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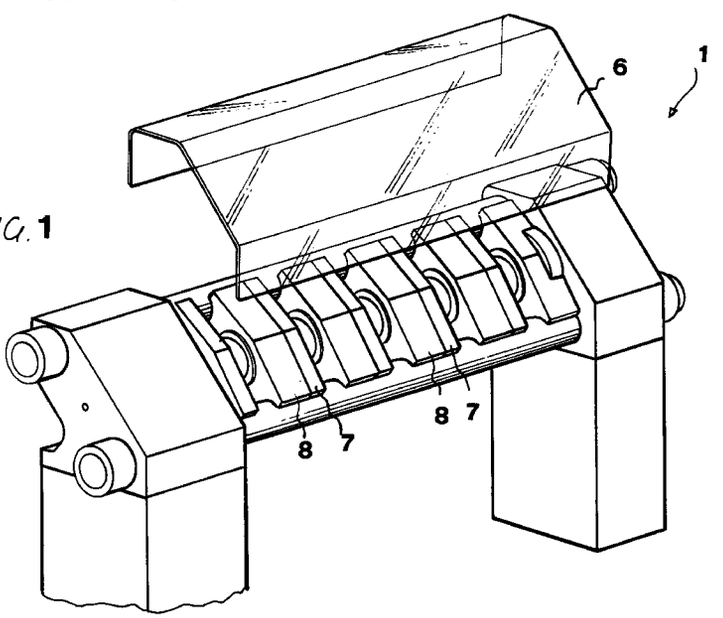
(54) Horizontal press for squeezing essences

(57) The invention relates to a horizontal press for squeezing essences, comprising a plurality of squeezing chambers, each of which comprises a jar and a counter-jar, on each jar being applied two filter supporting plates, each filter supporting plate being made of a high strength stainless steel material, the filter supporting plates being caused to contact one another during the squeezing operation.

FIG. 1



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Description

BACKGROUND OF THE INVENTION

[0001] The present invention relates to a horizontal press for squeezing essences.

[0002] More specifically, the present invention relates to a multiple-chamber horizontal squeezing press which has been specifically designed for squeezing and/or producing essences, both of an alcoholic and of an unalcoholic type.

[0003] Prior multiple chamber horizontal presses for squeezing a cocoa or oil seed mass conventionally comprise a plurality of squeezing chambers for receiving therein the material to be squeezed.

[0004] In particular, said squeezing chambers are made by coupling male elements, the so-called counter-jars, and female elements, the so-called jars.

[0005] On the two sides of a counter-jar two disc elements, of an inter-exchangeable type, and which are conventionally called "filter supporting plates" are arranged in order to support thereon specially designed filters, which are conventionally called filtering clothes.

[0006] The mentioned filtering clothes, during the squeezing operation are subjected to a very high pressure thereby separating the liquid material from the solid material.

[0007] For making food products such as sweetmeats, pies, chocolat-cream cakes and the like, the components thereof are conventionally mixed with a liquid perfumed by essences.

[0008] In order to set the perfumed material, a water, pure alcohol and essence mixture or the like, in a paste form, is usually pressed to provide an alcoholic nature liquid and/or an essence-perfumed liquid.

[0009] In this connection it should be pointed out that prior multiple chamber horizontal presses are not suitable for optimally pressing the mentioned essences, since the material to be pressed has properties and problems very different from those of a cocoa liquor and an oil seed material being usually pressed.

SUMMARY OF THE INVENTION

[0010] Accordingly, the aim of the present invention is to provide a multiple chamber horizontal press which is specifically designed for pressing and/or producing essences.

[0011] Within the scope of the above mentioned aim, a main object of the present invention is to provide such a multiple-chamber horizontal press which is specifically suitable for squeezing alcoholic essences.

[0012] According to one aspect of the present invention, the above mentioned aim and object, as well as yet other objects, which will become more apparent hereinafter, are achieved by a horizontal press for squeezing essences, comprising a plurality of squeezing chambers, each of which comprises a jar and a counter-jar, wherein on each said counter-jar two filter supporting plates are applied, characterized in that each of said filter supporting plates is made of a stainless metal material, and that said filter supporting plates are caused to contact one another during a squeezing operation.

[0013] According to a preferred embodiment of the present invention, the filtering clothes, as assembled on the filter supporting plates, are made of a high strength magnetic stainless steel material, whereas the material forming the filter supporting plates comprises a high strength stainless steel.

[0014] According to a further preferred embodiment of the present invention, the inner liners of the jars comprise a stainless steel material, differently from conventional prior like presses, in which the inner liners of the jars are made of a conventional steel material or are lacking since the squeezing chamber can merely comprise mating jar and counter-jar elements.

[0015] According to another preferred embodiment of the present invention, the press is processed on the outside whereof by an anti-rusting processing, in particular by a nickel plating or teflon coating process.

[0016] According to a further preferred embodiment of the present invention, the jars and counter-jars are protected by an anti-explosion bulkhead.

[0017] Finally, the press is driven by a pneumatic-hydraulic pump, provided with a pressurized air driven pressure multiplier.

[0018] The invention provides the following advantages with respect to prior like presses.

[0019] At first, considering that the filtering clothes directly contacting the product to be pressed are specifically designed for holding the dry and solid material for causing the liquid part to be filtered out, said filtering clothes are made of a magnetic high strength stainless steel.

[0020] This would allow to pick-up, by a magnetic detecting assembly, possible magnetic particles susceptible to contaminate the product.

[0021] Moreover, the plates will operate to transfer the filtered moist or liquid part into the counter-jar to be collected and outward ejected.

[0022] Thus, owing to the nature of the product being processed, the filter supporting plates, as stated, are made of a high strength stainless steel material.

[0023] A further advantage of the present invention is that the filter supporting plates, as assembled on the counter-jars, are specifically designed for contacting one another during the squeezing operation, considering that the products to be pressed hold therein a very high liquid material rate and, accordingly, the residue "panel" can have a very small thickness.

[0024] Thus, an inner liner in a jar made of a stainless steel material will allow the inside of the squeezing chamber to be properly protected from rusting, as a possible consequence of water or moisture contained in the product being pressed.

[0025] Moreover, in order to prevent any rusting phe-

nomena, susceptible to disadvantageously spoil the product being processed, all the surfaces of the press are surface processed in order to provide thereon an anti-rust coating, in particular by a nickel plating or teflon coating method, or any other suitable rust protecting method.

[0026] The jars and counter-jars, moreover, are protected by an anti-explosion bulkhead, to prevent a possible detachment of metal parts which could be caused by an accidental exploding of the alcoholic substances being processed by the press.

[0027] In order to prevent any exploding risks, furthermore, the press is operated or driven by a pneumatic-hydraulic pump, including a pressurized air driven pressure multiplier therein, thereby allowing to omit any electrical motors susceptible to be arranged near possibly exploding substances.

BRIEF DESCRIPTION OF THE DRAWINGS

[0028] Further advantages and characteristics of the present invention will become more apparent hereinafter from the following detailed disclosure, given by way of an illustrative but not limitative example, with reference to the accompanying drawings, where:

Figure 1 is a perspective schematic view of the press for squeezing and/or producing essences according to the present invention;

Figure 2 is an exploded perspective view of the press shown in Figure 1;

Figure 3 is a top plan view of a rear side of a filter supporting plate; and

Figure 4 is a further top plan view of a filter supporting plate including a filtering cloth.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0029] In the following disclosure reference will be made to a preferred embodiment of the present invention which has been illustrated as a not limitative example of several possible variations of the invention.

[0030] Figure 1 shows a horizontal press according to the invention, which has been specifically designed for pressing essences, and has been generally indicated by the reference number 1.

[0031] The press 1 of the type comprising a plurality of squeezing chambers, each of which includes a jar 8 and a counter-jar 7.

[0032] On each said counter-jar 7, two filter supporting plates 2 for assembling thereon filtering clothes 4 have been arranged, the rear side 3 of each filter supporting plate 2 being provided with a plurality of throughgoing holes 5.

[0033] Each said filter supporting plate 2 is made of a metal stainless material, in particular a high strength stainless steel material.

[0034] Moreover, the filtering clothes 4, assembled on said filter supporting plates 2 are also made of a high strength magnetic stainless steel material.

[0035] Finally, the inner liners 9 arranged inside the jars 8 are also made of stainless steel.

[0036] The press 1 is processed on the outside surfaces thereof by any suitable anti-rusting method, in particular by a nickel plating or teflon coating method.

[0037] As shown in Figure 1, the jars 8 and counter-jars 7 are protected by an anti-exploding bulkhead 6.

[0038] Moreover, the press 1 is driven by a pneumatic-hydraulic pump, including a pressurized air driven pressure multiplier.

[0039] In order to better understand the operation of the press 1, it should be pointed out that the filter supporting plates 2 have been specifically designed to contact one another during the squeezing operation.

[0040] Since, differently from a squeezing of a cocoa or oil seed mass, the products to be squeezed herein are mainly constituted by materials holding therein a very high rate of liquids, the residue panel provided thereby will have a very small thickness.

[0041] Thus, the filter supporting plates 2, mounted on the counter-jars 7, may contact one another without damaging the press 1.

[0042] The presence of water in the product being squeezed or pressed, will require to form the portions of the inner liners 9 of the jars 8 provided for contacting the product starting from a stainless steel material.

[0043] Moreover, said water would require to surface process the press surfaces by a suitable anti-rusting method.

[0044] As stated, the jars and counter-jars are protected by an anti-exploding bulkhead in order to prevent any possible detachments of metal parts which would be caused by an accidental exploding of alcoholic substances being processed by the press.

[0045] Moreover, in order to prevent any exploding phenomena from occurring, the press, as mentioned, is driven by a pneumatic-hydraulic pump, including a pressurized air driven pressure multiplier, thereby obviating any need of using electric motors near possibly exploding substances.

[0046] From the above disclosure it should be apparent that the invention fully achieves the intended aim and objects.

Claims

1. A horizontal press for squeezing essences, comprising a plurality of squeezing chambers, each of which comprises a jar and a counter-jar, wherein on each said counter-jar are applied two filter supporting plates, characterized in that each of said filter supporting plates comprise a stainless metal mate-

rial, and that said filter supporting plates are so arranged as to contact one another during a squeezing operation.

2. A horizontal press for squeezing essences according to Claim 1, characterized in that the filtering clothes, supported by said filter supporting plates, are made of a magnetic high strength stainless steel material.

3. A horizontal press for squeezing essences according to Claim 1, characterized in that said filter supporting plates are made of a high strength stainless steel material.

4. A horizontal press for squeezing essences according to Claim 1, characterized in that said horizontal press comprises press surfaces which are outside processed by an anti-rusting process.

5. A horizontal press for squeezing essences according to Claim 4, characterized in that said anti-rusting process comprises a nickel plating process.

6. A horizontal press for squeezing essences according to Claim 4, characterized in that said anti-rusting process comprises a teflon coating process.

7. A horizontal press for squeezing essences according to Claim 1, characterized in that said jars and counter-jars are protected by an anti-exploding bulkhead.

8. A horizontal press for squeezing essences according to Claim 1, characterized in that said jars are provided with inner liners made of a stainless steel material.

9. A horizontal press for squeezing essences according to Claim 1, characterized in that said press comprises driving means including a pneumatic-hydraulic pump having pressurized air pressure multiplier means.

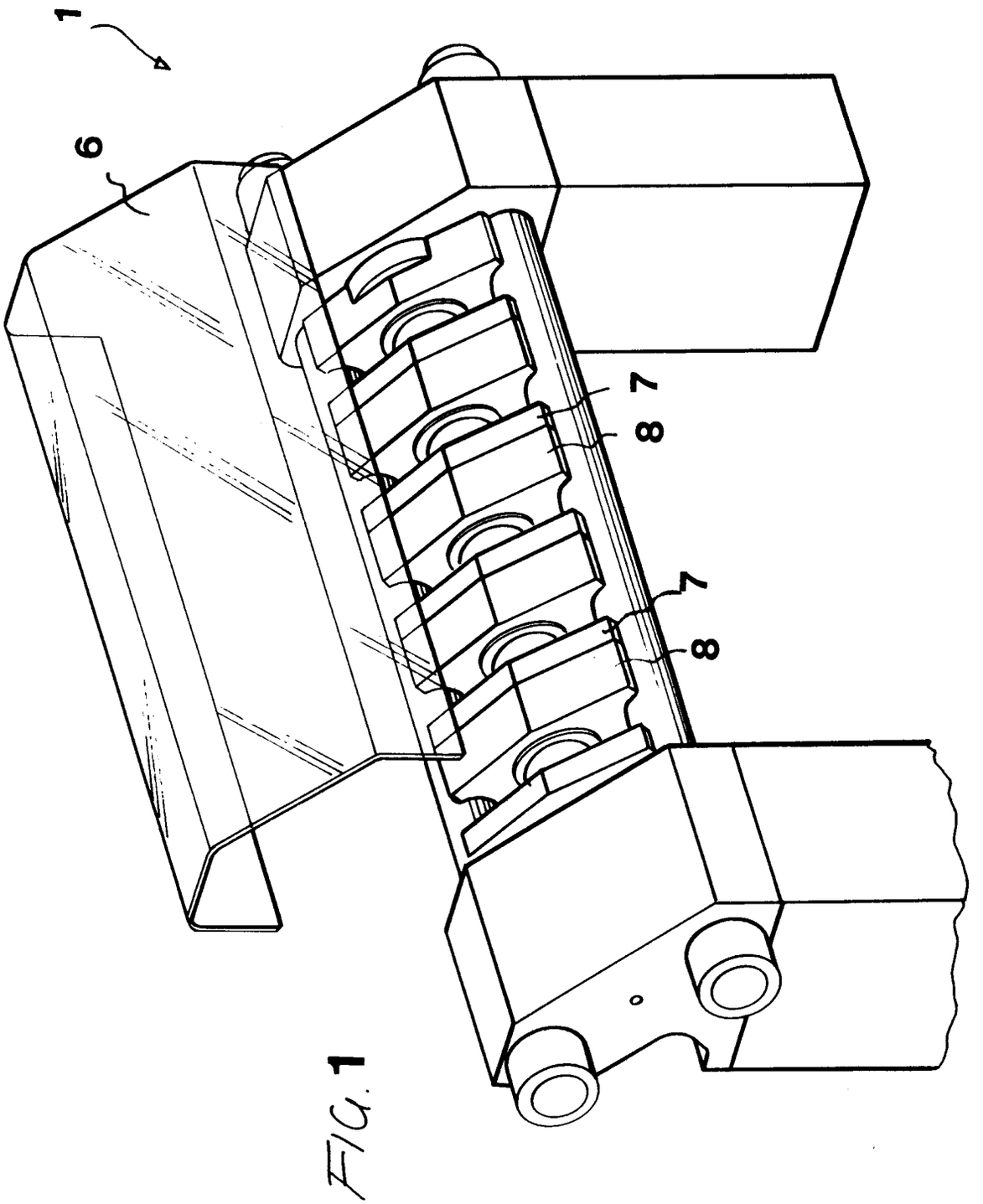

FIG. 1

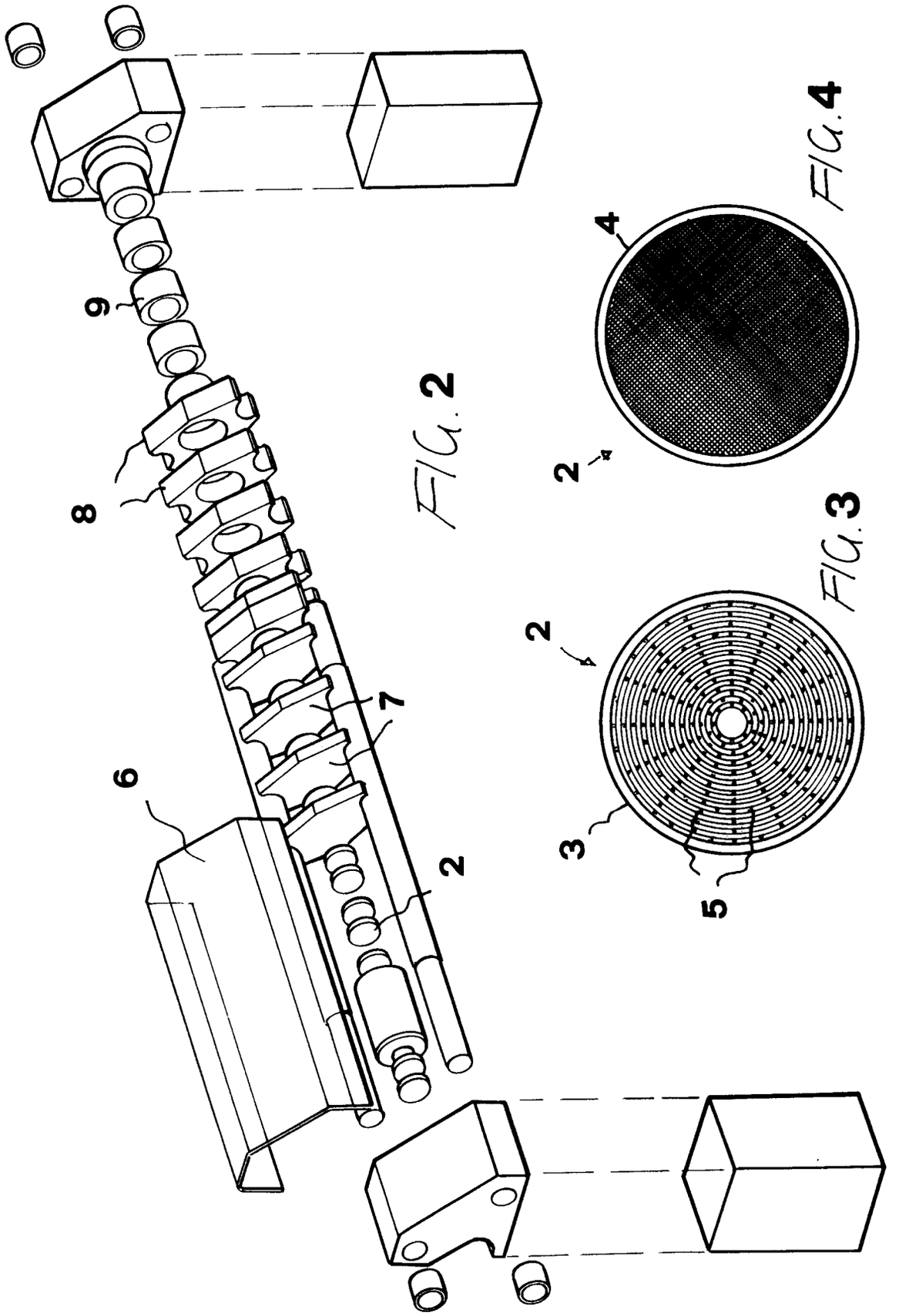

FIG. 2

FIG. 4

FIG. 3