Search history

Search 1: faucet and coupling (Results 8799)

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Search 11: 9 and 10 (Results 90)

Search 12: fn=(55720328 or 51754219 or 58402875 or 51881426 or 44264222 or 45961071 or 4296250) (Results 7)

Search 13: PA=(AHN CHOONG BUM) (Results 2)

Search 14: compression and ring (Results 491861)

Search 15: 6 and 14 (Results 1530)

Search 16: 10 and 15 (Results 659)

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Search 18: 8 and 17 (Results 165)

Search 19: 1 and 18 (Results 27)

1) Family number: 21320529 (US2156075A)

Title: KITCHEN WASTE UNIT

Abstract: What I claim as new and desire to secure by Letters Patent of the United States, ls: 1, In an apparatus for grinding garbage and other waste material, a casing defining a grinding chamber and having an opening for the feeding of such material to said chamber, means for mounting the casing beneath a kitchen sink or like structure with said opening ln registry with an opening provided ln said structure, grinding means in said chamber, means for operating the grinding means, said casing opening providing manual access to said chamber and grinding means for the removal of unground material, a receptacle movably mounted in said casing adjacent sald casing opening for movement into a plurality of positions including a position in which the receptacle provides a depository for garbage or other waste material and another position for emptying the deposited material into the grinding chamber, and means operative upon movement of the receptacle into certain of said plurality oi' positions for blocking said casing opening to prevent the feeding of material and manual access to said chamber. ` 2. In an apparatus for grinding garbage and other waste material, a casing defining a grinding chamber, means for grinding such material inss the chamber including a first cutting device mounted for rotation in the chamber and a second cuttlng device mounted for cooperation with said flrst cutting device, means for rotating said first cutting device, means providing an opening in said casing for admitting material to be ground to the chamber and providing for manual access to said grind1ng‘means, means for feeding material to be ground to said grinding means including a receptacle movably mounted for receiving matertal when in one poslltlon and for emptying the material into the grinding chamber when in another position, means including a portion of said receptacle for preventing manual access to said grinding means when the receptacle is in said other position, and means for moving said receptacle from one of said positions to the other. - 3. In a grinding apparatus, a casing dennlng a grinding chamber having an opening providing for manual access to the interior of the chamber. grinding means ln the chamber, a receptacle pivotally supported by said casing ln line with 2,156,076 V said opening tor operation into one position to receive material to be ground and into a second position to empty such material into said chamber, and -means including a portion ot the wall or said receptacle for blocking said opening to prevent manual access to the interior of the chamber when the receptacle is operated into said second position. ,_ 4. In a grinding apparatus, the combination of a casing defining a grinding chamber having a material receiving opening providing for manual access to the interior of the chamber, grinding means in the chamber, a receptacle movably supported for operation into a plurality of positions including a position for receiving material to be ground and a position for emptying such material into said chamber, means operative upon movement of said receptacle into certain of said plurality of positions for blocking said opening and means operative upon movement of the receptacle into other of said plurality of positions for affording manual access through said opening to the interior of said chamber. 5. In a grinding apparatus, a casing defining a grinding chamber having a material receiving opening providing for manual access to the lnterlor of the chamber, grinding means in the chamber, a receptacle movably supported adjac t said opening for operation into a plurallty of positions including one position for receiving material to be ground and another position for emptying such material into said chamber, and means including cooperating wall portions ot said receptacle and wall portions of said casing adjacent said opening for blocking the opening when the receptacle is in certain of said plurality of positions, said receptacle having also wall portions cooperative with wall portions of said casing adjacent said opening for providing manual access to the interior of said chamber when the receptacle is ln other of said plurality of positions. 6. In a. grinding apparatus, a casing defining a grinding chamber having a material receiving opening providing manual access to the interior of said chamber, means for grinding material in the chamber, a receptacle supported pivotally by said casing adjacent to and :ln line with said opening for rotation into a plurality of positions including a first position for the deposit therein of material to be ground and a second position for emptying such material into said chamber, and means including portions of the walls of said receptacle for blocking said opening when the receptacle is ln said first position and said second position, said receptacle having also wall portions formed to aiford manual access to said chamber through said opening when the receptacle ls rotated into a third one of said plurality of positions. 7. In a grinding apparatus, a casing dennlng a grinding chamber having an opening providing manLw.l access to said chamber and having means operable for grinding material therein, a receptacle having end walls and substantially cylindrically shaped side walls therebetween with

portions of said side walls cut away to provide a. receptacle opening, means for mounting the receptacle adjacent to and in line with said casing opening with the end walls thereof pivotally supported by the casing walls for rotation of the receptacle into a plurality ot positions including a first position wherein said receptacle opening is ln registry with said casing opening for the deposit in the receptacle of material to be ground ii and a second position for-`the emptying oi' such material into said chamber: and means for rotating the receptacle, the receptacle having wall portions arranged to cooperate with the rim o! said casing opening to block off the casing opening when the remptacle is in mid first and said second positions, said cut away portions ot the receptacle being formed for cooperation with the rinf of said casing opening to afford manual access therethrough to sald chamber when the receptacle is rotated into a third of said plurality of positions. 8. ln an apparatus for grinding garbage and like material, a casing deilning a grinding chamber having an opening for the feeding of material into said chamber, means for mdtmtlng the casing kneath a kitchen slnk or like structure with said opening in communication with a drain opening in the sink or like structure, means lor grinding material in said chamber, a receptacle movably supported by the casing in line ,with said casing opening for operation into a plurality of positions including one podtion to recdve material to be ground and a second position to empty such material into said chamber, and means including wall portions of the receptacle for blocking said casing opening to prevent access to the grinding chamber when the receptacle is in certain of its said' plurality of positions, said wall portions having apertures 'tor the passage therethrough of water from said sink or like structure into the Efilldllig chamber. 9. In a. grinding apparatus, a casing_havi.ng a grinding chamber and having an opening for admitting material to be ground to said chamber, means fqr grinding material in the chamber, a receptacle movably mounted for operation into a plurality of positions including one pos!- tion io; receiving material and a second podtlon for einptying the received material into said chamber, means for supplying water to said casing, valve means operable into a plurality of positions for controlling the water supply, and means operatively interconnecting said receptacle and said valve means for etfecting control of the positioning of the valve means in accordance with the positioning of the receptacle. 10. In a grinding apparatus, a casing having an opening, a grinding chamber in the casing, cutting means including a stationary cutter mounted in a lateral recess in the casing and a rotary cutter having a vertical shaft mounted on the bottom of the casing. a receptacle having two trunnions `mounted_lt;~ln.an, upper portion of ' the casing with the trunnions suppfifteiilli ssfines of the canng, a crank for turning the receptacle fastened to one of the trunnions, and means for conducting water to the receptacle comprising a valve mechanically connected to the other trunnion. l1_ A garbage grinding apparatus adapted for installation beneath a kitchen sink having a drainage opening, said apparatus including a casing deiining a substantially frusto-conical grinding chamber having a garbage receiving opening in the smaller end thereof, means torsupporting said casing beneath said sink witlfsaid receiving opening in registry with said sink drainage opening and the axis of said chamber substantially vertical, a receptacle mounted in said casing for rotation into one position for receiving garbage through said openings and into a second position for discharging the garbage into said chamber, said receptacle hav1ng a wall portion operative to block said openings when the receptacle is in said secmd position to prevmt access to said chamber, garbage grinding means in said chamber including stationary cutting means disposed at the side of the chamber and rotary cutting means supported by the bottom of said casing with the axis thereof vertical, a. vertical axis motor supported beneath said casing and connected to drive said rotary cutting means, switching means for controlling the operation ol’ said motor, a handle for positioning said receptacle, and means operatively associated with said handle for actuating said switch in accordance with the positioning of the receptacle. 12. In a grinding apparatus, a casing defining a grinding chamber and having a. material receiving opening in one wall thereof providing for manual access directly into the interior of the chamber, grinding means in said chamber, a closure device for said opening comprising a receptacle mounted in said casing for movement into one position to receive material to be ground and into another position to discharge the received materlal directly into said chamber, said receptacle having wall portions arranged to prevent access to said chamber when the receptacle is in discharging position, a motor for operating said grinding means, switch means operable for controlling said motor, and means operative responsively to movement of said receptacle for actuating said switch means to effect operation of said motor when the receptacle is in discharging position and for actuating said switch means to stop operatirm of said motor when the recentacle is in receiving position. 13. In a grinding apparatus, a casing having a grinding chamber therein and an opening for admitting material to be ground to-said chamber, grinding means in the chamber, a motor for driving the grinding means, a receptacle mounted in said casing for rotation into one position to receive material through said opening and into another position for discharging the received material into said chamber, said receptacle having wall portions arranged toprevent the feeding of material through said `opening into the grinding chamber when the receptacle is ln receiving position, a cam device connected for rotation concomitantly with said receptacle, a power circuit for said motor including switching means arranged Ior actuation 'ny said cam device to control the energization of said motor, said cam device including means for actuating said switching means to stop said motor when the receptacle is in receiving position and including also means for actuating the switching means to start said motor in response to initial turning movement of the receptacle out of receiving position and before the receptacle reaches its discharging positlon. 14. In a grinding apparatus, a casing having a grinding chamber therein and anfopening in direct communication with said chamber to provide for manual access thereto, means for grinding material in said chamber, a closure device movably supported by the casing for movement into a plurality of positions including a position for blocking said opening to prevent access to the grinding chamber, a cam device connected for movement concomitantly with said closure device, and control means for said motor including switching mechanism connected for actuation by said cam device in accordance with the positioning of the closure device. = J 15. In a grinding apparatus, a casing dehning a grinding chamber having an opening providing is for manual access to the interior of the chamber, means for cutting material ln said chamber includinga pair of cutting elements at least one of which is movable alternately into and out of cooperative cutting relation with the other of said elements, means for rendering said cutting means operative when said elements are in saldcooperatlve cutting relation, a closure device mounted for movement into a first position to block said opening and for movement into a second position for rendering the interior of said chamber accessible through said opening, and means operative responsively to movement of said closure device for eifecting movement of said one element into and out of said cooperative relation upon movement of said closure device into said drst position and said second position respectively. 16. In a grinding apparatus, a casing defining a grinding chamber having an opening providing for manual access to the interior of the chamber, grinding means including a cutting' element movably mounted for alternate advancement into and retraction from said chamber through a second opening provided in a wall of said casing, a closure device movably supported by said casing and operative in one position to block said first opening, said device being movable into a second position for affording access to said chamber throughsald ilrst opening, and means operative responslvely to operation of said closure device into said nrst position for effecting advancement oi' said cutting element into said chamber and operative responsively to operation of said closure device into said second position for effecting retraction of sald cutting element from said chamber. 17. In a. grinding apparatus, a casing defining a grinding chamber having an opening provided for manual access and the admission of material to be ground into said chamber, means providing a recess in the wall of the casing in communication with said chamber, a receptacle movably supported by the casing and operable into a plurality of positions including a position for receiving material and a position for emptying the received material into said chamber, said receptacle being operative when in certain of said plurality of posltions to block said opening and operative when in .other of said plurality of positions to permit access to said chamber, means for grinding inaterial in said chamber including a retractable cutter mounted for movement alternately into and out of said recess, means for moving the retractable cutter, means for moving the receptacle, and linkage mechanism operatively interconnecting said two last mentioned means for effecting movement of said cutter into said recess in response to movement of the receptacle into a position in which it permits access to the grinding chamber. 18, In a grinding apparatus a casing defining a grinding chamber having an opening provided for manual access and the admission of material to be ground into said chamber, a receptacle movably mounted in the casing and operable into a plurality of positions including a position for receiving material and a position for emptying the received material into said chamber, said receptEe being operative when in certain of said plurality of positions to blockusaid opening and operative when ln other of said plurality of positions to render said chamber accessible through said opening, means for grinding material in said chamber including a cutting element supported for operation in the chamber, and means for rendering said cutting element substantially inaccessible upon movement of the receptacle into a position affording access to the chamber including a portion of the wall of the receptacle disposed in position to shield an operator reaching through said opening from contact with the cutting element. ` 19. In a grinding apparatus, a. casing defining a grinding chamber having a recess in the wall thereof ln communication with the chamber. means operable for cutting material in the chamber includlng a. stationary cutting element, means for mounting said element movably in said recess for alternate advancement into an operative position in said chamber and retraction from its operative position, power means operable for eifeoting operation of said cutting means, control means for starting and stopping said power means, and a master control device connected for actuating both said mounting means and said control means to insure operation of said power means when said element is advanced into its said operative position in said chamber and to insure retraction of said element irom its said

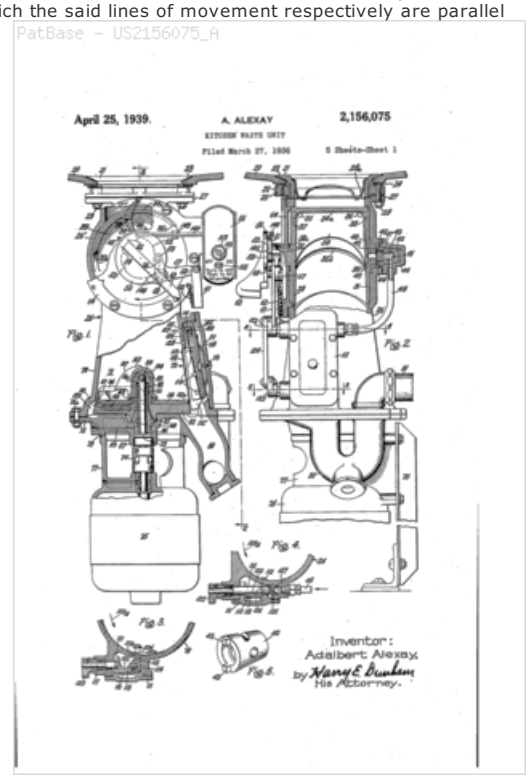
operative position when said power means ls inoperative. 20. In a grinding apparatus, a casing having a grinding chamber therein and an opening providing for access to the grinding chamber, means for grinding material in said chamber including a cutting element mounted for movement alternately into and out of operative cutting position in said chamber, a motor connected for effecting operation of said grinding means, a closure device rotatably supported by the casing for movement into a plurality of positions including n position for blocking said opening, a cam device connected for rotation concomitantly gwith said closure device, means for controlling the positioning of said cutting element, means for controlling the operation of said motor, and means interconnecting said cam device with both said controlling means for effecting control of said motor and the positioning of said cutting element in accordance with the positioning oi' said closure device. 21. In a grinding apparatus, means providing a grinding chamber, means for grinding material in said chamber including a cutting element mounted for movement alternately into and out of operative cutting position in said chamber. power means for operating said grinding means, means operable alternately for effecting withdrawal of said element from said cutting position and for efl’ec‘ting advancement of said element into said cutting position, and means cooperative with said last mentioned means upon advancement thereby of said element for automatically rendering said powier means operative a substantial time interval before said element reaches said operative cutting position. 22. In a grinding apparatus. a casing denning a grinding chamber having an opening providing for manual access to the interior of the chamber, means including a pair of cooperative cutting elements operable for cutting material in the chamber, means for actuating said cutting means, a movable closure device operable into one position for blocking said opening and operable into another position for rendering said chamber manually accessible through said opening, means for rendering said cutting means operative in response to movement of the closure device into its blocking position and means automatically operative for rendering said cutting 24561075 , -1' _lt;;,=_ , :_¢1;,,,if._1 f-,:" ~` fra; means inoperative and at least one or said cutting elements substantially inaccessible through said opening upon movement of the c’losure device into its said other position. 23. In a grinding apparatus, a casing defining a grinding chamber having an opening ln the upper portion thereof for the admission of material to be ground, a. receptacle movably mounted for receiving material when ln one position and for discharging such material into said chamber when moved into another position, cutting means operable for commlnutlng material in said chamber including a rotatable cutting element mounted for rotation in said chamber and a stationary cutting element edjustably mounted for alternate- movement into and out of a position to cooperate with the rotatable cutting element in the cutting operation, means for controlling the positioning of said stationary cutting element, motor means for driving said rotatable cuttlng element, means for controlling the operation of said motor means, and means operative in accordance with the positioning of said receptacle for effecting predetermined operations of both said controlling means. 24. In a grinding apparatus, a casing denning a grinding chamber and having means operable for grinding material therein, means providing for the admission of material to be ground to said chamber including a receptacle mounted for movement relative to said casing for receiving material when in one position and for feeding ~such material to said grinding chamber when in another position, meansfor supplying water to said chamber, and means ` operative responsively to and in accordance with the positioning of said receptacle for controlling both the operation of said grinding means and the suvvlying of water to said chamber. 25. In a grinding apparatus, a casing having an opening, a grinding chamber in the casing. cutting means including a stationary cutter mounted in a lateral recess ln the casing and a rotary cutter having a. vertical shaft mounted on the bottom of the casing, a receptacle having two trunnlons mounted in an upper portion of the casing with the trunnions supported in bores of the casing, a crank for turning the receptacle fastened to one of the trunnlons, means for conducting water to the receptacle comprising a valve mechanically and hydraulically connected to the other trunnion, means for moving the stationary cutter into and out of the grinding space including a holder, a shaft having a. cutaway portion engaging the holder and a lever mechanism connected to the shaft and including a roller engaging a cam defined by the cmnk. 26. In a grinding apparatus, a casing having an opening, a grinding' chamber in the casing, cutting means including a stationary cutter mounted on a side wall of the casing and a rotary cutter haidng a vertical shaft mounted on the bottom of the casing, a. motor for driving the rotary cutter, a receptacle having two trunnions mounted in an upper portion of the casing with the tnmnions supported by the casing, a. crank for turning the receptacle fastened to one of the trunnions, means for conducting water to the receptacle comprising a. tapered spring pressed valve mechanically connected to the other trunnlon, means for moving the stationary cutter into and out of the grinding chamber including a. holder, a shaft having a cut-away portion engaging' the holder and a lever mechanism connected to the shaft and including a roller engaging acam deilnedibf the'craInl§,`_`andssn'ieu.nLs'for conducting watéi'~`_Iroin saidvalve' throught alliore in saiasuan into the grinding chamber. 'fa 27. In anfappar`atus‘folj grinding garbage like material# a `casing"def1ni.ng `a’ substantially vertical axis frustoiconical grinding chamber liiavf ing a materialrecelving-6pei‘ilng`in the reduced upper end thereof, means for grinding ,niatérial in the chamber including ` member sshaving arf extended cutting- facel'and"movably mbuntedjln ai recess in the 'wall'of’sa11dichaLmhéi§ for' advancement oflsaid 'cutting"'face `l!lt0"`thBf:Cll_D1b¢l'; springimeans operable for advancing said’ her, means for'ma.intaining~saLid‘cutt1ng facersuhé stantially parallel td~afgeneratr1;ij'oij the; wa11"of said chamber when the cuttingfface isladvanced into the chamber: ri propelling‟device,Lcentrallj mounted in said chamber for rotation" abouta substantially verticn axis ufnnggyiiniatérieigoutwardly againstsaid cutqiiugkace; Auq_ir\eans;ruf rotatind said l5i‘dDé1ling‘devfoe_"' 'f " ' f 28. In a grinding' appalratL1s;‘af‘casing`_deiiriing it grinding euamber=-1;he;wa11s` aff wni_lt;;1'i3:6i_lt;ip_ a section or a; 5 vertical aiiisiconeihavitig ssits smaller end up 'and havingss Ianss operiingifor the ' adinissigii of material to be groundja cutting device mounted in said chamber for rotation aboutavertical axis and meapsifnr ‘rotating »sam»aievice§ 3;1SU§lElbl2i§.I;S{ cutting, device having' a’Acuttln`g ffacéfrnounted subszantisllylpamiiei a ~ge»ieratfix of me wall' of said chamber' 'and - in’ ` position ` `td ss cooperate with said 'rota}ry`_cutting¢dev1ce, ankii a 'propelling device mounted above said rotary ‘c'utting`devicé’ for rocauonlitnerewitu=1:6~'2tnr6vi‘_lt;hiaceria1 alitwardly against the"downwf§rii1yfl1iali§1ng_5 walls, of; said conica1=chah1her.ss""=' " "jf;_` ‘ ' 29- ssIll e degrees ¢ri11="11e erivefetw ess easing he-vibe if bottoxnf a.ndE§a»fslde' wall' defining' ‘a ' grinding chamber; 7n1eans`ffor‘ ssconducting "i'naterlal` to be; ground -tm the grinding- cliamiierg ghlidllgg 'means in the, chamber comprjSiIigfa"rotary cutteiymojunti ed on thevbottomiandia stationary"c_utter1ln gl lateral recess _of the casing, and nssiea`ns’for`,1le;d= bly niounting the 1 sta.ti6na.i'y` cutter ' ssand adapted to mcve zuersmicnary- cutgegifqiiii out Q; uié; recess, the mounting 'means' comprising' a jholderf for therstatiomiry cutterfcanr mémbers`for=sup=, porting the uo1derra;ndia'spririg'biasing ihéiigiiqeg towardsthe cam menibers, the cutting edge infa certain ~ position Tof ithei 'canilinenibers tproj eating into 1:he~euctinggcuainuer» and in 'ariotnerpoéiginxii of the being _disposed 'vifithinisaid lateral recess: 1` Vss Q” ""` }"Z,f" '30. ID a~grind.iflEyaDpé\i‘§§tus_ havingga’casing with a bottom'~plaLte andfa sldé"`wallA7denn1ngfaii opening at its Upper- ‘end thi'o\igh`whfch_ nfaterial _,ss to he ground¥i.s"cdnducted,`»cutting lineansvhaving ` a cutting edge mounted ‘o1i`tl:ie‘side'wall§’ineans for throwing material ‘to-be gfound'=tovjai'dsisaidf‘ cutting fedge comprising propeller, rneansifor mounting ithe ffpropellerf'on~" said l bottom plate, and means-for driving the pfopel1ér,'the'inounting means 'including a vertical sh§ft§ ifdisk ’ hav- ,BD ing a huh fastenedftoftheishnit andftdtheziproli’ peller and `a' hearing' for - the ‘ shaft/ andl the’»disk comprising a's1eeve~hav1ng1s;~cuhi¢a1 'portion se§'p5 cured at its' lower end' ftki' thesshi:itto1ri‘plate,'”the" inner bore of the sleeve defining a comparatively long bearing Esurface #for -thefshaftff and thef outer surfacef'of» the sleeve deiin“in` ' g\a‘l5eann" §"§iiéhiee . . e , _ , ,jro for the disk, the`disk§liavingia;`fcon1cal“bore-ieni' ' $881118 thelcunical port' ` ioniof §leévé:‘1' ‘ii ‘w si. In a grmalng apparatus;-'egnaamg ‘ch"am`1 af 'P ber, a rotary cuttériin the'ichiiniBer§~afi1i15toi Tor” driving the cutter, means for feeding material to 1 8 2,156,015 _ be ground to the chamber, means for automatically condueting water into the chamber during the grinding operation, the rotary cutter Including a disk, members ilexlbly mounted on the disk and a propeller centrally arranged with and secured to the disk, the propeller having two wings arranged to form a connection with a drive member for other devices whereby the motor may be used as a power agency for such other devices. 32. In a grinding apparatus, a grinding chamber, a stationary and a rotary cutter, and a motor for operating the rotary cutter, the rotary cutter comprising a disk, at least two members flexibly mounted on the disk and adapted to move radially outward under the action of centrifugal force, means for biasing the members inward against the action of centrifugal force, and an equalizer engaging the two members to insure equal movement thereof. 33. In a grinding apparatus having a grinding chamber, the combination of a stationary cutting device disposed in said chamber, a disk mounted for rotation- in said chamber in proximity to said device. means for rotating the disk, a cutting element supported movably on the disk for movement outwardly under the :lnnuence of centrifugal force into cooperative relation with said stationary cutting device, and a propelling member mounted on said disk for rotation therewith to throw material outwardly towards said stationary cutting device, said propelling member having means engaging said outwardly movable cutting element for guiding said cutting element in its outward movement. _ 34. In a grinding apparatus, a grinding chamber, a stationary and a rotary cutter, and a motor for operating the rotary cutter, the rotary cutter comprising a disk, at least two members flexibly mounted on the disk and adapted to move radially outward by the action ol' centrifugal force, an equalizer engaging the two members to insure equal movement thereof, and a propeller secured to the disk and having recesses for guiding said members. 35. In a grinding apparatus, a grinding chamber, a stationary and a rotary cutter, and a motor for operating the rotary cutter, the rotary cutter comprising a disk, at least two toothed members liexlbly mounted on

the disk and adapted to move radially' outward by the action of centrifugal force, an equalizer engaging the two members to insure equal movement thereof, and a propeller on the disk for throwing material to be ground outwardly towards the stationary cutter. 36. In a grinding apparatus having a grinding chamber, the combination of means including a rotatable cutting device for grinding material in said chamber, means for rotating said device, sald device including a member mounted for rotation in said chamber and having a cutting element movably mounted thereon for movement outwardly under the inlluence of centrifugal force, a propelling device mounted on said member for rotation therewith to throw material outwardly toward the walls of said chamber, means providing for the feeding of material to be ground to said chamber, and means operative for supplying water to the chamber during operation of said rotating means. V _ , 37. In a, grinding apparatus, a casing defining a grinding chamber having an opening for receiving material to be ground and having a recess communlcating with the chamber through an aperture in the wall of the chamber, a member having means providing a cutting edge on one face thereof, means for supporting said member movably in said recess and for advancing the member toward the chamber to cause projection of said cutting edge through said aperture into the chamber, said member having such size as to provide clearance between the side walls thereof and the rim of said aperture, and means in said chamber operable for forcing material to be ground against said cutting edge, the leading face of said cutting edge with respect to the direction of movement of said material being set back from the edge of the adjacent side wall of said member to minimize the forcing of comminuted material into the clearance between said last mentioned side wall and the rim of said recess. 38. In a grinding apparatus, a casing defining a grinding chamber having an opening for receiving material to be ground and having a recess communicating with the chamber through an aperture in the wall of the chamber, a. member mounted in said recess and having means providing on the inner face thereof a cutting edge projecting into said chamber, and means for forcing material to be ground against said cutting edge, said member being mounted also to provide a clearance between the leading edge thereof with respect to the direction of movement of said materlal and the adjacent rim of said aperture and said cutting edge being disposed in a manner to provide a space between the cutting edge and said leading edge of said recess whereby comminuted material is restrained from entering said clearance. 39. In a grinding apparatus, a casing defining a grinding chamber having an opening for receiving material to be ground, a member mounted in a recess in the wall of said chambergwlth a clearance space between one wall of the member and the adjacent wall portion of said recess, a row of cutting teeth mounted on said member and projecting into said chamber, said row' of teeth being disposed substantially parallel to and set hack from the edge of said member adjacent sald clearance, and means for forcing material to be ground transversely across said row of teeth from the general direction of said clearance, the space between the leading edge of the teeth and the edge of the clearance forming an overhung portion to prevent material comminuted by said teeth from being forced into the clearance. - 40. In a grinding apparatus including a casing defining a grinding chamber, a grinding unit comprising a holder having cutting teeth thereon, a supporting member for said holder adapted to be removably secured to said casing, and means carried by said supporting member for movably mounting said holder on said supporting member with said teeth directed toward the grinding chamber, said supporting member and said mounting means constituting substantially the sole support for said holder, said mounting means including resilient elements interposed between the holder and supporting member for minimizing the transmission of shock from the holder to said casing during the grinding operation. 41. In a grinding apparatus, the combination of a. casing deiining a substantially vertical axis circular cross-section grinding chamber having substantially smooth side walls and a circular rimmed opening in the bottom thereof, a stationary cutting element disposed at the side of said chamber, a member rotatable in the bottom of said chamber coaxially of said opening and having a substantially flat top disk-like outer portion with a substantially circular outer rim, and a cutu is zo so as oo as vo ting element supported for rotation with said member and for movement relative to said member and having a portion proiectlng above said nat top portion of said member adjacent the outer edge thereof for oooperation with said stationary element in the comminution of material, the rim of said member extending into close proximity with the rim of said opening thereby to define a clearance for controlling the size ol' comminuted material passing from said chamber. 42. In a grinding apparatus, the combination of a casing detining a grinding chamber having a circular rimmed opening in the bottom thereof, a stationary cutting element disposed at a side of said chamber, a member rotatable in the bottom of said chamber coaxially of said opening and having a substantially flat top disk-like outer portion with a substantially circular outer rim, the outer rim of said member having a plurality of indentations therein and extending into close proximity with the rim of said opening, and a plurality of cutting elements supported for rotation with said member and movable relative to said member to positions adjacent the outer edge of the member for cooperation with said stationary cutting element. » 43. In an apparatus for disposing of garbage and like waste material, the combination of a sink or like structure having an opening in _the bottom thereof, grinding apparatus including 9. casing providing a substantially vertical axis grinding chamber connected at the top to said structure for receiving material to be ground through said opening and having means for grinding material in said chamber including a vertical axis rotatable material impelling device. means for the discharge of ground material from said casing, a supporting stand having a iloor mounting portion at the bottom thereof and having adjacent the top thereof a horizontally extending bracket portion connected to said casing, a motor for driving said impelling device, means resiliently suspending said motor beneath said casing, with the axis of the motor extending vertically, and a iiexible coupling interconnecting said motor and impelling device, said stand having means for adjusting the height of said bracket portion. _ 44. ln a grinding apparatus, the combination of a casing defining a grinding chamber adapted to have water and material to be ground supplied thereto and having in one wall thereof a substantially circular, opening for the outward passage of water and ground material, means for grinding material in said chamber including an element mounted for rotation in said grinding chamber substantially coaxially of said opening, means providing a substantially annular chamber in corninunication with and substantially coaxial of said opening for receiving Water and ground material from said grinding chamber, a discharge conduit connected with said annular chamber, a second element connected for rotation with said tirst element and having a plurality of vanes rotatable in said annular chamber for impelling water and ground material from said annular chamber into said discharge conduit, and mechanical power means for rotating said two elements. 45. In a grinding apparatus, the combination of a casing dehning a grinding chamber adapted to have water and material to be ground supplied thereto and having in one wall thereof an opening for the outward passage of water and ground material, means for grinding material in cvs' 19 said chamber including an element mounted for rotation in said grinding chamber. means providing a second chamber in communication with said grinding chamber for receiving Water and ground material from said grinding chamber and having a discharge conduit connected therewith, a fluid impelling device rotatable in said second chamber for producing a centrifugal pump-like action to force water and ground material from said second chamber into said discharge conduit under pressu.re, and power means for rotating said elements. 46. In a waste disposal apparatus, the combination of a casing providing 8 grinding chamber having a material admission opening capable of affording manual access to the interior of the chamber, grinding means in said chamber, means for operating the grinding means, closure means for said opening including a receptacle supported for movement into a plurality of positions including a position wherein the receptacle aifords a depository for waste material and another position_for emptying such material into said chamber, and means including said receptacle operative upon movement of the receptacle into certain of its said plurality ot positions for blocking said opening to prevent feeding of material and manual access to said chamber. 47.111 a waste disposal apparatus, the combination of a casing providing a grinding chamber having a material admission opening capable of aifording manual access to the interior of the chamber, grinding means in said chamber, power means operable for effecting operation of said grinding means, closure means for said opening including a receptacle supported for movement into a pluality of positions including a receiving position wherein the receptacle aiiords a. depository for waste material and another position for the feeding of such material to said chamber, means including said receptacle operative to prevent manual access,,and feeding of material to said chamber when the receptacle is in certain of its said plurality of positions including its said receiving position, and control means operable dependently upon the positioning of the receptacle for controllingthe operation of said power means, said control means being operative responsively to movement of said receptacle from its said receiving position to its said other position for initiating operation of said power means an appreciable time interval before the receptacle reaches its said other position for the feeding of material to said chamber. p 48. In a waste disposal -apparatus, the combination of a casing providing a chamber having an opening for admission of material to the chamber, means for comminuting material in said chamber including a pair of elements at least one of which is supported for movement alter nately into and out of a position for coopera tion with the other of said elements in the com minution of material,_power means for effect ing operation of said comminuting means, a clo sure device supported for movement into a plurality of positions including a position for' block ing said opening and another position for the feeding of material to said chamber, and means automatically operative to control the positioning of said one of said elements dependently upon the positioning of said closure device. 49. In~a waste disposal apparatus, the combination of a casing providing a chamber of considerable depth having a discharge opening at the bottom, the lower portion of the casing having vertical axis circular cross-section. a stationary cutting and shredding element supported to one side and adjacent the bottom of the chamber, means including a member having a substantially Hat top dlsklike outer portion rotatable at the bottom ot the chamber about a

vertical axis. power means for driving said rotatable means at relatively high speed, and a plurality of material impelllng elements supported by said rotatable means for rotation in the bottom of the chamber and arranged for cooperation with said stationary element ln the commlnution of waste material, said plurality of elements being in angularly spaced relationship around said outer portion of said member and projecting above the flat top of said outer portion only a relatively small distance compared to the depth of said chamber. 50. In a waste disposal apparatus, a casing providing a chamber for receiving waste material and water and having a discharge opening at the bottom, the lower portion of the chamber having vertical axis circular cross-section, a stationary cutting and shredding element supported to one side and adjacent the bottom of the chamber, means rotatable at the bottom of the chamber about a vertical axis and including a member having a substantially flat top disklike outer portion, the periphery of said member extending in close proximity with the rlm oi' said opening to deiine a restricted clearance for outward passage of water and comminuted material, power means for driving sald rotatable means at relatively high speed, a plurality ot elements supported by said rotatable means ln angularly spaced relationship around said member and being arranged to project above said outer tlat top portion of said member for cooperation with said stationary element in the commlnutlon of material, said plurality of elements being movable approximately radially outward to operative positions under the influence of centrifugal force, and biasing means operaldve to restrain said elements in inwardly retracted positions when said rotatable means is at rest and operative to delay movement of said elements to outward operative positions until said rotatable means attains a predetermined Speed. 51. In a waste disposal apparatus, a casing providing a grinding chamber of substantial depth and having a discharge opening at the bottom, a stationary cutter supported to one side of said chamber, rotatable means including a member supported at the bottom of said chamber for rotation about a vertical axis. P0wer means operable for driving said rotatable means, a plurality oi' elements supported ln angularly spaced relationship by said rotatable means for cooperation with said stationary cutter in the commlnutlon of material, said elements being movable outwardly to operative positions under the lntlueuce of centrifugal force and being restrained against substantlal angular movement relative to said member in horizontal planes, said el ents being arranged to project above said member adjacent the periphery of the member to impel material against said stationary cutter, and means operative to restrain said elements in inwardly retracted posltlons when said rotatable means ls at rest and operative to delay movement of said elements to their outward operative positions untll said rotatable means attains a predetermined speed. ` 52. In a waste disposal apparatus, a 'casing providing a grinding chamber having a discharge opening at the bottom, the lower portion of the chamber being of vertical axis circular crosssection, a stationary cutter supported at one side of said chamber, means rotatable at the bottom of said chamber about a vertical axis and including a member having a top surface at least approximately coextensive with the cross-section of said chamber so as to form a support for ma.-' terlal in the chamber, means for driving said ro~ tatable means, a plurality of elements movably supported by said rotatable means in angularly spaced relationship around said member and arranged to project above said member adjacent the periphery of the member for cooperation with said stationary cutter in the commlnution of material, said elements being movable approx-' in-lately radially outward to operative positions under the influence of centrifugal- force and being restrained from substantial angular movement relative to said member in horizontal planes, and means operative to restrain said plurality of elements ln inward positions when said rotatable means is at rest and operative to delay movement of said elements to outward operative positions until said rotatable means attains predetermined speed, 53. In a. waste disposal apparatus, a casing providing a grinding chamber having a discharge opening at the bottom, a stationary cutter supported to one side of said chamber, rotatable means including a member supported for rotation at the bottom of said chamber about a vertical axis, means for driving said rotatable means, a plurality ot barlike elements slidably supported by said rotatable means in angularly spaced relationship around said member and arranged to project above the top of a portion of said member adjacent the periphery of the member for cooperation with said stationary cutter in the comminutlon of material, said barlike elements being slidable lonaitudinally and approximately radially outward to operative positions under the intluence of centrifugal force, and biasing means operative to restrain said barlike elements in lnwardly retracted positions when said rotatable means is at rest and operative to delay sliding of said elements to outward operative positions until said rotatable means attains predetermined speed. 54. In a waste disposal apparatus, a casing providing a grinding chamber, a stationary cutter supported to one side of said chamber, means rotatable in said chamber adjacent said stationary cutter, means operable for driving said rotatable means at substantial speed, and a plurality of material lmpelllng elements supported by said rotatable means for movement from inwardly retracted positions to outward operative positions wherein the said elements are cooperative with said stationary cutter for the comrnlnution of material, sald elements being constrained by said rotatable means to move inwardly and outwardly along lines which are parallel to radial lines from the axis of rotation of the rotatable means, but which lines of movement of said elements are displaced backwardly, relative to the direction of rotation, from radial lines with which the said lines of movement respectively are parallel

Classifications:

International (IPC 8-9): E03C1/266 (Advanced/Invention); E03C1/26 (Core/Invention)
International (IPC 1-7): A47J43/04 B02C18/42
CPC: E03C1/2665 Y10S4/04
European: B02C18/42 E03C1/266B
US: 241/101.1 241/245 241/296 241/32.5 241/38 241/46.016 241/63 4/DIG.4



Family:

Publication number	Publication date	Application number	Application date
US2156075 A	19390425	US19360071156	19360327

Priority:

US19360071156 19360327

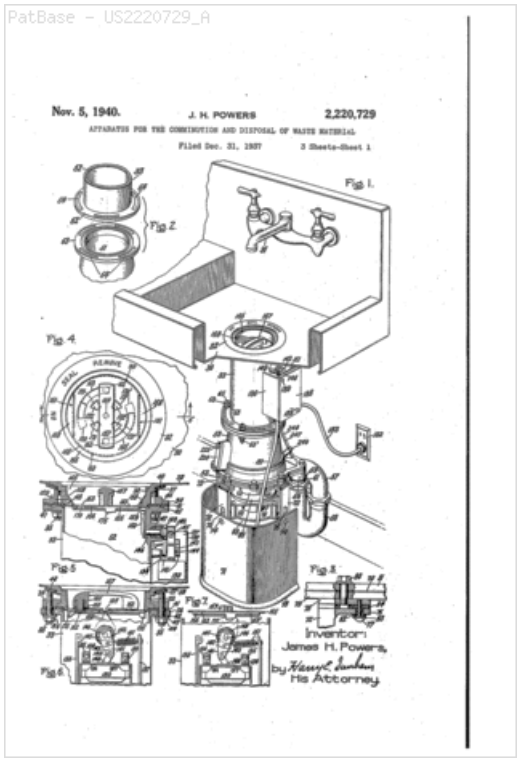
Probable Assignee: GEN ELECTRIC
Assignee(s): (std): GEN ELECTRIC
Assignee(s): GENERAL ELECTRIC CO ; GENERAL ELECTRIC COMPANY
Inventor(s): (std): ADALBERT ALEXAY
Inventor(s): ALEXAY ADALBERT

2) Family number: 21352384 (US2220729A)

Title: APPARATUS FOR THE COMMINUTION AND DISPOSAL OF WASTE MATERIAL

Abstract: 1. In a \vaste disposal apparatus, the combination of a housing providing a receptacle for waste material and having - an opening for admission of material to the receptacle, said housing having also a waste discharge conduit for connection with a sewer or the like, relatively high speed motor operated means supported by said housing and operable for cumminuting material in said receptacle, means for resilient suspension attachment of said housing to a kitchen sink or like structure, and a supporting stand adapted to be mounted on a portion of a building structure such as a floor or wall and having means cooperative therewith for resiliently supporting said housing, said stand and said attachment means providing for resilient suspension oi' said housing between a portion of a building structure on which the stand is mounted and a sink or like structure to which the housing is attached.

Classifications:
International (IPC 8-9): E03C1/266 E03F5/26 (Advanced/Invention); E03C1/26 E03F5/00 (Core/Invention)
International (IPC 1-7): B02C18/42 E04F17/10
CPC: E03C1/2665 E03F5/26
European: B02C18/42 E03C1/266B E03F5/26
US: 241/260 241/275 241/298 241/299 241/32.5 241/46.013 241/46.08 4/638



Family:

Publication number	Publication date	Application number	Application date
US2220729 A	19401105	US19370182775	19371231

Priority:

US19370182775 19371231

Probable Assignee: GEN ELECTRIC
Assignee(s): (std): GEN ELECTRIC
Assignee(s): GENERAL ELECTRIC CO ; GENERAL ELECTRIC COMPANY
Inventor(s): (std): POWERS JAMES H

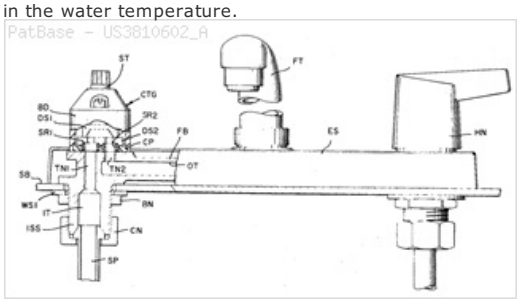
3) Family number: 40966833 (US3810602A)

Title: CERAMIC DISK FAUCET

Abstract: This covers a control valve for a kitchen or like faucet embodying a cartridge or container housing two contiguous ceramic disk elements and a vertical rotary stem. One of the elements is positioned at the base of the stem and is a rotatable member while the other element is a stationary member upon which the rotatable member is slid. The stationary member has inlet and outlet ports both so arranged that, when the movable member is rotated about its axis through a limited angle, the movable member is rotated about its axis through a limited angle, the movable member will be rotatably slid over both ports of the stationary ceramic member to determine the relative sizes of the openings of both ports. Either hot water or cold water, whichever is fed to the inlet port, may be transmitted through the valve and the angular position of the movable member will alone control the volume of water flow through the valve. The slidable member includes a cavity having a plurality of steps or ridges positioned in the path of the water reaching the slidable member, and they reduce the noise level that would otherwise be

developed upon water flow through the valve. The entire flow path within the valve is essentially free of parts which expand or contract to vary the flow as the water temperature changes. Each angular valve setting will correspond to a particular flow rate which may be changed as desired but will remain independent of changes in the water temperature.

Classifications:
International (IPC 8-9): F16K11/074 F16K11/20 F16K11/22 F16K3/04 F16K3/08 F16K31/60 (Advanced/Invention);
F16K11/06 F16K11/10 F16K3/02 F16K31/60 (Core/Invention)
International (IPC 1-7): E03C1/01 F16K11/10 F16K11/20 F16K19/00 F16K21/00 F16K3/08 F16K31/22 F16K31/60 F16K47/14 F16K5/04 F16K5/18
CPC: F16K11/0746 F16K19/00 F16K3/08 F16K19/006 Y10T137/7504 Y10T137/8122 Y10T137/86743
European: F16K11/074C F16K19/00 F16K19/00D F16K3/08
US: 137/454.2 137/55. 137/550 137/625.31 251/180 251/304



Family:

Publication number	Publication date	Application number	Application date
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BR7302752 A0	19740627	BR19730002752	19730416
BR7310029 A0	19741022	BR19730010029	19731220
CA981238 A1	19760106	CA19730163295	19730205
CA998035 A1	19761005	CA19730180677	19730910
CH560342 A	19750327	CH19730004788	19730404
DE2314657 A1	19731025	DE19732314657	19730323
DE2349772 A1	19740829	DE19732349772	19731003
DE2349772 C2	19860417	DE19732349772	19731003
ES190607 U	19740516	ES19730190607U	19730412
ES190607 Y	19741116	ES19730190607U	19730412
FR2180744 A1	19731130	FR19730012834	19730410
FR2180744 B1	19780303	FR19730012834	19730410
FR2219350 A1	19740920	FR19740002019	19740122
FR2219350 B1	19770826	FR19740002019	19740122
GB1363835 A	19740821	GB19730010466	19730305
IT983913 A	19741111	IT19730023061	19730416
JP49108638 A2	19741016	JP19730042268	19730416
JP50000421 A2	19750107	JP19740021554	19740225
JP58043635 B4	19830928	JP19740021554	19740225
NL7305405 A	19731019	NL19730005405	19730417
PH10054 A	19760729	PH19730014311	19730205
PH9526 A	19760109	PH19730015049	19730925
US3810602 A	19740514	US19720244503	19720417
US3834416 A	19740910	US19730335616	19730226

Priority:

US19720244503 19720417 US19730335616 19730226

Probable Assignee: AMERICAN STANDARD INC

Assignee(s): (std): AMERICAN STANDARD INC ; PARKISON R

Assignee(s): BANKERS TRUST CO ; CHEMICAL BANK AS COLLATERAL AGENT ; CHEMICAL BANK COLLATERAL AGENT AS ; PARKISON RICHARD G ; AMERICAN STANDARD INC 40 WEST 40TH STREET NEW YORK ; AMERICAN STANDARD INC 40 WEST 40TH STREET NEW YORK N Y 10018 E U A ; AMERICAN STANDARD INC NEW YORK N Y US ; AMERICAN STANDARD INC US

Inventor(s): (std): PARKISON RICHARD G ; PARKISON R G ; PARKISON R ; PARKINSON RICHARD G ; PARKINSON R

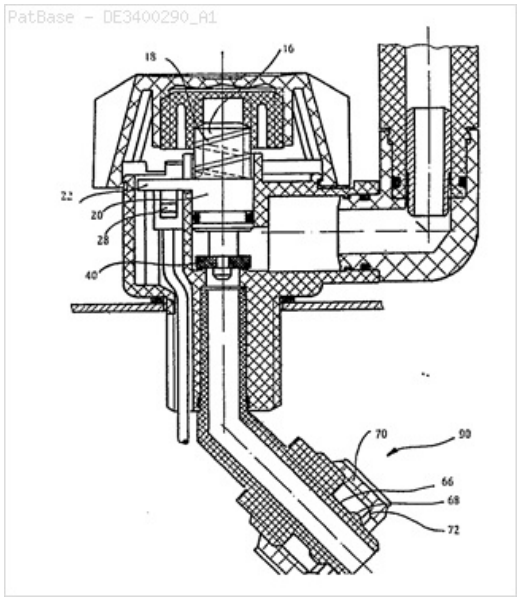
Inventor(s): G PARKISON RICHARD ; G PARKINSON RICHARD ; RG PARKISON ; PARKINSON R US ; PARKISON R US ; RICHAADO JIII PAAKISON ; R G PARKISON ; PARKISON RICHARD G SOMERSET N J US

4) Family number: 11741163 (DE3400290A1)

Title: AUTOMATIC WATER TAP AND A SCREWED HOSE CONNECTION FOR THE LATTER

Abstract: An automatic tap for water systems supplied by small electric pumps has a fixed spindle (16) which can be rotated, during the rotary motion of which a switching element (20) coupled via a thread (18) and further engagement means has an axial motion imparted to it, an electric switch (28) for switching on the current supply for the water pump thereby being actuated via a switching lug (22). By using threads of different pitch for the actuation of the switching element and of the valve seal (40), it is possible to ensure that a water pressure builds up, even when the passage for the water has been opened to a virtually imperceptible extent. The high water pressure required for higher standards of amenity, e.g. when using a plurality of take-off points or shower devices, is accommodated safely by screwed hose connections (90) which are simple to operate by hand and in which the hoses are pushed onto hose nozzles (66), and compression of the hoses between annular beads (68) and oblique surfaces (72) of corresponding shape formed on union nuts (70) ensures the required pressure-tightness.

Classifications:
International (IPC 8-9): F16K27/00 F16K37/00 (Advanced/Invention);
F16K27/00 F16K37/00 (Core/Invention)
International (IPC 1-7): B60P3/36 B60R15/00 B63B29/14 E03C1/042 F16K11/00 F16K27/00 F16K37/00 F16L33/22
CPC: F16K37/0041 F16K27/00
European: F16K27/00 F16K37/00D



Family:

Publication number	Publication date	Application number	Application date
DE3400290 A1	19850718	DE19843400290	19840105
DE3400290 C2	19960711	DE19843400290	19840105
DE3448441 C2	19960111	DE19843448441	19840105

Priority:

DE19843400290 19840105 DE19843448441 19840105

Probable Assignee: REICH REGEL AND SICHERHEITS KG

Assignee(s): (std)**:** REICH KG REGEL AND SICHERHEITS ; REICH REGEL AND SICHERHEITS KG

Assignee(s): REICH REGEL U SICHERHEITSTECHNIK KG ; REICH REGEL U SICHERHEITSTECHNIK 35687 DILLENBURG DE KG ; REICH REGEL U SICHERHEITSTECHNIK 6340 DILLENBURG DE KG ; REICH KG REGEL UND SICHERHEITSTECHNIK ; REICH KG REGEL UND SICHERHEITSTECHNIK 35687 DILLEN ; REICH KG REGEL UND SICHERHEITSTECHNIK 35687 DILLENBURG DE ; REICH KG REGEL UND SICHERHEITSTECHNIK 6340 DILLENB ; REICH KG REGEL UND SICHERHEITSTECHNIK 6340 DILLENBURG DE

Inventor(s): (std)**:** BENDER HELMUT ; REICH WALTER

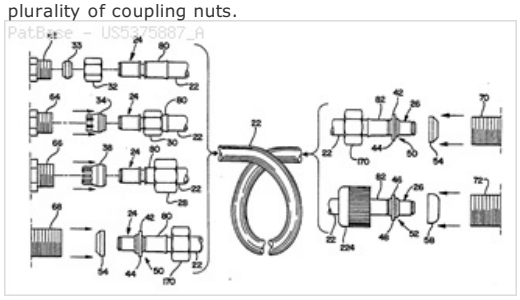
Inventor(s): REICH WALTER 6340 DILLENBURG DE ; REICH WALTER 35687 DILLENBURG DE ; BENDER HELMUT 6345 ESCHENBURG DE ; BENDER HELMUT 35713 ESCHENBURG DE

5) Family number: 9294983 (US5375887A)

Title: Plumbing hookup kit

Abstract: A plumbing hookup kit includes a length of flexible tubing having terminals mounted on each end; different sized brass compression nuts; a brass ferrule; a pair of identical plastic sealing sleeves of one size and a pair of identical plastic sealing sleeves of another size; four identical split locking ring components, pairs of which are adapted to be combined into a locking ring; a pair of identical sealing rings of one size and another larger sealing ring. Different components of the plumbing hookup kit enable the establishment of a fluid tight connection between any of a number of different male threaded fittings in 3/8'', 7/16'' and 1/2'' sizes, each of the type that cooperates with a corresponding one of a plurality of coupling nuts.

Classifications:
International (IPC 8-9): E03C1/02 F16L19/02 F16L19/06 F16L37/00 (Advanced/Invention);
E03C1/02 F16L19/00 F16L19/02 (Core/Invention)
International (IPC 1-7): F16L25/00 F16L37/00
CPC: E03C1/021 F16L19/0231 F16L19/061
European: E03C1/02B F16L19/02F F16L19/06C
US: 285/12 285/249 285/334.1 285/341



Family:

Publication number	Publication date	Application number	Application date
CA2126276 AA	19941222	CA19942126276	19940620
CA2126276 C	19970527	CA19942126276	19940620
US5375887 A	19941227	US19930080488	19930621

Priority:

US19930080488 19930621 CA19942126276 19940620

Probable Assignee: JOHNSON DESIGN LLC

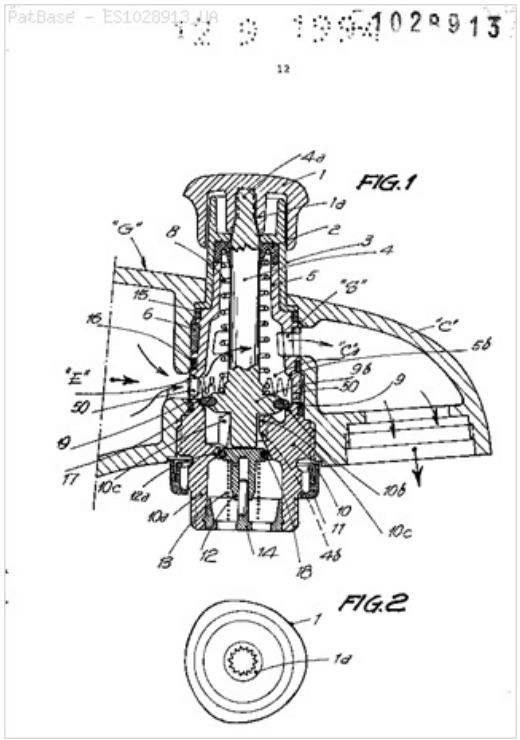
Assignee(s): (std): JOHNSON DWIGHT N
Assignee(s): JOHNSON FAMILY TRUST DATED JANUARY ; HUNTER IND ; HUNTER IND INC ; JOHNSON DESIGN LLC
Inventor(s): (std): JOHNSON DWIGHT N
Agent(s): SMART AND BIGGAR

6) Family number: 34633681 (ES1028913Y)

Title: DISPOSITIVO DISTRIBUIDOR DE AGUA HACIA EL BANO O LA DUCHA.

Abstract: Source: ES1028913U [ES] DISPOSITIVO DISTRIBUIDOR DE AGUA HACIA EL BANO O LA DUCHA, QUE COMPRENDE UN BOTON PULSADOR SOLIDARIO DE UN EJE DESPLAZABLE AXIALMENTE, PORTADOR DE UN OBTURADOR DESPLAZABLE EN EL INTERIOR DE UNA CAMARA DISTRIBUIDORA FORMADA ENTRE DOS PIEZAS COMPLEMENTARIAS ENTRE SI CON ENTRADAS DE AGUA Y DOS SALIDAS O PASOS OPUESTOS QUE COMUNICAN, RESPECTIVAMENTE, CON EL CANO DEL GRIFO Y LA SALIDA HACIA LA DUCHA; ESTE OBTURADOR PUEDE ADOPTAR DOS POSICIONES ESTABLES, EN UNA DE LAS CUALES CIERRA EL PASO DE AGUA HACIA LA DUCHA Y EN LA OTRA CIERRA EL PASO DE AGUA HACIA EL BANO; EL OBTURADOR ES EMPUJADO POR UN MUELLE QUE TIENDE A MANTENERLO EN LA POSICION DE CIERRE DEL PASO DEL AGUA HACIA LA DUCHA, DE FORMA QUE PARA SITUARLO EN LA POSICION OPUESTA ES NECESARIO PULSAR EL BOTON; UNA VEZ EN LA POSICION DE CIERRE DEL PASO HACIA EL BANO, SE MANTIENE ASI MIENTRAS HAYA SUFICIENTE PRESION EN EL AGUA QUE ENTRA EN EL GRIFO A FIN PARAEMPUJAR EL OBTURADOR PARA VENCER LA ACCION DEL MUELLE, PERO EN EL MOMENTO EN QUE DISMINUYELA PRESION DEL AGUA POR CUALQUIER CIRCUNSTANCIA, EL EMBOLO-OBTURADOR VUELVE AUTOMATICAMENTE A LA POSICION DE CIERRE DEL PASO HACIA LA DUCHA; A PARTIR DE ESTA REALIZACION, EL DISPOSITIVO DISTRIBUIDOR SE CARACTERIZA ESENCIALMENTE POR EL HECHO DE QUE UNA DE LAS PIEZAS QUE FORMAN LA CAMARA EN LA QUE SE DESPLAZA EL OBTURADOR, SE PROLONGA SUPERIORMENTE EN FORMA DE MANGUITO, RODEADA POR UN EMBELLECEDOR QUE DISPONE DE UN ASIENTO INTERNO EN EL QUE ESTA RESPALDADO UNA JUNTA DE HERMETICIDAD QUE AJUSTA ALREDEDOR DE UN EJE EN EL QUE ESTA MONTADO EL OBTURADOR, EN CUYA JUNTA SE APOYA UN EXTREMO DE UN MUELLE QUE EMPUJA AL OBTURADOR HACIA LA POSICION DE CIERRE DEL PASO HACIA LA DUCHA, EN TANTO QUE UNA DE LAS PIEZAS QUE CONSTITUYEN LA CAMARA DESCRITA SE PROLONGA EN UN CASQUILLO CON UNA ZONA POLIGONAL EXTERNA PARA EL ACOPLAMIENTO DE UNA LLAVE DE MONTAJE, CUYA ZONA ESTA PROTEGIDA POR UNA FUNDA ANULAR EXTERNA MONTADA A SU ALREDEDOR, EN TANTO QUE EL CASQUILLO DISPONE DE MEDIOS DE EMPALME DEL TUBO FLEXIBLE DE LADUCHA Y PRESENTA EN SU INTERIOR UN ALOJAMIENTO EN EL QUE VA INCORPORADA DE FORMA AMOVIBLE UNA VALVULA ANTIRRETORNO. **Machine translation:** Water distributor device toward the bathroom or shower, COMPRISING A BUTTON INTEGRAL WITH A shaft axially displaceable, CARRIER OF A SHUTTER MOVABLE INSIDE A distribution chamber formed between two complementary parts TOGETHER WITH WATER inlets and two outlets or opposite STEPS WHICH COMMUNICATE, respectively, with the spout of the faucet AND THE OUTLET TOWARD THE SHOWER; this shutter can adopt two stable positions, IN ONE OF WHICH CLOSES THE PASSAGE OF WATER TO THE SHOWER AND CLOSES THE PASSAGE OF WATER INTO THE BATH; the shutter is urged by a spring which TENDS TO KEEP IT IN THE CLOSED POSITION OF THE PASSAGE OF WATER INTO THE SHOWER, So AS TO PLACE IT IN THE OPPOSITE POSITION IT IS NECESSARY TO PRESS THE BUTTON; ONCE IN THE CLOSED POSITION OF THE PASSAGE TOWARD THE BATHROOM, AS WELL AS LONG AS THERE IS SUFFICIENT PRESSURE IS MAINTAINED IN THE WATER THAT ENTERS THE PARAEMPUJAR TAP TO THE SHUTTER TO OVERCOME THE ACTION OF THE SPRING, BUT AT THE TIME OF DISMINUYELA WATER PRESSURE FOR ANY REASON, THE plunger-shutter automatically RETURNS TO THE CLOSED POSITION OF THE PASSAGE TOWARD THE SHOWER; FROM THIS embodiment, the dispensing DEVICE IS ESSENTIALLY CHARACTERIZED BY THE FACT THAT ONE OF THE pieces that form the chamber in which MOVES THE SHUTTER, EXTENDS SUPERIORLY IN THE FORM OF SLEEVE, surrounded by a bezel It HAS AN INTERNAL SEAT IN WHICH IS SUPPORTED A gasket that fits around a shaft ON WHICH IS MOUNTED THE SHUTTER, whose board supports one end of a spring which pushes the SHUTTER TOWARD THE CLOSED POSITION OF THE PASSAGE TOWARD THE SHOWER, WHILE ONE OF THE PARTS CONSTITUTING THE CHAMBER DESCRIBED EXTENDS INTO A CAP WITH A POLYGONAL EXTERNAL AREA FOR THE COUPLING OF A WRENCH ASSEMBLY, whose AREA IS PROTECTED BY AN OUTER annular sleeve mounted around it, WHILE THE SOCKET HAS MEANS OF FLEXIBLE PIPE OF LADUCHA AND HAS INSIDE A HOUSING IN WHICH Is Incorporated REMOVABLY A CHECK VALVE.

Classifications:
International (IPC 8-9): E03C1/02 (Advanced/Invention);
E03C1/02 (Core/Invention)
International (IPC 1-7): E03C1/02



Family:

Publication number	Publication date	Application number	Application date

ES1028913 UA	19950316	ES19940002338U	19940912
ES1028913 Y1	19950801	ES19940002338U	19940912
ES1028913 YA	19950801	ES19940002338U	19940912

Priority:

ES19940002338U 19940912

Probable Assignee: SOLER IND

Assignee(s): (std): SOLER IND

Assignee(s): INDUSTRIAS RAMON SOLER S A ; INDUSTRIAS RAMON SOLER SA

Inventor(s): (std): SOLER FORNT RAMON

7) Family number: 30044856 (US2003024568A)

Title: REJECT WATER DRAIN LINE INSTALLATION SYSTEM AND APPARATUS FOR UNDER SINK REVERSE OSMOSIS FILTER SYSTEM

Abstract: Reject waste water adapter coupling fitting, for use with a household undercounter reverse osmosis (R/O) water filtration installation associated with an in-counter sink with its outlet connected by standard slip fit S/J plumbing fittings to a sink drain trap plumbed to the household sewer system. The R/O reject waste water drain line is coupled into the sink drain trap by various improved adapter coupling embodiments: e.g., a ball-and-cage type back check valve in the adapter; a modified S/J branch tail piece having a special adapter fitting that is permanently joined to the inlet of the branch stem tube of the tail piece; and a standard disposal Ell with a waste water drain inlet protuberance integrally molded at the outside corner of the junction of a quarter-turn curved elbow portion with a straight sleeve portion of the Ell.

Classifications:

International (IPC 8-9): B01D61/08 B01D61/10 E03B7/07 E03C1/12 E03C1/184 (Advanced/Invention);
B01D61/02 E03B7/00 E03C1/12 E03C1/18 (Core/Invention)

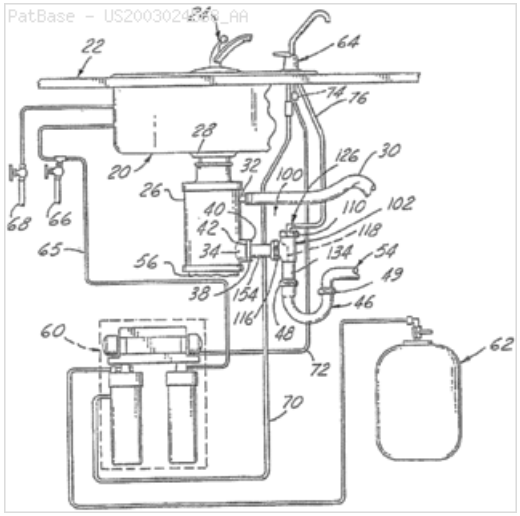
International (IPC 1-7): B01D27/08 B01D27/10 B01D35/00 B01D35/027 E03C1/12 F16K24/00

CPC: Y10T137/3185 Y10T137/3294 B01D61/08 B01D61/10 E03B7/074 E03C1/12 E03C1/184

European: B01D61/08 B01D61/10 E03B7/07D E03C1/12 E03C1/184

US: 137/216 137/217 138/120 138/177 21/17.2 210/153 210/172.1 210/173 210/232 210/320 210/418 210/460 285/125.1 285/132.1 285/133.21 285/134.1 285/148.23 285/155 285/156 285/179 285/180 285/323 285/342 285/343 285/423 4/629 4/640 4/653 4/679

Locarno class: 46/79



Family:

Publication number	Publication date	Application number	Application date
US2003024568 AA	20030206	US20020184312	20020627
US5449456 A	19950912	US19940206850	19940307
US5635058 A	19970603	US19950406182	19950316
US5681459 A	19971028	US19950514871	19950814
US5944985 A	19990831	US19970957517	19971024
US6193879 BA	20010227	US19990330797	19990614
US6651272 BB	20031125	US20020184312	20020627

Priority:

US19940206850 19940307 US19950406182 19950316 US19950514871 19950814
US19970957517 19971024 US19990330797 19990614 US20000703205 20001031
US20020184312 20020627

Probable Assignee: ECO TECH INC

Assignee(s): (std): BOWMAN DENNIS E ; ECO TECH INC

Inventor(s): (std): BOWMAN DENNIS E

8) Family number: 18253779 (EP0733745A2)

Title: FIXATION DEVICE WITH INSTALLATION ELEMENT

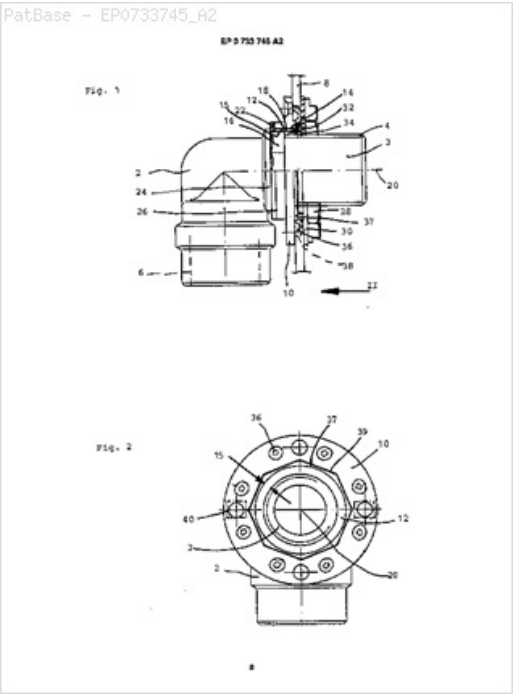
Abstract: The arrangement contains a fastener rail (8) with an aperture (32) for the pipe bend (2). A disc (10) engages with,or is connected to, the rail. An aperture (14) in the disc contains an elastic layer (12). The tubular part (3) of the pipe bend extends through the aperture, forming a gap (15), which contains the elastic material around the tubular part. The elastic layer has a radial section (22). This is located in axial direction between a shoulder (24) on the pipe bend, and the axial end (26) of the disc.

Classifications:

International (IPC 8-9): E03C1/02 (Advanced/Invention);
E03C1/02 (Core/Invention)

International (IPC 1-7): E03C1/042 E04F19/00

CPC: E03C1/021
European: E03C1/02B



Family:

Publication number	Publication date	Application number	Application date
DE19510414 A1	19961002	DE19951010414	19950324
DE19510414 C2	19980212	DE19951010414	19950324
EP0733745 A2	19960925	EP19960104088	19960315
EP0733745 A3	19970212	EP19960104088	19960315

Priority:

DE19951010414 19950324

Probable Assignee: FRIATEC KERAMIK KUNSTSTOFF

Assignee(s): (std)**:** FRIATEC KERAMIK KUNSTSTOFF

Assignee(s): FRIATEC AG KERAMIK UND KUNSTSTOFFWERKE ; FRIATEC AG KERAMIK UND KUNSTSTOFFWERKE 68229 MANNH ; FRIATEC AG KERAMIK UND KUNSTSTOFFWERKE 68229 MANNHEIM DE ; FRIATEC AKTIENGESELLSCHAFT KERAMIK UND KUNSTSTOFFW ; FRIATEC AKTIENGESELLSCHAFT KERAMIK UND KUNSTSTOFFWERKE

Inventor(s): (std)**:** BLAES JUERGEN ; FRANK UWE ; KROPP MICHAEL ; LIPPE MANFRED ; MANNWEILER GUDRUN ; MUENSTER WILFRIED ; SCHULZE HANS ; BLAESS JUERGEN

Inventor(s): BLAES JUERGEN 68542 HEDDESHEIM DE ; SCHULZE HANS 68535 EDINGEN NECKARHAUSEN DE ; MUENSTER WILFRIED 69118 HEIDELBERG DE ; MANNWEILER GUDRUN 68629 LAMPERTHEIM DE ; LIPPE MANFRED 47809 KREFELD BOCKUM DE ; KROPP MICHAEL 68535 EDINGEN NECKARHAUSEN DE ; FRANK UWE 64625 BENSHEIM DE

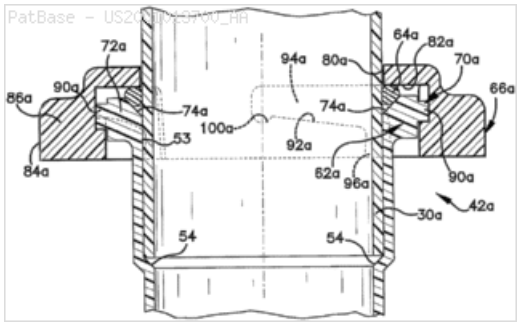
Designated states: AT BE CH DE DK ES FR GB IE IT LI NL

9) Family number: 28112430 (US2001013700A)

Title: WASTE PIPE CONNECTOR

Abstract: An under-sink waste pipe system comprises first and second waste pipes telescoped together, a softly resilient seal ring that both seals the waste-pipe juncture and secures the waste pipes together, a locking ring for compressing the sealing ring into resilient locking and sealing engagement with the waste pipes, and a latching mechanism for securing the locking ring in place with the seal ring resiliently compressed a predetermined degree. The latching mechanism maintains the locking ring secured to the end flange structure and comprises at least first and second latching projections on the end flange structure that extend towards the locking ring, and projection guiding cam surfaces formed in the locking ring. Each projection guiding cam surface terminates in a notch-like latching recess. The projection is resiliently urged into the latching recess by the seal ring and snap moves into place to maintain the locking ring latched to the end flange structure and the seal ring resiliently compressed a predetermined degree. The snap-action of the latching mechanism signals the installer that waste pipes are properly coupled.

Classifications:
International (IPC 8-9): E03C1/20 F16L37/252 (Advanced/Invention); E03C1/20 F16L37/00 (Core/Invention)
International (IPC 1-7): E03C1/20 F16L17/00 F16L19/00 F16L25/00 F16L33/18 F16L37/244
CPC: F16L21/04 F16L37/113 E03C1/20 F16L37/252
European: E03C1/20 F16L37/252
US: 285/129.1 285/129.2 285/36 285/360 285/361 285/361P 285/362 285/362S 285/376 285/396 285/402 285/402S 285/423 285/423S



Family:

Publication number	Publication date	Application number	Application date
US2001013700 AA	20010816	US20000747460	20001222
US2002163194 AA	20021107	US20020173071	20020617
US6481763 BB	20021119	US20000747460	20001222
US6755446 BB	20040629	US20020173071	20020617
WO0159351 A1	20010816	WO2001US03213	20010131

Priority:

US20000502738 20000211 US20000747460 20001222 US20020173071 20020617

Probable Assignee: J AND B PRODUCTS INC

Assignee(s): (std): SUPERIOR WORKSHOP TOOL CO ; SUPERIOR WORKSHOP TOOL COMPANY

Assignee(s): SUPERIOR WORKSHOP TOOL CO 100 HAYES DRI VEB ; J AND B PRODUCTS INC ; ROYNAT BUSINESS CAPITAL INC ; SUPERIOR TOOL CORP

Inventor(s): (std): KOVACH JAMES A ; MINTZ CHARLES J

Designated states: AT BE CA CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

10) Family number: 32082313 (US2005150556A)

Title: MULTI-MODE HANDS FREE AUTOMATIC FAUCET

Abstract: A hands-free faucet comprises a proximity sensor, a logical control, a handle including a first touch control, a second touch control, and a mode indicator. The logical control has a manual mode (wherein the proximity sensor is inactive, and water flow is toggled on and off by positioning the handle) and a hands-free mode (wherein water flow is toggled on and off in response to the proximity sensor). The first touch control puts the faucet in the hands-free mode when touched by a user. The second touch control toggles the logical control between the hands-free mode and the manual mode when touched by a user. The mode indicator indicates which mode the faucet is presently in. The water flow has a temperature and a flow rate that are determined by the position of the handle.

Classifications:

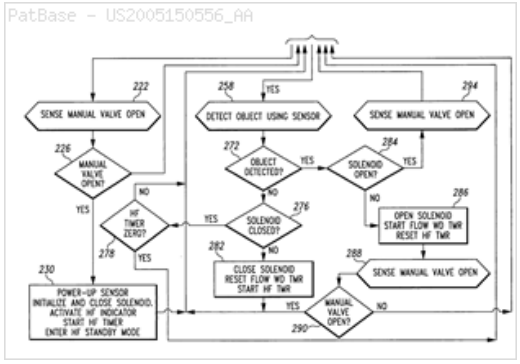
International (IPC 8-9): B05B1/22 B05B12/00 B05B15/06 E03C1/02 E03C1/04 E03C1/05 F15D1/00 F16K11/00 F16K31/02 F16K37/00 F16K51/00 G02F1/13 G02F1/133 G02F1/1347 G05D7/06 G09F9/46 G09G3/20 G09G3/36 G09G5/00 G09G5/02 G09G5/10 G09G5/36 G09G5/377 H01C1/01 H01C1/14 H01C13/02 H04N5/66 (Advanced/Invention);
E03C1/04 (Advanced/Non-invention);
B05B1/00 B05B12/00 B05B15/00 E03C1/02 E03C1/05 F15D1/00 F16K31/02 F16K37/00 F16K51/00 G02F1/13 G05D7/06 G09F9/46 G09G3/20 G09G3/36 G09G5/00 G09G5/10 G09G5/36 H04N5/66 (Core/Invention)

International (IPC 1-7): E03C1/02 E03C1/05 F16K31/02 G02F1/01 G05D7/06 G06F3/14 H04N5/202 H04N5/272

CPC: G02F1/1347 G09G3/3611 G09G2300/023 G09G2320/0646 F16K37/0041 E03C1/0412 F16K11/087 F16K37/0033 H01C1/01 H01C13/02 Y10T24/3927 E03C1/055 E03C1/05 Y10T137/8242 E03C1/057 E03C1/0404 E03C2001/0415 H01C1/14 Y10T137/0318 Y10T137/8158 Y10T137/8175 Y10T137/86389 Y10T137/87917 Y10T137/9464

European: E03C1/04D E03C1/05 E03C1/05D E03C1/05D2 F16K11/087 F16K37/00D F16K37/00D2 G09G3/36C P03C1/04K S02F1/1347 S09G300/02S S09G320/06L6

US: 1/1 116/277 137/1 137/1P 137/551 137/552 137/554 137/613 137/624.11 137/801 137/801S 239/195 239/443 239/73 24/129A 251/129.01 251/129.03 251/129.030S 251/129.04 251/129.040P 338/220 345/4 345/592 345/629 345/629P 345/634 4/623 4/668 4/678



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CA2491877 C	20150929	CA20052491877	20050111
CA2532510 AA	20060914	CA20062532510	20060106
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CA2599894 AA	20070831	CA20062599894	20060105
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CA2672853 AA	20090616	CA20072672853	20071211
CA2672853 C	20120417	CA20072672853	20071211
CA2767104 AA	20080724	CA20072767104	20071211

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CA2893503 C	20161220	CA20052893503	20050111
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CA2948045 AA	20050712	CA20052948045	20050111
CN101223321 A	20080716	CN200680008200	20060105
CN101223321 B	20110824	CN200680008200	20060105
CN101563561 A	20091021	CN200780046594	20071211
CN101563561 B	20110518	CN200780046594	20071211
EP1859106 A2	20071128	EP20060717459	20060105
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EP1949179 A4	20100303	EP20060812833	20061005
IN04452DN2009 A	20091204	IN2009DN04452	20090707
IN299370 B	20180803	IN2009DN04452	20090707
JP2009517698 T2	20090430	JP20080534475T	20061005
NZ542843 A	20080829	NZ20050542843	20051005
RU2009127768 A	20110127	RU20090127768	20071211
US2005150556 AA	20050714	US20040755581	20040112
US2006130907 AA	20060622	US20060325128	20060104
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WO08088534 A3	20081127	WO2007US25336	20071211

Priority:

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Probable Assignee: DELTA FAUCET CO

Assignee(s): (std): JONTE PATRICK ; MASCO CORP ; MARTY GARRY R ; MOORE JEFFREY L ; JONTE PATRICK B ; MARTY GARY R ; MOORE JEFFREY LEE ; DELTA FAUCET CO ; GAO HONGZHI ; HUFFINGTON TODD ; HUFFINTGON TODD ; MARTY GARRY M ; MARTY GARRY ROBIN ; BURKE DAVID M ; SAILORS TIMOTHY J JR ; PURE DEPTH LTD ; RODENBECK ROBERT W ; PUREDEPTH LTD ; SAILORS JR TIMOTHY JAY

Assignee(s): SAILORS TIMOTHY JAY JR ; SAWASKI JOEL D ; THOMAS KURT J ; SAILORS TIMOTHY J ; DAVIDSON KYLE R ; MASCO OF INDIANA CORP55 EAST 111TH ST.INDIANAPOLISIN46280US ; MASCO OF INDIANA CORP55 EAST 111TH STREETINDIANAPOLISIN46280US ; K ONE W ONE LTD ; JOINTE PATRICK B ; MASCO OF INDIANA CORP

Inventor(s): (std): BURKE DAVID M ; DAVIDSON KYLE R ; JONTE PATRICK ; JONTE PATRICK B ; MARTY GARRY M ; MARTY GARRY R ; MARTY GARRY ROBIN ; HUFFINGTON TODD ; MARTY GARY R ; MOORE JEFFREY L ; MOORE JEFFREY LEE ; RODENBECK ROBERT W ; SAILORS JR TIMOTHY JAY ; SAILORS TIMOTHY J JR ; SAILORS TIMOTHY JAY JR ; THOMAS KURT J ; TODD HUFFINGTON ; GAO HONGZHI ; SAWASKI JOEL D ; HUFFINTGON TODD ; JOINTE PATRICK B

Inventor(s): BURKE DAVID ; SAWASKI JOEL DUS ; RODENBECK ROBERT WUS ; SAILORS TIMOTHY JAY JRUS ; SAILORS TIMOTHY JJR ; SAILORS TIMOTHY J JRUS ; SAILORS TIMOTHY JAY ; SAILORS TIMOTHY ; SAILORS TIMOTHY J ; MOORE JEFFREY LEEUS ; MOORE JEFFREY LUS ; PATRICK B JONTE ; ROBERT W RODENBECK ; RODENBECK ROBERT ; MARTY GARY ROBIN ; MOORE JEFFREY ; JOINTE PATRICK BUS ; MARTY GARRY ROBINUS ; MARTY GARRY RUS ; MARTY GARY ; JONTE PATRICK BUS ; MARTY GARRY ; GARRY R MARTY ; DAVID M BURKE

Agent(s): DIMOCK STRATTON LLP; PIASETZKI NENNIGER KVAS LLP; MACRAE AND CO; HEENAN BLAIKIE LLP; HOWE STEVEN ET AL; WOODARD EMHARDT MORIARTY MCNETT AND HENRY LLP, BANK ONE CENTER/TOWER; WOODARD EMHARDT MORIARTY MCNETT AND HENRY LLP BANK ONE CENTER TOWER; BAKER AND DANIELS LLP; WOODARD EMHARDT MORIARTY MCNETT AND HENRY LLP; MURABITO HAO AND BARNES LLP; DOUGLAS A YERKESON BAKER AND DANIELS LLP; ZARINS EDGAR A; PARIKH NIRAV D; EDGAR A; NIRAV D; FAEGRE BAKER; FAEGRE BAKER DANIELS LLP; YERKESON DOUGLAS A

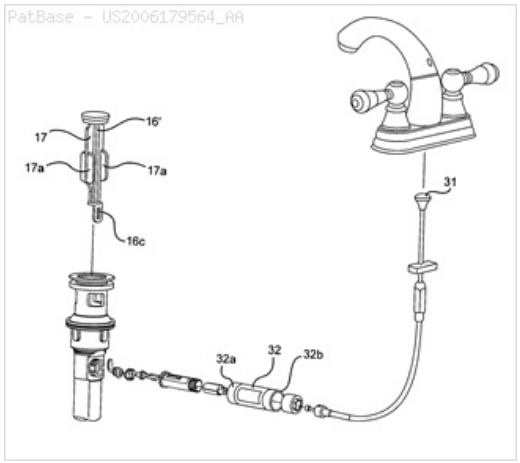
Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

11) Family number: 33211266 (US2006179564A)

Title: DRAIN ASSEMBLY FOR RAPID INSTALLATION IN SANITARY VESSELS

Abstract: The present invention provides an improved drain assembly having a drain stopper assembly in operational communication with an actuation assembly. The drain stopper assembly includes an elongate one-piece housing with a longitudinal body coextensive with proximate and distal extents of the housing and defining a lumen therein. A flange portion at the proximate extent has a fluid egress for delivery of fluids from a sanitary vessel to the housing lumen. The housing body has an inner circumferential surface of predetermined inner diameter and an outer circumferential surface of predetermined outer diameter. A linearly reciprocable drain stopper is provided that has a closure head proximate which an elongate shaft depends. The stopper reciprocates between a fully closed position, wherein the closure head obstructs the fluid egress, and a fully open position, wherein the fluid egress remains unobstructed. A securement region provided on the outer housing surface has a receiving region defined therewith and effects operational communication between the drain stopper assembly and the actuation assembly so that operation of a drain articulation member effects reciprocal motion of the drain stopper. In this embodiment, the housing, flange portion and securement region comprise an integral member. In an alternative embodiment, the drain stopper assembly has a multi-piece housing.

Classifications:
International (IPC 8-9): A47K1/14 E03C E03C1/12 E03C1/23 (Advanced/Invention); E03C1/12 (Advanced/Non-invention); E03C1/12 E03C1/22 E03C1/23 (Core/Invention)
International (IPC 1-7): E03C1/12 E03C1/23
CPC: E03C1/2304
European: E03C1/23 E03C1/23B
US: 4/295 4/689 4/689P



Family:

Publication number	Publication date	Application number	Application date
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EP1707695 A2	20061004	EP20050028453	20051224
EP1707695 A3	20070613	EP20050028453	20051224
HK1092194 A1	20070202	HK20060112861	20061123
HK1092194 A3	20070202	HK20060112861	20061123
KR20060091052 A	20060817	KR20060004004	20060113
TH100767 A	20100326	TH20051006088	20051221
US2006179564 AA	20060817	US20050217875	20050901
US7886372 BB	20110215	US20050217875	20050901
WO06088557 A2	20060824	WO2005US46973	20051222
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Priority:
US20050652402P 20050211 US20050217875 20050901

Probable Assignee: IP HOLDCO LLC AS

Assignee(s): (std): AMERICAN STANDARD INT INC ; AMERICAN STANDARD INTERNATIONAL INC ; AS IP HOLDCO LLC ; JACOBS BARRY H ; IP HOLDCO L L C AS

Assignee(s): WELLS FARGO BANK NATIONAL ASSOCIATION COLLATERAL TRUSTEE AS ; WELLS FARGO FOOTHILL LLC ; SUN PLUMBING V FINANCE LLC ; IP HOLDCO LLC AS ; ELJER INC ; WELLS FARGO BANK NATIONAL ASSOCIATION COLLATERAL T ; AS IP HOLDCO L L C ; ABLECO FINANCE LLC AS COLLATERAL AGENT ; ABLECO FINANCE LLC COLLATERAL AGENT AS ; AMERICAN STANDARD INT

Inventor(s): (std): JACOBS BARRY H

Inventor(s): JACOBS BARRY

Agent(s): SHANGHAI PATENT AND TRADEMARK OFFICE; AMERICAN STANDARD INC; FLASTER GREENBERG PC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

12) Family number: 40843311 (US2007272770A)

Title: APPARATUS AND METHODS FOR A SHOWERHEAD BRACKET WITH INTEGRAL SHOWERHEAD

Abstract: A showerhead assembly may include a showerhead bracket for attaching a conventional handheld showerhead to the showerhead assembly. A coupling member may join the showerhead assembly to a shower pipe, and a showerhead may be joined to the showerhead bracket to deliver water or other fluid from the showerhead assembly. The showerhead bracket may be selectively rotatable and/or pivotable relative to the coupling member, the showerhead, or both to change the direction water exits the showerhead assembly relative the showerhead pipe. The showerhead assembly may operate in one or more modes, which may include at least one off mode. The showerhead assembly operation mode may be selected by rotating at least some components of the showerhead relative to the showerhead bracket. Some showerhead assemblies may include a diverter valve to selectively control the flow of fluid from the showerhead pipe to the showerhead and the handheld showerhead.

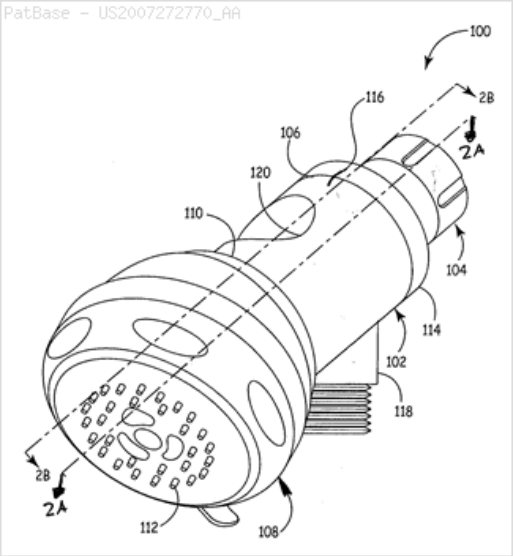
Classifications:

International (IPC 8-9): A62C31/00 B05B1/08 B05B1/18 B05B1/30 B05B1/32 B05B15/06 B05B15/08 B05B9/01 B29C65/00 B29C65/56 B29C69/00 B29D23/00 B29D31/00 B29D99/00 E03C1/02 E03C1/042 E03C1/06 F16L27/04 F16L27/047 (Advanced/Invention); B05B1/18 B29C41/04 B29C65/00 B29C65/02 B29C65/08 B29C65/48 B29C65/58 B29C69/00 B29L31/00 (Advanced/Non-invention); B05B1/02 B05B1/18 B05B1/30 B05B15/00 B05B9/00 B29C65/00 B29C69/00 B29D23/00 B29D99/00 E03C1/06 F16L27/02 (Core/Invention)

CPC: F16L27/047 E03C1/021 B29C41/04 B29C65/02 B29C65/08 B29C65/48 B29C65/56 B29C65/561 B29C65/562 B29C65/58 B29C66/1142 B29C66/124 B29C66/126 B29C66/54 B29C66/55 B29C69/004 B29L2031/7696 B29C65/00 Y10T29/49 Y10T137/6858 B05B15/62 B05B15/65 B05B15/654 B05B1/1654 B05B1/18 B05B1/3026 B05B3/04 E03C1/06

European: B05B1/16B3B2 B05B1/30C B05B15/06A B05B15/06B B05B15/06B1A B29C65/56 B29C65/56B B29C65/56D B29C66/126 E03C1/06 L05B1/18 L05B3/04 L29C41/04 L29C65/02 L29C65/08 L29C65/48 L29C65/56 L29C65/58 L29C66/1142 L29C66/124 L29C66/50 L29C66/54 L29C66/55 L29C69/00D L29L31/7696

US: 1/1 137/345 239/101 239/101P 239/282 239/436 239/443 239/447 239/451 239/525 239/558 239/569 239/581.1 264/239 264/239S 264/241 264/241S 285/146.1 285/184 285/261 285/261P 285/272 285/8 29/592 29/592S 4/695 4/695P



Family:

Publication number	Publication date	Application number	Application date
CA2630312 AA	20081104	CA20082630312	20080502
CA2630312 C	20140826	CA20082630312	20080502
CA2630325 AA	20081104	CA20082630325	20080502
CA2630325 C	20121002	CA20082630325	20080502
CA2630697 AA	20081104	CA20082630697	20080502
CA2630697 C	20140128	CA20082630697	20080502
CA2833476 AA	20081104	CA20082833476	20080502
CA2833476 C	20170307	CA20082833476	20080502
US2007272770 AA	20071129	US20070754980	20070529
US2008271240 AA	20081106	US20080112697	20080430
US2008272203 AA	20081106	US20080114304	20080502
US2008272591 AA	20081106	US20080112751	20080430
US2013147186 AA	20130613	US20130764404	20130211
US8028935 BB	20111004	US20080114304	20080502
US8371618 BB	20130212	US20080112751	20080430
US8789218 BB	20140729	US20080112697	20080430
US9127794 BB	20150908	US20130764404	20130211

Priority:

US20060803350P 20060526
US20070916092P 20070504
US20070916146P 20070504
US20070916219P 20070504
US20070754980 20070529
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CA20082630697 20080502
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US20080114304 20080502
US20130764404 20130211
CA20132630697 20131128

Probable Assignee: WATER PIK INC

Assignee(s): (std): CALLAGHAN ROBERTA L ; WATER PIK INC ; LEBER LELAND C ; QUINN MICHAEL J ; WHITAKER CARL T ; LUETTGEN HAROLD A

Assignee(s): WATER PIK INC1730 EAST PROSPECT ROADFORT COLLINSCO80553-0001US ; CREDIT SUISSE ; CREDIT SUISSE CAYMAN ISLANDS BRANCH FIRST LIEN ADMINISTRATIVE AGENT AG AS ; CREDIT SUISSE CAYMAN ISLANDS BRANCH SECOND LIEN ADMINISTRATIVE AGENT AG AS ; GENERAL ELECTRIC CAPITAL AGENT AS CORP

Inventor(s): (std): CALLAGHAN ROBERTA L ; LEBER LELAND C ; LUETTGEN HAROLD A ; QUINN MICHAEL J ; WHITAKER CARL T

Inventor(s): WHITAKER CARL TUS ; QUINN MICHAEL JUS ; LUETTGEN HAROLD AUS ; LEBER LELAND CUS ; CALLAGHAN

ROBERTA LUS

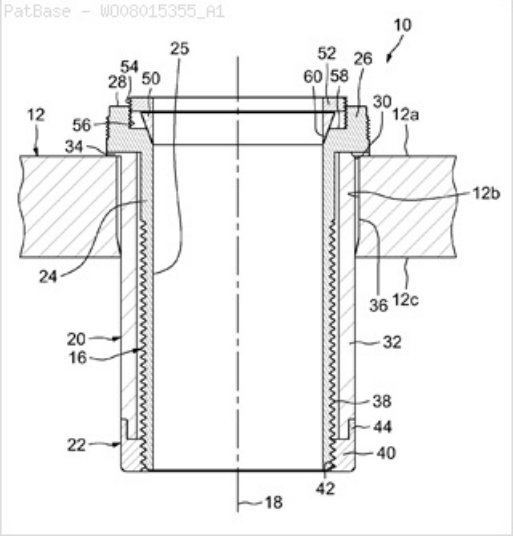
Agent(s): GOWLING LAFLEUR HENDERSON LLP; GOWLING WLG CANADA LLP; DORSEY AND WHITNEY LLP, INTELLECTUAL PROPERTY DEPARTMENT; DORSEY AND WHITNEY LLP INTELLECTUAL PROPERTY DEPARTMENT; DORSEY AND WHITNEY LLP

13) Family number: 41457082 (WO08015355A1)

Title: SYSTEM FOR INSTALLING AND ADJUSTING THE HEIGHT OF A VALVE

Abstract: System for installing and adjusting a valve, characterized in that it is provided with a sleeve 16 inside which the valve is to be installed, a compression seal 50 disposed inside the sleeve and comprising a surface in contact with an outer surface of the valve, and a locking ring 52 which cooperates with the compression seal so as to allow a radial compression of the outer surface of the valve.

Classifications:
International (IPC 8-9): E03C1/04 (Advanced/Invention); E03C1/04 (Core/Invention)
CPC: E03C1/0401 E03C1/0402
European: E03C1/04B E03C1/04B2



Family:

Publication number	Publication date	Application number	Application date
BRPI0714092 A2	20130101	BR2007PI14092	20070720
EP2047039 A1	20090415	EP20070823613	20070720
FR2904638 A1	20080208	FR20060007024	20060801
FR2904638 B1	20110304	FR20060007024	20060801
RU2009107203 A	20100910	RU20090107203	20070720
RU2436903 C2	20111220	RU20090107203	20070720
UA96769 C2	20111212	UA20090001758	20070720
WO08015355 A1	20080207	WO2007FR51695	20070720

Priority:

FR20060007024 20060801 WO2007FR51695 20070720

Probable Assignee: LEROY MERLIN PARTICIPATIONS SA

Assignee(s): (std): BOULMEAU FREDDY ; GROUPE ADEO ; GRUP ADEO ; LEROY MERLIN PARTICIPATIONS ; LEROY MERLIN PARTICIPATIONS SA ; SAUVAGE JEREMY ; PARMENTIER PIERRE

Assignee(s): LEROY MERLIN PARTICIPATIONS SOCIETE ANONYME

Inventor(s): (std): BUL MO FREDDI ; SOVAZH ZHEREMI ; SAUVAGE JEROME ; SAUVAGE JEREMY ; PARMENTIER PIERRE ; BULMEO FREDDY ; BOULMEAU FREDDY ; PARMENT ER P ER

Inventor(s): PARMENT'ER P'ER ; PIERRE PARMENTIER ; BUL'MO FREDDI ; FREDDY BOULMEAU ; JEREMY SAUVAGE

Agent(s): DOSSMANN GERARD ET AL; BUREAU DA CASALONGA AND JOSSE; CASALONGA AND ASSOCIES; ZAPALOWICZ FRANCIS

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

14) Family number: 46787710 (US2011309616A)

Title: SANITARY HOSE COUPLING

Abstract: A sanitary hose coupling (1) including a tubular coupling base body (2) which, in at least one of the base body end regions thereof, has a hose connector (3) profiled in at least one sub-region for a flexible water hose (4) to be pushed on, and also includes a crimp sleeve (6) which, when deformed, fixes an end (5) of the water hose (4) encompassed by the crimp sleeve (6) on the hose connector (3). The hose coupling (1) provides that the end (5) of the water hose (4) encompassed by the crimp sleeve (6) can be fixed in a rotationally fixed manner on the hose connector (3), and that the end (5) of the hose can be pushed onto a profiled section (7) of the hose connector (3) that is not round in the circumferential direction. Since the hose coupling permits a torque transmission between the water hose (4) and the coupling base body (2), the hose coupling is able to

substantially facilitate the mounting and dismantling of a water hose (4) even under restricted spatial conditions.

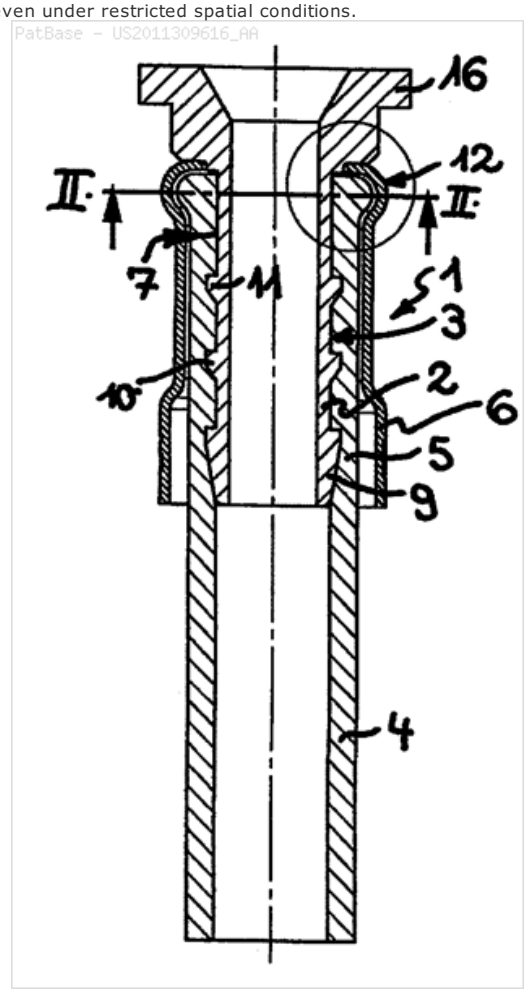
Classifications:

International (IPC 8-9): A62C33/00 E03C1/02 F16L21/00 F16L21/08 F16L33/00 F16L33/20 F16L33/207 F16L33/30 F16L35/00 (Advanced/Invention); E03C1/02 (Advanced/Non-invention); F16L33/00 F16L33/20 (Core/Invention)

CPC: B63B2001/066 F16L39/02 F16L33/2071 F16L33/207 E03C1/025 F16L33/2076 F16L33/2073 F16L33/30

European: F16L33/207B F16L39/02

US: 1/1 285/256 285/382.7 285/382.700P



Family:

Publication number	Publication date	Application number	Application date
AU2010220667 AA	20100910	AU20100220667	20100219
AU2010220667 BB	20140227	AU20100220667	20100219
BRPI1009119 A2	20160301	BR2010PI09119	20100219
CN102362112 A	20120222	CN201080010136	20100219
CN102362112 B	20150923	CN201080010136	20100219
CN105003772 A	20151028	CN201410433289	20140829
CN105003772 B	20170915	CN201410433289	20140829
CN105003774 A	20151028	CN201510115021	20150317
CN201606605 U	20101013	CN200920179144U	20090929
CN204114411 U	20150121	CN201420493021U	20140829
CN204829051 U	20151202	CN201520148689U	20150317
DE102009011411 A1	20100909	DE200910011411	20090303
DE102009011411 B4	20140918	DE200910011411	20090303
DE102014005837 B3	20150827	DE201410005837	20140419
DE102014011583 B3	20150730	DE201410011583	20140802
DE202014003383 U1	20150827	DE201420003383U	20140419
DE202014006216 U1	20150827	DE201420006216U	20140802
DE502010010410 D1	20151119	DE201050010410T	20100219
DE502015005292 D1	20180830	DE201550005292T	20150131
EP2404096 A1	20120111	EP20100706930	20100219
EP2404096 B1	20151007	EP20100706930	20100219
EP2940364 A1	20151104	EP20150001002	20150408
EP3134671 A1	20170301	EP20150704205	20150131
EP3134671 B1	20180801	EP20150704205	20150131
ES2553830 T3	20151214	ES20100706930T	20100219
IN00424KO2015 A	20160108	IN2015KO00424	20150416
IN01813MN2011 A	20120203	IN2011MN01813	20110902
JP2012519260 T2	20120823	JP20110552343T	20100219
MX2011008957 A1	20110930	MX20110008957	20100219
TR201515803 T4	20151221	TR20150015803T	20100219
TR201814472 T4	20181022	TR20180014472T	20150131
US2011309616 AA	20111222	US20100203924	20100219
US2014246851 AA	20140904	US20140274207	20140509
US2015219260 AA	20150806	US20150688908	20150416

US2015226356 AA	20150813	US20150688956	20150416
US8752867 BB	20140617	US20100203924	20100219
US9261213 BB	20160216	US20140274207	20140509
US9447904 BB	20160920	US20150688956	20150416
US9458958 BB	20161004	US20150688908	20150416
WO10099878 A1	20100910	WO2010EP01057	20100219
WO15158404 A1	20151022	WO2015EP00189	20150131

Priority:

DE200910011411	20090303	WO2010EP01057	20100219	EP20100706930	20100219
US20110203924	20110830	DE201410005837	20140419	DE201420003383U	20140419
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CN201420493021U	20140829	EP20150704205	20150131	WO2015EP00189	20150131
CN201520148689U	20150317	US20150688908	20150416	US20150688956	20150416

Probable Assignee: NEOPERL GMBH

Assignee(s): (std)**:** KURY WERNER ; MAGER KEVIN ; NEOPERL GMBH

Assignee(s): NIUPO LTD

Inventor(s): (std)**:** KURY WERNER ; MAGER KEVIN ; MICHAEL SCHERER ; WERNER KURY ; SCHERER MICHAEL ; KEVIN MAGER

Agent(s): PHILLIPS ORMONDE FITZPATRICK; PATENT U RECHTSANWAELTE MAUCHER BOERJES JENKINS; MAUCHER WOLFGANG; KUNST MANUEL NIKOLAUS JOHANNES; BOERJES PESTALOZZA HENRICH; LEHMANN MARIA ISABEL; YESIM METIN; ESEN KAYA; VOLPE AND KOENIG PC; MAUCHER WOLFGANG ET AL; BOERJES PESTALOZZA HENRICH ET AL

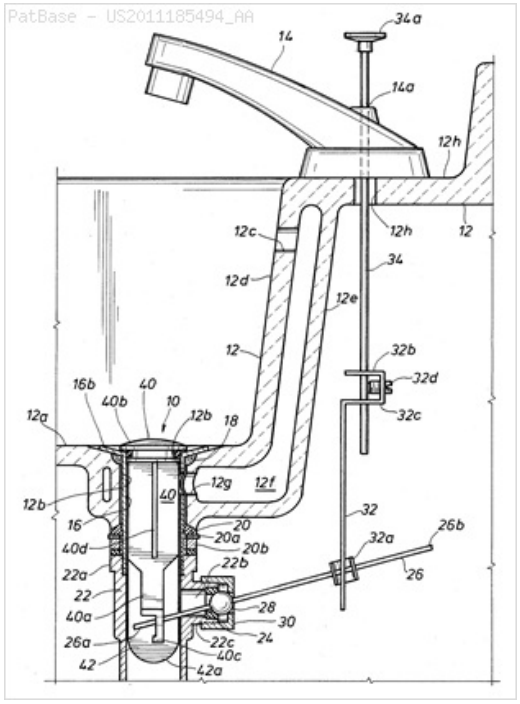
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

15) Family number: 49370544 (US2011185494A)

Title: POP-UP DRAIN ASSEMBLY

Abstract: A pop-up drain assembly for a sink has drain piping, a stopper in the drain piping, a pivot rod for opening and closing the stopper and tends not to clog because the pivot rod is not within a fluid flow path. In one embodiment the stopper has flow diverter plates that channel fluid flowing through the drain piping away from the pivot rod so that hair, waste and debris does not catch on and accumulate on the pivot rod. In another embodiment the stopper and the pivot rod are engaged through magnetic coupling, and the pivot rod does not protrude into the fluid flow path. The stopper is preferably variable in length for adjustment to fit different distances from the pivot rod to the top of the drain piping.

Classifications:
International (IPC 8-9): A47K1/14 E03C1/22 E03C1/23 E03C1/232 E03C1/26 E03C1/262 F16K31/46 (Advanced/Invention)
CPC: E03C1/23 E03C1/2302 E03C2001/2311 E03C1/2304 A47K1/14 E03C1/2306 E03C1/262 E03C2001/2317 E03C2001/2315
European: E03C1/23 E03C1/23A P03C1/23E
US: 4/689 4/689P



Family:

Publication number	Publication date	Application number	Application date
CA2787029 AA	20110804	CA20112787029	20110131
CA2787029 C	20140826	CA20112787029	20110131
CA2854530 AA	20110804	CA20112854530	20110131
CA2854530 C	20150825	CA20112854530	20110131
CA2965921 AA	20171102	CA20172965921	20170501
CA2965922 AA	20171102	CA20172965922	20170501
CA2965924 AA	20171102	CA20172965924	20170501

CA2989574 AA	20180619	CA20172989574	20171218
CN102753763 A	20121024	CN201180008027	20110131
CN102753763 B	20160413	CN201180008027	20110131
CN105971075 A	20160928	CN201610309580	20110131
CN108204015 A	20180626	CN201711372868	20171219
US2011185494 AA	20110804	US20110018389	20110131
US2017260724 AA	20170914	US20170584027	20170502
US2017314244 AA	20171102	US20170584030	20170502
US2017314245 AA	20171102	US20170584032	20170502
US2017321401 AA	20171109	US20170650650	20170714
US2018171610 AA	20180621	US20170844131	20171215
US2018263426 AA	20180920	US20180913452	20180306
US9745728 BB	20170829	US20110018389	20110131
WO11094725 A1	20110804	WO2011US23257	20110131

Priority:

US20100337100P 20100201	US20100304575P 20100215	US20100307881P 20100225
CA20112787029 20110131	CN201180008027 20110131	US20110018389 20110131
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US20160436024P 20161219	US20170460081P 20170216	US20170460071P 20170216
US20170461419P 20170221	US20170474058P 20170320	US20170584027 20170502
US20170584030 20170502	US20170584032 20170502	US20170650650 20170714
US20170588778P 20171120	US20170844131 20171215	US20180913452 20180306

Probable Assignee: PF WATERWORKS LP

Assignee(s): (std)**:** AHUJA SANJAY ; BECK HAROLD KENT ; PF WATERWORKS LP

Assignee(s): PF WATERWORKS LP226 - 1304 LANGHAM CREEK DRIVEHOUSTONTX77084US

Inventor(s): (std)**:** AHUJA SANJAY ; BECK HAROLD KENT ; KENT BECK HAROLD ; SANJAY AHUJA ; HAROLD KENT BECK

Inventor(s): BECK HAROLD KENTUS ; AHUJA SANJAYUS

Agent(s): HICKS AND ASSOCIATES; HICKS INTELLECTUAL PROPERTY LAW; STEPHEN S; HODGSON STEPHEN S

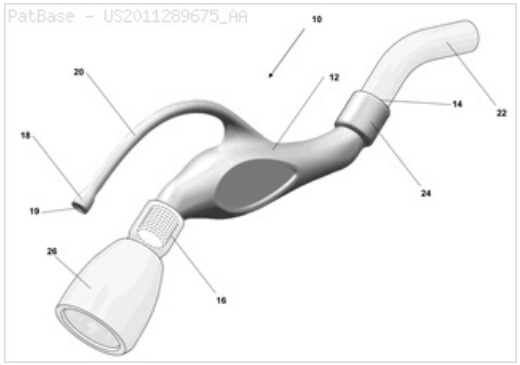
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

16) Family number: 50013929 (US2011289675A)

Title: FLOW CONTROL SYSTEM

Abstract: A fluid flow control system having a fluid inlet configured to be operatively coupled to a fluid source, a fluid outlet in fluid communication with the fluid inlet such that fluid may exit the system therethrough, a proximity sensor for detecting the position of an object within a region adjacent the sensor, and a flow control device configured to regulate fluid flow between the inlet and outlet in response to object detection by the sensor, wherein the flow control device varies the fluid flow proportional to the detected distance of an object from the sensor. A water flow control system for use in a shower environment is also provided, as well as a shower control system, methods for controlling water flow based on sensing of the presence and location of an object, and methods for reducing water consumption.

Classifications:
International (IPC 8-9): A47K3/28 B05B1/18 E03C1/00 E03C1/01 E03C1/02 E03C1/04 E03C1/044 E03C1/05 F16K11/074 F16K27/04 F16K3/08 F16K31/02 G05D23/13 G05D7/06 (Advanced/Invention); G05D23/13 G05D23/185 (Advanced/Non-invention)
CPC: G05D7/0617 E03C1/02 Y10T137/8376 E03C1/0408 E03C1/057 F16K3/08 F16K11/0743 F16K27/045 G05D23/1393 G05D23/1858 Y10T137/86743 Y10T137/86823 Y10T137/1842
European: E03C1/05D2
US: 137/560 137/560S 137/78.1 251/129.04 4/623 4/668 4/668P



Family:

Publication number	Publication date	Application number	Application date
AU2012258559 AA	20121129	AU20120258559	20120525
AU2012258559 BB	20171012	AU20120258559	20120525
CA2874589 AA	20141124	CA20122874589	20120525
EP2715001 A1	20140409	EP20120788972	20120525
EP2715001 A4	20150415	EP20120788972	20120525
JP2014517172 T2	20140717	JP20140512169T	20120525
JP6117776 B2	20170419	JP20140512169T	20120525
US2011289675 AA	20111201	US20110115971	20110525
US2014076415 AA	20140320	US20130089684	20131125
US2017254054 AA	20170907	US20170598742	20170518
US8807521 BB	20140819	US20110115971	20110525
US9657464 BB	20170523	US20130089684	20131125
WO12162670 A1	20121129	WO2012US39722	20120525

Priority:

US20100348000P 20100525
WO2012US39722 20120525
US20170598742 20170518
US20110115971 20110521
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US20130089684 20131125

Probable Assignee: DUNKI JACOBS KERRY

Assignee(s): (std): DUNKI JACOBS KERRY ; DUNKI JACOBS ROBERT ; DUNKI JACOBS ROBERT J ; DUNKI JACOBS KERRRY

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Inventor(s): (std): DUNKI JACOBS KERRRY ; DUNKI JACOBS ROBERT J ; DUNKI JACOBS ROBERT ; DUNKI JACOBS KERRY

Inventor(s): DUNKI JACOBS ROBERT4600 WESLEY COURTMASONOH45040US ; DUNKI JACOBS KERRRY4600 WESLEY COURTMASONOH45040US

Agent(s): PIZZEYS PATENT AND TRADE MARK ATTORNEYS; PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; FETHERSTONHAUGH AND CO; STRANDIN HELENE; YAMAMOTO OSAMU; TAKEUCHI SHIGEO; ONO SHINJIRO; KOBAYASHI YASUSHI; PORTER WRIGHT MORRIS AND ARTHUR LLP; MILLER MARTIN

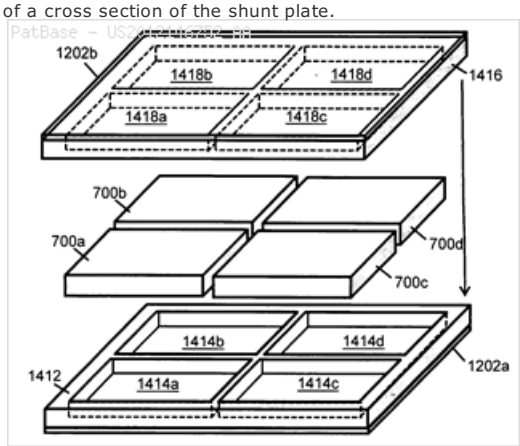
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

17) Family number: 51295485 (US2012146752A)

Title: SYSTEM AND METHOD FOR AFFECTING FLUX OF MULTI-POLE MAGNETIC STRUCTURES

Abstract: A shunt plate is provided that is associated with a first side of a multi-pole magnetic structure. The shunt plate provides a magnetic short between opposite polarity magnetic sources on the first side of said magnetic structure, the magnetic short causing a magnetic flux of said opposite polarity magnetic sources to be routed from said first side of the magnetic structure through said magnetic structure to the second side of said magnetic structure. The thickness of the shunt plate is selected by determining the integrated flux across a magnetic source of the magnetic structure such that the corresponding flux density in the shunt plate does not substantially exceed the flux density saturation level of a cross section of the shunt plate.

Classifications:
International (IPC 8-9): E03C1/04 F16K11/14 F16K31/08 G01R33/038 H01F7/02 H01F7/04 H01H1/00 H05K9/00 (Advanced/Invention); H01F3/12 (Advanced/Non-invention)
CPC: H05K9/00 H01F3/12 H01F7/0205 H01F7/0257 H01F7/04 H01F7/0242 Y10T137/86815 Y10T137/86823 G01R33/0385 H01F7/021 B23P15/001 E04F13/0883 F16K11/0787 F16K31/086 F16K31/088 F16K11/0782
European: H01F7/02A T01F3/12
US: 1/1 137/625.4 137/625.41 335/219 335/295 335/296 335/301 335/302 335/306 335/306P



Family:

Publication number	Publication date	Application number	Application date
EP2820659 A2	20150107	EP20130754686	20130227
EP2820659 A4	20160413	EP20130754686	20130227
US2012146752 AA	20120614	US20110374074	20111209
US2013222091 AA	20130829	US20130779611	20130227
US2014104022 AA	20140417	US20130103760	20131211
US2014184368 AA	20140703	US20140198226	20140305
US2014191830 AA	20140710	US20130066426	20131029
US2014373950 AA	20141225	US20140472945	20140829
US2016298787 AA	20161013	US20160188760	20160621
US8576036 BB	20131105	US20110374074	20111209
US8957751 BB	20150217	US20130066426	20131029
US9202615 BB	20151201	US20130779611	20130227
US9202616 BB	20151201	US20130103760	20131211
US9371923 BB	20160621	US20140472945	20140829
WO13130667 A2	20130906	WO2013US28095	20130227
WO13130667 A3	20131107	WO2013US28095	20130227

Priority:

US20080123019P 20080404
US20090322561 20090204
US20090478950 20090605
US20090277214P 20090922
US20090279094P 20091016
US20090284385P 20091217
US20100885450 20100918
US20100895589 20100930
US20100459994P 20101222
US20080123718 20080520
US20090476952 20090602
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US20090277900P 20090930
US20090281160P 20091113
US20090289094P 20091222
US20100403814P 20100922
US20100952391 20101123
US20110462715P 20110207
US20090358423 20090123
US20090478911 20090605
US20090479013 20090605
US20090278767P 20091009
US20090283780P 20091209
US20100342988P 20100422
US20100404147P 20100927
US20100459329P 20101210
US20110465810P 20110324

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US20110240335 20110922 US20110246584 20110927 US20110374074 20111209
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US20120640979P 20120501 US20120481554 20120525 US20120744342P 20120924
US20120629879 20120928 US20120744864P 20121004 US20120796863P 20121121
US20120735460P 20121210 US20130759695 20130205 US20130779611 20130227
WO2013US28095 20130227 US20130794427P 20130315 US20130798233P 20130315
US20130798453P 20130315 US20130799507P 20130315 US20130800377P 20130315
US20130918921 20130615 US20130959649 20130805 US20130871689P 20130829
US20130035818 20130924 US20130045756 20131003 US20130066426 20131029
US20130086924 20131121 US20130103760 20131211 US20140198226 20140305
US20140472945 20140829 US20160188760 20160621

Probable Assignee: CORRELATED MAGNETICS RESEARCH LLC

Assignee(s): (std)**:** CORRELATED MAGNETICS RES LLC ; FULLERTON LARRY W ; ROBERTS MARK D

Assignee(s): CORRELATED MAGNETICS RESEARCH LLC

Inventor(s): (std)**:** EVANS R SCOTT ; SWIFT WESLEY ; ZIMMERMAN JACOB S ; ROBERTS MARK D ; FULLERTON LARRY W

Inventor(s): EVANS R

Agent(s): HOPPLER JUSTIN; THOMAS A; VENABLE LLP; ROBERT S; VECTOR IP LAW GROUP; BABAYI ROBERT S

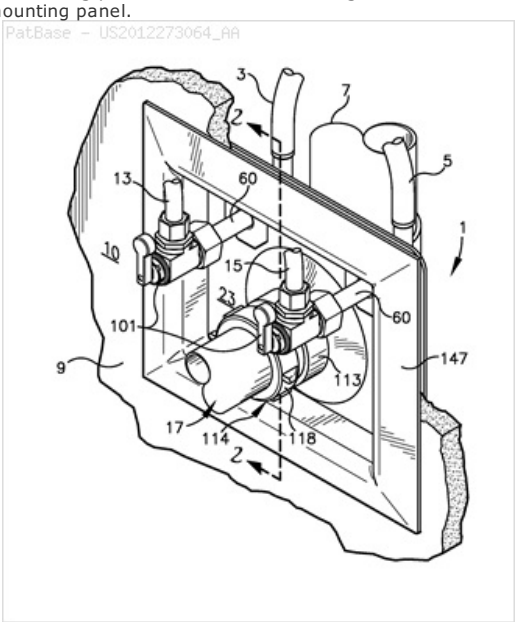
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

18) Family number: 52216798 (US2012273064A)

Title: PLUMBING SUPPLY LINE AND DRAIN LINE MOUNTING AND FINISH PANEL

Abstract: A plumbing finish plate assembly, for connecting water supply lines and a drain line in a wall to fixture supply and drain lines, comprises a mounting panel having a drain line opening and two supply line openings formed therethrough. The drain line opening is larger than the supply line openings and a flexible, annular seal is secured around the drain line opening. A supply line connector assembly is securable to the mounting panel through each supply line opening. A securement means, in the form of a clip is used to selectively secure the supply line connector assembly to the mounting panel such that an outlet leg of the connector assembly is oriented in at least ninety degree increments relative to the mounting panel.

Classifications:
International (IPC 8-9): E03C1/00 E03C1/02 E03C1/12 F16L5/00 F16L5/10 F16L5/14 (Advanced/Invention)
CPC: E03C1/12 F16L5/10 E03C1/021 E03C2001/028 F16L5/14 Y10T137/698
US: 1/1 137/360



Family:

Publication number	Publication date	Application number	Application date
US2012273064 AA	20121101	US20110096093	20110428
US2015259891 AA	20150917	US20150725857	20150529
US9057460 BB	20150616	US20110096093	20110428
US9725892 BB	20170808	US20150725857	20150529

Priority:

US20110096093 20110428 US20150725857 20150529

Probable Assignee: SIOUX CHIEF MFG CO INC

Assignee(s): (std)**:** ISMERT BRIAN E ; ISMERT JOSEPH P ; SIOUX CHIEF MFG CO INC

Assignee(s): US BANK NATIONAL ASSOCIATION ; PNC BANK NATIONAL ASSOCIATION ADMINISTRATIVE AGENT AS ; SIOUX CHIEF MFG CO

Inventor(s): (std)**:** ISMERT JOSEPH P ; ISMERT BRIAN E

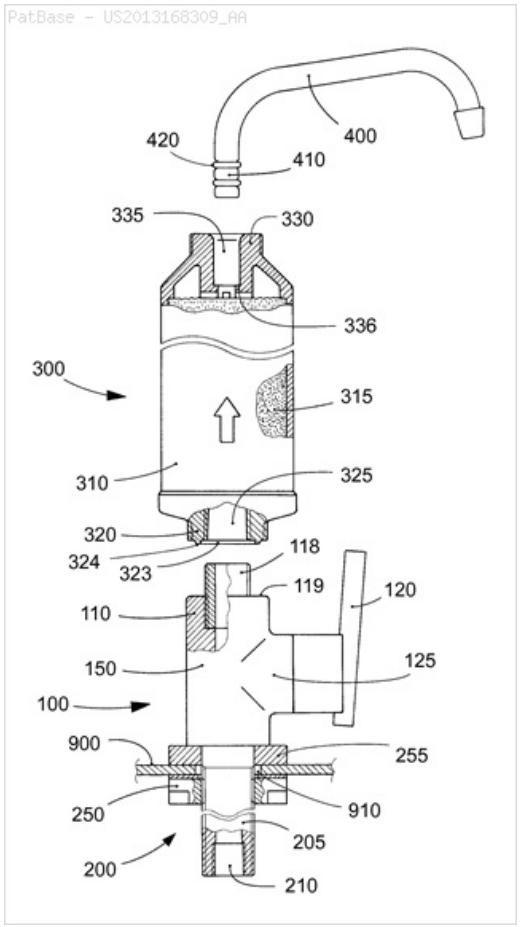
Agent(s): ERIKSON KERNELL DERUSSEAU AND KLEYPAS LLC; ERICKSON KERNELL IP LLC

19) Family number: 54261373 (US2013168309A)

Title: WATER FILTER FAUCET AND CARTRIDGE THEREFOR

Abstract: A water treatment assembly generally in the form of a filter faucet generally of the type mounted on a sink or similar countertop surface. The water treatment assembly generally comprises a mounted valve assembly, an inline water filter, and a water spout. The inline water filter is configured intermediate the mounted valve assembly and the spout. The inline water filter has a watertight shell comprising a water inflow port and a water outflow port that allow the filter to be used as a readily replaceable and disposable modular filter cartridge. The filter inflow port allows for releasable fluid engagement with the valve assembly. The filter outflow port comprises a fitting for receiving the spout. Water flow through the filter and spout is controlled by the valve assembly. The combined assembly permits the new use of standard components improved in a cost effective manner to form a reliable filter faucet.

Classifications:
International (IPC 8-9): B01D27/00 B01D27/08 B01D29/88 B01D35/02 B01D35/04 C02F1/00 E03C1/01 E03C1/04 (Advanced/Invention); C02F1/28 C02F101/20 C02F101/36 (Advanced/Non-invention)
CPC: C02F1/003 B01D35/02 E03C1/0404 E03C2201/40 C02F1/283 C02F2101/20 C02F2101/36 C02F2201/004 C02F2201/006 C02F2303/02 C02F2303/04 C02F2307/06
US: 210/236 210/418 210/435



Family:

Publication number	Publication date	Application number	Application date
PL403521 A1	20131014	PL20130403521	20130412
US2013168309 AA	20130704	US20120446421	20120413
US2014158602 AA	20140612	US20130101270	20131209
US9630856 BB	20170425	US20120446421	20120413
US9701546 BB	20170711	US20130101270	20131209

Priority:

US20110517166P 20110414 US20120446421 20120413 US20120735269P 20121210 US20130101270 20131209

Probable Assignee: LONIEWSKA AGNIESZKA MONIKA

Assignee(s): (std): LONIEWSKA AGNIESZKA MONIKA ; LONIEWSKI GRZEGORZ ; LONIEWSKI PIOTR ; NIGHTLINGER SCOTT ; NIGHTLINGER SCOTT ANTHONY

Inventor(s): (std): LONIEWSKA AGNIESZKA MONIKA ; LONIEWSKI GRZEGORZ ; LONIEWSKI PIOTR ; NIGHTLINGER SCOTT ; NIGHTLINGER SCOTT ANTHONY

Agent(s): JOHN C

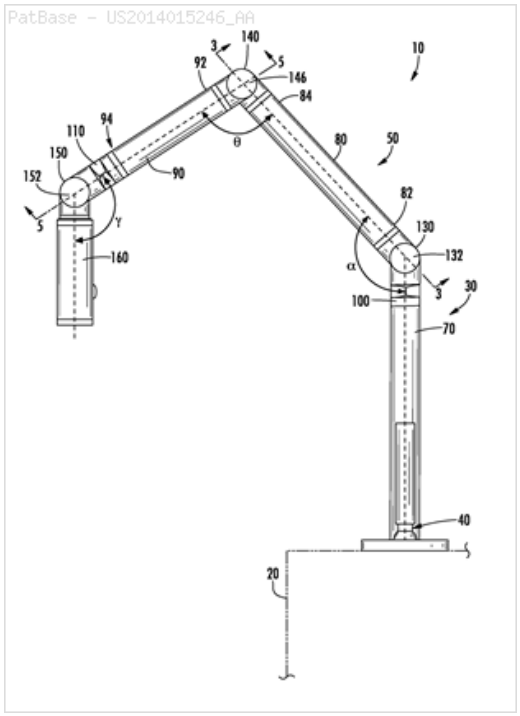
20) Family number: 55622674 (US2014015246A)

Title: CLUTCHED JOINT FOR ARTICULATING FAUCET

Abstract: A joint for an articulating faucet includes a first housing, a second housing, and a clutch assembly. The first housing defines a first inner cavity and the second housing defines a second inner cavity. The second housing is coupled to the first housing such that fluid may flow from the first inner cavity to the second inner cavity. The clutch assembly is coupled to at least one of the first housing and the second housing and is configured to apply a resistive torque that inhibits movement of the first

and second housings relative to each other. The clutch assembly includes a clutch pin, an interface member, and an end cap. The end cap is coupled to a first end of the clutch pin and the interface member. Movement of the end cap varies the magnitude of the resistive torque applied by the clutch assembly.

Classifications:
International (IPC 8-9): E03C1/04 F16K51/00 F16L27/08 (Advanced/Invention)
CPC: F16L27/08 E03C1/0404 F16L27/0816 F16L27/0849 E03C1/04 E03C2001/0414
US: 285/184



Family:

Publication number	Publication date	Application number	Application date
CN103574156 A	20140212	CN201310293760	20130712
CN103574156 B	20160302	CN201310293760	20130712
US2014015246 AA	20140116	US20130940044	20130711
US2017074441 AA	20170316	US20160360517	20161123
US9568132 BB	20170214	US20130940044	20130711

Priority:
US20120671422P 20120713 US20130940044 20130711 US20160360517 20161123

Probable Assignee: KOHLER CO
Assignee(s): (std): KOHLER CO
Inventor(s): (std): ERICKSON PERRY D ; RADDER STEVEN T ; SHAY CHRISTOPHER M ; STEVEN T RADDER ; PERRY D ERICKSON ; CHRISTOPHER M SHAY
Agent(s): FOLEY AND LARDNER LLP

21) Family number: 57607776 (US2016186421A)

Title: TOILET WITH PERSONAL SHOWER INTEGRATED INTO FLUSHING WATER DISTRIBUTOR

Abstract: A douche toilet is provided having a toilet bowl (2) including a flushing water inlet opening (2a) for supplying flushing water into a flushing chamber (4) for a flushing operation and a waste water opening for flushing waste water out of the toilet bowl (2), a flushing water distributor (10) for distributing the flushing water around the flushing chamber (4), and a douche lance (10a) for washing the user in the anal or genital region. To simplify the structure of the douche toilet, in particular to make cleaning thereof easier, the douche lance (10a) is integrated into the flushing water distributor (10).
Classifications:
International (IPC 8-9): A47K3/20 A47K4/00 E03C1/10 E03C1/284 E03D9/08 (Advanced/Invention)
CPC: E03D11/08 E03D11/13 E03C1/284 E03C1/102 E03D9/08 E03D2201/40
US: 4/420.5

FIG 1

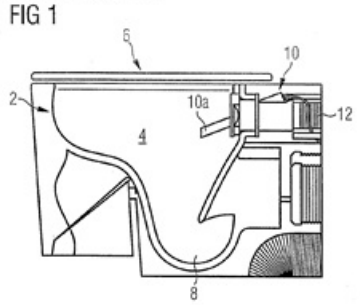
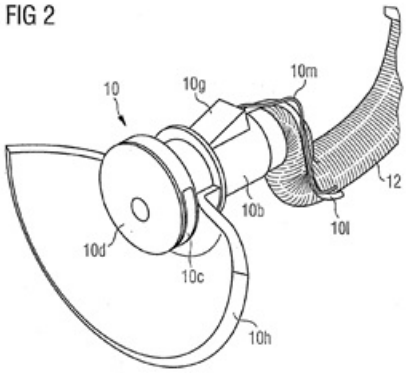


FIG 2



Family:

Publication number	Publication date	Application number	Application date
CN105247142 A	20160113	CN201480021918	20140417
CN105247142 B	20180928	CN201480021918	20140417
DE102013207053 A1	20141023	DE201310207053	20130418
DE202014101888 U1	20150226	DE201420101888U	20140422
DE502014009041 D1	20180830	DE201450009041T	20140417
EA201591654 A1	20160429	EA20150091654	20140417
EP2986787 A1	20160224	EP20140721267	20140417
EP2986787 B1	20180801	EP20140721267	20140417
EP3058144 A2	20160824	EP20140805582	20141128
US2016186421 AA	20160630	US20140784819	20140417
US2016305102 AA	20161020	US20140029424	20141128
US9874005 BB	20180123	US20140029424	20141128
WO14170465 A1	20141023	WO2014EP57977	20140417
WO15055861 A2	20150423	WO2014EP75953	20141128
WO15055861 A3	20150702	WO2014EP75953	20141128
WO15055861 A8	20150911	WO2014EP75953	20141128

Priority:

DE201310207053 20130418
DE201320104472U 20131015
DE201320104672U 20131015
DE201320105421U 20131128
EP20140721267 20140417
WO2014EP57977 20140417
DE201420101888U 20140422
WO2014EP75953 20141128

Probable Assignee: TECE GMBH

Assignee(s): (std)**:** TECE GMBH

Inventor(s): (std)**:** KOZIOL UWE ; KRABBE MARTIN ; LAMMEL MICHAEL ; MEIERMANN ANDRE ; STOCKEL MATHIAS ; STOCKEL MATTHIAS

Agent(s): LIPPERT STACHOW AND PARTNER; LIPPERT STACHOW PATENTANWAELTE RECHTSANWAELTE; PANITCH SCHWARZE BELISARIO AND NADEL LLP

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

22) Family number: 62705132 (US2017058496A)

Title: TOUCH SPRAY HEAD

Abstract: A touch spray head is in connection with a water supply segment of a water supply pipe which is accommodated in a body of a faucet and includes a water channel, the touch spray head and the water supply pipe are pulled out of and retracted back to an outlet of the body, and the touch spray head contains: a casing, a positioning member, a control valve, and an actuation device. The casing includes a hole arranged thereon, the positioning member includes at least one first through orifice,

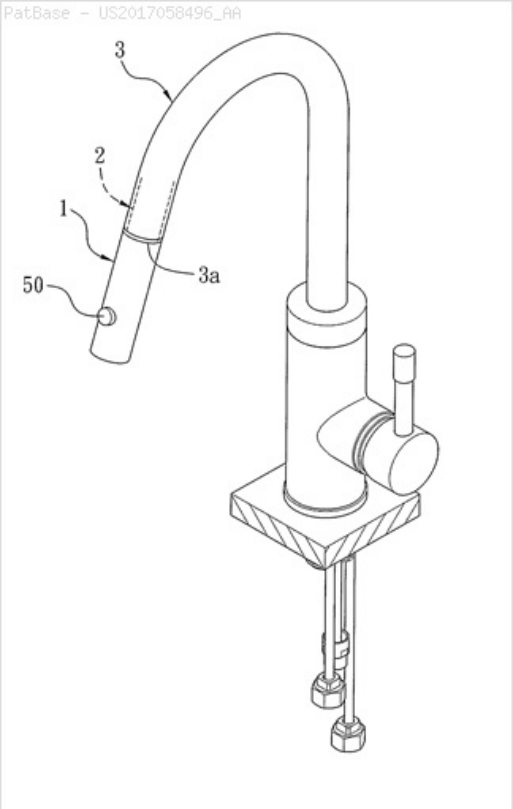
and each of the at least one first through orifice communicates with the water channel and the hole. The control valve includes a movable stem configured to turn on the control valve, and the actuation device partially exposes outside the casing and is operated by a user so as to urge the movable stem of the control valve to move.

Classifications:

International (IPC 8-9): B05B1/02 B05B1/04 B05B1/14 B05B1/16 B05B1/18 B05B12/00 E03C1/02 E03C1/04 E03C1/05 E03C1/084 E03C1/086 E03C1/10 E03C1/122 F16K21/06 F16K27/00 F16K31/44 F16K31/524 F16K31/528 F16K31/60 (Advanced/Invention)

CPC: B05B1/02 B05B1/14 B05B1/185 E03C1/057 F16K21/06 F16K31/44 E03C2001/026 E03C1/0404 E03C2001/0415 E03C2001/0417 E03C1/084 E03C1/0412 E03C1/0401 F16K31/52475 E03C1/10 E03C1/1225 B05B1/1681 B05B1/046 B05B7/0425 Y10T137/9464 B05B12/002 E03C1/04 E03C1/0405 F16K31/52458 F16K31/5284 B05B1/04 B05B1/16 E03C1/086 E03C1/122 F16K31/5286 F16K11/22 F16K31/52491

US: 239/428.5 239/445 239/446 239/588 251/143



Family:

Publication number	Publication date	Application number	Application date
CN205331574 U	20160622	CN201520983626U	20151202
DE102016115796 A1	20170302	DE201610115796	20160825
DE602016002573 D1	20180517	DE201660002573T	20160815
EP3135832 A1	20170301	EP20160184186	20160815
EP3135832 B1	20180418	EP20160184186	20160815
TW201708663 A	20170301	TW20150127758	20150825
TWI567272 B	20170121	TW20150127758	20150825
US2017058496 AA	20170302	US20160189087	20160622
US2018119395 AA	20180503	US20170853499	20171222
US2018127959 AA	20180510	US20180866397	20180109
US2018127960 AA	20180510	US20180866416	20180109
US2018141068 AA	20180524	US20170857956	20171229
US2018163382 AA	20180614	US20180894838	20180212
US2018179742 AA	20180628	US20180895925	20180213
US10106965 BB	20181023	US20160189087	20160622

Priority:

TW20150127758 20150825 US20160189087 20160622 EP20160184186 20160815
US20170853499 20171222 US20170857956 20171229 US20180866397 20180109
US20180866416 20180109 US20180894838 20180212 US20180895925 20180213

Probable Assignee: GLOBAL UNION INDUSTRIAL CORP

Assignee(s): (std): CHENGLIN ENTERPRISE CO LTD ; GLOBAL UNION IND CORP ; GLOBE UNION IND CORP

Assignee(s): GLOBE UNION INDUSTRIAL CORP ; GLOBAL UNION INDUSTRIAL CORP

Inventor(s): (std): CHANG YUANHAO ; CHIU HUI LING ; CHIU HUILING ; LIN YI PING ; YUAN CHIA HUA ; YUAN CHIAHUA ; YUAN JIAHUA ; QIU HUILING ; LIN YIPING ; CHIU HULLING

Agent(s): CABINET CHAILLOT; KAMRATH ALAN D; KAMRATH IP LAWFIRM PA

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

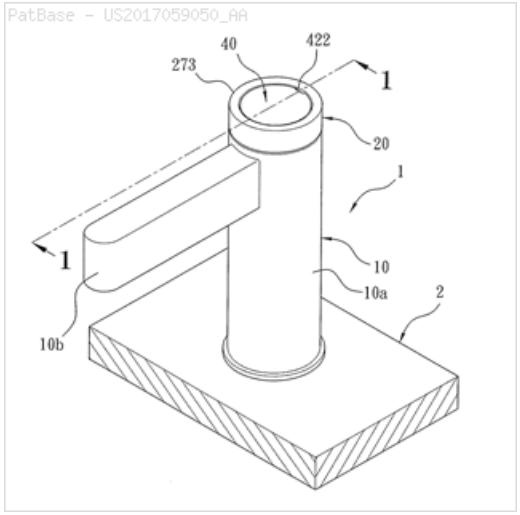
23) Family number: 62856673 (US2017059050A)

Title: TOUCH FAUCET

Abstract: A touch faucet contains: a body, a temperature control valve, a water control valve, and an actuation member. The body includes an inlet segment, an outlet segment, and a first cavity which has a first hole. The temperature control valve is housed in the first cavity and includes a water inflow portion configured to flow cold water and hot water, a mixing chamber in which the cold water and the hot water are mixed to form a mixing water, and a water outflow portion configured to flow the mix

water. The water control valve includes an operation post touched to turn on the water control valve, such that the mixing water flows into the water outflow portion from the mixing chamber, and the actuation member partially exposes outside the body so as to be operated by a user to drive the operation post to move.

Classifications:
International (IPC 8-9): E03C1/02 E03C1/04 F16K11/00 F16K11/072 F16K11/074 F16K11/076 F16K11/078 F16K21/06 F16K27/00 F16K27/04 F16K3/32 F16K5/10 (Advanced/Invention)
CPC: F16K21/06 E03C2001/026 E03C2001/0415 E03C1/04 F16K11/074 F16K11/076 F16K19/006
US: 137/625.4



Family:

Publication number	Publication date	Application number	Application date
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DE102016115793 A1	20170302	DE201610115793	20160825
DE602016002572 D1	20180517	DE201660002572T	20160815
EP3135831 A1	20170301	EP20160184185	20160815
EP3135831 B1	20180418	EP20160184185	20160815
TW201708751 A	20170301	TW20150127755	20150825
TWI577912 B	20170411	TW20150127755	20150825
US2017059050 AA	20170302	US20160185100	20160617

Priority:

TW20150127755 20150825 EP20160184185 20160815

Probable Assignee: GLOBE UNION INDUSTRIAL CORP

Assignee(s): (std): CHENGLIN ENTERPRISE CO LTD ; GLOBE UNION IND CORP

Assignee(s): GLOBE UNION INDUSTRIAL CORP

Inventor(s): (std): CHIU HUI LING ; CHIU HUILING ; LIN YI PING ; LIN YIPING ; QIU HUILING ; YUAN CHIA HUA ; YUAN CHIAHUA ; YUAN JIAHUA

Agent(s): CABINET CHAILLOT

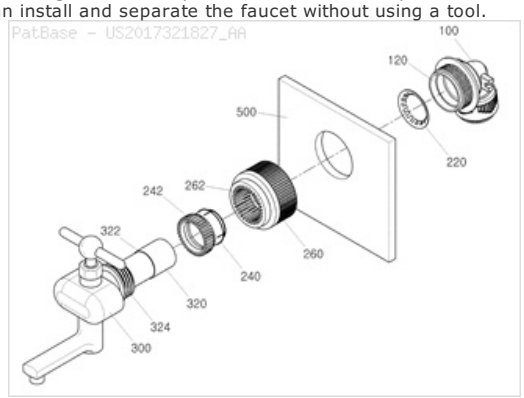
Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

24) Family number: 62985642 (US2017321827A)

Title: FAUCET COUPLING STRUCTURE

Abstract: The present invention provides a faucet coupling structure capable of enabling a user to complete the faucet installation by simply inserting the faucet instead of rotating to tighten the faucet, and enabling the user to separate the faucet by holding and rotating the faucet by hand. The user can conveniently install the faucet while adjusting the angular orientation of the faucet to a desired angle. The user can install the faucet by holding and inserting the faucet by hand, and can also separate the faucet by holding and rotating the faucet by hand. As a result, the user can install and separate the faucet without using a tool.

Classifications:
International (IPC 8-9): E03C1/042 F16L19/06 F16L19/065 (Advanced/Invention)
International (IPC 1-7): E03C1/042
CPC: F16L19/062 F16L19/065 E03C1/042 E03C1/021 F16L37/0915



Family:

Publication number	Publication date	Application number	Application date
AU2016300026 AA	20170202	AU20160300026	20160720

BR112018001063 A2	20180911	BR20181101063	20160720
CA2993145 AA	20180119	CA20162993145	20160720
CN107923162 A	20180417	CN201680042697	20160720
CO20180001603 A2	20180510	CO20180001603	20180219
EA201890359 A1	20180629	EA20180090359	20160720
EP3327207 A1	20180530	EP20160830747	20160720
ID201808182 A	20180803	ID2018PID01196	20160720
IN201817005016 A	20180511	IN201817005016	20180209
JP2018521247 T2	20180802	JP20180502704T	20160720
KR101642971 B1	20160727	KR20150105213	20150724
MX2018001035 A1	20180611	MX20180001035	20160720
PE06202018 A1	20180411	PE20180000105	20160720
PH2018500122 A	20180723	PH20180500122	20180115
US2017321827 AA	20171109	US20170661635	20170727
WO17018714 A1	20170202	WO2016KR07918	20160720

Priority:

KR20150105213 20150724 WO2016KR07918 20160720

Probable Assignee: AHN CHOONG BUM

Assignee(s): (std): AHN CHOONG BUM ; DO KYENG LEE AND CHOONG BUM AHN ; IDIN LAB INC ; LEE DO KYEONG ; LEE DO KYENG

Assignee(s): KIM YONG KYOUNG ; YIDOGYEONG

Inventor(s): (std): DO KYEONG LEE ; KIM YONG KYOUNG ; LEE DO KYENG ; LEE DO KYEONG ; YONG KYOUNG KIM

Agent(s): AJ PARK; GOWLING WLG CANADA LLP; CAROLINA MERCEDES DAZA MONTALVO; ZARDI MARCO; IR YUSWO TIRTO WIDJOJO; FUKAMI PATENT OFFICE PC; PATENT LAW FIRM GRAND KOREA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

25) Family number: 63445881 (US2017321399A)

Title: FAUCET COUPLING STRUCTURE

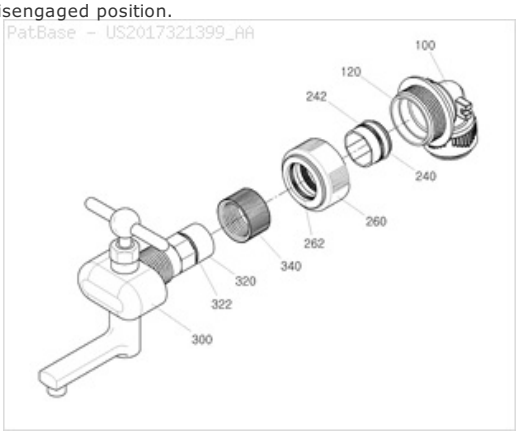
Abstract: A structure for coupling a faucet or a similar device includes: a faucet with a connecting pipe portion extending therefrom; a connecting body with an annular coupling portion formed at one end and connected to a liquid supply source to discharge liquid through the faucet; a fastening nut screw-coupled to the annular coupling portion; a pressing ring coupled to the connecting pipe portion; and a grab ring configured to grab an outer circumference of the connecting pipe portion to have the connecting pipe portion not to be detached from the coupling portion. The fastening nut can be detached from the coupling portion by rotating the faucet and the connecting pipe portion with the engaging configurations of the pressing ring and the fastening nut in engaged position, and an angular position of the faucet can be adjusted to a preferred position in assembly by rotating the faucet and with the engaging configurations of the pressing ring and the fastening nut in disengaged position.

Classifications:

International (IPC 8-9): E03C1/04 E03C1/042 F16L19/06 F16L19/065 F16L21/02 F16L27/08 (Advanced/Invention)

International (IPC 1-7): E03C1/04

CPC: E03C1/0403 E03C1/0401 F16L19/062 F16L19/065 E03C1/042



Family:

Publication number	Publication date	Application number	Application date
AU2016285084 AA	20170105	AU20160285084	20160629
BR112017028597 A2	20180828	BR20171128597	20160629
CA2990363 AA	20171220	CA20162990363	20160629
CN107923161 A	20180417	CN201680038039	20160629
CO20180000531 A2	20180131	CO20180000531	20180119
EA201890139 A1	20180531	EA20180090139	20160629
EP3318682 A1	20180509	EP20160818209	20160629
EP3318682 A4	20180829	EP20160818209	20160629
ID201809806 A	20180907	ID2018P0000264	20160629
IN201817003076 A	20180504	IN201817003076	20180125
JP2018519445 T2	20180719	JP20170567199T	20160629
KR101654858 B1	20160906	KR20150092603	20150630
MX2017017085 A1	20180430	MX20170017085	20160629

PE07942018 A1	20180508	PE20170002729	20160629
PH2017502384 A	20180702	PH20170502384	20171221
US2017321399 AA	20171109	US20170661530	20170727
WO17003176 A1	20170105	WO2016KR06952	20160629

Priority:

KR20150092603 20150630 WO2016KR06952 20160629

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Assignee(s): (std)**:** AHN CHOONG BUM ; DO KYENG LEE AND CHOONG BUM AHN ; IDIN LAB INC ; LEE DO KYENG ; LEE DO KYEONG

Assignee(s): LEE DO KYEUNG ; LEE YONG WOON ; YIDOGYEONG

Inventor(s): (std)**:** DO KYEONG LEE ; LEE DO KYENG ; LEE DO KYEONG ; LEE YONG WOON ; YONG WOON LEE

Agent(s): AJ PARK; GOWLING WLG CANADA LLP; CAROLINA MERCEDES DAZA MONTALVO; ZARDI MARCO; IR YT WIDJOJO; FUKAMI PATENT OFFICE PC; PATENT LAW FIRM GRAND KOREA

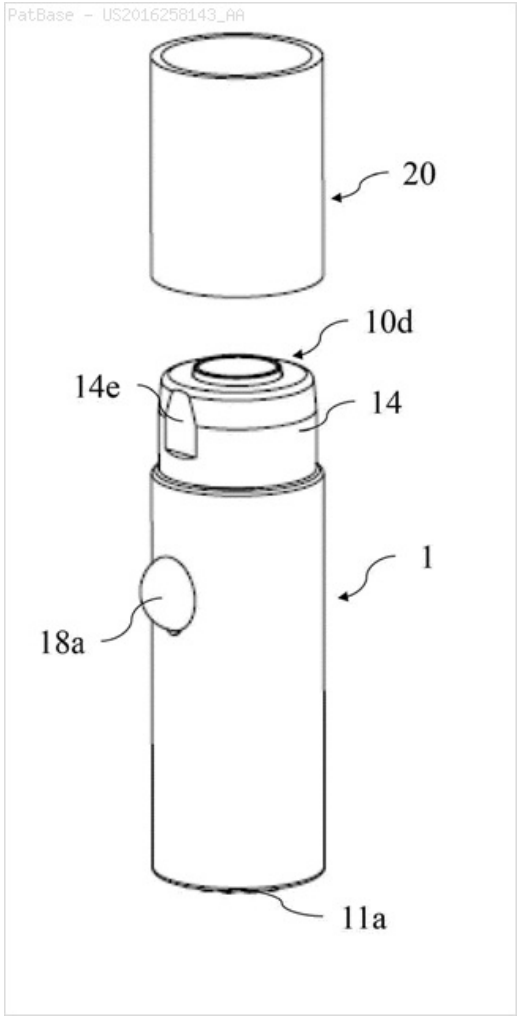
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

26) Family number: 63453756 (US2016258143A)

Title: PULL-OUT SPRAYHEAD WITH IMPROVED MAGNETIC COUPLING SYSTEM

Abstract: Pull out sprayhead (1) for a faucet, comprising: an inlet fitting (10), provided with a coupling end (10d) connectable to a extractable water supply pipe; a supply mouth (11a) in fluid connection with said attachment end (10d); and a magnet (12) fixed at the inlet fitting (10) and prearranged to allow a releasable connection of said pull-out sprayhead (1) to a faucet neck (20), said magnet (12) being arranged in a housing chamber (13), defined between an outer wall of said inlet fitting (10) and a covering nut (14), within which an insulating sleeve (30) is placed, distinct from the covering nut (14) and interposed between the inlet fitting (10) and the magnet (12), so as to minimize the heat flow occurring between a supplied fluid and the magnet (12) through the inlet fitting (10).

Classifications:
International (IPC 8-9): E03C1/00 E03C1/04
F16L37/00 (Advanced/Invention)
CPC: E03C1/0401 E03C2001/0417 E03C1/0404 E03C2001/0415
US: 4/678



Family:

Publication number	Publication date	Application number	Application date
DE602016001251 D1	20180215	DE201660001251T	20160303
EP3064659 A1	20160907	EP20160158490	20160303

EP3064659 B1	20180103	EP20160158490	20160303
ES2664811 T3	20180423	ES20160158490T	20160303
US2016258143 AA	20160908	US20160061126	20160304
US9988796 BB	20180605	US20160061126	20160304

Priority:

IT2015MI00343 20150306 EP20160158490 20160303

Probable Assignee: AMFAG SRL

Assignee(s): (std): AMFAG SRL

Assignee(s): AMFAG SRL CASALOLDO

Inventor(s): (std): BOSIO ORLANDO

Agent(s): PATENTANWAELTE BAUER VORBERG KAYSER PARTNERSCHAFT MBB; BOTTI MARIO; PONS ANGEL; WENDEROTH LIND AND PONACK LLP

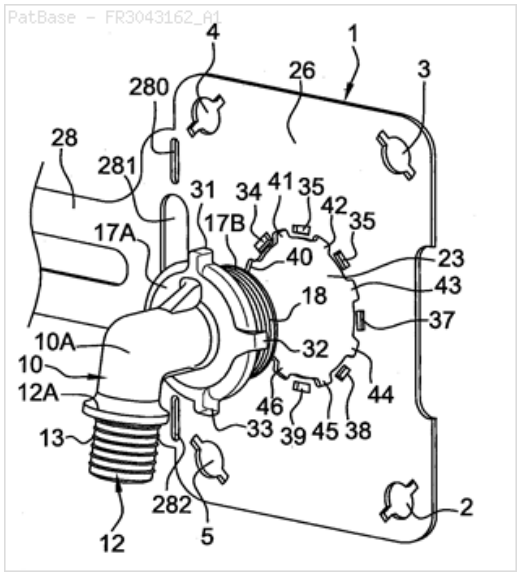
Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

27) Family number: 65597573 (FR3043162B)

Title: DISPOSITIF DE RACCORDEMENT D'UN ELEMENT DE ROBINETTERIE ET D'UN CONDUIT D'ALIMENTATION AU TRAVERS D'UNE CLOISON

Abstract: Source: FR3043162A [FR] Dispositif du type « traversee de cloison », destine a relier une robinetterie (22) et un conduit d'arrivee d'eau (15), situes respectivement de part et d'autre d'une cloison (16), comportant: - Au moins un raccord (10, 11) tubulaire coude, dont une premiere extremite (12) coopere avec l'extremite libre (14) dudit conduit d'arrivee (15), et dont l'autre extremite tubulaire (17) comporte d'une part un filetage exterieur (18) apte a cooperer avec une bague-ecrou de serrage (19, 25), et d'autre part un filetage interieur (20) apte a cooperer avec un moyen de raccordement (21) avec un robinet (22), ou avec un autre conduit ou similaire; - Une platine (1) pourvue d'au moins une lumiere circulaire (23, 24) traversee par l'extremite filetee (18) du raccord coude (10); la lumiere (23) et le coude (10A) etant pourvus de moyens de positionnement angulaire (31, 32, 33, 34, 35, 36, 37, 38, 39) respectifs du coude (10A) sur la platine (1), selon un axe perpendiculaire a cette derniere, lesdits moyens (31, 32, 33, 34, 35, 36, 37, 38, 39) comportant plusieurs elements respectivement males (31, 32, 33) et femelles (34, 35, 36, 37, 38, 39) aptes a cooperer. **Machine translation:** Device type "wall crossing", for connect fitting (22) and a water inlet duct (15), respectively located on other partitions (16), with:-at least a tubular (10, 11) fitting elbow, including a first end (12) cooperates with the end free (14) led said of arrival (15), and the other end tubular (17) has on the one hand an outside thread (18) fit a cooperate with a ring-nut (19 25), and the other a thread inside (20) fit was cooperating with a way of connection (21) with a tap (22), or with another led or similar; -A plate (1) with at least a circular light (23, 24) crossing by the end filetee (18) of the fitting elbow (10); light (23) and the elbow (10A) being equipped with means of angular positioning (31, 32, 33, 34, 35, 36, 37, 38, 39) respective of the elbow (10A) on the plate (1), on a perpendicular axis has the latter, said means (31, 32, 33, 34, 35, 36, 37, 38, 39) involving several elements respectively males (31, 32, 33) and females (34, 35 36, 37, 38, 39) fit a cooperate.

Classifications:
International (IPC 8-9): E03C1/042 F16L5/12 (Advanced/Invention)
CPC: F16L5/12 E03C1/021 F16L5/00 F16L41/14



Family:

Publication number	Publication date	Application number	Application date
FR3043162 A1	20170505	FR20150060284	20151028
FR3043162 B1	20180622	FR20150060284	20151028

Priority:

FR20150060284 20151028

Probable Assignee: GUARESKI SOC

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Inventor(s): (std): BALESDENT CHRISTOPHE ; MIGEOT YANN

Inventor(s): YANN MIGEOT ; CHRISTOPHE BALESDENT

Agent(s): IPSIDE