

Search query (3): [SP]: technical field of the invention[0001] the invention relates to a method for transforming solid urban waste into aggregates. the invention also relates to an apparatus for transforming solid urban waste into aggregates.background[0002] even in developed countries the collection, transport, separation and final disposition of the components of solid urban waste is both an economic and environmental problem since, in an ideal situation, the 100 percent of solid urban waste should be recycled for reuse: as raw material, as a source of valuable elements, etc.[0003] for example, in the case of glass, plastics and metals, as raw material for manufacturing new containers: bottles, vessels, cans, etc. [0004] in the case of organic matter of biological origin, for example, as raw material for preparing balanced feed, manure and fertilizers.[0005] in less developed or developing countries, the collection, transport and final disposition of solid urban waste usually ends up in the formation of huge open dumps or dumps covered with a layer of soil.[0006] in general, the invention relates to the treatment, recovery and recycling of those components that are part of solid urban waste.[0007] particularly, the present invention refers to a method and an apparatus for transforming organic and inorganic solid urban waste into aggregates once the batteries, ferrous and non-ferrous metal components, non-contaminated bottles, glass and plastic containers and possibly any organic or inorganic material that, owing to its hardness or volume-such as cobblestone and hard wood pieces-is not adequate for being treated by the process of the present invention, have been previously separated. the remaining waste that may not be recycled is referred to as rejection.[0008] rejection is understood as those organic and inorganic elements that, as a result of being inappropriately managed, are cross-contaminated and cannot be recycled, and which are generally buried.[0009] the aim of this invention is to solve the problem that arises from this rejection.[0010] in the context of the present invention, the expression organic and inorganic solid urban waste means a combination of waste of mainly biological origin generated by people as a result of food consumption.[0011] examples of this waste are bones, meat remainders, cartilages, greases, oils, vegetables, fruits, cereals, oil plants, infusions, etc., generally accompanied by remaining inorganic waste, such as bags and plastic, paper, cardboard and glass containers, which are contaminated with organic waste.[0012] on the other hand, in the context of the present invention, the term "aggregate" means a granulated, sterile, dry product of petrous nature, such as rubble and stones, which comply with the epa sw486 and epa 1310 standards. that is, a product that will be suitable for use in mortars and road backfills.disclosure of the invention[0013] the object of the invention is a method for transforming solid urban waste into aggregates, comprising: a selection and preparation stage of a rejection from solid waste, obtaining a parget characterised in that it comprises: a feeding stage of an apparatus for transforming organic and inorganic solid urban waste into aggregates, said apparatus comprising an extruding machine and a reactor, wherein the extruding machine comprises an extrusion cylinder through which a piston circulates inside an extrusion cavity that defines an extrusion axis the end of the extrusion cavity is hermetically connected to the reactor the longitudinal shaft of the reactor comprises a rotatory shaft in which some blades are arranged between the end of the blades and the wall or dome of the reactor there is a clearance, which is referred to as the boundary layer of the reactor the rotatory shaft of the reactor and the blades are jointly referred to as rotor, a compression stage where the parget is compressed by the piston of the extruding machine moving forward until it comes into contact with the blades of the reactor, which reject the parget, propelling it to the interior of the extrusion chamber, and prevent it from moving forward with the resulting increase of pressure a processing stage where: [a] when the piston moves forward, it further compresses the parget and forces it to penetrate the boundary layer of the reactor, forming a perimeter film, [b] the reactor shaft enters into resonance, where the potential energy built up by the rotor shaft is released as an emission of a shock wave train, subjecting the parget that is inside the extrusion cavity to violent stirring, and also subjecting the parget which is in the boundary layer to pressure peaks produced by the vibration of the rotor shaft, [c] once the resonance phenomenon is finished, the pressure on the piston of the extruding machine is reduced, decompressing the parget, and the compression of the parget on the rotor is repeated until it enters into resonance once again and there is a new emission of shock waves, and [d] the resonance and decompression cycles are repeated until the temperature of the parget reaches 85 degrees centigrade to 98 degrees centigrade, preferably 92 degrees centigrade, and a discharging stage. [0014] in the dependant claims, various advantageous alternatives and preferred embodiments of the method according to the invention are described.[0015] another object of the invention is an apparatus (100) for transforming organic and inorganic solid urban waste into aggregates, characterised in that it comprises: an extruding machine connected to a reactor wherein the extruding machine comprises an extrusion cylinder through which a piston circulates inside an extrusion cavity that defines an extrusion axis, the end of the extrusion cavity is hermetically connected to the reactor the reactor is a drum with rotational symmetry whose longitudinal shaft is coupled (preferably transversally, at 90 degrees to the extrusion axis), by means of an opening, with the end of the extrusion cavity of the cylinder of the extruding machine the longitudinal shaft of the reactor comprises a rotatory shaft that is inserted into the beds, which are arranged at the ends of the reactor in said shaft some steel blades are arranged between the end of the blades and the wall or dome of the reactor there is a clearance, referred to as boundary layer of the reactor, wherein the rotatory shaft of the reactor and the blades are jointly referred to as rotor, and wherein the reactor has a discharge valve. [0016] in the dependant claims, various advantageous alternatives and preferred embodiments of the apparatus according to the invention are described.brief description of the drawings[0017] further advantages and characteristics of the invention are appreciated from the following description, where, without limitations, some preferred embodiments of the invention are described, mentioning the attached drawings. the figures show:[0018] fig. 1 is a cross-sectional side view of the apparatus of the present invention.[0019] fig. 2 is a perspective view of the rotor.[0020] figs. 3a and 3b are cross-sectional side views of a section of the apparatus of the invention, showing in fig. 3a the compression stage of the parget against the blades of the rotor, with the discharge valve of the reactor being closed. fig. 3b shows the valve of the reactor being opened, allowing the unloading of the parget through the boundary layer of the reactor and the openings at the bottom of the reactor.[0021] figs. 4a, 4b, 4c, 4d, and 4e are a group of views of the blades that support the rotor shaft, wherein:[0022] fig. 4a represents a ground view of the internal blade that supports the rotor shaft.[0023] fig. 4b represents a side front view of the internal blade that supports the rotor shaft.[0024] fig. 4c represents a cross-section of the internal blade at b-b.[0025] fig. 4d represents a cross-section of the internal blade at a-a.[0026] fig. 4e is a perspective view of one of the side blades (400) that supports the rotor shaft. there are two of such side blades, located at each of the two ends of the rotor, and they are mirror images.[0027] figs. 5a and 5b are a front view of the discharge valve of the reactor wherein: fig. 5a shows the discharge valve of the reactor being closed, and fig. 5b shows the discharge valve being opened.[0028] fig. 6 is a perspective view of the electric engine, the flywheel and the compression chamber coupled with the reactor and its discharge valve.detailed description of preferred embodiments of the invention[0029] then, reference will be made to a preferred embodiment of the procedure of the present invention at a pilot plant scale for the treatment of solid urban waste, that is, a procedure for the treatment of up to approximately 2000 kg per day of waste, even though the technical concepts are likewise applicable to an industrial plant that may process tens and hundreds of tons per day of waste.[0030] the procedure of the present invention begins with a series of steps that are not novel per se and comprise the following stages: a) providing solid urban waste to a waste treatment plant b) loading inorganic and organic waste, partially or totally mixed and cross-contaminated, in a shredder, tearing the bags, if any, and unloading their contents on a conveyor belt of wide exposure and predetermined speed for the initial selection of recyclable waste c) successively extracting the following waste during the initial selection: [0031] batteries, electronic components, microprocessors, home ap

Results: 12

Diego Gonzalez

1) Family number: 64782162 (US2018214885A)

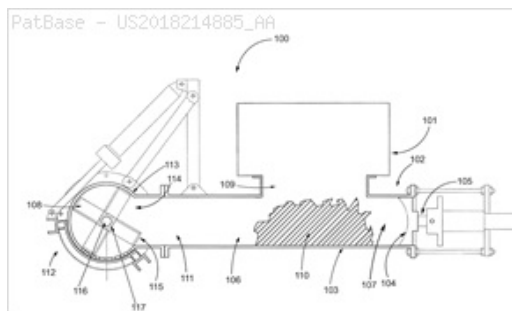
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Title: METHOD AND APPARATUS FOR TRANSFORMING MUNICIPAL SOLID ORGANIC AND INORGANIC WASTE INTO AGGREGATES

Abstract: Method and apparatus (100) for transforming organic and inorganic solid urban waste into aggregates, comprising an extruding machine connected to a reactor. The extruding machine is formed by an extrusion cylinder (103) through which a piston circulates (104) inside an extrusion cavity (106), which comprises three sections (107, 110, 111) and is fed with a parget obtained after pre-processing the waste. The end (115) of the third section (111) is connected to the reactor (112) through an opening (114). The reactor's longitudinal shaft is formed by a rotatory steel shaft (116) in which some steel blades are arranged (108), whose ends play the roles of cutting, hammering, punching and hydraulic helix as they rotate. Between the end of the blades and the wall of the reactor, there is a clearance of more than 0.1 mm of thickness. The reactor has a discharge valve (300) to discharge the parget present in the boundary area through some openings (304), once it has been processed by a series of pressure, vibration energy and decompression cycles.

Classifications:

International (IPC 8-9): B02C B02C18/00 B02C18/14 B02C18/22 B02C23/18 B03B B03B9/06 B09B B09B1/00 B09B3/00 B09B5/00 C04B C04B18/02 C04B18/04 C04B18/30 C04B40/00 (Advanced/Invention); B02C (Subclass/Invention)
International (IPC 1-7): B03B9/06 B09B3/00 C04B18/30
IPC: B09B3/00 B02C18/0084 B02C18/14 B02C18/2233 B09B3/0025 C04B18/021 C04B18/305 C04B40/0071 C04B40/0082 Y02W30/91 B02C18/2216 B02C23/18 B09B3/0041
US: 1/1 241/15



Family:

Publication number	Publication date	Application number	Application date
AR105300 AA	20170920	AR2016P102086	20160707
AU2015403040 AA	20180222	AU20150403040	20150717
AU2015403040 BB	20190509	AU20150403040	20150717
BR112018000614 A2	20180918	BR20181100614	20150717
CA2992682 AA	20180116	CA20152992682	20150717
CN107921491 A	20180417	CN201580081678	20150717
CO20180001162 A2	20180209	CO20180001162	20180202
CR20180106 A	20180904	CR20180000106	20150717
DE602015037243 D1	20190926	DE201560037243T	20150717
DK3326728 T3	20191202	DK20150767567T	20150717
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EP3326728 B1	20190904	EP20150767567	20150717
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IL256657 A0	20180228	IL20150256657	20150717
IN201817006055 A	20180601	IN201817006055	20180216
JP2018520873 T2	20180802	JP20180521716T	20150717
KR20180033220 A	20180402	KR20187004431	20150717
LT3326728 T	20191227	LT20150767567T	20150717
MX2018000742 A1	20180815	MX20180000742	20150717
NZ739586 A	20190329	NZ20150739586	20150717
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RU2697384 C1	20190813	RU20180105837	20150717
SG11201800381R A1	20180227	SG20181100381	20150717
TR201918873 T4	20200121	TR20190018873T	20150717
US2018214885 AA	20180802	US20150745408	20150717
UY36777 A1	20170131	UY20160036777	20160707
WO17013272 A1	20170126	WO2015ES70552	20150717
ZA201801053 A	20190731	ZA20180001053	20150717

Priority:

EP20150767567 20150717 WO2015ES70552 20150717 ZA20180001053 20150717

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Inventor(s): GARIN ROTONDARO ; INAKI JOSE ; GNAEDINGER ; OSCAR MIGUEL ; GNDINGER OSCAR MIGUEL ; GARN ROTONDARO IAKI JOS

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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

2) Family number: 10643148 (US5595348A)

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Title: MACHINE FOR TRITURATING COMPOSITE MATERIALS, PARTICULARLY FOR TRITURATING SOLID URBAN WASTE

Abstract: The present invention relates to a machine for triturating composite materials, particularly for triturating solid urban waste, which comprises a shredding apparatus that is in turn composed of a cutting element provided with multiple blades arranged side by side along an axis, of elements for actuating the blades with a rotary motion about the axis, and of a complementary cutting element which is laterally adjacent to the cutting element. The complementary cutting element cooperates with the cutting element in shredding the material conveyed between the cutting element and the complementary cutting element, and is movable away from the cutting element to allow material that withstands the action of the blades of the cutting element to pass between the cutting element and the complementary cutting element.

Classifications:

International (IPC 8-9): B02C18/14 B02C18/22 (Advanced/Invention); B02C18/06 (Core/Invention); B02C B30B (Subclass/Invention)

International (IPC 1-7): B02C B02C18/14 B02C18/16 B02C18/22 B02C18/40 B30B

CPC: B02C18/0084 B02C18/14 B02C18/142 B02C18/22 Y10S241/38

European: B02C18/00W B02C18/14 B02C18/14B B02C18/22 B02C18/40

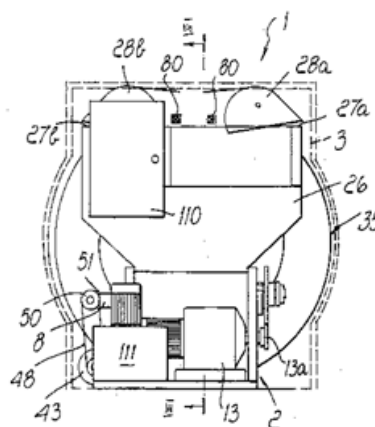


FIG. 1

Family:

Publication number	Publication date	Application number	Application date
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DE69410991 D1	19980716	DE19946010991	19941213
DE69410991 T2	19981217	DE19946010991T	19941213
EP0682983 A1	19951122	EP19940119670	19941213
EP0682983 B1	19980610	EP19940119670	19941213
ES2116517 T3	19980716	ES19940119670T	19941213
IT1247548 B	19941219	IT1994PA00004	19940518
ITPA940004 A0	19940518	IT1994PA00004	19940518
ITPA940004 A1	19951119	IT1994PA00004	19940518
US5595348 A	19970121	US19940356485	19941215

Priority:

IT1994PA00004 19940518

Probable Assignee: ALFA SRL

Assignee(s): (std): ALFA SRL

Assignee(s): ALFA SRL ZONA INDUSTRIAL ; ALFA S R L ; ALFA S R L TERMINI IMERESE IT

Inventor(s): (std): BARONE GIUSEPPE

Inventor(s): BARONE GIUSEPPE 90018 TERMINI IMERESE PALERMO IT

Designated states: AT BE CH DE ES FR GB LI NL SE

3) Family number: 13134087 (JP11221541A)

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Title: METHOD FOR RECYCLING ORGANIC WASTE

Abstract: PROBLEM TO BE SOLVED: To make it possible to efficiently execute fermentation with an anaerobic fermentation stage at a decreased void volume and increased compression rate by mixing slurry-like org. waste with dehydrated material, crushing the mixture to a fine particle form under high pressure, and classifying the mixture from the remaining material inadequate for fermentation and then leading the mixture to the anaerobic fermentation stage. SOLUTION: The org. waste, such as crude refuse and food waste, is low in the void volume as the dehydrated sludge 4 from night soil, septic tank sludge, etc., is mixed therewith in a coarse crushing stage #6. The org. waste is efficiently and coarsely crushed in the state of largely compressing the waste by a coarse crushing machine. The coarsely crushed material 9 sent to 7 is further lowered in the void volume by addition of diluting water depending upon characteristics and, is then largely compressed under high pressure by a compression crushing machine. The waste water is discharged as the fine particulate org. waste 10 of a grain size less than or equal to 1 to 2 mm and is automatically classified from the material 11 inadequate for fermentation. such as plastic, metal, stone and sand, remaining in the machine. In the anaerobic fermentation stage #8, the efficient fermentation is effected by the effect of mixing of different components, such as food waste and dehydrated sludge 4.

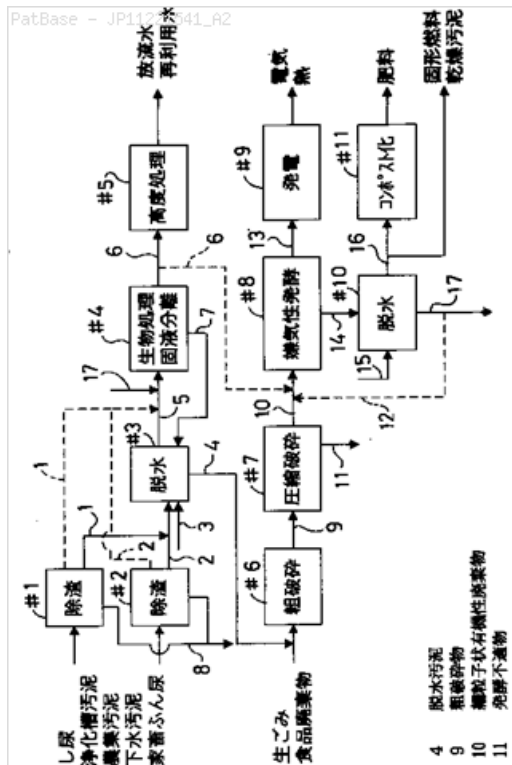
Classifications:

International (IPC 8-9): B09B3/00 B09B5/00 C02F11/00 C02F11/04 C02F11/12 C05F15/00 C05F17/00 (Advanced/Invention); C05F3/00 C05F7/00 C05F9/00 (Advanced/Non-invention); B09B3/00 B09B5/00 C02F11/00 C02F11/04 C02F11/12 C05F15/00 C05F17/00 (Core/Invention); C05F3/00 C05F7/00 C05F9/00 (Core/Non-invention)

International (IPC 1-7): B09B3/00 B09B5/00 C02F11/00 C02F11/04 C02F11/12 C05F15/00 C05F17/00 C05F3/00 C05F7/00 C05F9/00

CPC: Y02E50/343 Y02W30/43 Y02W30/47

European: Y02E50/34B

**Family:**

Publication number	Publication date	Application number	Application date
JP11221541 A2	19990817	JP19980027679	19980210
JP3755982 B2	20060315	JP19980027679	19980210

Priority:

JP19980027679 19980210

Probable Assignee: KUBOTA KK**Assignee(s):** (std): KUBOTA KK**Assignee(s):** KUBOTA CORP**Inventor(s):** (std): SHIBATA TOSHIYUKI ; MORO MASASHI ; YAMAMOTO TETSUYA ; SOEDA YUJI**4) Family number: 14039980 (JP2000176935A)**

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Title: DEVICE FOR PRODUCING REGENERATED PELLET

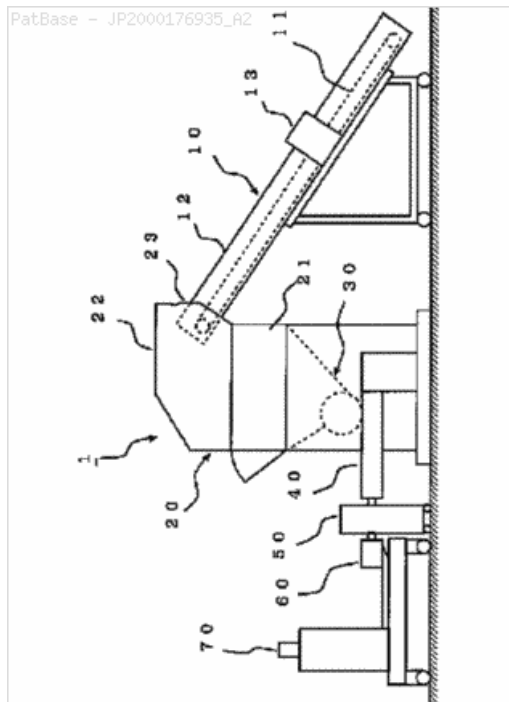
Abstract: PROBLEM TO BE SOLVED: To provide a highly thermally efficient re-pelletizing device by storing a grinding energy applied to waste plastic material at its grinding by a method wherein a series of executions ranging from the receiving of the waste plastic material to the supplying of regenerated pellets are realized in processes for grinding, melting and pelletizing of the waste plastic material. SOLUTION: This device is equipped with a carrying-in means 10 consisting of a charging conveyor 11 for transporting waste plastic material to a hopper 21, a supplying means 20 equipped a slider for pressing and supplying the material to a shredder, a grinding means 30 mainly consisting of the shredder for grinding the material to be supplied, an extruder 40, which melts and extrudes the material after being ground, a screen changer 50 inserted in a resin flow path extruded from the extruder 40, a pelletizing means 60 for pelletizing a resin extruded from the nozzle of a die provided in the downstream of the screen changer 50 by cutting and a centrifugal separator 70, with which water is separated from regenerated pellets and discharged.

Classifications:

International (IPC 8-9): B02C18/00 B02C18/14 B09B3/00 B29B17/00 B29B17/04 B29B9/00 (Advanced/Invention); B02C18/00 B02C18/06 B09B3/00 B29B17/00 B29B17/04 B29B9/00 (Core/Invention)

International (IPC 1-7): B02C18/14 B02C18/44 B09B3/00 B29B17/00 B29B9/00

CPC: Y02W30/62 B29B17/0036**European:** B29B17/00D2



Family:

Publication number	Publication date	Application number	Application date
JP2000176935 A2	20000627	JP19980357457	19981216

Priority:

JP19980357457 19981216

Probable Assignee: HAGIHARA IND

Assignee(s): (std): HAGIHARA IND

Assignee(s): HAGIHARA IND INC ; HAGIHARA INDUSTRIES INC

Inventor(s): (std): UEMURA RYUJI

5) Family number: 15896256 (US5863003A)

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Title: Waste processing machine

Abstract: A waste processing machine according to the invention is ideally suited for reducing virtually any products. The waste processing machine includes a rotor having multiple processing tools pivotally mounted thereon wherein each tool is adapted to self-limit the depth of the cut into the waste material. In addition, the pivotally mounted processing tools are staggered and spaced along the length of the rotor so that a limited number of tools will contact the waste product at any one point in time. Once the processing tool cuts or otherwise reduces the waste product to smaller bits of waste material, the bits are drawn out of the rotor system by screens having angled surfaces formed thereon.

Classifications:

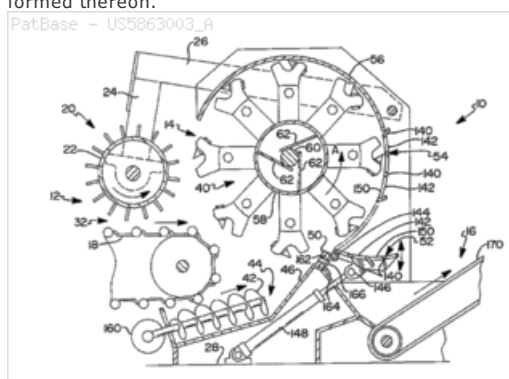
International (IPC 8-9): B02C 18/14 B02C 18/22 (Advanced/Invention); B02C 18/06 (Core/Invention)

International (IPC 1-7): B02C 13/286

CPC: B02C 18/145 B02C 18/225

European: B02C 18/14F B02C 18/22F6

US: 241/186.35 241/189.1 241/200 241/285.3 241/73



Family:

Publication number	Publication date	Application number	Application date
US5863003 A	19990126	US19960637233	19960424
US6299082 BA	20011009	US19980071237	19980501

Priority:

US19950001538P 19950726

US19960637233 19960424

US19980071237 19980501

Probable Assignee: SMORACY LLC

Assignee(s): (std): SMITH LEWARD M ; SMITH LEWARD N

Assignee(s): SMORACY LLC

Inventor(s): (std): SMITH LEWARD N ; SMITH LEWARD M

Title: WASTE TREATMENT APPARATUS

Abstract: A cutting mechanism (108) for shredding waste has a planetary gearbox which carries four cutting heads (109) that are in close proximity to one another. The cutting heads (109) are rotated in the same direction by the gearbox (110) so that at a shredding zone between opposed portions of adjacent cutting heads (109), the opposed portions are moving in opposite directions.

Classifications:

International (IPC 8-9): A61G12/00 A61L11/00 A61L2/06 A61L2/07 B02C18/08 B02C18/14 B02C18/22 B02C18/24 B02C21/00

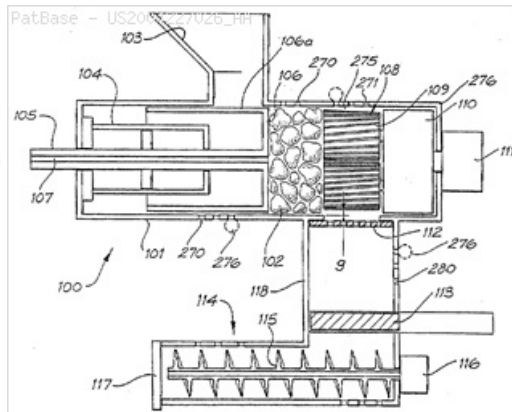
B02C23/24 B09B3/00 (Advanced/Invention);
A61G12/00 A61L11/00 A61L2/04 B02C18/06 B02C23/18 B09B3/00 (Core/Invention)

International (IPC 1-7): A61G12/00 A61L11/00 A61L2/06 A61L2/07 B02C18/14 B02C18/16 B02C18/40 B02C19/12 B02C23/24 B09B3/00 B29B17/00

CPC: A61L2/07 A61L11/00 B02C18/142 B02C18/2233 B02C18/24 B02C19/0075 B02C23/24 B02C2018/147 B09B3/0075 Y10S241/606

European: A61L11/00 A61L2/07 B02C18/14B B02C18/22F2 B02C18/24 B02C19/00W6 B02C19/12M B02C23/24 B09B3/00M L02C18/14M

US: 241/235 241/235P 241/285.2 241/57 241/606 241/65



Family:

Publication number	Publication date	Application number	Application date
AU200025262 A1	20000731	AU20000025262	19991224
AU200025262 A5	20000731	AU20000025262	19991224
AU2003248375 AA	20031030	AU20030248375	20030924
AU2003248375 BB	20060112	AU20030248375	20030924
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TH42429 A	20010110	TH19991004877	19991223
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Priority:

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US20010869180 20011102	AU20030248375 20030924	AU20030248375 20030924
US20040792605 20040303		

Probable Assignee: MEDIVAC TECHNOLOGY PTY LTD

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Inventor(s): (std): MARK H BUTLER ; MARK HENRY BUTLER ; BUTLER MARK HENRY ; BUTLER MARK H

Agent(s): MAXWELLS PATENT AND TRADE MARK ATTORNEYS PTY LTD; PETER MAXWELL AND ASSOCIATES; BROUILLETTE AND ASSOCIES PARTNERS

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

Title: METHOD OF PROCESSING DOMESTIC WASTE

Abstract:

FIELD: processing domestic waste.

SUBSTANCE: method includes preliminary removing of coarse garbage from waste before supplying it to the conveyor and further supplying the waste to the device for primary processing made of a drum, main grading for removing different fractions which are supplied to the secondary processing.

EFFECT: enhanced efficiency.

8 cl, 1 dwg

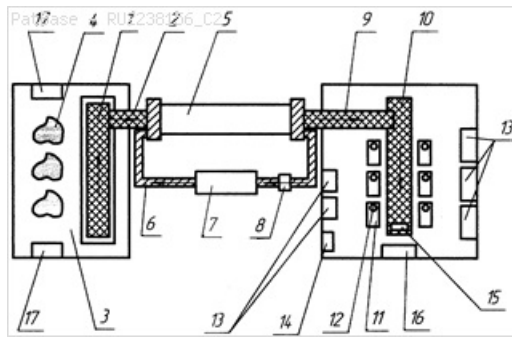
Classifications:

International (IPC 8-9): B03B9/06 B09B3/00 C05F9/00 (Advanced/Invention);

B03B9/00 B09B3/00 C05F9/00 (Core/Invention)

International (IPC 1-7): B03B9/06 B09B3/00 C05F9/00

CPC: Y02A40/214



Family:

Publication number	Publication date	Application number	Application date
RU2003101297 A	20040710	RU20030101297	20030120
RU2238156 C2	20041020	RU20030101297	20030120

Priority:

RU20030101297 20030120

Inventor(s): (std):

KISELENKO V V

Inventor(s):

KISELENKO V.V.

8) Family number: 33008119 (JP2006088132A)

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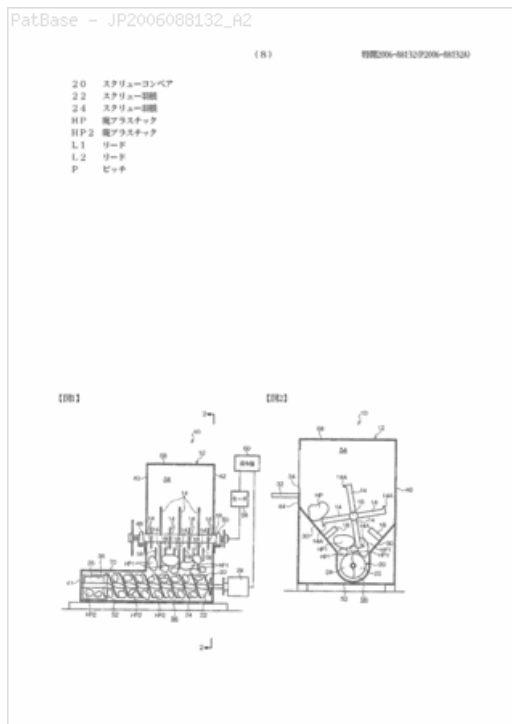
Title: WASTE PLASTIC TREATMENT DEVICE

Abstract: PROBLEM TO BE SOLVED: To provide a waste plastic treatment device capable of selecting pulverized waste plastic with a simple structure. SOLUTION: This waste plastic treatment device 10 comprises a rotary blade 14 and a fixed blade 18, and a screw conveyor 20 having two sets of screw blades 22, 24. When waste plastic charged in a machine body 12 is caught by the rotary blade 14 and the fixed blade 18 and pulverized, the pulverized waste plastic is dropped onto the screw conveyor 20. Since a space (the pitch) between the screw blade 22 and the screw blade 24 facing each other is set correspondingly to the size of the waste plastic HP2 to be conveyed by the screw conveyor 20, only the waste plastic HP2 of the size not larger than that of the waste plastic to be conveyed among the waste plastic dropped on the screw conveyor 20 is sorted and conveyed by the screw conveyor 20.

Classifications:

International (IPC 8-9): B02C18/00 B02C18/14 B02C18/22
B29B17/00 (Advanced/Invention);
B02C18/00 B02C18/06 B29B17/00 (Core/Invention)

CPC: Y02W30/62 Y02W30/625



Family:

Publication number	Publication date	Application number	Application date
JP2006088132 A2	20060406	JP20040280688	20040927

Priority:

JP20040280688 20040927

Probable Assignee:

YAMAMOTO AND CO LTD

Assignee(s): (std):

YAMAMOTO AND CO LTD

Assignee(s):

YAMAMOTO CO LTD

Inventor(s): (std):

YAMAMOTO SOICHI ; YOSHIOKA MASATOSHI

Title: BIOMASS SOLID FUEL

Abstract: PROBLEM TO BE SOLVED: To provide a biomass solid fuel obtained from, as raw materials, yam vines to be put to disposal produced in yam cultivation process and the cultivation nets. SOLUTION: The biomass solid fuel is such as to be obtained by winding up/binding yam vines produced in yam cultivation process and entangled on synthetic resin nets(made of polyethylene resin) for yam cultivation, and with the yam vines and the nets as the raw materials, crushing and hardening them. The biomass solid fuel thus obtained is practicable enough to have a calorific value equivalent to or higher than that of commercial woody pellets. Thereby, in putting the above yam vines and the cultivation nets to disposal, there is no need of any separating work, generating no cost for the disposal as well.

Classifications:

International (IPC 8-9): A01G1/00 A01G9/12 B09B3/00 C10L5/44

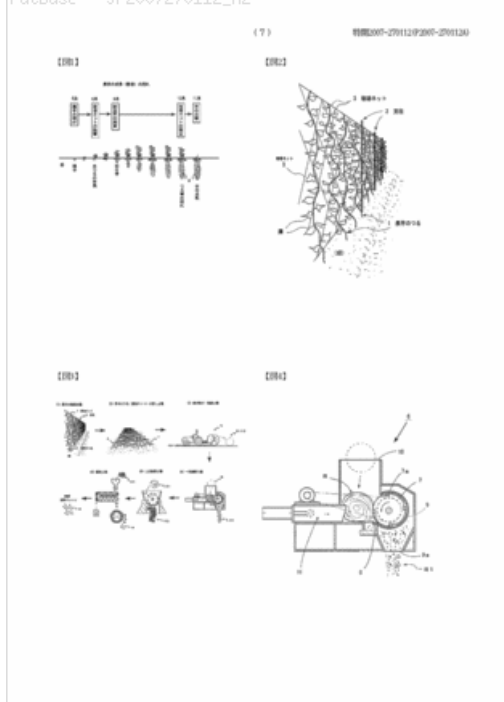
C10L5/48 (Advanced/Invention);

A01G1/00 A01G9/12 B09B3/00 C10L5/40 (Core/Invention)

CPC: Y02E50/10 Y02E50/30 Y02W30/78

European: Y02E50/10 Y02E50/30

PatBase - JP2007270112_A2



Family:

Publication number	Publication date	Application number	Application date
JP2007270112 A2	20071018	JP20060118111	20060330
JP2007270112 A2	20071018	JP20060118111	20060421
JP5035592 B2	20120926	JP20060118111	20060421

Priority:

JP20060002336 20060330 JP20060118111 20060421

Probable Assignee: SATAKE ENG CO LTD

Assignee(s): (std): SATAKE ENG CO LTD

Assignee(s): SATAKE CORP

Inventor(s): (std): KIMURA TETSUYA ; NISHIYAMA TAKAHIRO

Title: LINE FOR SHREDDING and briquetting INDUSTRIAL AND / OR WASTE, WASTE AND CRUSHER PRESS FOR THEIR BRIQUETTING (Machine translation)

Abstract: Source: RU40916U

Machine translation: Group The invention relates to the processing industry, in particular to devices chopper and the press, working both independently and in a variant of their association in the above-mentioned conveyor line, which is characterized by a horizontal layout LOAD-unloading system and the convenience of moving in tight labor platform by providing the chopper and the press handles and rollers for.

Classifications:

International (IPC 8-9): B02C18/40 B30B11/00 (Advanced/Invention)

Family:

Publication number	Publication date	Application number	Application date
RU40916 U1	20041010	RU20040115232U	20040524

Priority:

RU20040115232U 20040524

Probable Assignee: JOINT STOCK CO PRECISION MECHANICS M

Assignee(s): JOINT STOCK CO PRECISION MECHANICS M

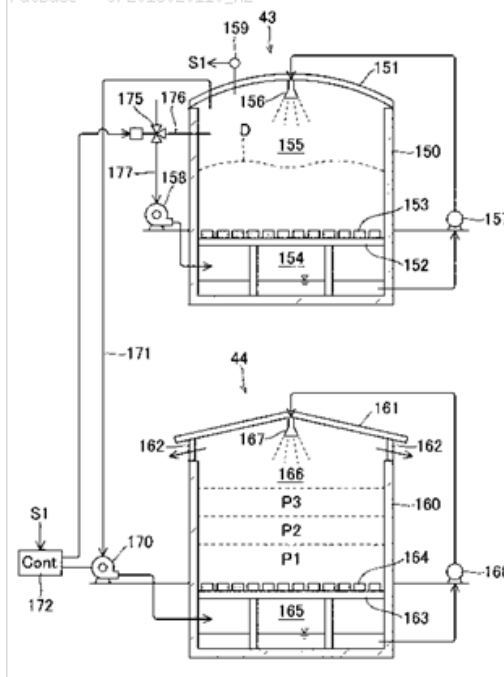
Abstract: PROBLEM TO BE SOLVED: To provide a recycling plant of municipal refuse that can dry and deodorize a relatively large amount of waste with relatively simple constitution and can be easily made large-sized. SOLUTION: A recycling plant 1 of municipal refuse includes a pretreatment line 2, a wooden material production line 3, a blending line 4, a fermentation drying line 5, a selecting line 6, a polyvinyl chloride removing line 7, and a RPF production line 8. The fermentation drying line 5 of bio-tunnel type has a plurality of fermentation buildings 43, 43,..., and a deodorization building 44. A waste charged into the fermentation chamber 155 of the fermentation building 43 is sprayed with water of a water reservation chamber 154, and air of the fermentation chamber 155 is circulated through the water reservation chamber 154 with an air blower 158. The air of the fermentation chamber 155 in the fermentation building 43 is guided into the water reservation chamber 165 of the deodorization building 44 with an air blower 170, and passes through three layers of wooden chip layers P1, P2, P3 installed in the deodorization chamber 166 of the deodorization building 44, thereby being deodorized.

Classifications:

International (IPC 8-9): B01D53/38 B01D53/77 B09B3/00 B09B5/00 C05F9/04 (Advanced/Invention)

CPC: Y02W30/78 Y02A40/216 Y02A50/2358 Y02A50/2359

PatBase - JP2015020110_A2

**Family:**

Publication number	Publication date	Application number	Application date
JP2015020110 A2	20150202	JP20130149961	20130718
JP5649697 B1	20150107	JP20130149961	20130718

Priority:

JP20130149961 20130718

Probable Assignee: MIIKE IRON WORKS CO LTD

Assignee(s): (std): MIIKE IRON WORKS CO LTD ; MINO TERUO

Inventor(s): (std): KOBAYASHI HIDEMASA ; MINO TERUO ; NAGAE HIROKI ; KOBAYASHI YOSHIKAZU

12) Family number: 5864466 (JP53110260A)

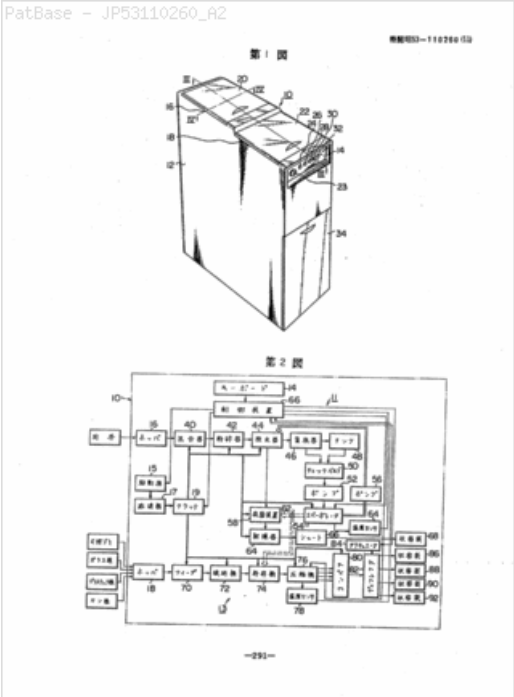
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Title: SMALL SIZED WASTES TREATMENT APPARATUS

Abstract: Source: JP53110260A **Machine translation:** 1, the name of the invention claim 1 small [Source: waste processing apparatus 1, 2 of Patent animal and vegetable waste, for grinding the grinding milled waste dehydrated to separate the fiber material and the juice and dewatering device to the casing body, the casing in the main body, a fiber material by a press apparatus a certain shape, and molding the recycled waste processing apparatus, characterized in that. 2 juice by heating the moisture was evaporated to concentrate, so as to generate the comparator Everquest, together with circulating the concentrated solution to the dewatering device, by circulating the steam heating press apparatus so as to the size of the range set forth in claim 1 waste processing apparatus. 3, to form a press apparatus, the steam jetting nozzle, the nozzle of a certain shape, more steam molded fiber material in molding and at the same time sterilization by jetting the fiber material by the thermal energy of steam to evaporate the moisture in the scope of the appended claims paragraph 1 or 2 small waste processing apparatus. 4, juice, and to save the current liquid collecting liquid receiver in the liquid juice when it exceeds a certain level, accumulate excess liquid out of the auxiliary tank, liquid receiver to check current and the auxiliary tank through the interpolator pulp everquest so as to communicate with the scope of the appended claims second term, wherein the small waste processing apparatus. The inlet and outlet 5, and dewatering device pulp, pressure, respectively supplied to the dewatering device in the cooker steam to so as to act as the scope of the appended claims 1 according to any one of the first to fourth waste treatment apparatus the size Jvx steam jet holes 6, device is a hollow shaft and the fixed shaft and a constant time constant 0 speed of a hundred rotation is supported so as to press the press roller, comprising a roller, and a plurality of recesses respectively communicating with the recess of the plurality of steam jetting nozzle to form during the molding of the fiber material of the hollow shaft of the steam injection holes and Endpage:1-less and roller of the steam jet nozzle so as to communicate the scope of the appended claims 3 to fifth warning according to any deviation of the small waste treatment apparatus The surface of the developing roller b press non-adhesive resin film is formed on the scope of the appended claims, wherein the small waste processing apparatus 6. 8, animal and vegetable waste from the first grinder, grinding for grinding the waste, and a first fiber material and dehydrated to separate the juice and dewatering device, the fiber material by a press apparatus a constant shape of the first casing body, waste treatment unit housed in the casing main body, other than the further first second waste waste, waste disposal unit for accommodating the second, characterized in that waste processing apparatus. 9 the second waste waste treatment unit for grinding the second pulverizer and pulverized waste, second the compressor for compressing to the scope of the claims 8 comprises a small waste processing apparatus. 10, second waste processing unit, the conveyor is a conveyor device BU collaborative device by deflector to a second waste in a predetermined direction, deflect paragraph 8 the scope of the appended claims or 9 small waste processing apparatus. 11, the grinding machine second waste processing unit by supplying the waste steam to disinfect more second cleaning the scope of the appended claims paragraph 9, wherein the small or waste processing apparatus 10. Waste processing unit 1z is first evaporated concentrate juice Everquest, the comparator for generating a second processing

unit, the grinding machine, the waste of the vapor everquest so as to circulate the patent claim 11., wherein the small waste processing apparatus. 13, the second waste processing unit compressor is by the second heating device, which waste heat compression so as to the scope of the appended claims paragraph 9 to paragraph 12 compact according to any one of waste processing apparatus. The second processing unit 14 waste crushing machine, constant second waste crushing machine to break forced or compressed feed further comprising the feeder 6 the scope of the claims 9 to 13 according to any one of waste treatment apparatus the size 15 is a second crusher crushing waste processing unit by the second magnetic metal from the waste sorting device (38) so as to the scope of the appended claims paragraph 14, wherein the small waste processing apparatus. 3,

Classifications:
International (IPC 8-9): B02C21/00 B09B5/00 B30B9/00 C05F9/00 C05F9/02 (Advanced/Invention);
B02C21/00 B09B5/00 B30B9/00 C05F9/00 C05F9/02 (Core/Invention)
International (IPC 1-7): B02C18/40 B30B9/00 C05F9/00
CPC: Y02A40/215



Family:

Publication number	Publication date	Application number	Application date
JP53110260 A2	19780926	JP19770023745	19770307

Priority:
JP19770023745 19770307

Probable Assignee: HATANAKA TAKESHI
Assignee(s): (std): HATANAKA TAKESHI
Inventor(s): (std): HATANAKA TAKESHI