The present invention relates to a retailed product shelf arrangement for displaying a plurality of retail products in a retail environment. The invention includes a first product support platform, a second product support platform which is wholly supported by and positioned beneath the first product support platform. The second product support platform is moveable between a stowed and extended configuration such that one or more products can be temporarily supported on the second product support platform when in the extended configuration. A support arrangement is provided and comprises at least one guide secured thereto for supporting and guiding the second product support platform and the guide comprises an interruption or latch and the second platform comprises the other of an interruption or latch, the interruption arranged to receive the latch in the stowed configuration. The latch is arranged to cooperate with the interruption to prevent linear withdrawal of the second product support platform from the stowed configuration.
Retail Product Shelf Arrangement

The present invention relates to a retail product shelf arrangement for displaying a plurality of retail products in a retail environment.

Retail establishments typically have two basic methods of displaying products. The first is by hanging the product on a display arm or hook, and the second is by placing the product on a shelf. Shelves are most commonly fixed horizontally (flat) or angled downwardly (sloping). The present invention is concerned with a retail product shelf arrangement.

Shelves are regularly restocked and products reorganised. As products are taken from the shelf by customers, a store assistant restocks the shelf but at the same time reorganises the products whereby items with a longer shelf life or sell by date are positioned at the back of the shelf with the shorter life or sell by date products positioned to the front. This is known as stock rotation, code life rotation, or date code rotation. It is usual that a plurality of shelves is positioned vertically above each other in order to maximise the amount of products that can be stored and displayed for purchase. This means that product is displayed at different heights relative to the store assistant and also means that there is limited space between the top of the product and the shelf above. When restocking or reorganising therefore the store assistant typically brings new stock on a trolley and repositions existing stock on the shelf and adds new stock as appropriate. This involves significant reorganising and moving around of the products on the shelf. For example, if the product is provided in jars then it is likely that the jars adjacent the forward edge of the shelf have been purchased. As such there is space left at or adjacent the forward edge so that the store assistant must then reposition the existing product from the back of the shelf to the front of the shelf and replenish the shelf with new products at the back of the shelf. This is time consuming and can lead to accidents whereby products are knocked over either on the shelf itself or onto the surrounding floor.

A solution to this problem is the provision of a shelf that slides forward toward the store assistant meaning that access is provided to the product at the rear of the shelf from above. This improves the ability for a store assistant to replenish the products at the back of a
shelf whilst moving forwards the products that were at the back of the shelf to the front of
the shelf. Whilst this does improve the capability for stock rotation, the shelves themselves
are expensive to produce and require high strength to enable the shelf in the extended
configuration to support a full shelf of products. Furthermore, whilst this solution is
effective for shelves at a low level relative to the store assistant, shelves above chest height
can still be difficult to replenish with proper stock rotation as the store assistant cannot
look downwards onto the product on the shelf.

The present invention provides a significantly improved retail product shelf arrangement.

According to the present invention, there is a retail product shelf arrangement for
displaying a plurality of products in a retail environment comprising:

a first product support platform;

a second product support platform wholly supported by and positioned beneath the
first product support platform and being moveable between a stowed configuration
and an extended configuration, such that one or more products can be temporarily
supported on the second product support platform when in the extended
configuration;

wherein the first platform comprises a support arrangement comprising at least one
guide secured thereto for supporting and guiding the second product support
platform;

wherein the guide comprises an interruption or latch and the second platform
comprises the other of an interruption or latch, the interruption arranged to receive
the latch in the stowed configuration, the latch arranged to cooperate with the

interruption to prevent linear withdrawal of the second support platform from the
stowed configuration.

The present invention is extremely beneficial as it enables stock rotation to be achieved
faster, more reliably and with less chance of a store assistant causing damage to the
product. The requirement for complex and expensive bearings is removed as the second
product support platform does not require movement between the stowed and extended
configuration whilst supporting products. Instead, the second product support platform can
be drawn forward into the extended configuration. This configuration provides temporary
additional working space upon which products can be temporarily supported while the
store assistant organises the stock rotation.

A further benefit of the present invention is that the retail product shelf arrangement is a
standalone product. This means that the retail product shelf arrangement can be relocated
and repositioned quickly in a retail environment due to changes in store layout or changes
in product to be displayed. It is beneficial that the second product support platform is
therefore retained by and is preferably at least partially within the first product support
platform.

It will be appreciated that the second product support platform can only support products
thereon when in the extended configuration.

It will be appreciated that the second product support platform is directly beneath the first
product support platform. Preferably the support surface of the second product support
platform is adjacent the underside of the first product support platform in the stowed
configuration. This ensures that the shelf arrangement is compact. It will be appreciated
that the support surface of the second product support surface beneficially has no
upstanding edges or the like to ensure close proximity to the underside of the first product
support platform.

The support arrangement includes at least one guide for guiding a portion, and preferably a
side edge of the second product support platform. The at least one guide enables relative
movement between the second product support platform and the first product support
platform. The at least one guide is beneficially inset from a side edge of the first product
support platform. A first and second guide are preferably provided. Each guide preferably
guides opposing side edges of the second product support platform.

The guide and second product support platform are beneficially arranged to cooperate to
prevent linear withdrawal of the second product support platform from the stowed
configuration. This means that customers are unlikely to intentionally or unintentionally
withdraw the second product support platform. It is beneficial that in order to withdraw the second product support platform the second product support platform should be lifted and then subsequently withdrawn. The at least one guide preferably includes the interruption therein arranged to receive a corresponding latch provided in the second product support platform such that engagement between the latch and the interruption prevents linear withdrawal of the second product support platform from the stowed configuration. Although the interruption being provided in the second product support platform and latch in the least one guide is envisaged, this increases manufacturing complexity.

When the latch is slotted into the interruption, withdrawal is prevented unless the second product support platform is initially lifted upwardly and forwardly to disengage the latch. Further linear withdrawal can then be achieved to withdraw the second product support platform. The interruption preferably comprises a notch or an aperture. The latch is beneficially tapered to enable receipt of the latch into the interruption more readily during movement of the second product support platform from the extended to the stowed configuration.

The latch preferably comprises a leading edge comprising a shoulder arranged to abut against the interruption.

The first and second product support platforms preferably have support surfaces which are substantially planar. The first and second product support platforms are beneficially in planes that are substantially parallel. The first and second product support platforms are beneficially substantially horizontal when in use, however for some applications the first and second product support platforms may slope forwardly when in use. The second product support platform is beneficially stowed beneath the first product support platform. As such, in the stowed configuration the second product support platform is unusable as a support surface. The second product support platform is beneficially slidable between the stowed and extended configuration.
In use with the second product support platform extended, a store assistant can draw the existing product forward and arrange it on the temporary platform which has been provided while new product is loaded to the rear of the first product support platform. When the new product is in place, the older product can be returned onto the first product support platform, but now in front of the new product. As such, when not in use, the second product support platform is returned to the stowed configuration which is effectively hidden under and/or within the first product support platform and is not then visible to customers.

The first and second product support platforms beneficially comprise a leading edge defining a width such that in the extended configuration the depth of the second product support platform is defined between a leading edge of the first product support platform and the leading edge of the second product support platform.

The second product support platform preferably comprises a leading edge configured to accommodate a display arrangement for displaying information relating to a product. Even more beneficially, the leading edge of the second product support platform comprises an upstanding extension for accommodating a display arrangement. A display arrangement may therefore be positioned substantially parallel, and/or substantially contiguous with the leading edge of the first product support platform. The upstanding extension is preferably aligned with the leading edge of the first product support platform, and preferably overlaps at least part of the leading edge of the first product support platform. Effectively, therefore, it appears that the leading edge of the second product support platform is the leading edge of the first product support platform to a customer. This aids in the clean lines of the retail product shelf arrangement. Beneficially, a display arrangement is secured to the upstanding extension, however, it will be appreciated that a display arrangement can be secured to the leading edge of the second product support platform in the absence of an upstanding extension.

The leading edge of the second product support platform beneficially comprises one or more apertures therein, preferably substantially in the axis along which the second product support platform moves. Such apertures are provided to accommodate fixing means for
securing a display arrangement to the leading edge of the second product support platform. Beneficially the apertures are provided in the upstanding extension of the second product support platform. For example, a display arrangement may be secured to the second product support platform by a plurality of rivets.

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The retail product shelf arrangement preferably further comprises a display arrangement secured to the leading edge of the second product support platform. The display arrangement beneficially includes a display element securable to the leading edge of the second product support platform arranged to display or receive an arrangement to display information relating to a product. The display element is beneficially secured to the upstanding extension of the second product support platform.

In use the retail product shelf arrangement may be sloped forwardly meaning that it is possible that products may slide from the leading edge of the first product support platform. As such it is beneficial that the retail product shelf arrangement further comprises a first product support platform retaining element. The first product support platform and first product support platform retaining element cooperate to enable securing of the first product support platform retaining element to the first product support platform. The retaining element is therefore effectively a riser and prevents products sliding from the leading edge of the first product support platform. The first product support platform retaining element and first product support platform are configured such that the first product support platform retaining element is positioned adjacent a leading edge of the first product support platform. The first product support platform and first product support platform retaining element comprise connecting portions arranged to communicate such that the first product support platform retaining element is secured relative to the first product support platform. This is beneficially achieved through an opening provided in the first product support platform for receipt of a corresponding engagement portion of the first product support platform retaining element.

30 It is further beneficial that the retail product shelf arrangement further comprises a second product support platform retaining element, wherein the second product support platform and second product support platform retaining element cooperate to enable securing of the
second product support platform retaining element to the second product support platform. Engagement between the second product support platform retaining element and the second product support platform is beneficially of the same form as described with respect to the first product support platform and first product support platform retaining element.

In one aspect a spacer may be provided to provide spacing between the leading edge of the second product support platform and display arrangement such that a channel is defined therebetween. The channel beneficially is configured to accommodate a riser, wherein a riser is known in the field to retain product on a shelf. In such a configuration the riser is accommodated at least partially in the channel and retains product on the first product support platform. A riser is beneficially provided for accommodation in the channel. The riser beneficially includes a receiving portion shaped to communicate with and accommodate the spacer.

The first product support platform beneficially comprises a downwardly projecting portion and a receiving channel for receipt of a support bracket is defined between the downwardly projecting portion and the at least one guide. The channel preferably extends in an axis between the forward and rearward edge of the first product support platform and is preferably substantially perpendicular to the leading edge. The channel provides a significant benefit in that shelf brackets can be accommodated within the channel providing a secure and quick way to assemble the retail product shelf arrangement.

The retail product shelf aITangement preferably further comprises stop means for providing a limit to movement of the second product support platform. The stop means beneficially provides an end point for movement of the second product support platform between the stowed and extended configuration. The end point ensures that the second product support platform is at least partially retained via the retail product shelf arrangement so that there is no spacing between the support surfaces of the first and second product support platforms in the direction of movement of the second product support platform. The stop means may take a variety of forms and may for example, comprise tabs provided by the first product support platform and second product support platform that communicate in the extended configuration to prevent further withdrawal of the second product support platform.
One or more elongate elements are beneficially provided extending substantially parallel to 
the leading edge of the second product support platform arranged to increase the stiffness 
of the second product support platform.

According to a second aspect of the present invention there is a retail product shelf 
arrangement for displaying a plurality of products in a retail environment comprising:
a first product support platform comprising a retaining element adjacent a leading edge 
thereof for retaining products on the first product support platform;
a second product support platform wholly supported by and positioned beneath the first 
product support platform and being moveable between a stowed configuration and an 
extended configuration, such that one or more products can be temporarily supported on 
the second product support platform when in the extended configuration, the second 
product support platform comprising an upstanding extension adjacent a leading edge 
thereof for accommodating a display arrangement for displaying information relating to 
displayed products.

Such a retail product shelf arrangement provides for a standalone retail product shelf 
arrangement that can be easily and quickly positioned and repositioned as appropriate for 
displaying retail products. The invention allows stock rotation to be achieved quickly and 
reliably with reduced chance of a store assistant causing damage to the product.
Furthermore, and particularly as is typically required in fridge displays the retail product 
shelf arrangement maybe sloped forwardly in use. Products from the first product support 
platform and second product support platform are therefore retained on the respective 
platforms through the provision of the retaining element and upstanding extension 
respectively. A suitable bracket for mounting the retail product shelf arrangement sloping 
forwardly in use is beneficially provided.

The retail product shelf arrangement beneficially further comprises a display arrangement 
for displaying information relating to a product secured to the leading edge of the second 
product support platform.
The retaining element is beneficially releasably securable to the first product support platform. Beneficially, the retaining element comprises engagement portions arranged to be received in corresponding engaging portions in the first product support platform. The engaging portions in the first product support platform beneficially comprise apertures. A retaining element is therefore capable of being manufactured separately to the first product support platform. It is typically manufactured from a different material, such as plastic, and dependent upon the product supported on the first product support platform different sizes or configurations of retaining element maybe utilised.

The present invention also extends to a retail product shelf system including a retail product support arrangement as hereinbefore described and further comprising a support bracket for supporting the retail product shelf arrangement, the support bracket including an engagement element configured to restrict tipping of the retail product support arrangement. Such a bracket typically includes protrusions which locate into a slotted column, upright, key-bar or pilaster which is vertically secured to a wall or within a fridge, or on another freestanding shelving structure. The support bracket provides an elongate supporting surface onto which the retail product shelf arrangement sits. A problem associated with a retail product shelf arrangement according to the present invention is that the effective depth of the overall support platform can be increased thus meaning that there is a counter lever action applied to the retail product support arrangement when the second product support platform is in the extended configuration. Force therefore applied adjacent the leading edge of the second product support platform may cause the retail product support arrangement to tip. The engagement element is therefore configured to restrict tipping of the retail product support arrangement. The engagement element is beneficially configured to engage the first product support platform. Thus as the retail product support arrangement begins to tip the engagement element restricts this motion. The engagement element beneficially comprises a protrusion extending from the support bracket. The protrusion beneficially includes a first product support platform engagement surface, preferably arranged to communicate with the first product support platform adjacent a rearward edge thereof.
The present invention will now be described by way of example only with reference to the accompanying drawings in which:

Figure 1 is a schematic perspective view of a retail product shelf arrangement according to an exemplary embodiment of the present invention, wherein the second product support platform is in the stowed configuration and no product display arrangement has been shown for clarity purposes.

Figure 2 is a schematic perspective view of an exemplary embodiment of a display arrangement where Figure 2a is a cross-sectional representation of display element (44) and Figure 2b is a cross-sectional representation of supplementary element (46) for securing to a second product support platform. Also visible are apertures (50) to accommodate fixings for the display element (44).

Figure 3 is a schematic perspective view of a retail product shelf arrangement supported on brackets including the addition of a display arrangement which is shown in more detail in Figure 3a as an exploded view.

Figure 4 is a schematic perspective view of a retaining element or riser (52) for use with a retail product shelf arrangement in an exemplary embodiment.

Figure 5 is a schematic perspective view of a retail product shelf arrangement according to an exemplary embodiment of the present invention including the retaining element or riser (52) in position in communication with the second product support platform (18).

Figure 6 is a schematic perspective view of the retail product shelf arrangement in an extended configuration with any riser or display arrangement removed for clarity purposes.

Figure 7 is a schematic perspective view of a retail product shelf arrangement according to an exemplary embodiment of the present invention including the display arrangement at the leading edge of the second product support platform.
Figure 8 is a schematic perspective view of a retail product shelf arrangement according to an exemplary embodiment of the present invention as represented in Figure 7 including the riser (52) in communication with the second product support platform.

Figure 9 is a schematic perspective view of a retail product shelf arrangement according to an exemplary embodiment of the present invention additionally including a riser (52) in communication with the first product support platform.

Figure 10 is a schematic underside representation of a retail product shelf arrangement according to an exemplary embodiment of the present invention where Figure 10a is a more detailed view of a corner of the retail product shelf arrangement and Figure 10b shows further detail for clarity purposes.

Figure 11 is a schematic perspective view of a bracket and Figure 11a is a detailed view of a portion of the bracket.

Figure 12 is a schematic representation of the underside of a retail product shelf arrangement according to an exemplary embodiment of the present invention supported on brackets (14). Figures 12a and 12c show detailed components and their interaction in a position part way between the stowed and extended configurations. Figures 12b and 12d show components in more detail in the fully extended configuration the extended configuration. Figure 12e shows an underside view of the second product support platform (18) in isolation according to an exemplary embodiment.

Figure 13 is a schematic side view of an exemplary embodiment of the present invention in the extended configuration and Figure 13b is a detailed exploded view of an exemplary embodiment of the display arrangement and leading edge of the second product support platform in increased detail.

The retail product shelf arrangement (2) defines a first product support surface which in use typically operates in a substantially horizontal configuration onto which products are supported and displayed in a retail environment. It will be appreciated that in use the retail
product support arrangement (2) may be sloped forwardly. The retail product shelf arrangement (2) comprises a first product support platform (4) having a leading edge (6) and rearward edge (8). The depth of the first product support platform (4) is defined in-between the leading edge (6) and the rearward edge (8). The first product support platform (4) has a width defined between first and second side edges (10a, 10b). The second product support platform is shown in the stowed configuration in Figure 1 whereby only the leading edge (12) is visible. For clarity in Figure 1, a display arrangement, as will be described subsequently, is not shown in order to aid in clarity. It can be seen that the second product support platform is received by the first product support platform (4) and the side edges (10a, 10b) project downwardly such that viewing from the side of the retail product shelf arrangement the second product support platform (18) is not visible.

Referring now to Figures 2, 3 and represented in side view in Figure 13, the retail product shelf arrangement (2) and in particular the leading edge (12) of the second product support platform (18) is configured to accommodate a display arrangement (5) for displaying information relating to a product. The displayed information may relate to detail regarding the product itself, for example, a brand or the price. The information may be presented digitally or through typed or handwritten letters or numerals. In the embodiment shown in the Figures the leading edge (12) includes an upstanding extension or portion (42) for accommodating the display arrangement. This upstanding extension (42) is positioned substantially parallel and beneficially substantially contiguous with the leading edge (6) of the first product support platform (4) when in the stowed configuration. This is shown in Figure 3a where the second product support platform (18) has been partially withdrawn moving the upstanding extension (42) which is contiguous with the leading edge (6) of the first product support platform (4) in the stowed configuration away from the leading edge (6). Secured to the upstanding extension (42) is a display element (44) which can display information relating to a product or alternatively and as shown in the figures includes a supplementary element (46) which is secured to the display element (44). The display element (44) is secured to the upstanding extension (42). The upstanding extension (42) may be formed of folded material such as a Dutch fold as part of the second product support platform (18). Apertures (50) are provided in both the display element (44) and the upstanding extension (42) to accommodate fixings to hold one to the other.
Presented in Figure 4 is a retaining element (52) or riser (52) for positioning into engaging portions (36a) in the first product support platform (4). The riser (52) includes engagement portions (37) that are received in the engaging portions (36a) and cooperate to prevent products unintentionally sliding from the first product support platforms (4), particularly if the retail product shelf arrangement is sloped forwardly in use. The same configuration may be provided on the second product support platform (18), to prevent products sliding off the second product support platform (18) when in use, and is particularly beneficial in the event the retail product shelf arrangement is sloped forwardly in use.

Referring now to Figure 5, the retail product shelf arrangement is presented in the stowed configuration as presented in Figure 3. In this configuration, however, the riser (52) and in particular the engagement portions (37) have been located into the corresponding engaging portions (36b) provided in the second product support platform (18). The engaging portions (36b) are provided on the upper surface of the second product support platform (18) rearwardly of the leading edge (12) of the second product support platform (18).

Referring to Figure 6, it will thus be clear that first and second risers (52) are beneficially provided to prevent product falling from the first product support platform (4) and second product support platform (18) when the second product support platform receives product in the extended configuration.

Referring to Figure 7, the retail product shelf arrangement is again represented, however, shown in Figure 7 is the inclusion of the display arrangement including the supplementary element (46) secured relative to the display element (44) which in turn is secured to the upstanding extension portion (42).

Figure 8 is a representation of the second product support platform at least partially extended as presented in Figure 7, however, in this Figure the riser (52) has been included positioned adjacent the leading edge (12) of the second product support platform (18).
Presented in Figure 9 is the further inclusion an additional riser element (52) positioned adjacent the leading edge (6) of the first product support platform (4). It will be appreciated that in the stowed configuration the risers (52) are positioned adjacent one another and are substantially parallel. It is beneficial that for aesthetic purposes there is no or minimal separation between the adjacent risers (52).

With reference to Figures 6 to 9, the retail product shelf arrangement (2) is shown with the second product support platform (18) in at least a partially extended configuration. The second product support platform (18) provides a support surface substantially parallel to the first product support platform and is slidably moveable between the stowed and extended configurations. The second product support platform (18) is unusable in the stowed configuration and is designed such that it is effectively hidden from customers in the stowed configuration. The second product support platform extends forwardly from the leading edge (6) of the first product support platform (4).

Referring now to Figure 10, retail product shelf arrangement (2) has been removed from the brackets (14) and rotated in order to clearly show the underside of the retail product shelf arrangement. In Figure 10, therefore, the second product support platform (18) and in particular the underside thereof is shown with the second product support platform (18) in the stowed configuration. One or more elongate support elements (20) are provided to aid stiffness to the product support platform (18).

At both the left and right sides of the retail product shelf arrangement (2) are certain features that are mirrored left and right. As shown in Figures 10a and 10b, details of the left hand side of the shelf are illustrated, but these features equally apply to the right hand side of the shelf.

The second product support platform (18) is wholly supported by the first product support platform (4). This is achieved through the provision of a support arrangement secured to the first product support platform for supporting the second product support platform (18). The support arrangement is provided by guides (24). The sides (26a) of the second product support platform (18) position and slide into the guides (24) and locate between opposing
shoulders (28a). An inwardly projecting shoulder (28a) provides a support surface or runner on which the second product support platform (18) may slide. An aperture (30) is provided in the shoulder (28a) into which engages a latch (32) in the stowed configuration. The latch (32) is beneficial as this means that unintentional movement of the second product support platform (18) from the stowed to the extended configuration cannot occur. In order to achieve this movement the latch (32) must be lifted out of the aperture (30) before the product support platform (18) is withdrawn. This means that the separation between the shoulder (28a) and an opposing shoulder (29a) visible in Figure 13 must be of a greater separation than the depth or height of the second product support platform (18).

As best shown in Figure 10, the latch (32) is shaped such that movement from the stowed configuration to the extended configuration is difficult to achieve unintentionally due to the barb-like configuration of the latch (32). The latch (32) provides a shoulder which must be lifted out of the aperture (30) in order to enable movement of the second product support platform (18) to the extended configuration. The reverse direction is easily achieved due to the tapering of the latch (32). This means that the second product support platform needs to be lifted slightly before it will pull forward but when being pushed back in it will ride into its location without requiring lifting.

A longitudinal channel (31) is defined between the respective sides (10a, 10b) and the guides (24). The guides (24) extend substantially parallel to the sides (10a, 10b) respectively. A separation is therefore provided perpendicular to the longitudinal axis of the leading edge (6), or axially with the direction of movement of the second product support platform (18). This channel (31) is of sufficient width to receive a bracket (14) which means positioning and repositioning of the retail product shelf arrangement is fast and simple. The retail product shelf arrangement provides a neat, simple to handle self-contained unit that may be easily positionable on brackets (14) thereby quickly providing shelves for display of retail products.

The retail product shelf arrangement (2) is supported by bracket (14) which in turn has protrusions which locate into the slotted column, upright, key-bar or pilaster which is vertically secured to a wall or within a fridge, or on another freestanding shelving structure
as prescribed in Figure 11. The terms 'column, upright, key-bar and pilaster' are commonly used terms in the field for this type of support arrangement indicated by reference numeral (16). Such a support (16) enables selection of the location of the brackets (14) as appropriate dependent on the requirement for the vertical height of the retail product shelf arrangement (2). The bracket (14) includes an engagement element (15) for restricting tipping of the retail product support arrangement as a whole. The engagement element (15), in the normal stowed configuration, is separated from the first product support platform (4) by a separation gap meaning that positioning of the retail product support arrangement onto the bracket (14) is quick and is unimpeded. In the stowed configuration, when force is applied to the first product support platform (4), the engagement element (15) is typically not utilised as force is transferred from the first product support platform (4) directly onto the elongate support surface presented by the bracket (14). However, in the extended configuration if force is applied to the second product support platform (18) then a counter lever effect occurs and the retail product shelf arrangement (2) may tip potentially leading to damage to the product or danger to a person. The provision of the engagement element (15) which cooperates with the rearward edge of the first product support platform prevents this tipping or rotation of the retail product shelf arrangement (2) as a whole.

Referring now to Figure 12, the underside of the retail product shelf arrangement is shown in more detail with a bracket (14) received in the channel (31), with the portions magnified for clarity purposes. As there is no requirement for the second product support surface (18) to carry any load when it is moving between the stowed and extended configuration complex runners or bearings are not required. Instead, simple plastic rivets (38) may be utilised to provide a running surface as best described with reference to Figure 12e. No other runners are needed. End stop tabs (40a, 40b) are provided to prevent the second product support platform (18) from extending beyond the predetermined end point.

Represented in Figure 12a is the second product support platform (18) in a position part way between the stowed and extended configurations. It is clear that in this position and as more clearly represented in Figure 12c respective end stop tabs (40a, 40b) are separated longitudinally. As identified in Figure 12c it is clear that these stop tabs (40a, 40b) have
been bent or deflected in order that there will be impingement against each other as the second product support platform (18) is withdrawn. During assembly the stop tabs (40a,40b) are substantially aligned in planes parallel to the product support platforms meaning that the second product support platform (18) can be assembled without the end stop tabs (40a,40b) interacting. Once assembled and as represented in Figure 12c, stop tab (40a) has been bent or deflected upwardly and stop tab (40b) has been bent or deflected downwardly meaning that they communicate to limit withdrawal of the second product support platform (18).

Referring to Figure 12b and 12d, as the second product support platform is withdrawn the end stop tabs (40a,40b) communicate meaning that the second product support platform (18) cannot be withdrawn any further. It is clear that end stop tab (40a) is fixedly secured to the guide (24) and the stop tab (40b) is secured to the second product support platform (18) meaning that the first end stop tab (40a) does not move.

Figure 12e shows the underside of the second product support platform (18) in an exploded view, i.e. before the second product support platform (18) is inserted into the first product support platform. A running surface (60) is shown which in use runs against the shoulder (28a) of the guide (24) including a portion (62) which has been removed solely for the purposes of clarity to show positioning of the rivets (38). The rivets (38) protrude from the running surface (60) in order to provide smooth movement of the second product support platform (18). Rivets (38) are also provided extending through a side wall of the second product support platform to ensure smooth movement of the second product support platform (18) in the event of the second product support platform (18) not being moved precisely linearly in use causing contact between the side wall and the guide (24).

The tab (40b) is clearly shown prior to being bent into place into the operational configuration.

Figure 13 is a schematic representation of a side view of the first (4) and second (18) product support platforms and Figure 13b is a more detailed view showing the display arrangement according to an exemplary embodiment of the present invention.
It will be appreciated that according to the present invention the retail products do not sit on the second product support platform (18) when this platform is in motion. The second product support platform (18) is drawn forward to protrude from the first product support platform and provides a temporary surface on which retail products can stand while being loaded onto or unloaded from the first product support platform. The leading edge of the second product support platform has a facility for ticket stripping or electronic displays to be affixed meaning that this does not affect a person carrying out stock rotation or restocking.

In use the second product support platform (18) is extended and a store assistant draws the existing retail product forward and arranges it on the temporary platform while new product is loaded to the rear of the first product support platform. Once the new product is displayed the old product can be returned to its position on the first product support platform (4), in front of the new product. When not in use it is important that the second product support platform (18) is returned to its hidden position within the first product support platform.

The second product support platform construction maybe similar to that of the first product support platform in which it is housed. For example, zinc plated steel sheet is utilised to prevent oxidisation in refrigerated cabinets. It is epoxy powder coated (EPC) to a desired colour to improve durability and appearance.

The overall appearance of the present retail product shelf arrangement has the appearance of a traditional shelf and it is the only the trained store assistant who will know the function and technique of the additional work space.

The present invention has been described by way of example only and it will be appreciated by the skilled addressee modifications and variations may be made without departing from the scope of protection afforded by the appended claims.
Claims:

1. A retail product shelf arrangement for displaying a plurality of products in a retail environment comprising:
   a first product support platform;
   a second product support platform wholly supported by and positioned beneath the first product support platform and being moveable between a stowed configuration and an extended configuration, such that one or more products can be temporarily supported on the second product support platform when in the extended configuration;
   wherein the first platform comprises a support arrangement comprising at least one guide secured thereto for supporting and guiding the second product support platform;
   wherein the guide comprises an interruption or latch and the second platform comprises the other of an interruption or latch, the interruption arranged to receive the latch in the stowed configuration, the latch arranged to cooperate with the interruption to prevent linear withdrawal of the second support platform from the stowed configuration.

2. A retail product shelf arrangement according to claim 1 wherein the latch comprises a leading edge comprising a shoulder arranged to abut against the interruption.

3. A retail product shelf arrangement according to claim 2 wherein the trailing edge of the latch is tapered away from the shoulder.

4. A retail product shelf arrangement according to any preceding claim, wherein the first and second product support platform each comprise a leading edge defining a width such that in the extended configuration the depth of the second product support platform is defined between the leading edge of the first product support platform and the leading edge of the second product support platform.
5. A retail product shelf arrangement according to any preceding claim, wherein the second product support platform comprises a leading edge configured to accommodate a display arrangement for displaying information relating to a product.

6. A retail product shelf arrangement according to claim 5, wherein the leading edge of the second product support platform comprises an upstanding extension for accommodating the display arrangement.

7. A retail product shelf arrangement according to claim 6, wherein the upstanding extension of the second product support platform comprises one or more apertures therein.

8. A retail product shelf arrangement according to any preceding claim, further comprising a display arrangement for displaying information relating to a product secured to the leading edge of the second product support platform.

9. A retail product shelf arrangement according to any preceding claim, further comprising a first product support platform retaining element, wherein the first product support platform and first product support platform retaining element cooperate to enable securing of the first product support element platform retaining element to the first product support platform.

10. A retail product shelf arrangement according to any preceding claim further comprising a second product support platform retaining element, wherein the second product support platform and second product support platform retaining element cooperate to enable securing of the second product support platform retaining element to the second product support platform.
11. A retail product shelf arrangement according to any preceding claim, wherein the at least one guide is inset from a side edge of the first product support platform.

12. A retail product shelf arrangement according to any preceding claim, wherein the first product support platform comprises a downwardly projecting portion, and a receiving channel for receipt of a support bracket is defined between the downwardly projecting portion and the at least one guide.

13. A retail product shelf arrangement according to any preceding claim comprising stop means for providing a limit to movement of the second product support platform.

14. A retail product shelf arrangement according to any preceding claim, comprising one or more elongate elements extending substantially parallel to the leading edge of the second product support platform arranged to increase the stiffness of the second product support platform.

15. A retail product shelf arrangement for displaying a plurality of products in a retail environment comprising:
   a first product support platform comprising a retaining element adjacent a leading edge thereof for retaining products on the first product support platform;
   a second product support platform wholly supported by and positioned beneath the first product support platform and being moveable between a stowed configuration and an extended configuration such that one or more products can be temporarily supported on the second product support platform when in the extended configuration; the second product support platform comprising an upstanding extension adjacent a leading edge thereof for accommodating a display arrangement for displaying information relating to displayed products.

16. A retail product shelf arrangement according to claim 15 wherein the upstanding extension of the second product support platform comprises one or more apertures therein.
17. A retail product shelf arrangement according to any of claims 15-16 further comprising a display arrangement for displaying information relating to a product secured to the leading edge of the second product support platform.

18. A retail product shelf arrangement according to any of claims 15-17 wherein the retaining element is releasably securable to the first product support platform.

19. A retail product shelf arrangement according to any of claims 15-18 wherein the retaining element comprises engagement portions arranged to be received in corresponding engaging portions in the first product support platform.

20. A retail product shelf arrangement according to claim 19 wherein the engagement portions in the first product support platform comprise apertures.

21. A retail product shelf system including a retail product support arrangement according to any preceding claim and further comprising a support bracket for supporting the retail product shelf arrangement, the support bracket including an engagement element configured to restrict tipping of the retail product support arrangement.

22. A retail product shelf system according to claim 21 wherein the engagement element is configured to engage the first product support platform.

23. A retail product shelf system according to claim 22 wherein the engagement element comprises a protrusion extending from the support bracket.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

INV. A47F5/00 A47B96/02

ADD.

According to International Patent Classification (IPC) or to both national classification and IPC.

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

F25D A47B A47F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched.

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal , WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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<th>Relevant to claim No.</th>
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<td>GB 2 500 803 A (MAXIM DESIGN GROUP LTD [GB]) 2 October 2013 (2013-10-02) page 3, line 7 - page 7, line 17; figures 1-4</td>
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Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents :

*A* document defining the general state of the art which is not considered to be of particular relevance

*E* earlier application or patent but published on or after the international filing date

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*C* document referring to an oral disclosure, use, exhibition or other means

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"A" document member of the same patent family

Date of the actual completion of the international search 5 August 2015

Date of mailing of the international search report 20/10/2015

Name and mailing address of the ISA

European Patent Office P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk

Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016

Authorized officer Kohler, Pierre

Form PCT/ISA/210 (second sheet) (April 2005)
This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
   because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
   because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☑ Claims Nos.:
   because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

This International Searching Authority found multiple inventions in this international application, as follows:

   see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. ☑ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☑ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

   1-14, 21-23

Remark on Protest

☐ The additional search fees were accompanied by the applicant’s protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant’s protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.
This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-14, 21-23

   a retail product shelf arrangement comprising:
   - a first product support platform comprising a guide.
   - a second product support platform beneath the first product support platform and movable through the guide.
   - a latch and interrupt on between the guide and the second product support platform.

2. Claims: 15-20

   a retail product shelf arrangement comprising:
   - a first product support platform comprising a retaining element.
   - a second product support platform beneath the first product support platform and movable between two configurations, comprising an upstanding extension.
### DOCUMENTS CONSIDERED TO BE RELEVANT

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