

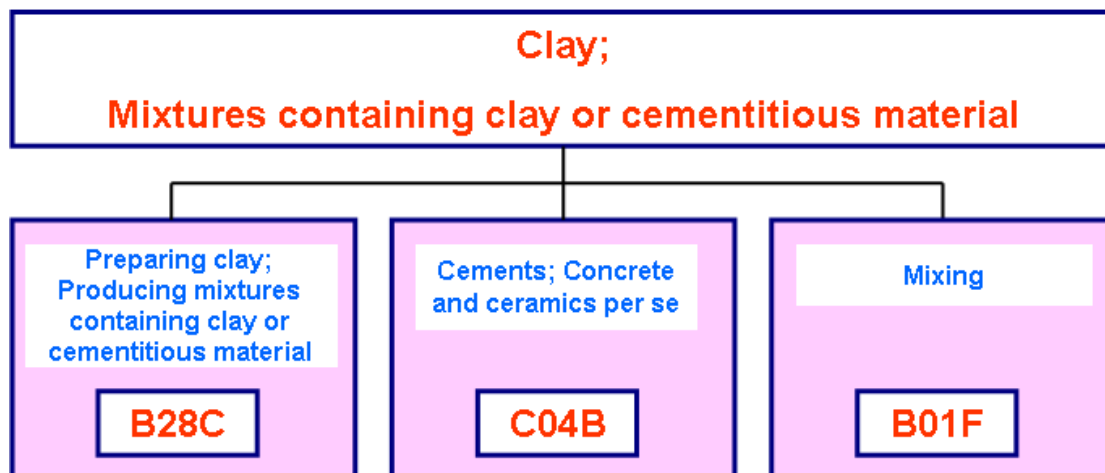
B28C

PREPARING CLAY; PRODUCING MIXTURES CONTAINING CLAY OR CEMENTITIOUS MATERIAL, e.g. PLASTER (preparing material for foundry moulds [B22C 5/00](#))

Relationships with other classification places

Classification of prepared clay; Producing mixtures containing clay or cementitious material is in this subclass.

Classification of cements; concrete and ceramics per se is classified under [C04B](#). Mixing is classified under [B01F](#).



The preceding image includes references to [B28C](#), [C04B](#), [B01F](#).

References

Limiting references

This place does not cover:

Mixers in general	B01F
Concrete paving mixers combined with distributing devices	E01C 19/00
Machines for preparing mixtures of road-metal with bitumen	E01C 19/10

Glossary of terms

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

Cement	includes plaster
Mixtures of cement with other substances	includes plaster
Clay	includes ceramic compositions

B28C 1/00

Apparatus or methods for obtaining or processing clay (filtration in general [B01D](#); separation of solids from solids [B03](#), [B07](#); chemical part [C04B](#); by mining or quarrying [E21C 41/16](#), [E21C 41/26](#), [E21C 47/10](#))

References

Informative references

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

Preparing or treating clay; kaolin	C04B 33/04
Treatment of clays	C09C 1/42

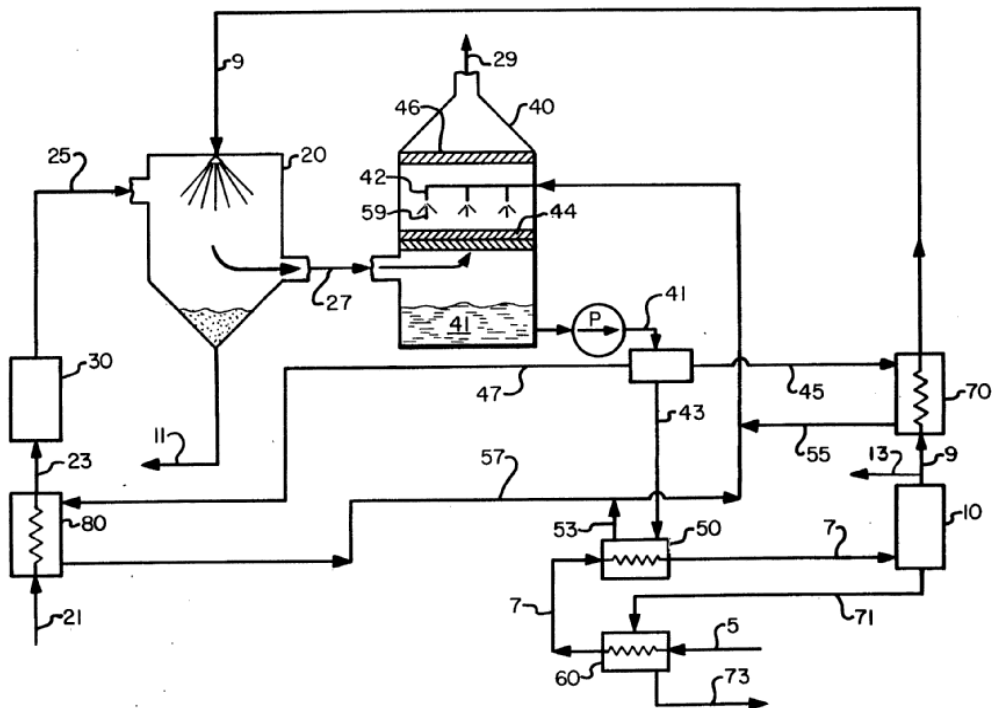
B28C 1/02

for producing or processing clay suspensions {, e.g. slip} (producing or processing suspensions in general [B01](#))

Definition statement

This place covers:

Illustrative example of subject matter classified in [B28C 1/02](#).



WO 87/00765

1/1

PCT/US86/01413

B28C 1/10

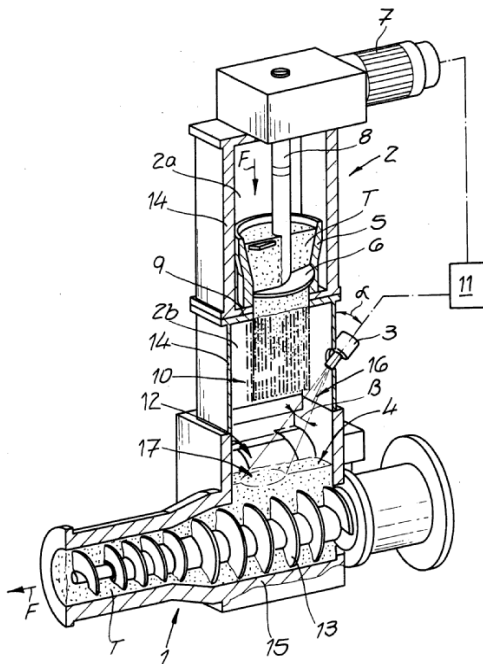
for processing clay-containing substances in non-fluid condition (clay slurries [B28C 1/02](#)); Plants}

Definition statement

This place covers:

Illustrative example of subject matter classified in [B28C 1/10](#).

DE 20 2009 014 658 U1 2010.03.18
Anhängende Zeichnungen

**B28C 3/00**

Apparatus or methods for mixing clay with other substances (producing clay suspensions [B28C 1/02](#))

References**Informative references**

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

Compositions of mortars, concrete or artificial stone containing unburned clay	C04B 28/001
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B28C 5/00

Apparatus or methods for producing mixtures of cement with other substances, e.g. slurries, mortars, porous or fibrous compositions (controlling the mixing apparatus and supplying the ingredients [B28C 7/00](#) {; separating cement from waste concrete [B03B 9/063](#)})

Special rules of classification

Classification of apparatus or methods for producing mixtures is classified under this subclass.

without using driven mechanical means effecting the mixing is classified under [B28C 5/02](#).

using driven mechanical means effecting the mixing is classified under [B28C 5/08](#).

mixing in containers not actuated is classified under [B28C 5/10](#).

mixing in containers to which motion is imparted is classified under [B28C 5/18](#).

mixing on or by conveyors is classified under [B28C 5/34](#).

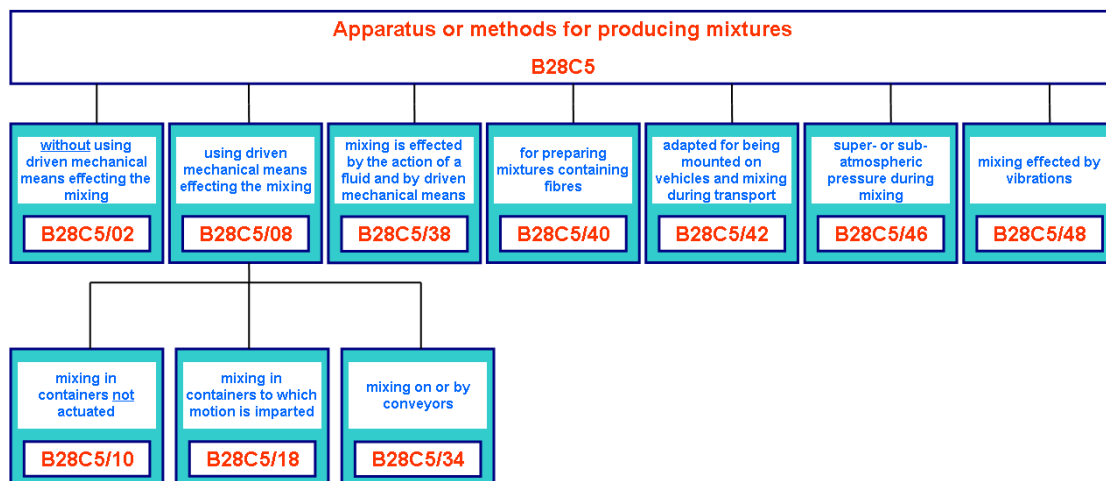
mixing effected by the action of a fluid and by driven mechanical means is classified under [B28C 5/38](#).

for preparing mixtures containing fibres is classified under [B28C 5/40](#).

adapted for being mounted on vehicles and mixing during transport is classified under [B28C 5/42](#).

super-or sub-atmospheric pressure during mixing is classified under [B28C 5/46](#).

mixing effected by vibrations is classified under [B28C 5/48](#).



B28C 5/02

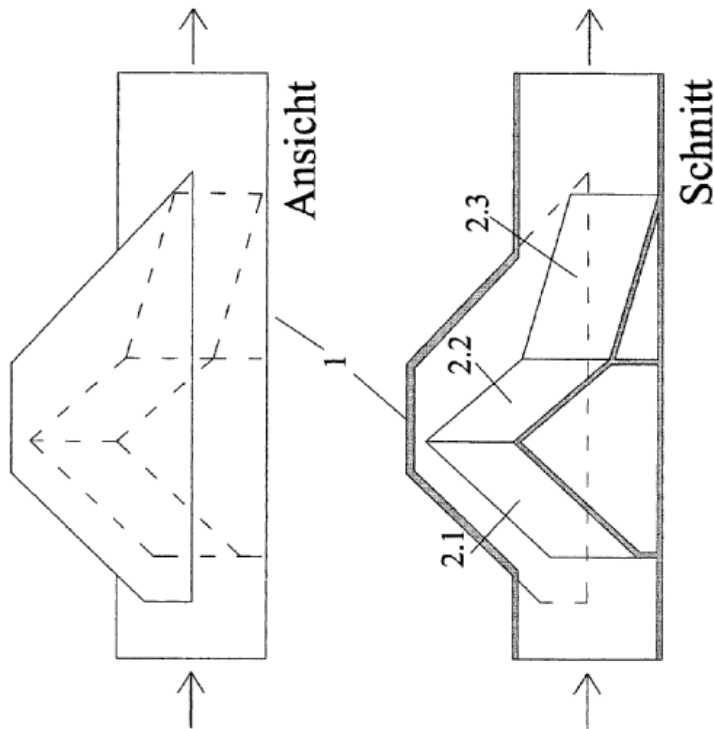
without using driven mechanical means effecting the mixing ([B28C 5/48](#) takes precedence)

Definition statement

This place covers:

Illustrative example of subject matter classified in [B28C 5/02](#).

EP 1 695 803 A2



B28C 5/026

{Mixing guns or nozzles; Injector mixers (applying plaster by gas pressure [E04F 21/12](#); both conveying and distributing concrete [E04G 21/04](#); conveying concrete [B65G 53/32](#); accelerating or decelerating material flow in troughs or tubes [B65G 53/58](#))}

Synonyms and Keywords

In patent documents the following words "gunnite", "shotcrete" and "aircrete" are often used.

B28C 5/08

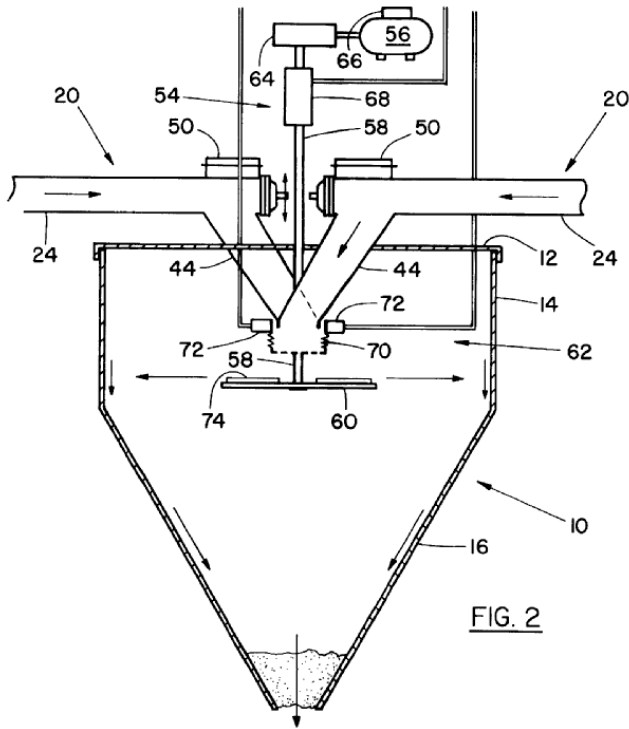
using driven mechanical means affecting the mixing ([B28C 5/40](#), [B28C 5/42](#), [B28C 5/48](#) take precedence; in combination with the action of a fluid [B28C 5/38](#))

Definition statement

This place covers:

Illustrative example of subject matter classified in [B28C 5/08](#).

US 6 357 905 B1



B28C 5/10**Mixing in containers not actuated to effect the mixing****Definition statement**

This place covers:

Illustrative example of subject matter classified in [B28C 5/10](#).

WO 2009/069162

PCT/IT2007/000840

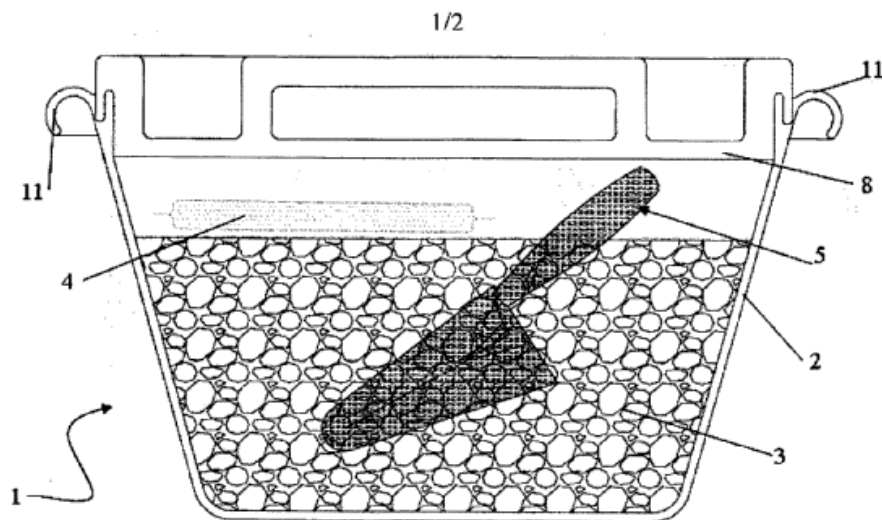


FIG. 1

Special rules of classification

Classification of mixing in containers not actuated to effect the mixing is classified in this subclass.

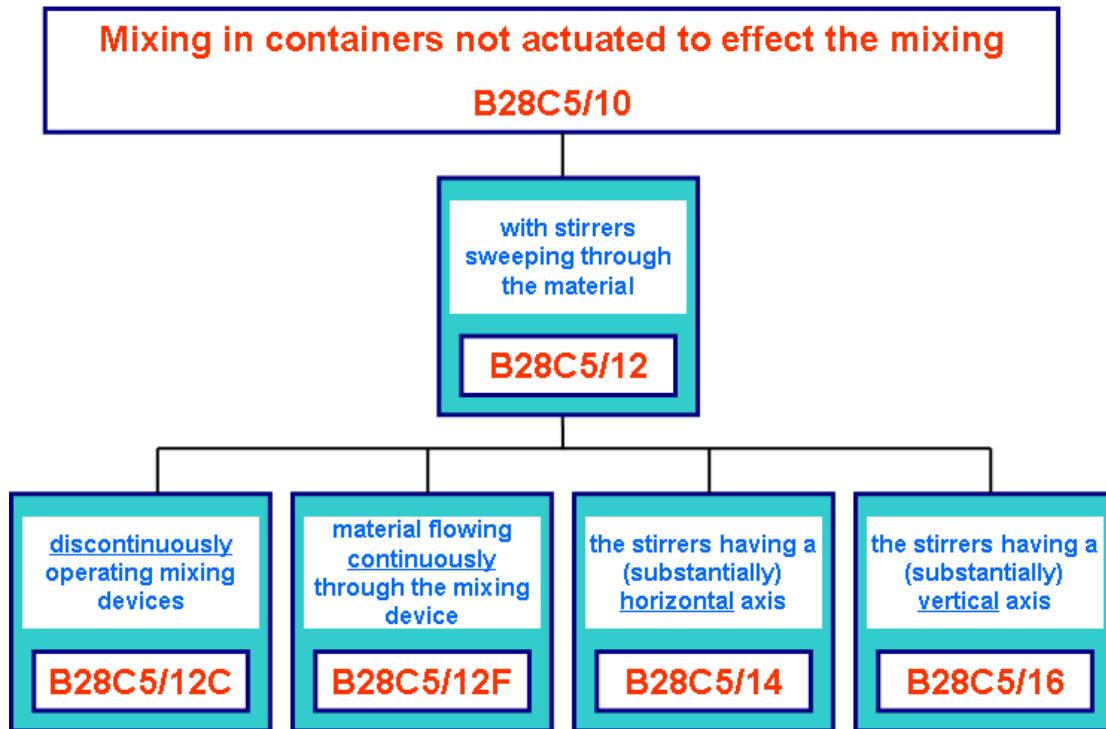
mixing with stirrers sweeping through the material is classified under [B28C 5/12](#).

discontinuously operating mixing devices is classified under [B28C 5/1223](#).

material flowing continuously through the mixing device is classified under [B28C 5/1238](#).

the stirrers having a substantially horizontal axis is classified under [B28C 5/14](#).

the stirrers having a substantially vertical axis is classified under [B28C 5/16](#).



B28C 5/12

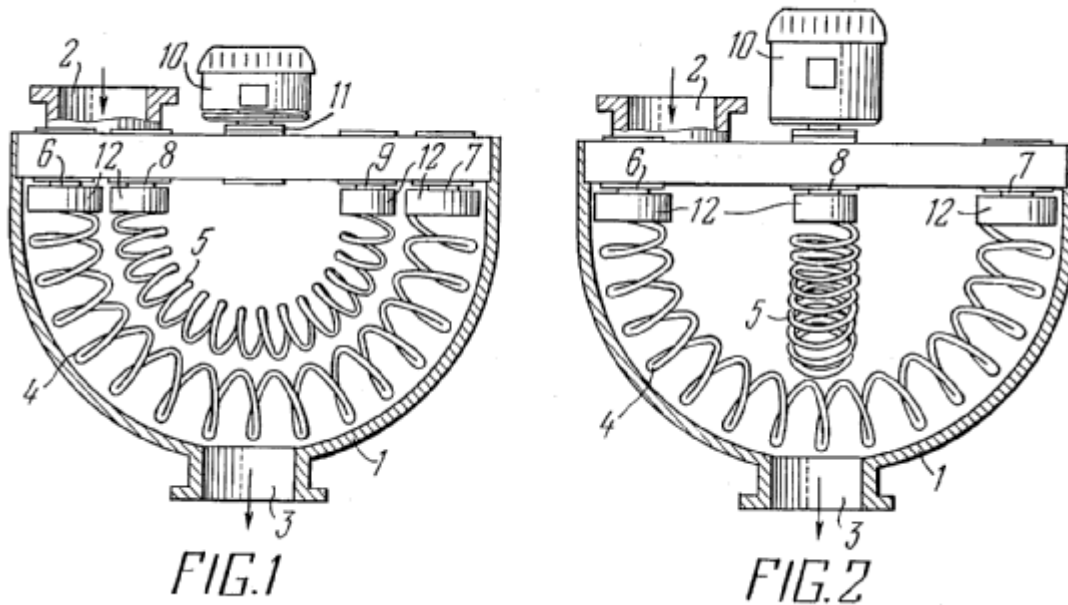
with stirrers sweeping through the materials {, e.g. with incorporated feeding or discharging means or with oscillating stirrers}

Definition statement

This place covers:

Illustrative example of subject matter classified in [B28C 5/12](#).

US 4 827 455 A



References

Application-oriented references

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

Vehicle with moving mixing tools in a stationary container for mixing during transport	B28C 5/4282
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B28C 5/14

the stirrers having motion about a horizontal or substantially horizontal axis
 {(with feeding or discharging means [B28C 5/12](#))}

Definition statement

This place covers:

Illustrative example of subject matter classified in [B28C 5/14](#).

EP 1 023 978 A1

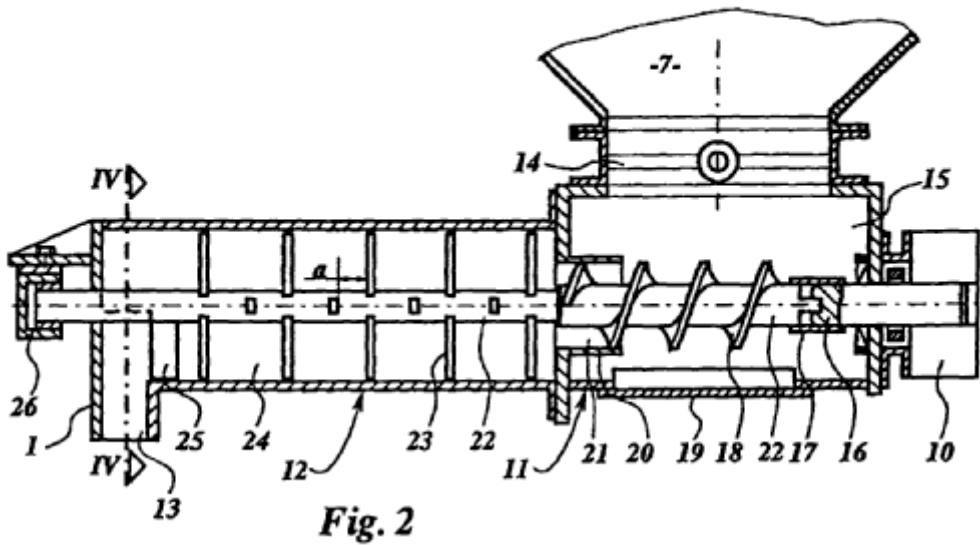


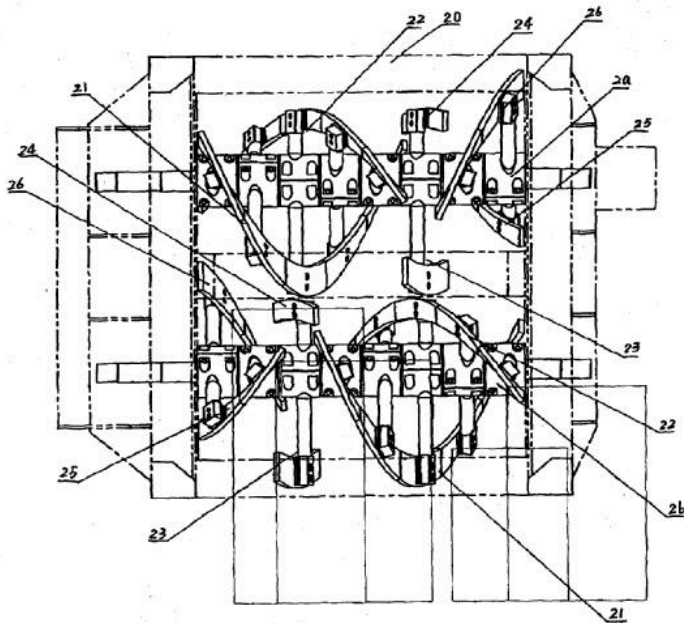
Fig. 2

B28C 5/142**{the stirrer shaft carrying screw-blades}****Definition statement***This place covers:*Illustrative example of subject matter classified in [B28C 5/142](#).

WO 2011/098013

1/2

PCT/CN2011/070813



B28C 5/16

the stirrers having motion about a vertical or steeply inclined axis {(with feeding or discharging means [B28C 5/12](#))}

Definition statement

This place covers:

WO 98/43726

PCT/AU98/00209

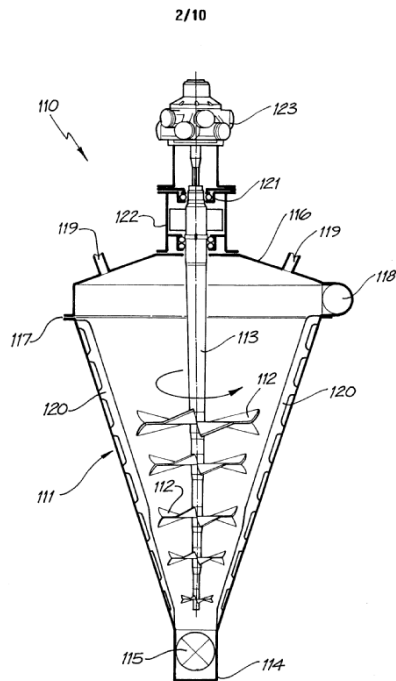


FIG. 2

B28C 5/18

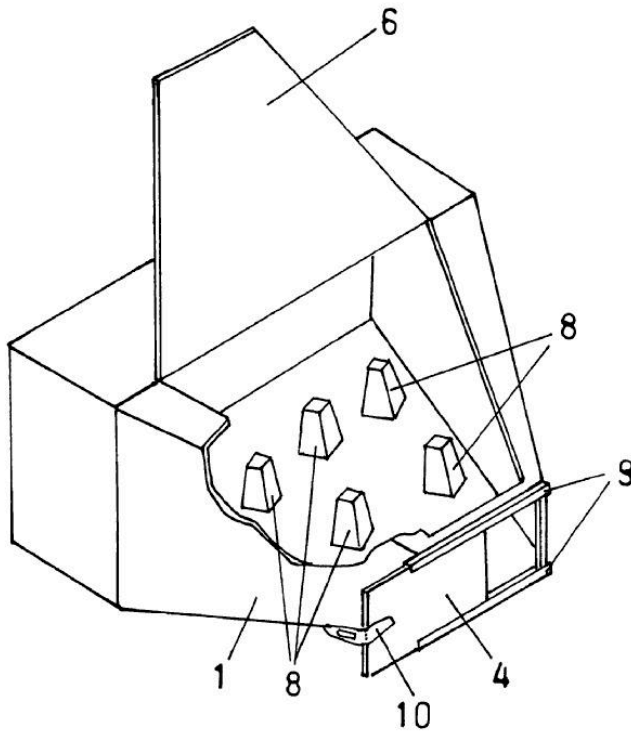
Mixing in containers to which motion is imparted to effect the mixing

Definition statement

This place covers:

The motion which is imparted to the container to effect the mixing is non-rotational, e.g. rocking back and forth; axial reciprocating movement of the container.

US 2006 227 652 A1



References

Application-oriented references

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

Apparatus specially adapted for being mounted on vehicles with provision for mixing during transport	B28C 5/42
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Special rules of classification

Mixing in containers to which rotating motion is imparted are to be classified in the hierarchically lower subgroups of the [B28C 5/18](#).

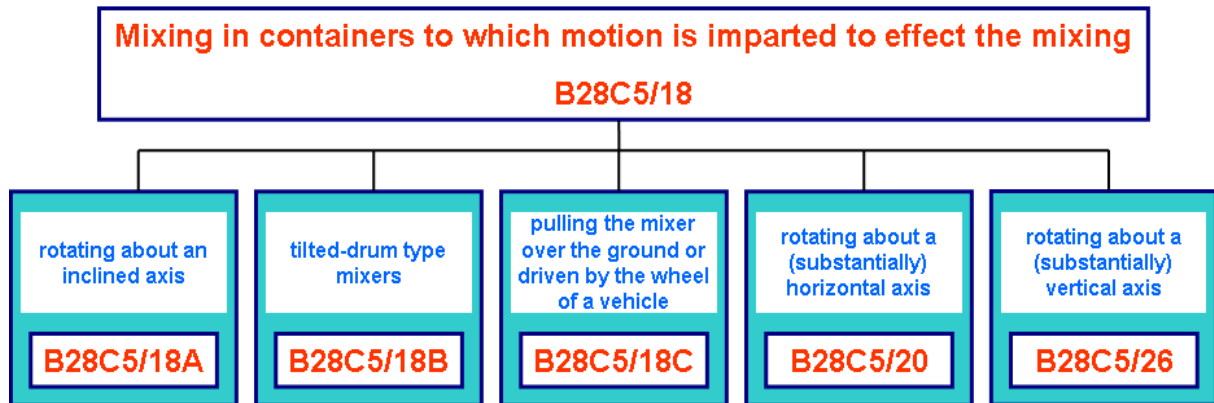
rotating about an inclined axis is classified under [B28C 5/1806](#).

tilted-drum type mixers is classified under [B28C 5/1825](#).

pulling the mixer over the ground or driven by the wheel of a vehicle is classified under [B28C 5/1893](#).

rotating about a (substantially) horizontal axis classified is under [B28C 5/20](#).

rotating about a (substantially) vertical axis is classified under **B28C5/25**.



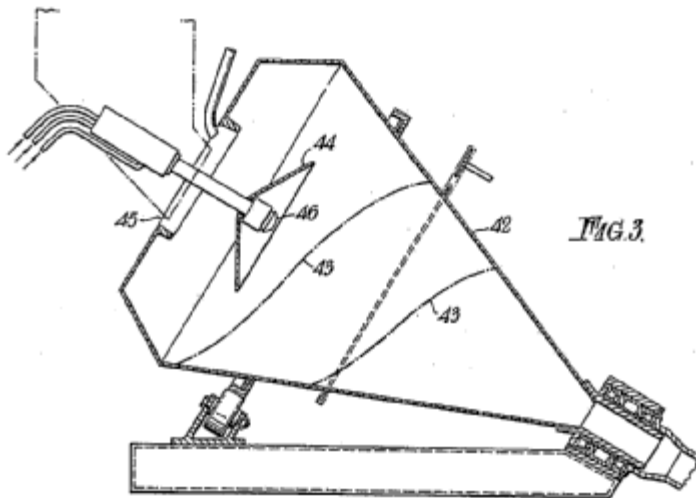
B28C 5/1806

{rotating about an inclined axis (about a steeply inclined axis [B28C 5/26](#))}

Definition statement

This place covers:

Illustrative example of subject matter classified in [B28C 5/1806](#).



B28C 5/1825

{Mixers of the tilted-drum type, e.g. mixers pivotable about an axis perpendicular to the axis of rotation for emptying}

Definition statement

This place covers:

Illustrative example of subject matter classified in [B28C 5/1825](#).

BE 498 075 A

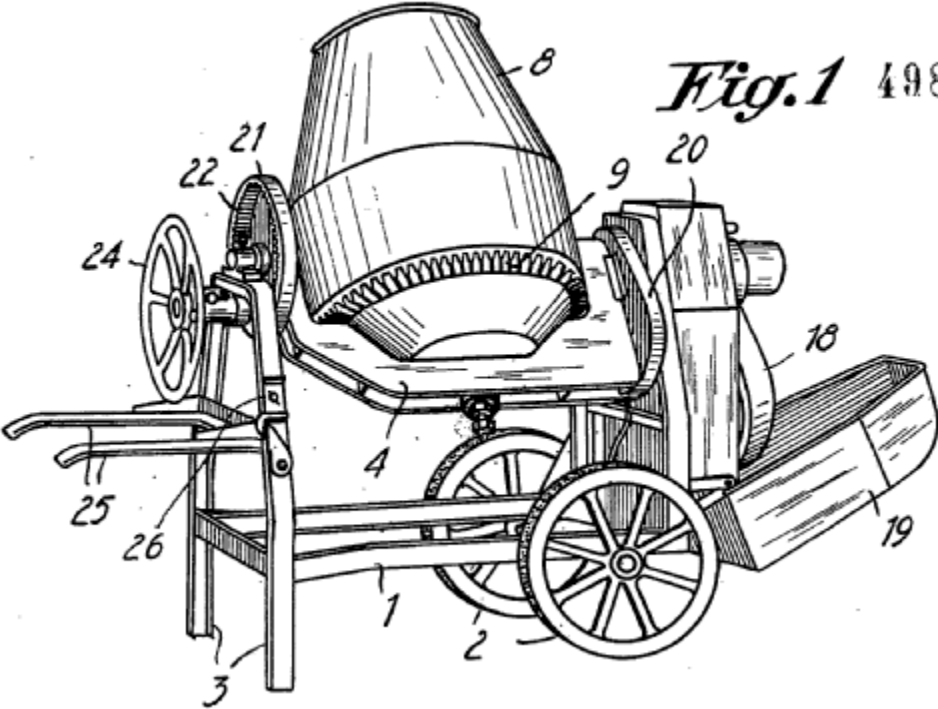


Fig.1 498075

B28C 5/1843

{having several drums}

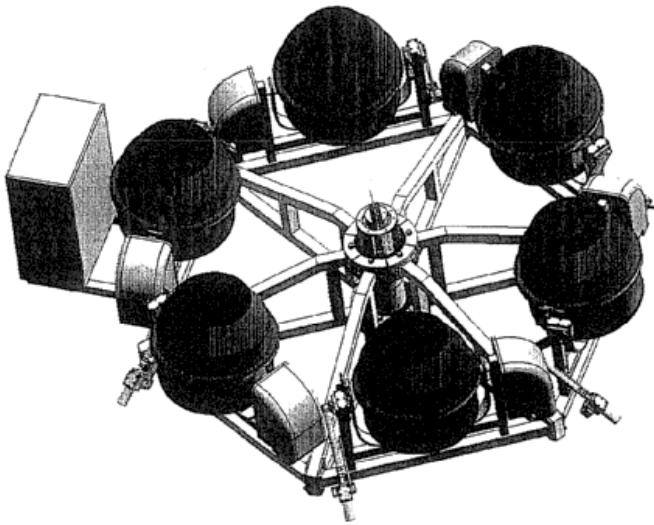
Definition statement

This place covers:

Illustrative example of subject matter classified in [B28C 5/1843](#).

CH 699 889 A2

Fig. 1.1



B28C 5/1893

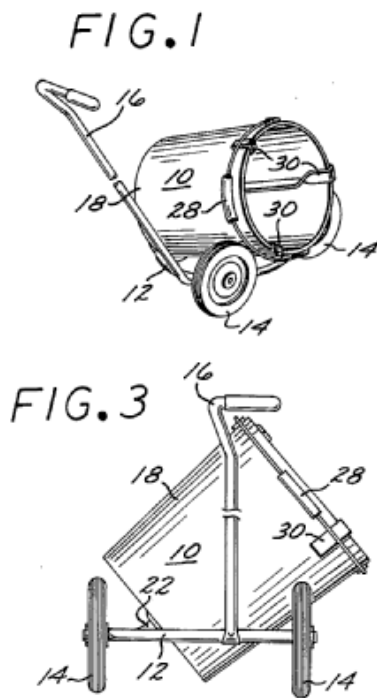
{the mixing drum being rotated by pulling it over the ground; the mixing drum or the stirrer being driven by movement of the wheel of a vehicle}

Definition statement

This place covers:

Illustrative example of subject matter classified in [B28C 5/1893](#).

US 4 078 263 A



B28C 5/20

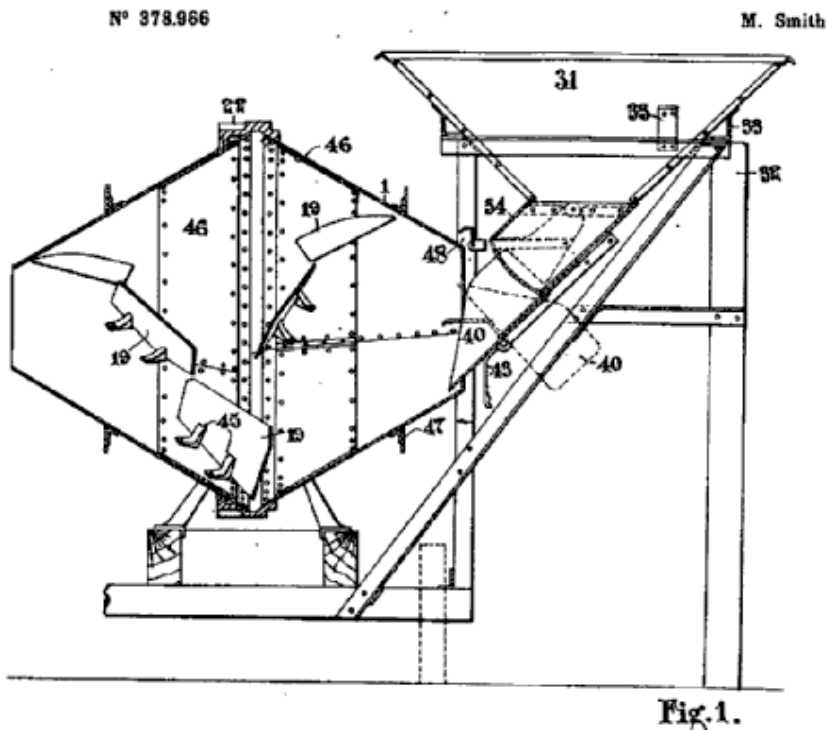
rotating about a horizontal or substantially horizontal axis during mixing, e.g. without independent stirrers

Definition statement

This place covers:

Illustrative example of subject matter classified in [B28C 5/20](#).

FR 378 966 A



B28C 5/26

rotating about a vertical or steeply inclined axis during the mixing {, e.g. comprising a flat bottomplate rotating about a vertical axis, co-operating with blades or stirrers}

Definition statement

This place covers:

Illustrative example of subject matter classified in [B28C 5/26](#).

US 3 635 449 A

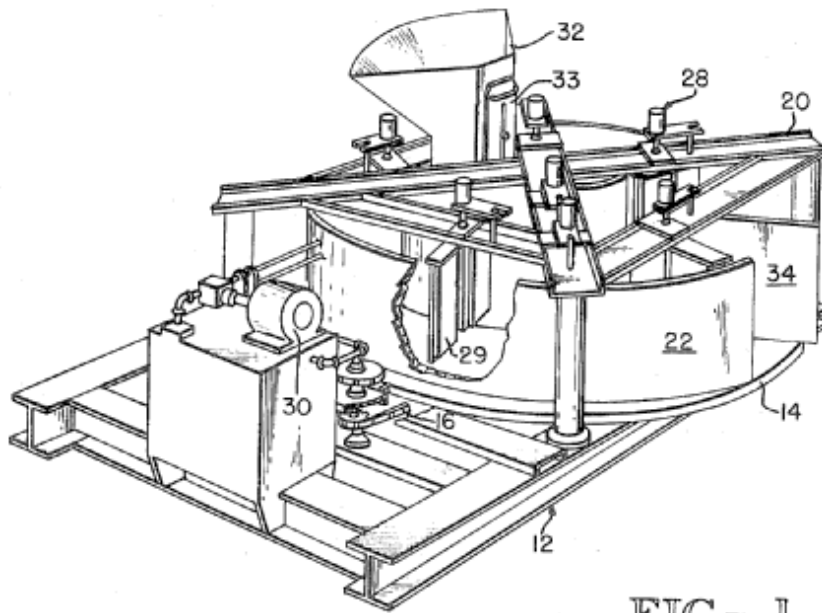


FIG-1

B28C 5/34

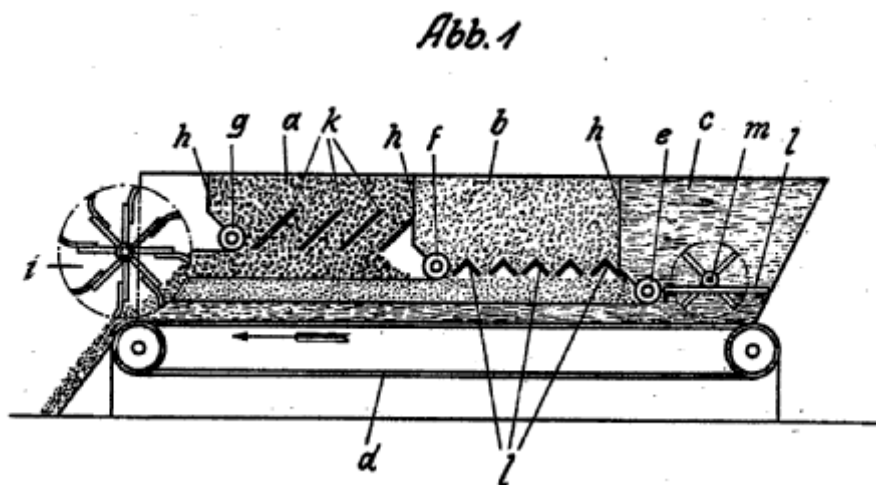
Mixing on or by conveyors {, e.g. by belts or chains provided with mixing elements}

Definition statement

This place covers:

Illustrative example of subject matter classified in [B28C 5/34](#).

DE 477 968 C



B28C 5/38

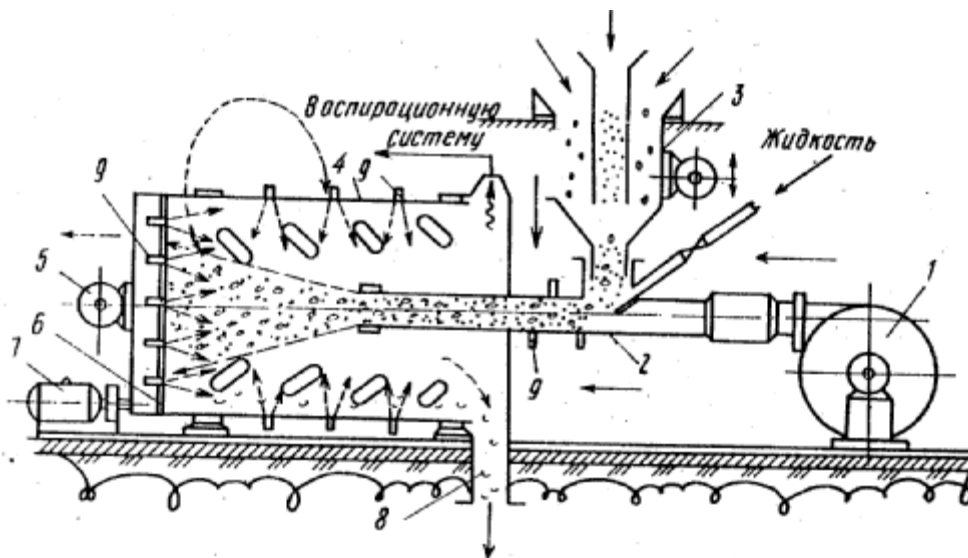
wherein the mixing is effected both by the action of a fluid and by directly-acting driven mechanical means, e.g. stirring means {; Producing cellular concrete}

Definition statement

This place covers:

Illustrative example of subject matter classified in [B28C 5/38](#).

SU 1 691 110 A1

**B28C 5/40**

Mixing specially adapted for preparing mixtures containing fibres

Definition statement

This place covers:

Illustrative example of subject matter classified in [B28C 5/40](#).

WO2009 043 833 A1

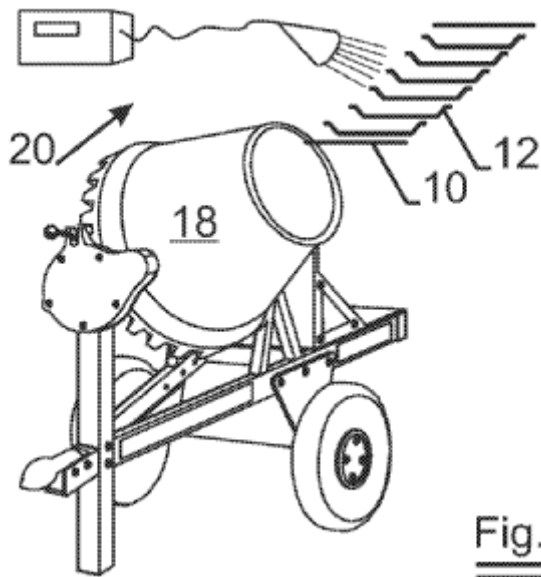


Fig. 3

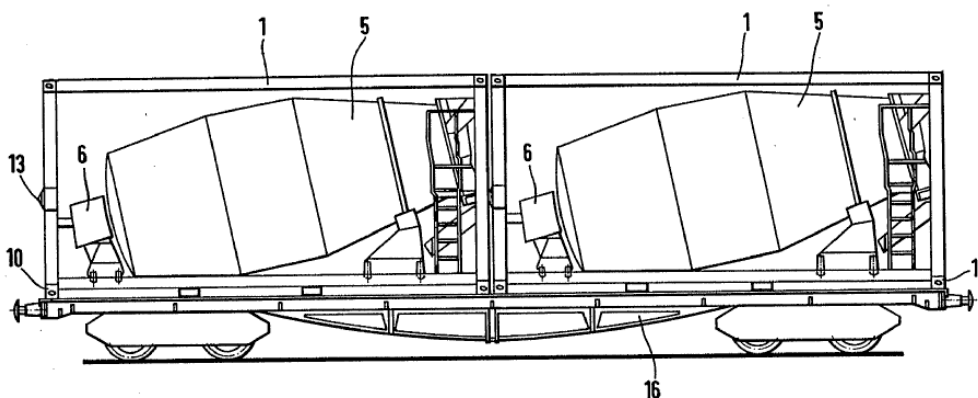
B28C 5/42

Apparatus specially adapted for being mounted on vehicles with provision for mixing during transport (({B28C 5/1893 takes precedence; mounted on a wheelbarrow B28C 5/1215, B28C 5/1818, B28C 5/2018; } vehicle aspect B60P 3/16)

Definition statement

This place covers:

Illustrative example of subject matter classified in [B28C 5/42](#).



Numer.:
Int. Cl. e.:
Offenlegungstag:

DE 44 03 793 A1
B 28 C 5/42
10. August 1995

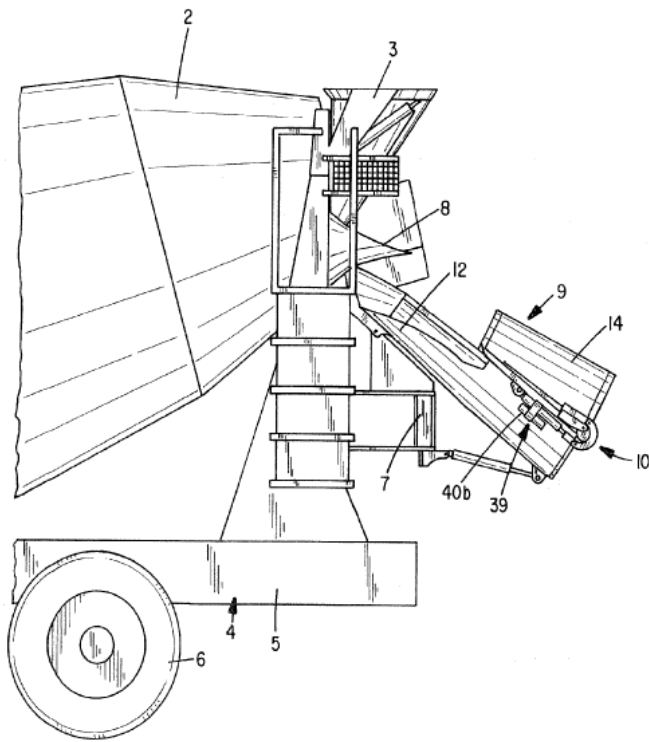
B28C 5/4251

{telescopic or foldable chutes}

Definition statement

This place covers:

Illustrative example of subject matter classified in [B28C 5/4251](#).



B28C 5/44

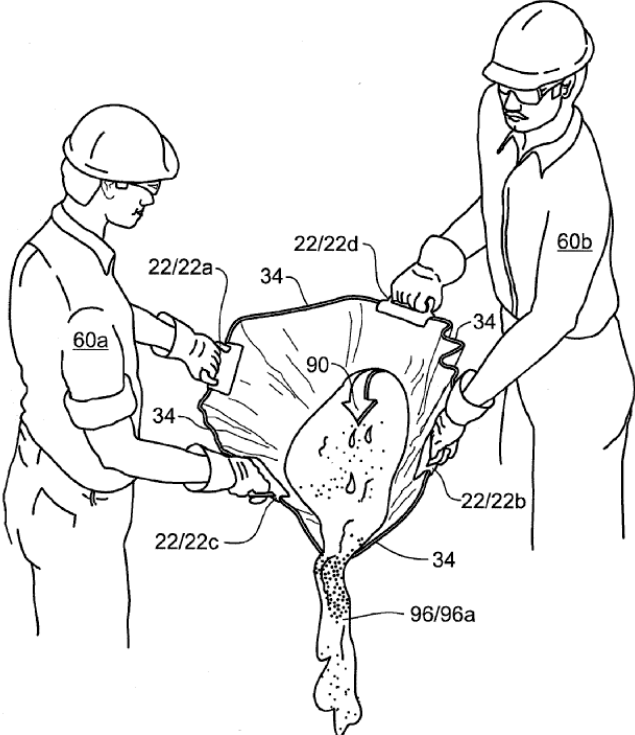
Apparatus specially adapted for drive by muscle power

Definition statement

This place covers:

Illustrative example of subject matter classified in [B28C 5/44](#).

US2007 297 275 A1



B28C 5/46

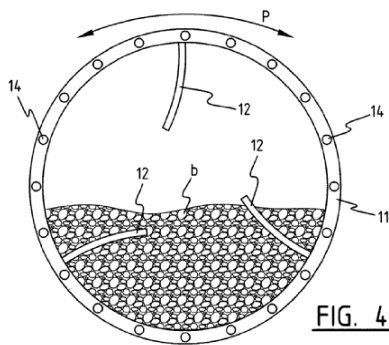
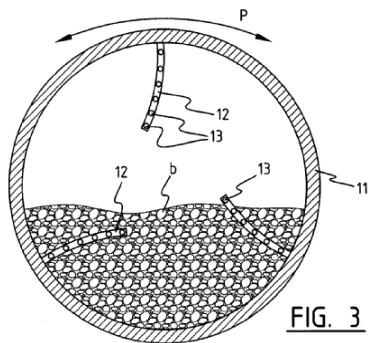
Arrangements for applying super- or sub-atmospheric pressure during mixing;
Arrangements for cooling or heating during mixing {, e.g. by introducing vapour}

Definition statement

This place covers:

Illustrative example of subject matter classified in [B28C 5/46](#).

EP 1 447 192 A1



B28C 5/48

wherein the mixing is effected by vibrations (mixers with vibrating mechanisms in general [B01F 31/00](#))

Definition statement

This place covers:

Illustrative example of subject matter classified in [B28C 5/48](#).

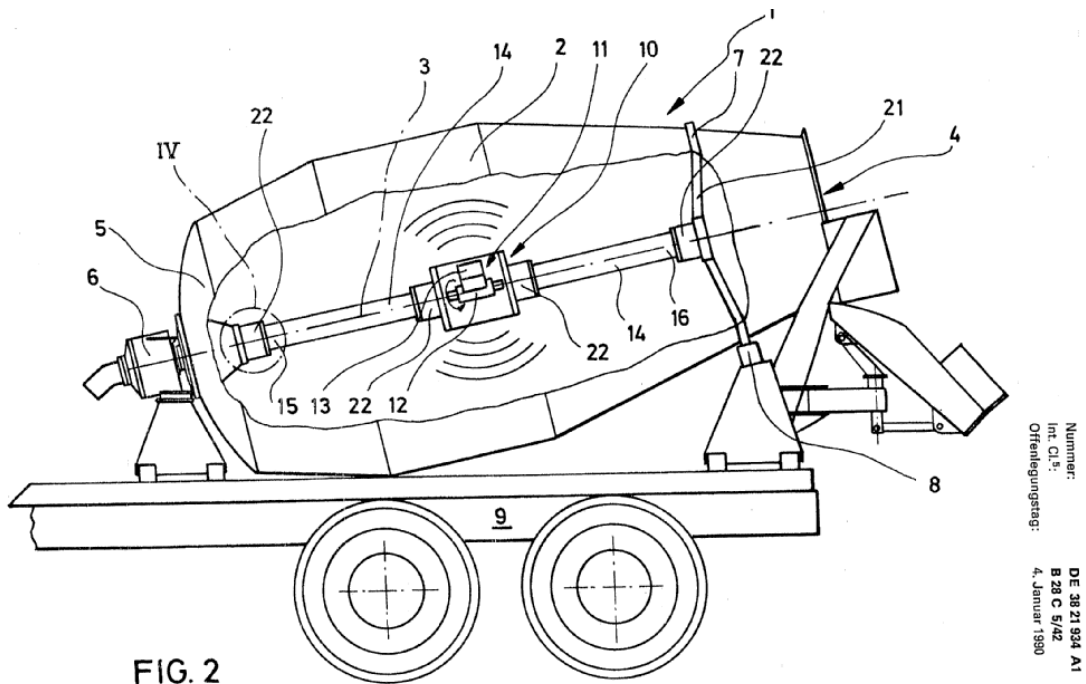


FIG. 2

B28C 7/0046

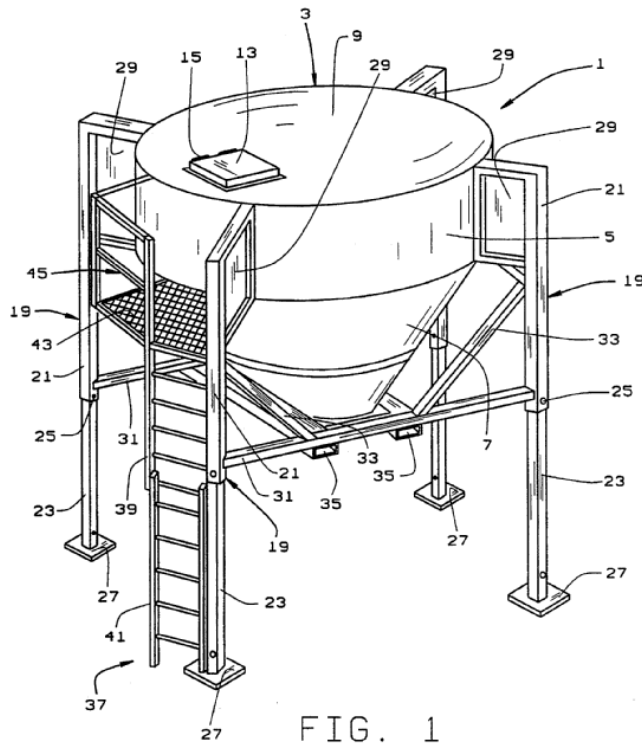
{Storage or weighing apparatus for supplying ingredients ([B28C 7/04](#) takes precedence)}

Definition statement

This place covers:

Illustrative example of subject matter classified in [B28C 7/0046](#).

US 5 339 996 A



References

Informative references

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

Large containers	B65D 88/00
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B28C 7/02

Controlling the operation of the mixing

References

Informative references

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

Controlling; Testing; Measuring	B01F 35/20
Methods, systems and apparatus for controlling in general	G05

B28C 7/04

Supplying or proportioning the ingredients {([B28C 7/022](#) takes precedence; forming a predetermined ratio of the components to be mixed, in general [B01F 35/80](#))}

Special rules of classification

Classification of supplying or proportioning the ingredients is in this subclass.

proportioning is classified under [B28C 7/0404](#).

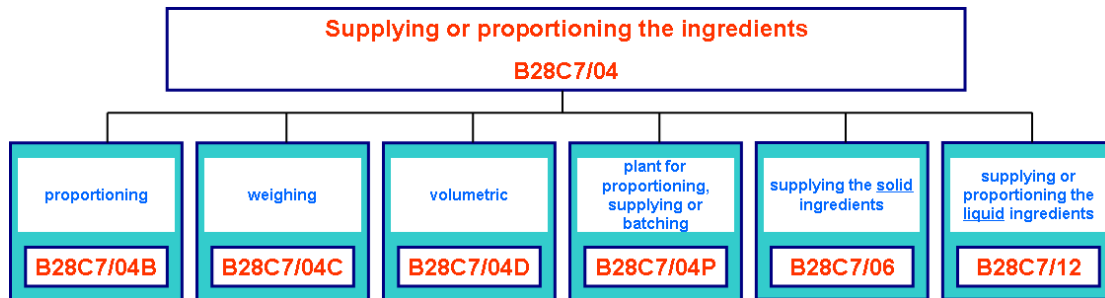
weighing is classified under [B28C 7/0422](#).

volumetric is classified under [B28C 7/0454](#).

plant for proportioning supplying or batching is classified under [B28C 7/0481](#).

supplying the solid ingredients is classified under [B28C 7/06](#).

supplying or proportioning the liquid ingredients is classified under [B28C 7/12](#).



B28C 7/0431

{using a weighing belt or the like}

References

Informative references

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

Conveyor belt weighers	G01G 11/00
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B28C 7/16

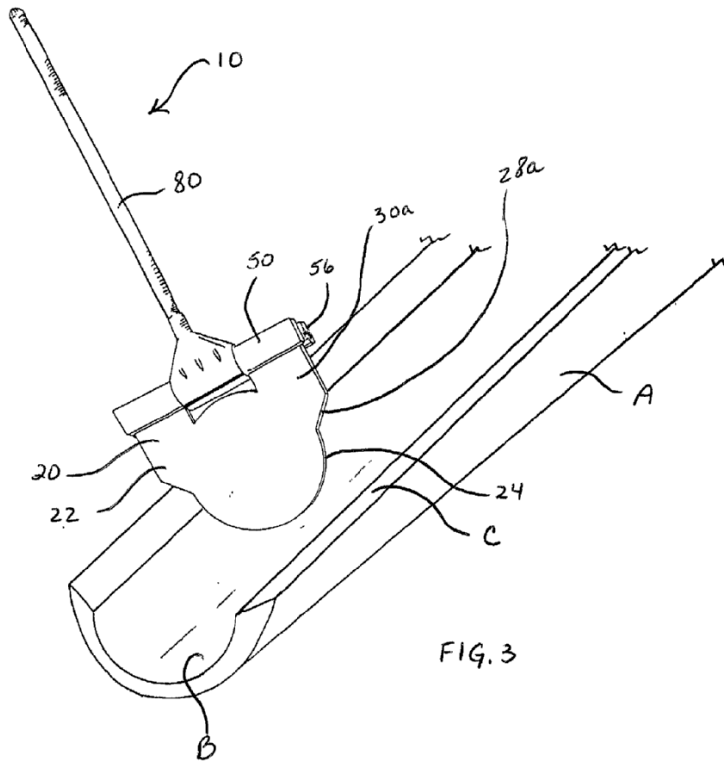
Discharge means {, e.g. with intermediate storage of fresh concrete}

Definition statement

This place covers:

Illustrative example of subject matter classified in [B28C 7/16](#).

US2002 175 525



B28C 9/00

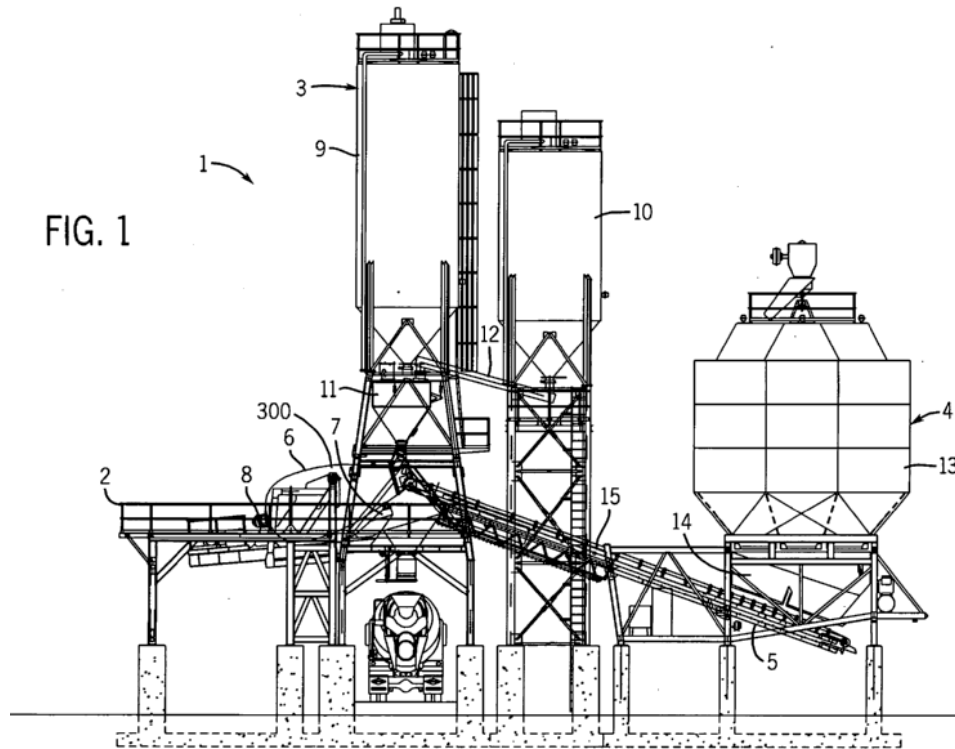
General arrangement or layout of plant {([B28C 7/0061](#), [B28C 7/0481](#) take precedence)}

Definition statement

This place covers:

Illustrative example of subject matter classified in [B28C 9/00](#).

WO2005 113 211 A1



References

Informative references

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

Mixing plant in general	B01F 33/80
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B28C 9/04

the plant being mobile, {e.g. mounted on a carriage or a set of carriages}
 (B28C 5/42, {B28C 9/004, B28C 9/006} take precedence)

Definition statement

This place covers:

Illustrative example of subject matter classified in [B28C 9/04](#).

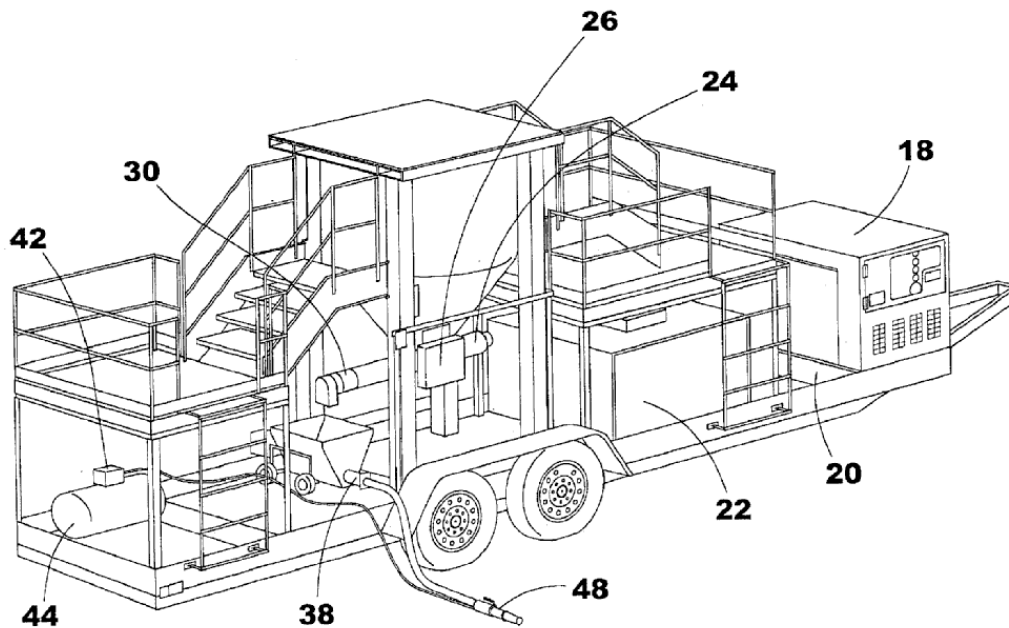


FIG. 7

May 8, 2003 Sheet 4 of 4 US 2003/0085299 A1

References

Informative references

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

Hydraulic cement concrete mixers combined with distributing means specially adapted for road building	E01C 19/47
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