semi-rigid scraping elements, e.g. for removing ice
B60S 2001/3834	.....	equipped with brush-like elements
B60S 2001/3836	.....	characterised by cross-sectional shape
B60S 2001/3837	.....	with more than one wiping edge or lip
B60S 2001/3839	.....	with longitudinally split squeegee, with squeegee parts
B60S 2001/3841	.....	Squeegee modifications to prevent longitudinally sliding of squeegee in support structure
B60S 2001/3843	.....	equipped with removable cover or protective elements
B60S 2001/3844	.....	equipped with means to indicate wear or usage of blade
B60S 2001/3846	.....	Devices for renewing or renovating blade wiping edges, e.g. cutters
B60S 2001/3898	.....	method for manufacturing wiper blades
B60S 2001/40	....	Connections between blades and arms
B60S 2001/4006	.....	{ for arms provided with a hook-shaped end }
B60S 2001/4009	.....	{ comprising a detachable intermediate element mounted on the hook-shaped end }
B60S 2001/4012	.....	the element being provided with bearing surfaces on its side walls
B60S 2001/4016	.....	{ the element being provided with retention means co-operating with the hook-shaped end of the arm }
B60S 2001/4022	.....	the element being provided with a locking element movable thereon
B60S 2001/4025	.....	the element being able to receive pivot pins of different diameters
B60S 2001/4029	.....	the element being able to receive arms of different widths
B60S 2001/4032	.....	the element being able to receive arms with hooks of different radiuses
B60S 2001/4035	.....	the connection being covered by a removable cover mounted on the blade
B60S 2001/4038	.....	{ for arms provided with a channel-shaped end }
B60S 2001/4045	.....	{ comprising a detachable intermediate element mounted on the channel-shaped end }
B60S 2001/4048	.....	{ the element being provided with retention means co-operating with the channel-shaped end of the arm }
B60S 2001/4051	.....	the intermediate element engaging the side walls of the arm
B60S 2001/4054	.....	the intermediate element engaging the back part of the arm
B60S 2001/4058	.....	comprising a separate locking element, e.g. in addition to an intermediate element
B60S 2001/4061	.....	covered by a removable cover mounted on the blade
B60S 2001/4067	.....	{ for arms provided with a side pin }

B60S 2001/4077	.....	{ characterised by the connecting part of, or an intermediate element mounted on, the wiper blade (means for locking the side pin B60S 1/4074) }
B60S 2001/408	.....	the connecting part or the intermediate element being provided with holes for different diameters of pivoting pin
B60S 2001/409	.....	characterised by the arm or connecting part mounted on the arm presenting a shaped opening for bearing the pivot axis
B60S 2001/4093	.....	characterised by the mounting of the pivot on the main yoke of the blade
B60S 2001/4096	.....	Connections between arm and blade not using a cylindrical pivot axis on the blade