COMMONWEALTH OF AUSTRALIA
Patents Act
APPLICATION FOR A PATENT

I we (a) FRITZ JUSTL

of 5 Starkenburgergrng,
Dietzenbach D-6057
West Germany.

hereby apply for the grant of a Patent for an invention entitled (b)
"HOUSING UNIT"

which is described in the accompanying (c) complete specification.

(Note: The following paragraph applies only to Convention applications)

This application is a Convention application based on the basic application(s) for a patent or similar protection identified by number, country, and filing date as follows:

No. P 25 34 895.2
West GERMANY
5th August, 1975

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Dated (d) 3rd August, 1976

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AUSTRALIA — PATENT DECLARATION FORM
(CONVENTION OR NON-CONVENTION)

Forms 7 and 8
COMMONWEALTH OF AUSTRALIA
Patents Act 1945-1962

DECLARATION IN SUPPORT OF A CONVENTION OR NON-CONVENTION
APPLICATION FOR A PATENT OR PATENT OF ADDITION

In support of the application No. (a) .............................................. I
made by (b) FRITZ JUSTL .................................................................

for a patent/ .............................................. or an invention entitled (c) .."HOUSING UNIT".

1. (a) .............................................. (b) FRITZ JUSTL .................................................................
of (c) 5 Starkenburger Hrt, Dietzenbach D-6057, West Germany
do solemnly and sincerely declare as follows:—

1. (f) I am/XXX the applicant(s) for the patent/patent of addition.

2. The basic application (s) as defined by Section 141 of the Act was/were made in the following country or countries on the following date (s) by the following applicant(s) namely.—

   (i) .............................................. (j) ..............................................
   on ..............................................
   by ..............................................

3. (l) I am/we are the actual inventor(s) of the Invention.

4. The basic application (s) referred to in paragraph 2 of this Declaration was/were the first application (s) made in a Convention country in respect of the invention the subject of the application.

Declared at Langen ..............................................
this 21st day of July 1976.

(r) ..............................................

FRITZ JUSTL

TO THE COMMISSIONER OF PATENTS,
COMMONWEALTH OF AUSTRALIA.
COMMONWEALTH OF AUSTRALIA

Patents Act

COMPLETE SPECIFICATION
(ORIGINAL)

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Actual Inventor(s): Fritz Justi

Address for Service is:

Complete Specification for the invention entitled:
"HOUSING UNIT"

The following statement is a full description of this invention, including the best method of performing it known to applicant(s):

P. DOC 11
The invention relates to a housing unit for animals, particularly for household pets, such as guinea-pigs, dwarf hares, golden hamsters, white mice, etc., and specifically relates to such a habitation with a base tray which supports extensions of its side walls, which provide the limits of an access opening in the top.

In the case of the familiar constructions of such cases, a circular body of wire mesh or lattice work is inserted from above into a base tray, in such a way that the walls of this wire mesh body, lying roughly parallel to the side walls of the base tray, rest against the latter, which provides support for the whole wire mesh member. Such well-known cage constructions however, are not suitable for every type of small domestic animal to be accommodated. For example, in the case of tortoises and dwarf hares, no problems arise in respect of safeguarding the animals against escaping from the cage. With other animals however, such as guinea-pigs, golden hamsters, and particularly white mice and similar creatures, there is a risk of them climbing up the mesh of the cage walls and over its upper edge, and so attaining their freedom. In order to prevent this happening,
cases which are intended for such types of animal, are always provided with a cover, which is similarly constructed of mesh or lattice work supported in a frame. As such animals however, are so-called 'fondling' animals, i.e., animals which their owners, usually children, like to stroke frequently, and which psychologically will at the least submit to such handling, if not experiencing actual pleasure from it, there must be good and speedy accessibility to these animals, where they are kept however, in cases which must be fitted with a mesh cover because of the nature of such domestic pets and their climbing inclination, each form of case construction presents a certain measure of inconvenience, which must always be endured by the owner of such animals in their handling and treatment, because the cover must always first be removed from the mesh cover structure when it is desired to fondle an animal or to remove it from such a recognized form of containment. Experience shows that this cannot be effected without the production of a certain amount of noise, i.e., frequently causes alarm to animals sensitive to their containment in accommodation of this type, which has been shown to have an adverse effect on their confidence and trust.

Invention is based on the problem of providing a habitation for particular species of animals which avoids the drawbacks of conventional forms of construction, and by simple and economical means, so that a single constructional form is universally suited as permanent accommodation both for non-climbing domestic pets as for those capable of, and willing to climb. In addition, not just what the nature of the animal to be housed, not only is there to be permanently open access a contour for fondling the animals, which effectively eliminates inconvenience to the user in alarm to the animals themselves from noise produced, but it is also to be ensured that the most exuberant climbers among the domestic pets cannot leave their habitation.

In accordance with the invention, a housing structure for animals, particularly domestic pets, such as guinea-pigs, chinchillas, mice, hamsters, white mice, etc., or tortoises, is characterized, in that these may supporting extensions to the side walls of the
tray, which surround a handle, opening accessible from above, the extensions of the base tray side walls at the ends remote from the base tray being provided with a solid (non-mesh) flange, which stretches essentially in a direction covering the base tray, and which surrounds the open access aperture.

In this connection, the extensions of the base tray walls may be formed of the usual wire-mesh or lattice members. Even with such constructions, it can be prevented by the invention, effectively and yet by simple and economical means, that even the most enthusiastic of the inhabitants in respect of the climbing facilities can climb over the rim of the overhanging cover flange, should it succeed in climbing to the top of the mesh body structure of the normal type. The invention therefore, provides a most effective obstacle against any further climbing, without impairing in any way the mental of the occupants of the housing structure. In a further practical advanced form of the invention, the complete tray can be constructed as an approximately circular detachable cover section attached to the extensions of the base tray side walls. In this connection, by 'circular' formation, is understood not only a formation with circular or elliptical outer edge contours, but any form of the outer contour of the cover section adapted to the outline of the tubular member forming the extensions to the side walls of the base tray, and which also, and indeed in the majority of cases, can be of polygonal form to correspond with a similar section of the base tray.

In accordance with a further advancement in the invention, an additional important problem — for the solution of which, no provision is made in the usual animal housing structures — is solved not only, but effectively for the first time. It is recognized in science with animal habitations of this type, that it cannot be denied that scraps of food, excrement, or bits of the base tray covering, i.e., the lining straw, are thrown or pushed out through the mesh structure. This disused refuse presents a problem not only in respect of the act insignificant expenditure of labour, and also with regard to the maintenance of cleanliness in the vicinity of the location of such an animal habitation, but accords to a quite considerable extent the principal question.
whether such domestic pets — usually to be accommodated in the house or flat — should, or may be allowed to, be kept at all.

Experience shows that the mothers, usually employed as housewives, are reluctant to undertake the additional work necessitated by the periodical cleaning in the vicinity of such animal cases, and consequently refuse to allow the children to keep these pets.

In accordance with a further, more practical, concept of the invention, the extensions of the base tray sides can form a complete non-mesh circular member. In this connection, it is also avoided — particularly in the case of spacious animal housing structures in accordance with the invention, in the interior of which climbing equipment, etc. is to be installed — for the occupants fulfilling their climbing inclinations on the mesh of the extensions of the base tray side walls — which does not usually conform with their natural environment — instead of making use of the climbing equipment specially adapted to their species.

It has furthermore been shown that it is of particular advantage for the circular cover section and/or the circular member formed by the extensions of the base tray side walls, to be formed as a plastic moulding, although other materials could be used within the scope of the invention, such as glass or metal.

According to another development of the invention, the circular cover section and the member formed by the extensions of the base tray side walls can be formed in one piece as a hood-shaped moulding, preferably of plastic. As a result, a considerable advantage can be gained in respect of production costs, together with the possibilities for the external surface of the area formed by the base tray side extensions on this hood-shaped moulding, being elaborated in any desired aesthetically tasteful manner.

A form of construction for the invention which has proved to be of particular advantage however, is that in which the flange of the base tray side wall extensions, or the circular cover section formed by them, or the annular member formed by the extensions of the base tray side walls, or the hood-shaped moulding, are made of transparent material.
The invention provides for the facility of the extensions of the base tray sides being capable of being inserted from above and parallel to the side walls, and retained in the operating position by the latter. This has the advantage, that by the most simple and economical of methods, even existing animal housing structures of conventional type can be re-assembled in such a form that the problems which could not formerly be overcome without the provisions of the invention, are now satisfactorily solved, as previously described at the outset.

In accordance with an alternative solution provided by the invention, the facility can also be given for the base tray side wall extensions to be superimposed on the side walls, when a detachable form of mounting is naturally to be preferred. In a further improvement, the extensions of the base tray side walls, on their side nearest to the base tray, are provided with securing flanges, which extend in the opposite direction to the flange on the end remote from the base tray, and which are attached to the opposing flanges provided at the top edge of the base tray side walls. The form of construction in accordance with this preferential concept of the invention, has the advantage that the extensions of the base tray side walls do not come into contact with the bedding straw provided for the occupants, and therefore, in the process of cleaning out the housing structure as per the invention, by the simplest of means, the risk is safely, easily and effectively eliminated, of a certain amount of undesired dispersion of the contents of the base tray taking place from the separation of the side wall extensions from the base tray itself, causing contamination of the vicinity of the habitation. This solution in accordance with the further concept of the invention submitted, accordingly complements the characteristics of the invention in the combined prevention of an undesired escape of the occupants of the animal habitation, and the facility for immediate and direct seizure of the domestic pets therein by their owner. Furthermore, the most effective maintenance of cleanliness in the vicinity of the housing location is attained when it is necessary to removecrement etc. from the base tray. In this case, in accordance with the invention, it is no longer necessary to take care on
removal of the cage section forming the extension of the base tray side walls, that no part of the contents of the base tray or the housing structure is dispersed in its vicinity, it merely suffices for the complete complex of the cage or housing section located on the top of the base tray to be detached, without having to undertake any action in respect of the contents of the base tray, including the sets possibly still in the tray.

In accordance with a not so obvious improvement of the invention, the attachment flanges of the annular member or the hood-shaped covering, and the counter-flanges on the base tray side walls, can in such case be formed as continuous circular flanges, which, among other factors, also results in a considerable degree of production simplification.

In accordance with a further development, the companion flanges on the base tray side walls, at the ends remote from the base tray, may be provided with extensions in a direction approximately parallel to the base tray side walls, so that these side walls assume a double-walled formation. Experience shows that in many practical cases, it is advantageous for the side walls of the base tray to be complicated, particularly for reasons of thermal insulation. Due to the fact that the base tray, which is occupied by the animals in question for most of the time, is of double-walled construction, the invention, in accordance with its basic requirements, provides for the special facility of being able to accommodate animal housing in practice at any desired location, without having to pay particular attention to the thermal conditions. Solely due to the fact that the sides of the base tray are of double-walled construction, in accordance with the not so obvious further development of the invention as above described, thermal insulation of conventional housing structures adapted to the species of animal, has up to the present not been possible, and this has been achieved by the most simple and economical means. In an advantageous constructional form of this preferential concept of the invention, the extensions of the companion flanges can be provided with base support flanges, which extend from the free ends of the downward directed extensions in the direction of the base tray companion flanges. In this way, a particularly high degree of stability of the housing structure.
in accordance with the invention, is assured. In a further development of this preferred constructional example in accordance with the invention concept, the height of the extensions of the companion flanges can be greater than the height of the base tray side walls. Consequently, in addition to the thermal insulation provided by the layer of air contained in the space between the double walls of the base tray, a further practical form of thermal insulation against the foundation of the location, is provided at no cost, and which reduces thermal insulation properties of at least the same value, in with the optimum of economical application.

Provision can be made in a further improved development of the invention, for the attachment of the circular member or the hood-shaped moulding to the base tray section, being effected by the securing flanges of the circular member or hood-shaped moulding, and the companion flanges of the base tray side walls, each being provided with lined-up holes, into which securing pins can be inserted.

The invention is hereafter described in more detail with the aid of a number of constructional examples represented by drawings. These show:

**Fig. 1a**  Diagrammatic representation of one constructional form of the invention

**Fig. 1b**  Similar representation, also shown in half-section of another form of construction for the invention

**Fig. 2**  Similar representation of a further preferred constructional form.
the base tray 1 is shown in Figs. 1a and 1b with side walls 2 extending vertically from its base. In this connection, the base tray can be of any desired plan form, i.e., round, oval or polygonal, and particularly rectangular or square. In Fig. 1 is shown how an effective animal housing structure can be fashioned by the simplest of means within the purport of the invention, when a wire-mesh or lattice-work member 4 is provided, which is bent in conformity with the plan outline of the base tray 1. This ring member 4 is then inserted from above into the receiving recess in the base tray 1 in the usual manner, so that its side walls contact, and are supported by, the internal surface of the side walls 2 of the base tray 1, and the complete ring member 4 is retained in its operating position. In this way, the sides of the ring member form upward extensions of the side walls 2 of the base tray 1. Finally, a flat ring 5 of non-mesh (solid) material, its peripheral outline corresponding approximately to the plan outline of the base tray 1, and with an adequate width in the direction of the interior of the base tray, is placed on the open top of the ring member 4 of wire-mesh or lattice-work material, so as to prevent the domestic pets in the enclosed space so formed, from attaining their freedom outside, the barrier presented by the practically smooth continuous ring 5 being effective in this purpose, even where the animals possess particularly good climbing abilities. In place of a cover section 5, formed by this circular attached disc, which encompasses in its centre the access opening 21, provision can also be made for each of the side walls 4 of the mesh body being bent inwards at right angles to form a flange, which however, from experience must be provided with a plain, i.e., non-mesh surface, to prevent suspended climbing motions from the animals. In other respects, any desired material, such as sheet metal, plastic, glass, or similar, may be used for these flanges, which represent the side walls 4 of the mesh member forming extensions of the base tray side walls 2. Particularly in the case of a construction in glass, reference should normally be given to the individual side walls which extend upwards, and the flange extending towards the centre of the housing structure, being combined in a single one-piece construction. This circular cover section 5 can then be firmly attached to the mesh body, or made detachable, as desired.
Fig. 1b shows a further improved constructional form for the invention, in which the extensions 6 of the side walls 2 of the base tray 1 are not constructed of mesh material, but are of solid form. In this way, dispersion of quantities of the bedding straw, scraps of food, excrement, etc. by the animals, or even by the owners themselves, in the neighbourhood of the housing structure, is prevented. This form of construction for the invention as shown in Fig. 1b, also illustrates other special features of the invention. Whilst the side walls of plain material can be inserted in the interior of the base tray in place of the side sections 4 of mesh material or similar, forming extensions of the side walls 2 of the base tray 1, as depicted in Fig. 1a, the form of construction shown in Fig. 1b illustrates a further improvement in the invention towards the solving of the particular problem concerning the maintenance of order in the vicinity of the animal housing in conformity with the invention.

Due to the fact that the side sections of plain (non-mesh) material are not inserted into the interior of the base tray (as depicted in Fig. 1a), but placed on top of the base tray side walls, (as shown in Fig. 1b), any existing possibility not completely preventable, that the animal owner will pull out part of the contents of the base tray when removing the side extensions of the base tray side walls, is eliminated. Furthermore, in this way it is assured that the side sections, which extend the base tray side walls 2 upwards, in such cases, remain unsullied for a considerable length of time, resulting in a not inconsiderable saving of work, which would normally be required in the cleaning of same.

In other respects, the side section 6 is also shown in Fig. 1b as being combined as a ring member, the outline of which conforms with that of the plan of the base tray 1. The ring member 6 is provided with a circular flange 9 at the base tray end, which extends outwards at right-angles from the ring member and surrounds it, by means of which, the ring member 6 is placed in contact with a corresponding companion flange 3 in the base tray side walls 2, to which it can be secured. For simple attachment, the circular flange 9 of the ring member 6 and the companion flange 3 of the base tray side walls 2, are provided with a number of line-up holes, which are indicated in Fig. 1 only by their centre lines, and are designated as 10.
by means of these aligned holes 10, a simple but most effective method of attachment for the ring member 6 to the base tray 1, is for a plain pin 8 to be inserted in the holes. A screwed fitting may also be used should this be considered necessary.

In Fig. 1b, glass is indicated as the material for the ring member 6 and the circular cover 7, which encompasses the access opening 21. Other suitable materials may however be used, and this should preferably be a transparent material, so that on the one hand, observation of the occupants of the housing structure is not adversely affected, and on the other hand, an unnecessary reduction of their light is not brought about. Plastic can be recommended as such a material, particularly on the grounds of weight-saving and also for technical production reasons, especially where the ring member 6 and the circular cover 7 are formed in one piece, as previously described as an appropriate development for the invention.

Such a one-piece form of construction is depicted in the example shown in Fig. 2. Here, the hood cover 22 on the base tray 11, forming an extension of the base tray side walls 12 as the side section 14, and the circular cover 7 and cover flange combined, are formed in one piece as a moulding of plastic material.

This hood cover 22 is also provided at the bottom, or base tray side, with flanges, which should preferably be combined to form one circumferential flange 15. The base tray 11 itself, at the upper edge of its side walls 12, is also of similar construction in the access area, as described in reference to Fig. 1b. In this case too, the base tray side walls 12 are extended to form a circumferential flange 13, which is complementary to the flange 19 of the hood cover 22. The flange 15 of the hood cover 22 and the counter flange 13 of the base tray side walls 12, are again provided with a row of holes in mutual alignment 20, which again, are only indicated by their centre lines, and through which suitable pins 16 can be inserted to secure the hood cover 22 to the base tray 11, if required, may be replaced by, e.g., screwed bolts with nuts.

An important difference in the constructional example shown in Fig. 2 compared with that depicted in Fig. 1b, lies in the fact that
The sides of the base tray are of double-walled construction. To provide for this, the outer zone of the companion flanges 13 of the base tray sides 12 is again bent uniformly downwards, so that a number of wall sections 15, approximately parallel to the base tray side walls 12, are produced, which can also be formed for preference as a complete circumscribing member. The result is that both the thermal insulation of the base tray is improved, and also its stability. A still further improvement in this respect provides a solution to a problem forming the basis of the invention, which is directed towards both improving the stability of the complete housing structure in accordance with the invention, and also to provide for exceptional noise insulation. This is effected in the invention by making the height b of the circumferential member 15 (the outer wall of the base tray sides) greater than the height a of the actual base tray side walls 12. Consequently, the bottom of the tray 11 is maintained at a distance from the location foundation, with adequate rigidity and bearing strength, so that vibration of the foundation, which can be caused for example by the trampling and stamping of children's feet, can practically be prevented from being transmitted to the base tray 11 itself, because surprisingly, due to the angular formation of the external base tray side wall circumferential member 15 and the ring flange 13, the vibration is damped to such an extent that it no longer causes inconvenience to the well-being of the domestic pets accommodated in the housing structure in accordance with the invention.

This circumferential form of construction in accordance with Fig. 2 is, as shown, carried out completely in plastic, whereby both the cover section 22 and the base tray section are formed from plastic mouldings. However, other suitable materials may also be employed for this constructional example, just the same as for other such examples in accordance with the invention; the use of plastic however, in the large majority of cases, may produce the most economical solution. In other respects, the invention is not restricted to the examples of construction which have been shown, there are on the contrary, very many possibilities open to the specialist to adapt the invention to the relevant constructional factors or the particular requirements of the individual case, by other combinations of its characteristics, or exchange with equivalent elements, without departing from the framework of the invention.
CLAIMS
The claims defining the invention are as follows:

1. An animal housing unit, particularly for domestic pets, such as guinea-pigs, dwarf hares, golden hamsters, white mice, or similar, with a base tray supporting extensions of its side walls, which encompass an access opening in the top, characterized in that the extensions of the base tray side walls are formed with plain (non-mesh) flanges at their end remote from the base tray, which extend essentially in a direction over the base tray and which encompass the open access aperture at the top.

2. An animal housing unit in accordance with Claim 1, characterized in that the complete flanges are formed as an annular cover section which is secured to, and detachable from, the extensions of the base tray side walls.

3. An animal housing unit in accordance with Claim 1 or 2, characterized in that the extensions of the base tray side walls are formed as a single plain (non-mesh) member.

4. An animal housing unit in accordance with Claim 2 or 3, characterized in that the flanges and/or the extensions of the base tray side walls, are constructed as plastic mouldings.
5. An animal housing unit in accordance with claim 2, characterized in that the flanges and the extensions of the base tray side walls are formed in one piece as a hood-shaped moulding, preferably in plastic.

6. An animal housing unit in accordance with any one of the preceding claims, characterized in that the flanges of the extensions of the base tray side walls, or the annular cover section or the member formed by the extensions of the base tray side walls, or the hood-shaped moulding, as the case may be, are constructed of transparent material.

7. An animal housing unit in accordance with any one of the preceding claims, characterized in that the extensions of the base tray side walls can be inserted from above into the base tray parallel to the side walls, and retained in the operating position by the base tray side walls.

8. An animal housing unit in accordance with any one of claims 1 to 6, characterized in that the extensions of the base tray side walls can be superimposed on the latter, and secured to same.
9. An animal housing in accordance with Claim 8, characterized in that the extensions of the base tray side walls are provided with securing flanges on the end nearest to the base tray, extending in the opposite direction to their flanges on the end remote from the base tray, which can be secured to companion flanges provided on the adjoining upper edges of the base tray side walls.

10. An animal housing unit in accordance with Claim 9 characterized in that the securing flanges are each constructed as continuous encircling flanges.

11. An animal housing unit in accordance with Claim 9 or 10, characterized in that the companion flanges of the base tray side walls, at their ends remote from the base tray, are provided with extensions running in a direction approximately parallel to the base tray side walls from which the base tray sides are of double-walled construction.

12. An animal housing unit in accordance with Claim 11, characterized in that the extensions of the companion flanges at their downward directed open ends, are provided with support flanges, extending in the direction of the companion flanges and at an appropriate distance from the base tray.
14. An animal housing unit in accordance with Claim 11 or 12, characterized in that the height of the extensions of the companion flanges is greater than the height of the base tray side walls.

14. An animal housing unit in accordance with any one of the Claims 9 to 13, characterized in that the attachment of the base tray side of the extensions of the base tray side walls is effected by their attachment flanges, and the companion flanges of the base tray side walls, each being provided with aligned through holes in which securing pins can be inserted.

15. An animal housing unit substantially as hereinbefore described with reference to and as illustrated in Fig. 1a of the accompanying drawings.

16. An animal housing unit substantially as hereinbefore described with reference to and as illustrated in Fig. 1b of the accompanying drawings.

17. An animal housing unit substantially as hereinbefore described with reference to and as illustrated in Fig. 2 of the accompanying drawings.

Dated: 3rd August, 1976

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