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# (12) United States Patent Che et al.

#### (54) PUZZLE PLATFORM

(71) Applicants: Xiaoling Che, Hubei (CN); Xiaoyi Che, Hubei (CN)

(72) Inventors: Xiaoling Che, Hubei (CN); Xiaoyi

Che, Hubei (CN)

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#### Related U.S. Application Data

(63) Continuation of application No. 18/748,158, filed on Jun. 20, 2024, which is a continuation of application No. 18/530,402, filed on Dec. 6, 2023, now Pat. No. 12,053,709, and a continuation-in-part of application No. 18/235,896, filed on Aug. 21, 2023, now Pat. No. 12,048,885, and a continuation-in-part of application No. 18/235,416, filed on Aug. 18, 2023, now Pat. No. 12,059,631, and a continuation-in-part of application No. 17/829,359, filed on Jun. 1, 2022, now Pat. No. 12,104,744, application No. 18/755,730, filed on Jun. (Continued)

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(51) Int. Cl. A63F 9/10 (2006.01) A47B 25/00 (2006.01) A63F 3/00 (2006.01)

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#### (52) U.S. Cl.

CPC ....... A63F 9/1044 (2013.01); A63F 3/00261 (2013.01); A47B 25/00 (2013.01); A63F 2003/00274 (2013.01); A63F 2003/00952 (2013.01)

#### (58) Field of Classification Search

#### (56) References Cited

#### U.S. PATENT DOCUMENTS

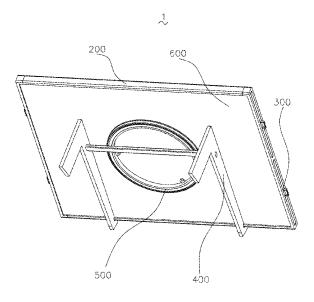
4,111,425 A *	9/1978	Lathrop		A63F 9/1044			
4,257,606 A *	3/1981	Launzel		40/768 A63F 9/1288			
273/157 F							
(Continued)							

Primary Examiner - Nkeisha Smith

#### (57) ABSTRACT

A puzzle platform includes: a puzzle plate, having: a playing portion for carrying puzzle pieces; and a fixing portion; a base plate; and a support assembly, configured to mount and support the puzzle plate and the base plate. The support assembly includes a first extending member and a second extending member that is substantially parallel to and is spaced apart from the first extending member; each of the first extending member and the second extending member comprises a first fixing slot and a second fixing slot; the first fixing slot and the second fixing slot are substantially parallel to each other and are spaced apart from each other; the fixing portion of the puzzle plate is fixedly received in the first fixing slot, and an edge of the base plate is fixedly received in the second fixing slot.

#### 20 Claims, 22 Drawing Sheets



#### Related U.S. Application Data

27, 2024 is a continuation-in-part of application No. 18/530,402, filed on Dec. 6, 2023, now Pat. No. 12,053,709, which is a continuation-in-part of application No. 17/829,359, filed on Jun. 1, 2022, now Pat. No. 12,104,744, and a continuation-in-part of application No. 18/235,416, filed on Aug. 18, 2023, now Pat. No. 12,059,631, application No. 18/755,730, filed on Jun. 27, 2024 is a continuation-in-part of application No. 18/235,896, filed on Aug. 21, 2023, now Pat. No. 12,048,885, and a continuation-in-part of application No. 18/541,685, filed on Dec. 15, 2023, now Pat. No. 12,042,740, which is a continuation-inpart of application No. 17/505,587, filed on Oct. 19, 2021, now Pat. No. 11,890,551, said application No. 18/530,402 is a continuation-in-part of application No. 17/505,587, filed on Oct. 19, 2021, now Pat. No. 11,890,551, said application No. 18/235,416 is a continuation-in-part of application No. 17/505,587, filed on Oct. 19, 2021, now Pat. No. 11,890,551, said application No. 18/235,896 is a continuation-in-part of application No. 17/505,587, filed on Oct. 19, 2021, now Pat. No. 11,890,551, and a continuation-in-part of application No. 17/829,359, filed on Jun. 1, 2022, now Pat. No. 12,104,744, application No. 18/755, 730, filed on Jun. 27, 2024 is a continuation-in-part of application No. 18/235,416, filed on Aug. 18, 2023, now Pat. No. 12,059,631, which is a continuation-in-part of application No. 17/829,359, filed on Jun. 1, 2022, now Pat. No. 12,104,744, application No. 18/755,730, filed on Jun. 27, 2024 is a continuation-in-part of application No. 17/829,359, filed on Jun. 1, 2022, now Pat. No. 12,104,744, said application No. 18/748,158 is a continuation of application No. 18/541,685, filed on Dec. 15, 2023, now Pat. No. 12,042,740.

#### (56) References Cited

#### U.S. PATENT DOCUMENTS

5,243,777	A *	9/1993	Dedlow A47G 1/0605
5 405 146	A *	4/1005	40/781
3,403,140	A	4/1993	Washington A63F 9/1044 40/773
5,624,118	A *	4/1997	Gottesman A63F 9/1044
6,276,525	R1*	8/2001	40/739 Kobeluch A63F 9/1044
0,270,323	DI	0/2001	206/499
8,235,207	B2 *	8/2012	Dietenberger A63F 9/1044
9,044,688	B1*	6/2015	273/148 R Janay B65D 25/22
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<sup>\*</sup> cited by examiner

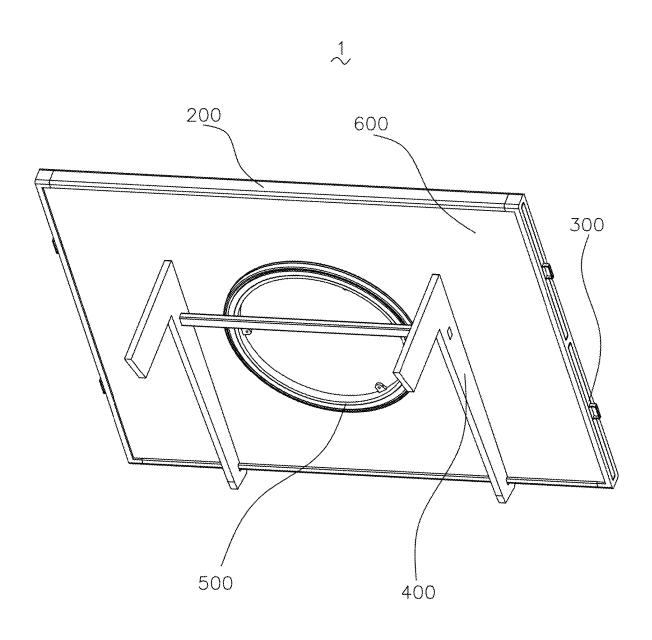


Fig. 1

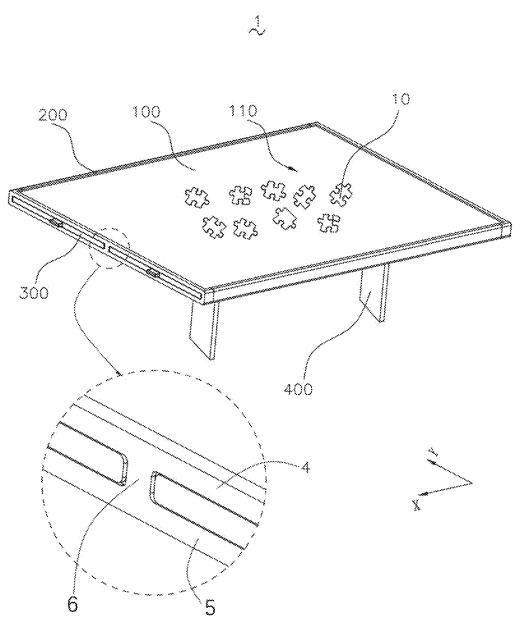


FIG. 2

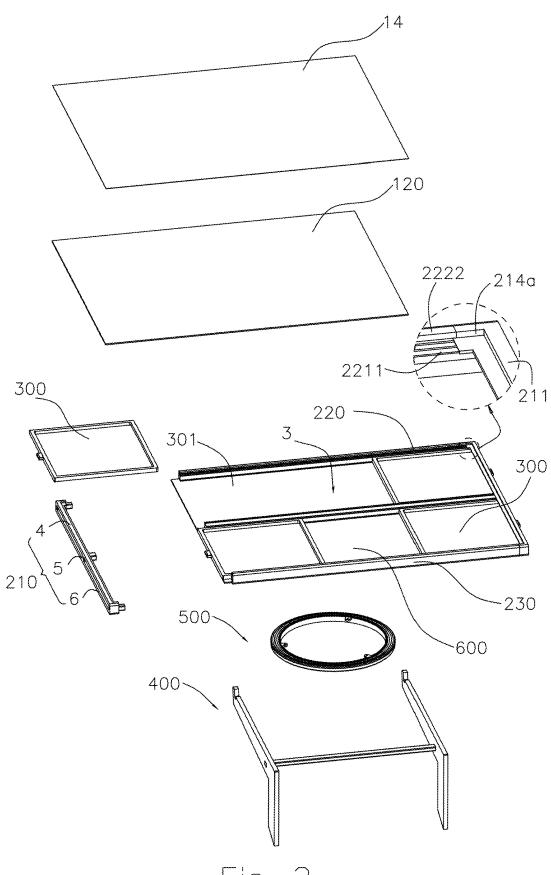


Fig. 3

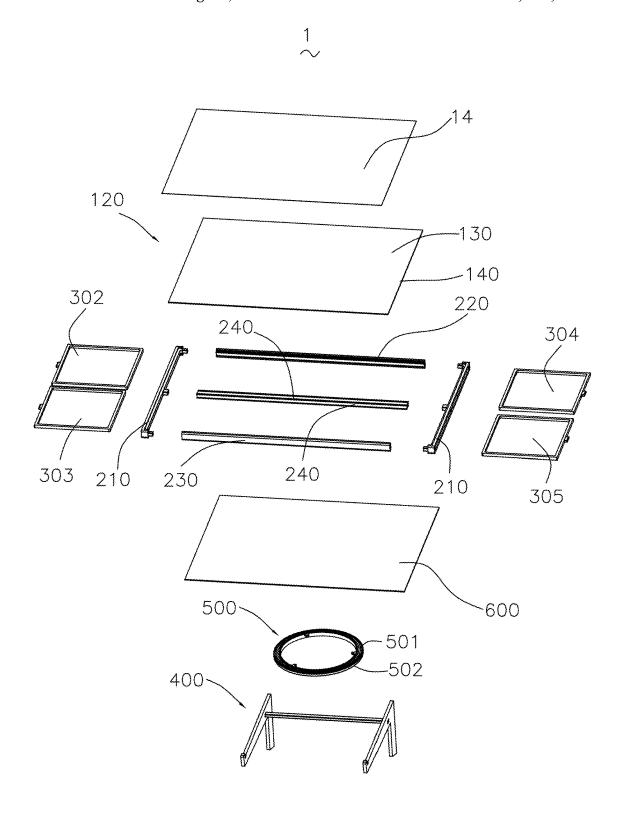
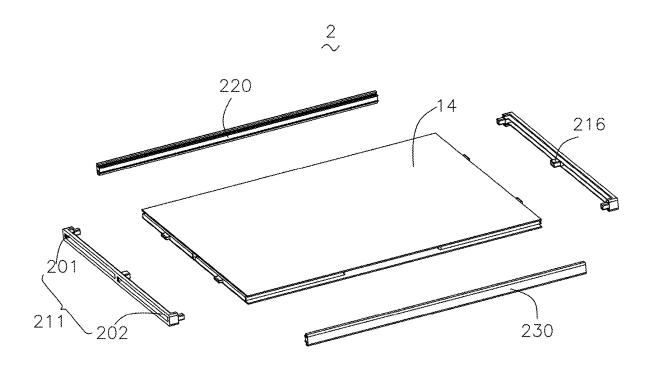
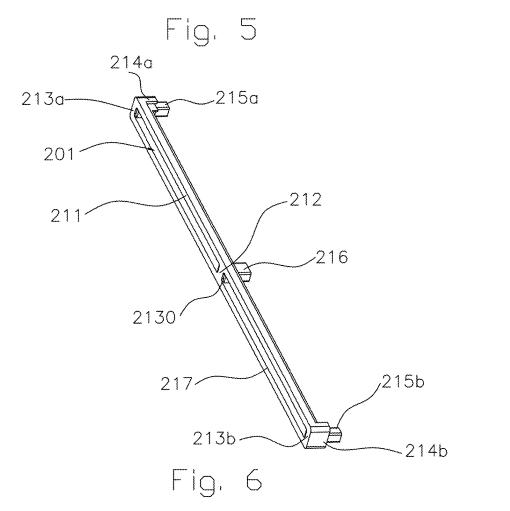


Fig. 4





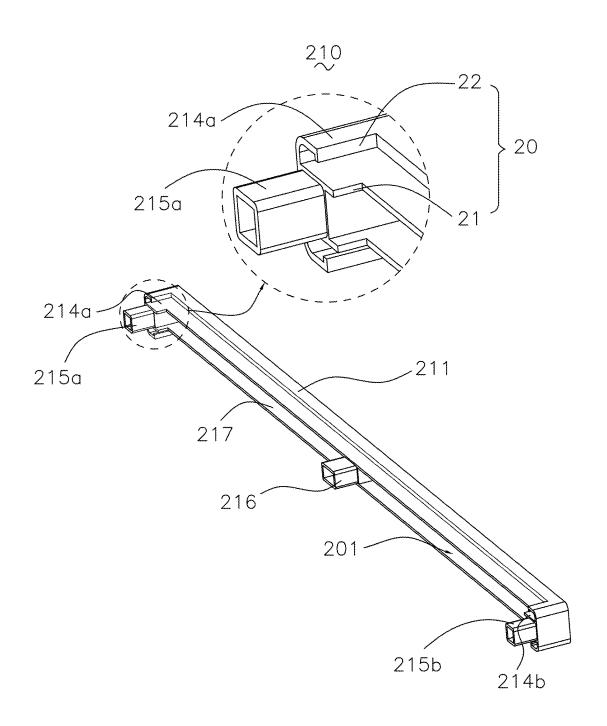


Fig. 7

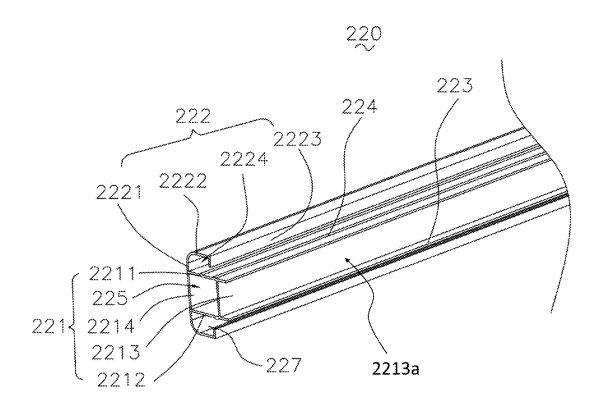


FIG. 8



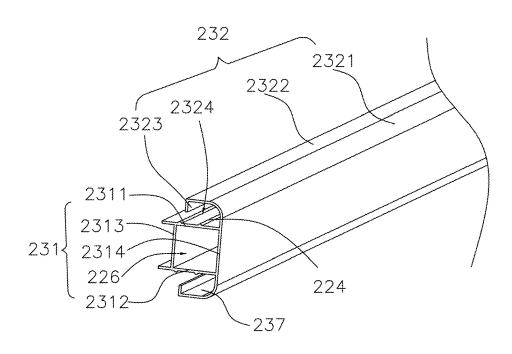


Fig. 9

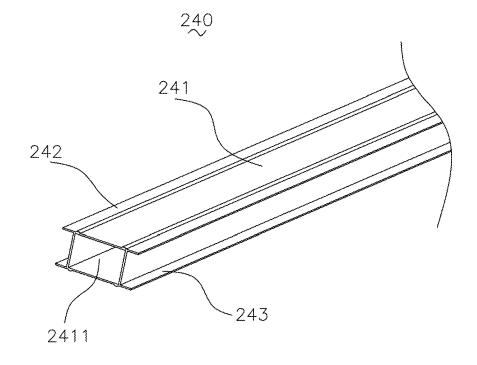


Fig. 10

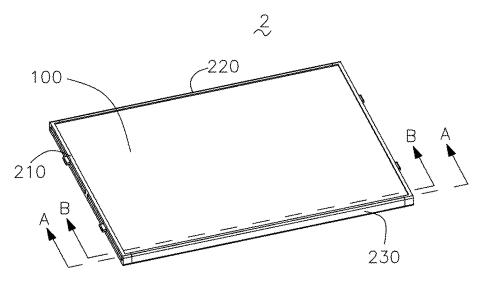
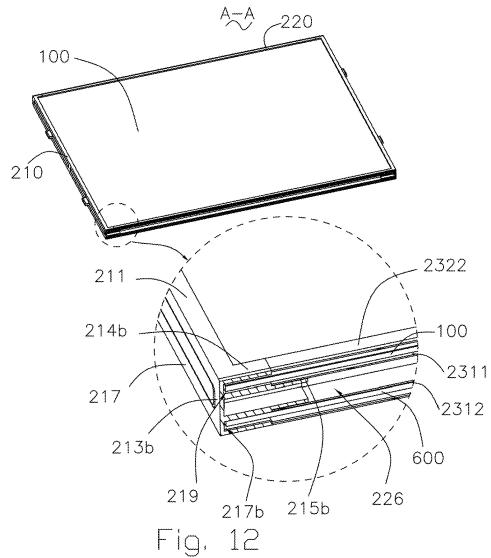
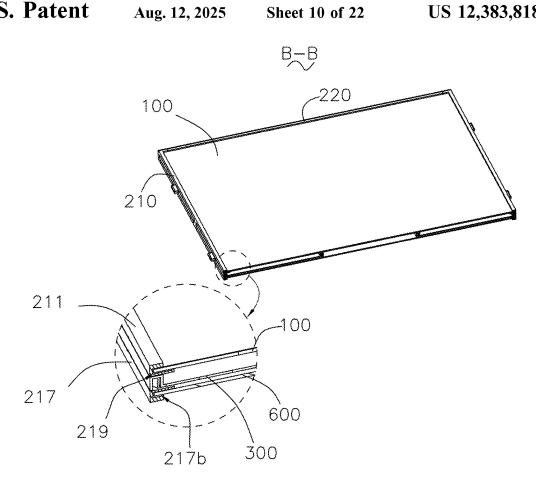


Fig. 11





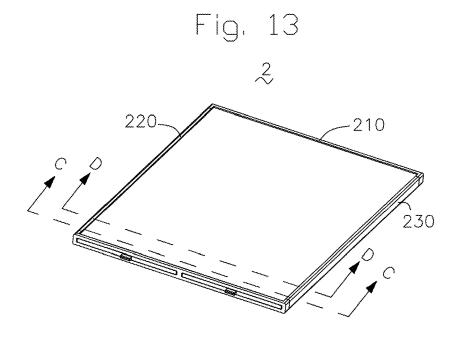
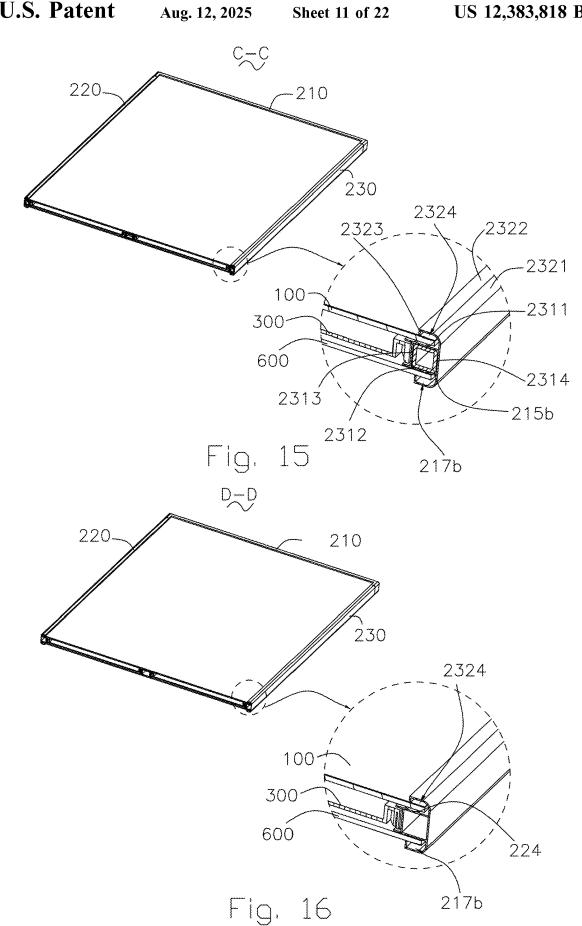


Fig. 14



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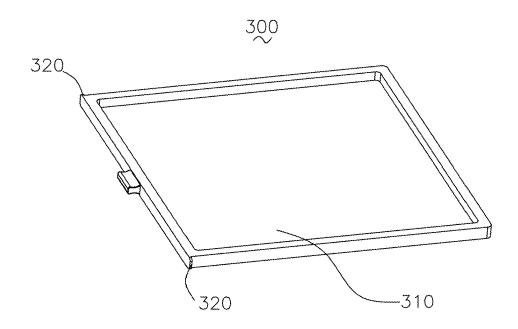
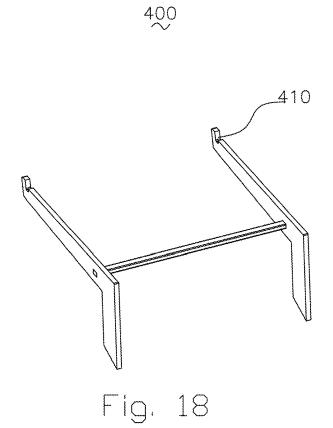


Fig. 17



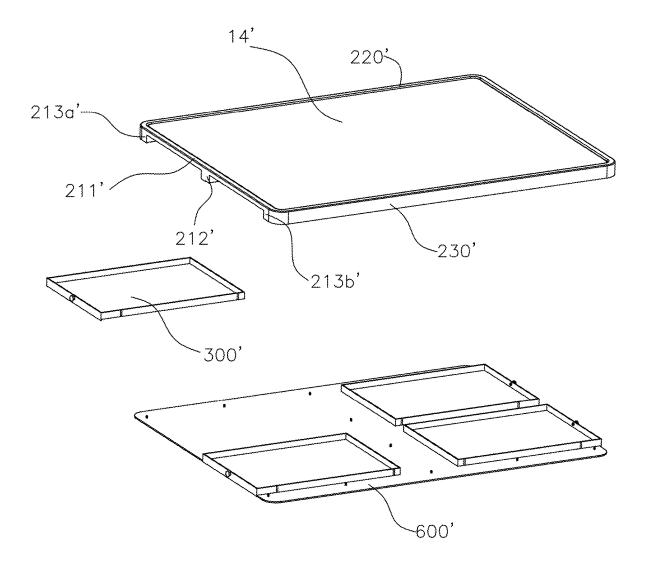


Fig. 19

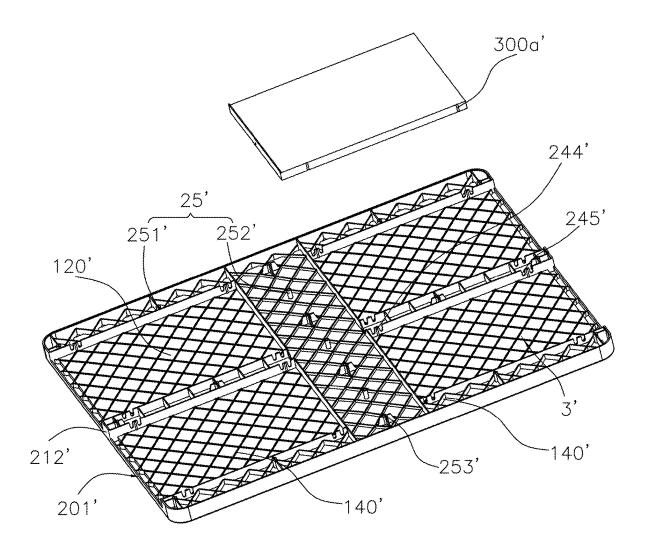
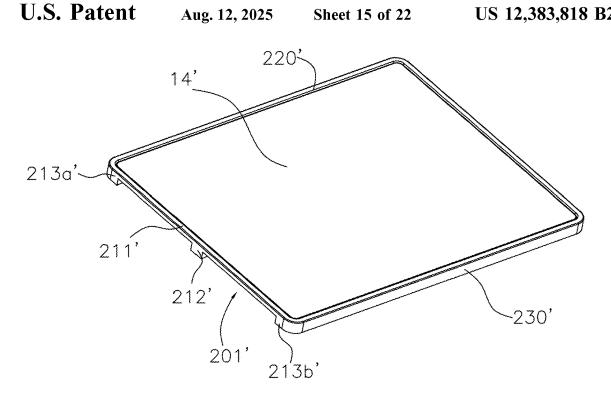


Fig. 20



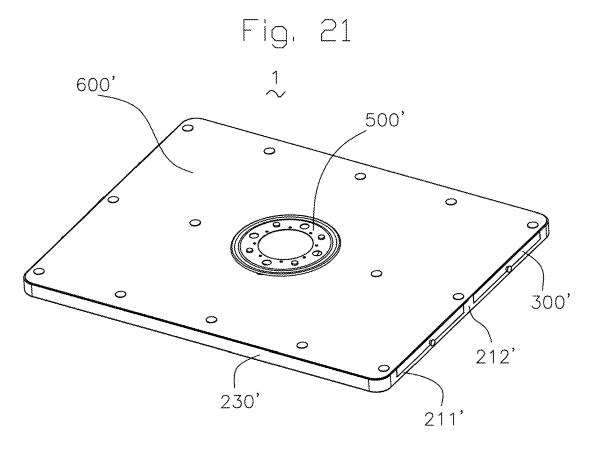


Fig. 22



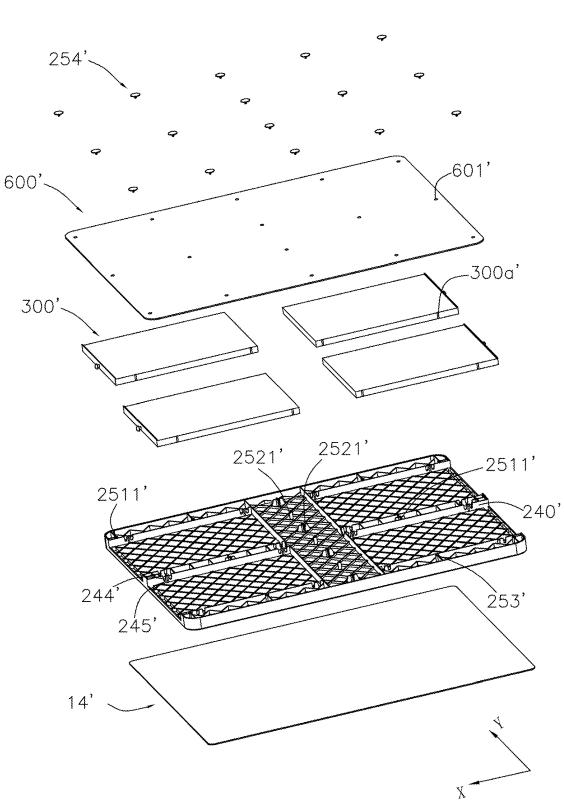


Fig. 23

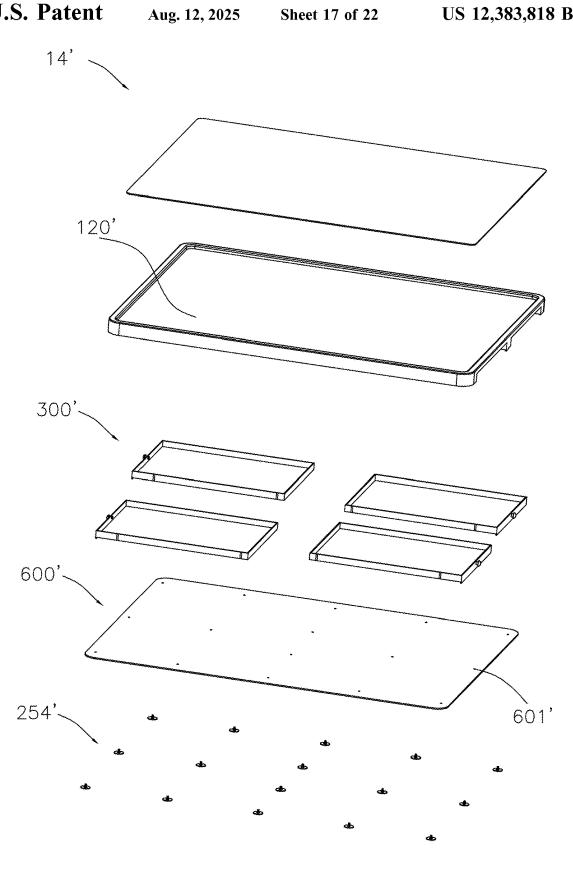


Fig. 24

2" ~

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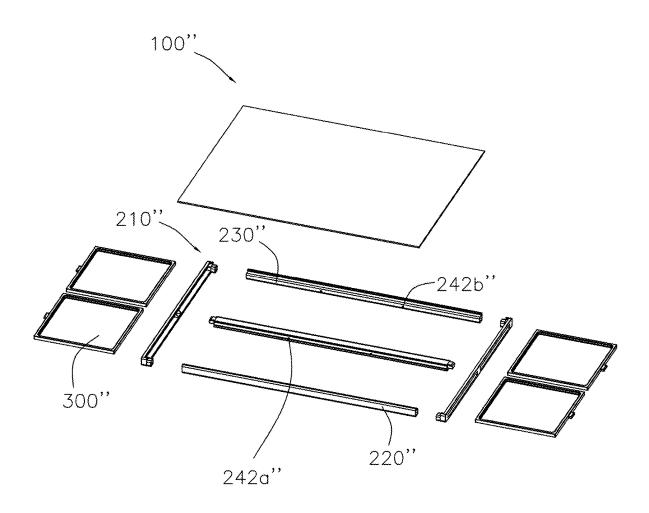


Fig. 25



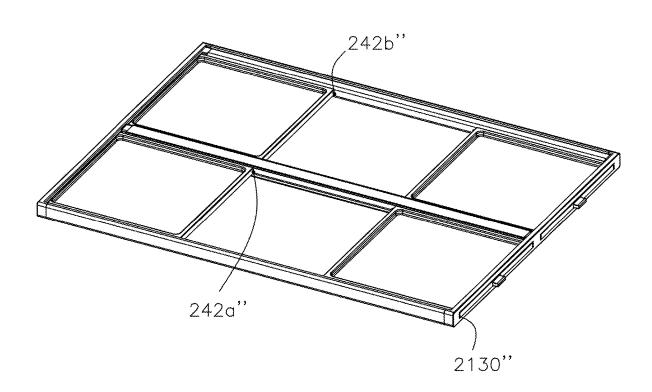


Fig. 26

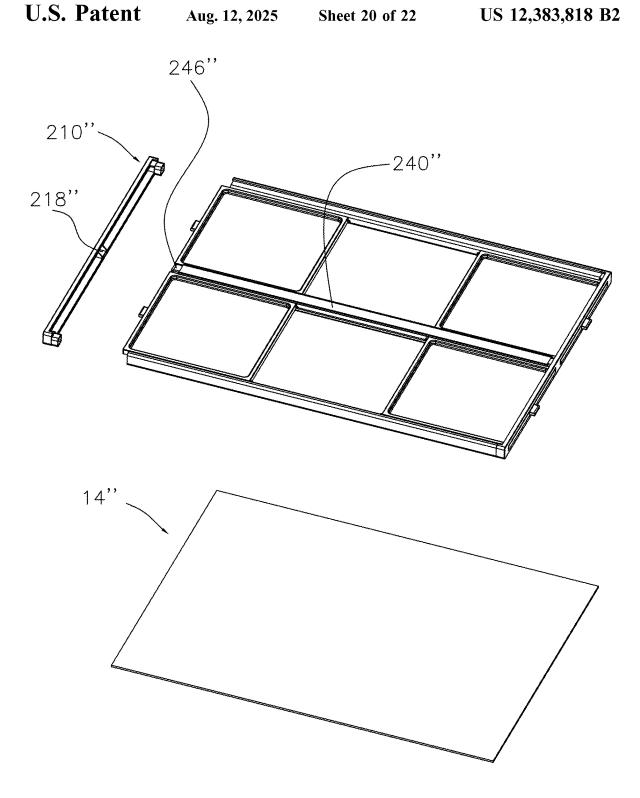


Fig. 27

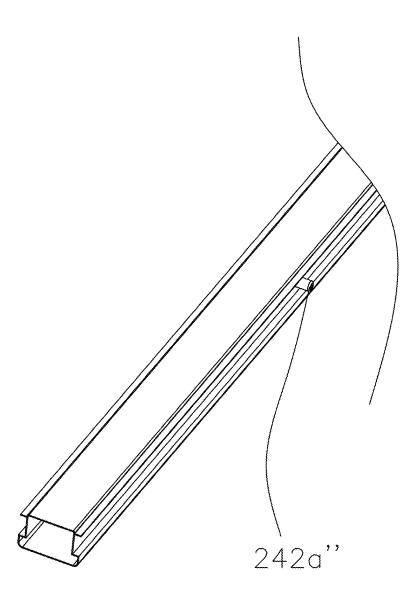


Fig. 28

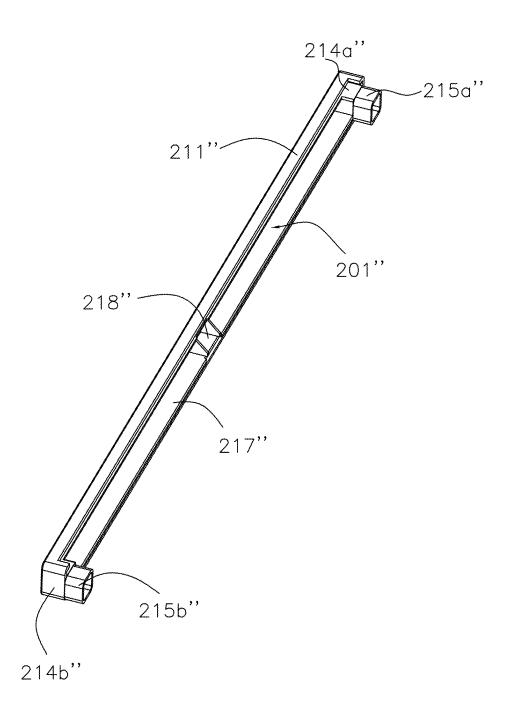


FIG. 29

#### PUZZLE PLATFORM

#### CROSS REFERENCES AND PRIORITIES

The present application is a continuation application of 5 the U.S. patent application Ser. No. 18/748,158, filed on Jun. 20, 2024, which is continuation application of the U.S. patent application Ser. No. 18/530,402, filed on Dec. 6, 2023, continuation-in-part application of the U.S. patent application Ser. No. 18/235,896, filed on Aug. 21, 2023, 10 continuation-in-part application of the U.S. patent application Ser. No. 18/235,416, filed on Aug. 18, 2023, and continuation-in-part application of the U.S. patent application Ser. No. 17/829,359, filed on Jun. 1, 2022.

The present application is a continuation application of <sup>15</sup> the U.S. patent application Ser. No. 18/530,402, filed on Dec. 6, 2023, which is a continuation-in-part application of the U.S. patent application Ser. No. 17/829,359, filed on Jun. 1, 2022, and continuation-in-part application of the U.S. patent application Ser. No. 18/235,416, filed on Aug. 18, <sup>20</sup> 2023.

The present application is a continuation-in-part application of the U.S. patent application Ser. No. 18/235,896, filed on Aug. 21, 2023, which is a continuation-in-part application of the U.S. patent application Ser. No. 17/829,359, filed <sup>25</sup> on Jun. 1, 2022.

The present application is a continuation-in-part application of the U.S. patent application Ser. No. 18/235,416, filed on Aug. 18, 2023, which is a continuation-in-part application of the U.S. patent application Ser. No. 17/829,359, filed on Jun. 1, 2022.

The present application is a continuation-in-part application of the U.S. patent application Ser. No. 17/829,359, filed on Jun. 1, 2022.

All the above are hereby incorporated by reference in <sup>35</sup> their entirety.

# BACKGROUND OF THE PRESENT INVENTION

#### Field of Invention

The present invention relates to puzzle game apparatus, and more particularly to a puzzle platform, wherein the puzzle platform is configured for retaining all the unfinished 45 pieces and while allowing the player to conveniently play the puzzle.

#### Description of Related Arts

Puzzles are devised over the years and are among the most popular board games generally played alone by an individual. It is well known that puzzles are good for the brain. Studies have shown that playing puzzles can improve cognition and visual-spatial reasoning, and can train concentration and patience.

Other than as a means of entertainment and enjoyment, players would like to challenge themselves by playing higher piece counts of the puzzle. Generally speaking, the higher the piece count, the harder the puzzle is. However, a 60 common drawback or a burden for the player is that the finished size of the puzzles is relatively large. For example, a finished size of 1,000 piece puzzles is about 30"×24", a finished size of 5,000 piece puzzles is about 60"×40", and so on. It could take hours, days or even months to compete a 65 larger scale puzzle. One or more puzzle pieces could be missed accidentally or unintentionally. It is sad that the

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player usually finds out there is a missing piece at the end. Furthermore, as a skilled player, the strategies for playing such huge size of puzzles are configured for classifying puzzle pieces by different feature such as puzzle pieces with a particular color or shape and preassembling a group of puzzle pieces. Therefore, how to avoid losing any pieces and classifying different puzzle pieces with preassembling puzzle groups, it is best to find a container to save and classify all the unfinished pieces.

U.S. Pub. No. 20210170267A1 describes a jigsaw puzzle on which the puzzle pieces are assembled. Referring to FIG. 2, a perimeter edge 18 and a first side edge 22 is a type of two-piece and a multi-layer structure. The perimeter edge 18 is stacked on the first side edge 22 and a drawer 40 positioned such that it is extendable outwardly away from the first side edge 22. In order to assemble the drawer 40, the perimeter edge 18 and the first side edge 22 should be placed at an appropriate location. However, in order to place the perimeter edge 18 and the first side edge 22 precisely at specific location, the locations of the perimeter edge 18 and the first side edge 22 should be adjusted repeatedly. So, the perimeter edge 18 and a first side edge 22 must be assembled together by additional assembly steps, which complicates the manufacturing process. Therefore, the jigsaw puzzle has complicated structures and is difficult to be manufactured with low cost.

A need exists for a tool that retains all the unfinished pieces classified. It is to the provision of such a tool that the present disclosure is primarily directed.

#### SUMMARY OF THE PRESENT INVENTION

The present disclosure provides a puzzle platform including: a puzzle plate, a base plate; and a support assembly. The puzzle plate has a playing portion for carrying puzzle pieces; and a fixing portion. The support assembly is configured to mount and support the puzzle plate and the base plate. The support assembly includes a first extending member and a second extending member that is substantially parallel to and is spaced apart from the first extending member; each of the first extending member and the second extending member comprises a first fixing slot and a second fixing slot; the first fixing slot and the second fixing slot are substantially parallel to each other and are spaced apart from each other; the fixing portion of the puzzle plate is fixedly received in the first fixing slot, and an edge of the base plate is fixedly received in the second fixing slot.

The present disclosure further provides a puzzle platform, including: a puzzle board, having a playing portion configured for playing a plurality of puzzle pieces thereon; and a support assembly, configured to mount and support the puzzle board. The support assembly includes: a first extending member; a second extending member that is substantially parallel to and is spaced apart from the first extending member; and two support members that are substantially parallel to each other, wherein, each of the two support members is connected between an end of the first extending member and an end of the second extending member. Each support member comprises: an upper part and a middle part, wherein the upper part is configured to support the puzzle board; the middle part extends downwardly from a lower side of the upper part. The middle part includes: a first side wall connected to the upper part and the first extending member; a second side wall connected to the upper part and

the second extending member; and a partition wall connected to the upper part and spaced from the first side wall and the second side wall.

#### BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an illustrative isometric view of a puzzle platform according to a first embodiment of the present invention.

FIG. 2 is an illustrative isometric view of the restricting wall and the supporting portion of the puzzle platform shown in FIG. 1, but from another aspect.

FIG. 3 is a partly exploded perspective view of the puzzle platform shown in FIG. 1.

FIG. 4 is an exploded perspective view of the puzzle platform shown in FIG. 1.

FIG. 5 is a partly exploded perspective view of a board assembly of the puzzle platform shown in FIG. 1.

FIG. 6 is an illustrative isometric view of a supporting 20 member of the puzzle platform shown in FIG. 1.

FIG. 7 is an illustrative isometric view of a supporting member of the puzzle platform shown in FIG. 1, but from another aspect.

member of the puzzle platform shown in FIG. 1.

FIG. 9 is an illustrative isometric view of a second extending member of the puzzle platform shown in FIG. 1.

FIG. 10 is an illustrative isometric view of a reinforcing member of the puzzle platform shown in FIG. 1.

FIG. 11 is an illustrative isometric view of the puzzle platform shown in FIG. 1.

FIG. 12 is a cross-sectional view of the puzzle platform taken along line A-A of FIG. 11.

FIG. 13 is a cross-sectional view of the puzzle platform 35 taken along line B-B of FIG. 11.

FIG. 14 is an illustrative isometric view of the puzzle platform shown in FIG. 1, but from another aspect.

FIG. 15 is a cross-sectional view of the puzzle platform taken along line C-C of FIG. 14.

FIG. 16 is a cross-sectional view of the puzzle platform taken along line D-D of FIG. 14.

FIG. 17 is an illustrative isometric view of a puzzle drawer of the puzzle platform shown in FIG. 1.

FIG. 18 is an illustrative isometric view of a bracket of the 45 puzzle platform shown in FIG. 1.

FIG. 19 is a partly exploded perspective view of a puzzle platform illustrating another mode of a board assembly.

FIG. 20 is a partly exploded perspective view of a board assembly of the puzzle platform shown in FIG. 13 and a base 50 and a part of drawers thereof being removed away, but from another aspect.

FIG. 21 is an illustrative isometric view of a board assembly of the puzzle platform shown in FIG. 13 and a base thereof being removed away.

FIG. 22 is an illustrative isometric view of the puzzle platform shown in FIG. 13, but from another aspect.

FIG. 23 is an exploded perspective view of the puzzle platform shown in FIG. 13.

FIG. 24 is an exploded perspective view of the puzzle 60 platform shown in FIG. 13, but from another aspect.

FIG. 25 is an exploded perspective view of a puzzle platform illustrating third mode of a board assembly

FIG. 26 is an illustrative isometric view of the puzzle platform shown in FIG. 25.

FIG. 27 is a partly exploded perspective view of the puzzle platform shown in FIG. 25.

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FIG. 28 is an illustrative isometric view of a reinforcing member of the puzzle platform shown in FIG. 25.

FIG. 29 is an illustrative isometric view of a supporting member of the puzzle platform shown in FIG. 25.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The following description is disclosed to enable any person skilled in the art to make and use the present invention. Preferred embodiments are provided in the following description only as examples and modifications will be apparent to those skilled in the art. The general principles comprised in the following description would be applied to other embodiments, alternatives, modifications, equivalents, and applications without departing from the spirit and scope of the present invention.

Referring to FIGS. 1-18, a puzzle platform 1 is arranged for a user or a player to assemble a plurality of puzzle pieces 10 thereon and includes a board assembly 2, a rotating assembly 500 attached on the board assembly 2, and a bracket 400 disposed below the board assembly 2 and detachably connected to the board assembly 2.

The board assembly 2 comprises a puzzle board 100 FIG. 8 is an illustrative isometric view of a first extending 25 configured for placing the puzzle pieces 10, a support assembly 200 supporting the puzzle board 100 for forming a receiving space 3 cooperatively with the puzzle board 100, and a base 600 attached on the support assembly 200, at least two puzzle drawers 300 received in the receiving space 3. The rotating assembly 500 is configured to provide accessibility for the board assembly 2 to move the board assembly 2 at different directions with respect to a playing place. The board assembly 2 is embodied to have a rectangular shape having two longer longitudinal sides provided along a longitudinal direction X and two shorter transverse sides provided along a lateral direction Y perpendicular to the longitudinal direction X. Although good results have been shown with the board assembly 2 that is rectangular in shape, it is within the scope of the present invention that numerous other shapes of the board assembly 2 could be used to achieve the desired functionality as described herein.

The puzzle board 100 as shown is a rectangular board, which can be adapted to fit most of the puzzle patterns available on the market, however, within the scope of the present invention, many other shapes of puzzle boards can be used to fulfill the functions described herein, and the puzzle boards of uniform thickness can be of any shape, such as round, square, rectangular, and so on. The puzzle board 100 comprises a puzzle plate 120 and an anti-slipping layer 14 attached on the puzzle plate 120. The puzzle plate 120 includes a playing portion 130 for playing the puzzle pieces 10 thereon and a fixing portion 140 extending from the edge of the playing portion 130 and fixed by the support assembly 200. It is worth mentioning that an area of the playing portion 130 is not smaller than an area of the puzzle pieces 10 being put together. Preferably, the area of the playing portion 130 matches with the area of the puzzle pieces 10 after the puzzle pieces 10 are assembled. In other words, the puzzle board 100 serves as a puzzle frame for framing the puzzle pieces after the puzzle pieces 10 are assembled. It is worth mentioning that the puzzle board 100 has a predetermined size adapted for a larger scale puzzle, such as at least 1,000 puzzle pieces, being assembled on the puzzle board 100. Preferably, the anti-slipping layer 14 has a self-adhesive bottom surface adhered on the puzzle plate 120, wherein the anti-slipping layer 14 can be removed from the puzzle plate 120 without damaging the puzzle plate 120

and the anti-slipping layer 14. Therefore, the anti-slipping layer 14 is reusable to place on the puzzle plate 120. Furthermore, the anti-slipping layer 14 serves as a backing layer of the puzzle pieces 10 after the puzzle pieces 10 are assembled. The flat puzzle plate 120 is made of non-slip felt 5 surfaces to keep the puzzle pieces 10 and prevent the puzzle pieces being slipped thereon. The area of the anti-slipping layer 14 matches with the area of the puzzle plate 120. It's optional that the area of the anti-slipping layer 14 matches with the area of the puzzle plate 120. The anti-slipping layer 10 14 is made of a plastic sheet, a silicone sheet, a transparent sheet, an opaque sheet, or a flexible sheet, and so on for retaining the puzzle pieces 10.

As shown in FIGS. 1-18, the support assembly 200 is coupled with the puzzle plate 120 for forming at least two 15 drawer cavities 301 and at least two puzzle drawers 300 received in the corresponding drawer cavities 301. The puzzle board 100 of the puzzle platform 1 has a thin and big size. A length and/or a width of the puzzle board 100 is much greater than a thickness of the puzzle board 100, so the 20 support assembly 200 is configured for improving the structural strength of the puzzle board 100. The support assembly 200 is substantially perpendicular to the puzzle board 100 and may take any shape, such as circular, square, rectangular and so on

The support assembly 200 comprises a pair of supporting members 210 formed at the transverse sides of the puzzle board 100, a first extending member 220 connected with an end of the pair of supporting members 210 and a second extending member 230 spaced apart from the first extending member 220 in an extension direction of the supporting member 210 and connected with the other end of the pair of supporting members 210. The pair of supporting members 210 is parallel to each other. The first extending member 220 is parallel to the second extending member 230.

Each of the supporting member 210 includes an upper part 4, a lower part 5 spaced apart from the upper part 4, and a middle part 6 connected the upper and lower parts 4, 5. It's optional that the lower part 5 can be omitted. Each of the supporting member 210 further comprises a top wall 211 40 arranged on the upper part 4 and connected to the puzzle board 100, a partition wall 212 arranged on the middle part 6 and extending from the middle of the top wall 211 and a bottom wall 217 arranged on the lower part 5, spaced apart from the top wall 211 and connected with the partition wall 45 212. The top wall 211 includes a first end 201 and second end 202 opposite to the first end 201. Each of the supporting member 210 further includes a first side wall 213a arranged on the middle part 6 and connected to the first end 201 of the top wall 211, the bottom wall 217 and the first extending 50 member 220, a first abutting portion 214a arranged on the upper part 4, connected to the top wall 211 and a side of the first side wall 213a adjacent to the first extending member 220 and abutting against the first extending member 220, a first engaging portion 215a protruding from the first abutting 55 portion 214a in a direction away from the first side wall 213a and engaged with the first extending member 220, a second side wall 213b arranged on the middle part 6 and connected to the second end 202 of the top wall 211, the bottom wall 217 and the second extending member 230, a 60 second abutting portion 214b arranged on the upper part 4 and connected to the top wall 211 and a side of the second side wall 213b and abutting against the second extending member 230, and a second engaging portion 215b protruding from the second abutting portion 214b in a direction 65 away from the second side wall 213b and engaged with the second extending member 230. The first abutting portion

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214a, the first engaging portion 215a, and the first side wall 213a are integrated with each other to form a one-piece structure. The top wall 211, the bottom wall 217, the first side wall 213a, the second side wall 213b, and the partition wall 212 cooperatively comprise two openings 201, and a corresponding one of the puzzle drawers 300 is exposed outside the receiving space 3 through the corresponding opening 201.

In this embodiment, each of the supporting member 210 is a monolithic structure. The partition wall 212 is integral with the top wall 211. The first side wall 213a and the second side wall **213***b* is integral with the top wall **211**. The bottom wall 217 is integral with the partition wall 212, the first side wall 213a, and the second side wall 213b. Further, the first abutting portion 214a, the first engaging portion 215a, and the first side wall 213a are integrated with each other to form a one-piece structure. The second abutting portion 214b, the second engaging portion 215b, and the second side wall 213b are integrated with each other to form a one-piece structure. That is, each of the supporting member 210 is a one-piece structure, and is not a laminated multi-layer structure, which makes the assembling process much easier, the service life of the device is increased, the support force applied on the puzzle plate 120 is increased, thereby greatly reducing material cost and assembly cost. Particularly, each of the supporting member 210 is a one-piece of plastic. The partition wall 212 and the top wall 211 are manufactured by injection molding, thereby forming an integral unit and placing the partition wall 212 precisely at specific location. There is no need to place and adjust the partition wall 212 precisely at specific location. So, it simplifies the manufacturing process of the board assembly 2. It's optional that at least one of the first side wall 213a and the second side wall 213b is integral with the top wall 211, which makes the 35 assembling process much easier. The bottom wall 217 is integral with at least one of the partition wall 212, the first side wall 213a, or the second side wall 213b. In an alternative embodiment, the bottom wall, the first side wall, and the second side wall can be omitted. The partition wall 212 is integral with the top wall 211 for forming the pair of openings 201 communicated with the receiving space 3.

Referring to FIGS. 19-24, in another mode of a board assembly 2' of a puzzle platform 1', the board assembly 2' is a monolithic structure. A puzzle plate 120' and a support assembly 200' are manufactured by injection molding, thereby forming an integral unit, improving the mechanical strength of the board assembly 2' and reducing the assembly cost. Particularly, a puzzle plate 120', a first extending member 220', a second extending member 230', a top wall 211', a first side wall 213a', a second side wall 213b', and a partition wall 212' are integrated with each other to form the monolithic structure of the board assembly 2', which further reduces assembly cost and improves the mechanical strength of the board assembly 2'. The first extending member 220' and the second extending member 230' is integral with the top wall 211' to form a one-piece structure. Further, the first extending member 220' and the second extending member 230' is integral with the pair of the supporting member 210'. The first extending member 220' and the second extending member 230' is substantially strip-shaped, respectively. It's optional that at least one of the first extending member 220' and the second extending member 230' is integral with a corresponding one of the first side wall 213a' or second side wall 213b' to form a one-piece structure.

The support assembly 200' of the board assembly 2 'further comprises a plurality of reinforcing ribs 140' with different pattern integrally extended from the puzzle plate

120' to solve the problem of the distortion or deformation of the board assembly 2', a plurality of reinforcing members 240' integrally extended from the puzzle plate 120' for fixing puzzle drawers 300', and a plurality of coupling members 25' integrally extended from the puzzle plate 120' for fixing a 5 base 600'. The reinforcing member 240' comprises a plurality of limiting bars 244' and the puzzle drawers 300' comprises a plurality of limiting groove 300a' matching with the limiting bar 244', so that the puzzle drawers 300' are easily and smoothly actuated to slide in-and-out of a receiving 10 space 3' through the openings 201'. Preferably, the reinforcing member 240' further comprises a plurality of limiting openings 245' adjacent to the corresponding limiting bar 244' for providing the limiting bars 244' with good elasticity.

The coupling members 25' comprises three first groups 15 251' extending along the longitudinal direction X and at least one second group 252' extending along the lateral direction Y, thereby fixing the base 600' on the puzzle plate 120' firmly. The three first groups 251' have a same structure to another and spaced apart from another. Each of the first 20 groups 251' comprises a plurality of longitudinal members 2511' intervally and integrally extended from the puzzle plate 120'. The second group 252' comprises a plurality of lateral members 2521' intervally and integrally extended from the puzzle plate 120. However, the amount of the first 25 groups 251' is not limited or restricted to three, and according to different desires, amount of the first groups 251' can be various. The number of the second group 252' is not limited either one or two. The first groups 251' cooperate with the second group 252' for stabilizing and balancing the 30 fixation of the base 600'.

Each of the coupling members 25' has a coupling slot 253' formed thereon to detachably couple at the base 600' by inserting screws 254' through the corresponding coupling slot 253' to the base 600'. It is worth mentioning that a 35 plurality of screw holes 601' formed at the base 600', such that the screws 254' can engage with the screw holes 601' through the corresponding coupling slot 253' to couple the base 600' at the puzzle plate 120'. Referring to FIG. 22, the base 600' is completely received in an inner periphery of the 40 support assembly 200' and do not expose from the openings 201'. It's optional that the base 600' can be omitted and the rotating assembly 500' is directly attached on the support assembly 200'.

Turning back to FIGS. 1-18, the first extending member 45 220 comprises a first engaging frame 221, a first clamping structure 222 extending from the first engaging frame 221 configured to fix the fixing portion 140 of the puzzle plate 120 cooperatively with the first engaging frame 221, and a first fixing structure 227 extending from the first engaging 50 frame 221 for fixing the base 600. The first engaging frame 221 includes a first upper fixing wall 2211 supporting a bottom of the fixing potion 140, a first lower fixing wall 2212 spaced apart from the first upper fixing wall 2211 and opposite to the first upper fixing wall 2211, a first inner wall 55 2213 connected the first upper fixing wall 2211 and the first lower fixing wall 2212, and a first outer wall 2214 connected the first upper fixing wall 2211 and the first lower fixing wall 2212. The first engaging frame 221 further includes a first engaging groove 225 surrounded by the first upper fixing 60 wall 2211 together with the first lower fixing wall 2212, the first inner wall 2213 and the first outer wall 2214 for being engaged with the first engaging portion 215a of the supporting member 210. In this embodiment, each of the supporting member 210 is detachably inserted into the first 65 extending member 220 and the second extending member 230. The first upper fixing wall 2211 is closer to a center of

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the puzzle board 100 than the first inner wall 2213 for fixing the puzzle board 100 firmly. The first lower fixing wall 2212 is closer to a center of the puzzle board 100 than the first inner wall 2213 for fixing the base 600 firmly.

The first extending member 220 and the extending member 230 further comprises at least one third guiding rail 223 at a side adjacent to the one of the puzzle drawers 300 and humps 224 protrudes from the first upper fixing wall 2211 of the first engaging frame 221 and the second upper fixing wall 2311 of the second engaging frame 231, respectively. The puzzle plate 120 is rested on the humps 224 and in contact with the first clamping structure 222 and the second clamping structure 232. For example, as shown in FIG. 8, the first extending member 220 includes the first upper fixing wall 2211, a first fixing slot 2224 and a receiving slot 2213a. The first fixing slot 2224 and the receiving slot 2213a are substantially parallel to each other and are located respectively at two sides of the first upper fixing wall 2211.

The first clamping structure 222 extends from the first upper fixing wall 2211 for fixing the fixing portion 140 of the puzzle plate 120 cooperatively with the first upper fixing wall 2211 of the first engaging frame 221. The first clamping structure 222 comprises a first clamping wall 2221 extends from the first upper fixing wall 2211 and connected to the first outer wall 2214, a second clamping wall 2222 connected to the first clamping wall 2221 and spaced apart from the first upper fixing wall 2211 of the first engaging frame 221, and a third clamping wall 2223 bent from the second clamping wall 2222 in a direction close to the first upper fixing wall 2211 of the first engaging frame 221 for forming a first fixing space 2224 together with the first upper fixing wall 2211, the first clamping wall 2221 and second clamping wall 2222. The fixing portion 140 of the puzzle plate 120 is sandwiched between the third clamping wall 2223 and the first upper fixing wall 2211 of the first engaging frame 221 and embedded in the first fixing space 2224, so that the puzzle plate 120 is fixedly arranged inside the support assembly 200.

The second extending member 230 comprises a second engaging frame 231, a second clamping structure 232 extending from the second engaging frame 231 configured to fix the fixing portion 140 of the puzzle plate 120 cooperatively with the second engaging frame 231, and a second fixing structure 237 extending from the second engaging frame 231 for fixing the base 600. The second engaging frame 231 includes a second upper fixing wall 2311 supporting a bottom of the fixing potion 140, a second lower fixing wall 2312 spaced apart from the second upper fixing wall 2311 and opposite to the second upper fixing wall 2311, a second inner wall 2313 connected the second upper fixing wall 2311 and the second lower fixing wall 2312, and a second outer wall 2314 connected the second upper fixing wall 2311 and the second lower fixing wall 2312. The second engaging frame 231 further includes a second engaging groove 226 surrounded by the second upper fixing wall 2311 together with the second lower fixing wall 2312, the second inner wall 2313 and the second outer wall 2314 for being engaged with the second engaging portion 215b. In this embodiment, each of the supporting member 210 is detachably inserted into the first extending member 220 and the second extending member 230. The second upper fixing wall 2311 is closer to a center of the puzzle board 100 than the second inner wall 2313 for fixing the puzzle board 100 firmly. The second lower fixing wall 2312 is closer to a center of the puzzle board 100 than the second inner wall 2313 for fixing the base 600 firmly.

It's optional that the first abutting portion **214***a* and the second abutting portion **214***b* can be omitted. A first engaging portion **215***a* extends from the first side wall **213***a* for being engaged with the first engaging groove **225** of the first extending member **220**. The second engaging portion **215***b* extending from the second side wall **213***b* for being with the second engaging groove **226** of the second extending member **230**.

The second clamping structure 232 extends from the second upper fixing wall 2311 for fixing the fixing portion 10 140 of the puzzle plate 120 cooperatively with the second upper fixing wall 2311 of the second engaging frame 231. The second clamping structure 232 comprises a fourth clamping wall 2321 connected to the second upper fixing wall 2311 of the second engaging frame 231, a fifth clamp- 15 ing wall 2322 connected to the fourth clamping wall 2321 and spaced apart from the second upper fixing wall 2311 of the second engaging frame 231, and a sixth clamping wall 2323 bent from the fifth clamping wall 2322 in a direction close to the second upper fixing wall 2311 of the second 20 engaging frame 231 for forming a second fixing space 2324 together with the fourth clamping wall 2321 and the fifth clamping wall 2322. The fixing portion 140 of the puzzle plate 120 is sandwiched between the sixth clamping wall 2323 and the second upper fixing wall 2311 of the second 25 engaging frame 231 and received in the second fixing space 2324.

Referring to FIGS. 6-14, a periphery of the first abutting portion 214a abuts against peripheries the first clamping structure 222 and the first upper fixing wall 2211 of the first 30 engaging frame 221, directly. A periphery of the second abutting portion 214b abuts against peripheries the second clamping structure 232 and the second upper fixing wall 2311 of the second engaging frame 231, directly. The first engaging portion 215a is detachably inserted into the first 35 engaging groove 225 of the first engaging frame 221 and is not exposed from the supporting member 210 and the first extending member 220. An outer wall of the first engaging portion 215a is engaged with an inner wall of the first engaging frame 221. The second engaging portion 215b is 40 detachably inserted into the second engaging groove 226 of the second engaging frame 231 and is not exposed from the supporting member 210 and the second extending member **230**. An outer wall of the second engaging portion 215b is engaged with an inner wall of the second engaging frame 45 231.

The support assembly 200 further comprises a reinforcing member 240 disposed below the puzzle board 100 and located between the first extending member 220 and the second extending member 230. When assembled, the partition wall 212 is engaged with the reinforcing member 240 to divide the receiving space 3 into drawer cavities 301. The drawer cavities 301 are in one-to-one correspondence with the puzzle drawers 300 and configured to at least partially receive the puzzle drawers 300. It will be understood that in 55 some embodiments, the reinforcing member 240 can be omitted.

The board assembly 2 has four puzzle drawers 300 received in the corresponding drawer cavity 301. The storing capacity of drawers vary as per varying sizes of the puzzle 60 pieces 10. In this embodiment, the support assembly 200 is configured not only for improving the structural strength of the board assembly 2, but also for forming the drawer cavities 301 together with the puzzle plate 120. The four puzzle drawers 300 are formed at the transverse sides of the 65 puzzle board 100 respectively. Particularly, a first puzzle drawer 302 and a second puzzle drawer 303 are spacedly

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formed at each of the transverse sides of the puzzle board 100. A third puzzle drawer 304 and a fourth puzzle drawer 305 are spacedly formed at each of the other transverse sides of the puzzle board 100. In other words, two corresponding puzzle drawers 300 are slidably coupled at each of the transverse sides of the puzzle board 100. Therefore, four puzzle drawers 300 are slidably coupled at the transverse sides of the puzzle board 100. It is worth mentioning that each puzzle drawer 300 is independently actuated to slide in-and-out of the corresponding drawer cavity 301 through the corresponding the opening 201. Since the puzzle drawers 300 are slidably coupled at the transverse sides of the puzzle board 100, each puzzle drawer 300 is relatively long enough and each drawer cavity 301 is deep enough to retain the puzzle drawer 300 therein so as to prevent the puzzle drawer 300 being slid out of the drawer cavity 301 accidentally or unintentionally. Accordingly, a length of each puzzle drawer is slightly smaller than half of the length of the puzzle board between the transverse sides thereof.

Each of the puzzle drawers 300 comprises a drawer body 310 and at least one tab 320 extending from an end of the drawer body 310. Each of the puzzle drawers 300 is switchable between an extending state in which the drawer body 310 of each puzzle drawer 300 extends out of the drawer cavity 301 and an accommodating state in which the drawer body 310 of each puzzle drawer 300 is received in the drawer cavity 301. The board assembly 2 further comprises recesses 2130 arranged on the first side wall 213a, the second side wall 213b and the partition wall 212, respectively. When the puzzle drawer 300 is in the accommodating state, the tab 320 of the puzzle drawer 300 abuts against the recess 2130. Referring to FIG. 10, in order to support the puzzle drawers 300 and actuate the puzzle drawers 300 easily and smoothly, the reinforcing member 240 comprises a first guiding rail 242 adjacent to the first and third puzzle drawers 302, 304 and a second guiding rail 243 adjacent to the second and fourth puzzle drawers 303, 305.

Referring to FIGS. 6-10, the reinforcing member 240 comprises a reinforcing frame 241 having a reinforcing groove 2411 engaged with each of the partition wall 212. The first guiding rail 242 and the second guiding rail 243 are disposed at two opposite sides of the reinforcing member 240. The supporting member 210 further comprises a first inserting portion 216 disposed at a side of the partition wall 212 facing the reinforcing member 240, and the inserting portion 216 is detachably inserted into the reinforcing groove 2411 of the reinforcing member 240.

Each of the supporting member 210 further comprises an upper channel 219 formed continuously along an inner periphery 20 thereof and provided on the upper part 4, which the upper channel 219 is adapted to cooperate with the first fixing space 2224 and the second fixing space 2324 to fix the puzzle board 100 firmly. Accordingly, each of the supporting member 210 may be installed about the puzzle board 100 by inserting the fixing portion 140 within the upper channel 219. The inner periphery 20 of each of the supporting member 210 comprises a lower inner periphery 21 disposed below the puzzle board 100 and an upper inner periphery 22 spaced apart from the lower inner periphery 21. The lower inner periphery 21 of each of the supporting member 210 is closer to a center of the puzzle board 100 than the upper inner periphery 22 of each of the supporting member 210 for fixing the puzzle board 100 firmly.

The top wall **211** is adapted to cooperated with the first and second abutting portions **214***a*, **214***b* to form the upper part **4**. The upper channel **219** is arranged on the upper part **4**. The first inserting portion **216** is adapted to cooperated

with the first and second side walls 213a, 213b, and the first and second engaging portion 215a, 215b to form the middle part 5. The lower part 6 has the same structure as the upper part 4. The bottom wall 217 is arranged on the lower part 6. The lower part 6 further comprises a lower channel 217b to 5 receive and fix the base 600 firmly.

In this embodiment, the board assembly 2 comprises a complementary conformation provided between each of the supporting members 210, the first extending member 220 and the second extending member 230 for fixing each of the supporting members 210 on the first extending member 220 and the second extending member 230 firmly. Optionally, the engaging portions 215a, 215b are arranged on the first extending member 220 and the second extending member 230 and the engaging grooves 225, 226 are arranged on each 15 of the supporting member 210, thereby each of the supporting members 210 is detachably inserted into the first extending member 220 and the second extending member 230.

Referring to FIGS. 25-29, in a third mode of a board assembly 2" of a puzzle platform 1", a supporting member 20 210" comprises an inserting groove 218" disposed at a side of a partition wall 212" facing a reinforcing member 240", and the reinforcing member 240" comprises a second inserting portion 246" extending from a reinforcing frame 241" and detachably inserted into the inserting groove 218". 25 Comparing with the first mode of board assembly 2, the reinforcing groove 2411 can be replaced with the second inserting portion 246" and the first inserting portion 216 can be replaced with the inserting groove 218".

The support assembly 200" further comprises a first 30 stopping element 242a" disposed on the reinforcing member 240" and facing puzzle drawers 300". Particularly, the first stopping element 242a" disposed on the first guiding rail 242" and second guiding rail 243". When the puzzle drawer 300" is in the accommodating state, the puzzle drawers 300" abut against the first stopping element 242a". Further, A first extending member 220" and a second extending member 230" further comprises a second stopping elements 242b" facing the puzzle drawers 300". When the puzzle drawer 300" is in the accommodating state, the puzzle drawers 300" abut against the second stopping element 242b". That is, the first and second stopping elements 242a", 242b" are configured to limit the displacements of the corresponding puzzle drawers 300".

Turning back to FIGS. 1-18, the bracket 400 is detachably 45 connected to the support assembly 200. The bracket 400 comprises a notch 410 facing the support assembly 200 and the support assembly 200 is partially received in the notch 410.

The rotating assembly 500 comprises a first moving 50 member 501 coupled at board assembly 2 and a second moving member 502 rotatably coupled to the first moving member 501. It is worth mentioning that the rotating assembly 500 is preferred to be coupled coaxially with a center of gravity of the board assembly 2, for example at a center 55 portion of the board assembly 2, such that the board assembly 2 can be moved on the playing place in a balancing manner. In this embodiment, the rotating assembly 500 is detachably coupled at the base 600 and disposed apart from the bracket 400.

According to this embodiment of the present invention, the board assembly 2 is adapted for being self-rotated  $360^\circ$  on the playing place via a rotation movement between the first and second moving members 501, 502. In other words, the user is able to selectively rotate the board assembly 2 65 from one longitudinal side to another opposed longitudinal side or to any one of the shorter transverse sides without

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walking around the board assembly 2. For example, the user is able to assemble one puzzle piece 10 at one side of the board assembly 2 and to rotate the board assembly 2 at 180° in order to assembly another puzzle piece 10 at an opposed side of the board assembly 2, so as to speed up the assembling time of the puzzle pieces 10. It should be understood that a rotating angle of the puzzle board 100 can be adjusted to be smaller than 360°.

The base 600 is assembled with the support assembly 200 for supporting the board assembly 2 on the playing place such as a table surface, a wall surface, a floor surface, and the like or even a support frame for supporting the board assembly 2 on ground. The base 600 is generally the type of one-piece with a whole entirety platy shape and have a rectangular shape for matching and covering the support assembly 200. The base 600 disposed below the puzzle drawers 300 and a periphery of the base 600 is clamped by the support assembly 200. It will be understood that in some embodiments, the guiding rails 242, 243, 223 can be omitted and the bottom of each of the puzzle drawers 32 is mounted on the base 600 and slid on the base 600 directly. So, the base is configured not only holding the puzzle drawer and preventing the puzzle drawer from falling off the supporting portion, but also for allowing each of the puzzle drawer to be slid in-and-out of the corresponding drawer cavity. The base 600 is stacked on the support assembly 200 by suitable chemical or mechanical methods such as but not limited to glue or wood screws. Optionally, a base is integral with at least a part of the support assembly 200 as a whole for forming a stable and reliable structure. For example, the base is integral with the bottom wall 217 of the supporting member 210.

The puzzle board 100 and/or the support assembly 200 are/is made of plastic, wood, or metal. When the support assembly 200 is made of plastic by molding, the partition wall 212 is integral with the top wall 211, such that each of the supporting member 210 is a monolithic structure and is detachably inserted into the corresponding extending members 220, 230, which makes the assembling process much easier, the service life of the device is increased, the support force applied on the puzzle plate is increased, thereby greatly reducing material cost and assembly cost. It's optional that each of the supporting member 210 are integrated with the corresponding extending members 220, 230 to form a one-piece structure. Particularly, the puzzle board 100 is preferred to be integrally molded on the support assembly 200 as a whole.

When the first extending member 220 and/or the second extending member 230 are/is made of metal by stamping, the first and second extending member 220, 230 are preferred to be integrally molded as a whole, respectively. If the first extending member 220 and/or the second extending member 230 are/is made of aluminum, the weight of the puzzle platform 1 can be reduced. If first extending member 220 and/or the second extending member 230 are/is made of stainless steel or tempered steel, the structural strength of the puzzle platform 1 can be improved. Meanwhile, the puzzle board 100 and each of the supporting member 210 are/is made of plastic by molding. Each of the supporting member 210 is a monolithic structure and is detachably inserted into the corresponding extending members 220, 230. If the first extending member 220 is made of plastic or wood, comparing with metal, the manufacturing cost of the puzzle platform 1 can be reduced. The second extending member 230 has the same structure and material as the first extending member 22.

The first extending member 220 and the second extending member 230 are detachably inserted into both ends of the supporting member 210 to form a stable frame structure. The puzzle board 1 are set to be mutually removable and installable, such a setup can facilitate the transportation of 5 the puzzle platform 1 in a disassembled form, and be installed by the user to form a product after receipt of the goods, thereby saving the space occupied by the puzzle platform 1 in the transportation process, and thus saving the transportation cost; furthermore, the user can disassemble 10 the puzzle platform 1 provided by the present embodiment when it is not in use, thereby saving the space occupied by the puzzle platform 1.

In another aspect, the support assembly 200 are manufactured by injection molding to form a one-piece structure 15 for improving the mechanical strength of the board assembly 2 and reducing assembly cost. Optionally, each of the supporting member may also be formed wholly or partially integrally, thereby providing structural stability of the board assembly 2.

In the other aspect, the puzzle plate 120 is integral with the support assembly 200 to form a one-piece structure, thereby improving the mechanical strength of the board assembly 2 and reducing assembly cost.

It's optional that each of the pair of extending members 25 comprises a first connection portion detachably inserted with a corresponding one of the side walls and a second connection portion detachably inserted with the first connection portion.

invention have been fully and effectively accomplished. The embodiments have been shown and described for the purposes of illustrating the functional and structural principles of the present invention and is subject to change without departure from such principles. Therefore, this invention 35 includes all modifications encompassed within the spirit and scope of the following claims.

What is claimed is:

- 1. A puzzle platform, comprising:
- a puzzle plate, having: a playing portion for carrying 40 puzzle pieces; and a fixing portion;
- a support assembly, configured to mount and support the puzzle plate; and
- at least one drawer, configured to store the puzzle pieces;
- a rotating assembly, connected to a side of the puzzle platform away from the puzzle plate;

wherein the rotating assembly is configured to enable the puzzle platform to self-rotate for 360° on a placement plane;

- wherein, the support assembly comprises a first extending 50 member and a second extending member that is substantially parallel to and is spaced apart from the first extending member; each of the first extending member and the second extending member comprises a first fixing wall, a first fixing slot and a receiving slot; the 55 first fixing slot and the receiving slot are substantially parallel to each other and are located respectively at two sides of the first fixing wall; the fixing portion of the puzzle plate is fixedly and un-detachably received in the first fixing slot;
- wherein an edge of the at least one drawer is slidably received in the receiving slot; and the at least one drawer is slidable to be exposed out of or received in the puzzle platform.
- 2. A puzzle platform, comprising:
- a puzzle plate, having: a playing portion for carrying puzzle pieces; and a fixing portion; and

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- a support assembly, configured to mount and support the puzzle plate;
- wherein, the support assembly comprises a first extending member and a second extending member that is substantially parallel to and is spaced apart from the first extending member; each of the first extending member and the second extending member comprises a first fixing slot and a second fixing slot; the first fixing slot and the second fixing slot are substantially parallel to each other and are spaced apart from each other; the fixing portion of the puzzle plate is fixedly received in the first fixing slot;
- wherein, the support assembly further comprises two support members, the two support members are substantially parallel to and spaced apart from each other, each of the two support members is connected between an end of the first extending member and an end of the second extending member;

each support member comprises:

- an upper part, receiving the puzzle plate:
- a middle part, extending downwardly from the upper part and supporting the puzzle plate cooperatively with the upper part;
- wherein, the middle part comprises: a first side wall connected to the first extending member; a second side wall connected to the second extending member; and a partition wall, connected to the upper part and spaced from the first side wall and the second side wall.
- 3. The puzzle platform according to claim 2, wherein, It will thus be seen that the objects of the present 30 each support member comprises a first support end and a second support end opposite to the first support end, the first support end is connected to the end of the first extending member; the second support end is connected to the end of the second extending member.
  - 4. The puzzle platform according to claim 3, wherein, each of the first support end and the second support end is arranged with a connection member, each of the end of the first extending member and the end of the second extending member defines an engaging space; the connection is inserted into the respective engaging space to enable the first support end to be connected to the end of the first extending member and to enable the second support end to be connected to the end of the second extending member.
  - 5. The puzzle platform according to claim 4, wherein, 45 each extending member comprises:
    - an outer wall:
    - an upper fixing wall, extending from the outer wall;
    - a lower fixing wall extending from the outer wall and spaced from the upper fixing wall; and
    - an inner wall, connected to the upper fixing wall and the lower fixing wall and being spaced from the outer wall;
    - wherein, the outer wall, the upper fixing wall, the lower fixing wall, and the inner wall cooperatively define the engaging space.
    - 6. The puzzle platform according to claim 5, wherein, each of the first support end and the second support end further comprises an abutting portion, the connection member is arranged on the abutting portion; the abutting portion abuts against peripheries of the outer wall, the upper fixing wall, the lower fixing wall, and the inner wall.
    - 7. The puzzle platform according to claim 6, wherein, each extending support member further comprises:
      - a first upper clamping wall, extending from the upper fixing wall;
      - a second upper clamping wall, connected to the first upper clamping wall and spaced from the upper fixing wall;

- a third upper clamping wall, connected to a side of the second upper clamping wall away from the first upper clamping wall and extending towards the upper fixing wall:
- wherein the upper fixing wall, the first upper clamping 5 wall, the second upper clamping wall, and the third upper clamping wall cooperatively define the first fixing slot.
- **8**. The puzzle platform according to claim **6**, wherein, each extending support member further comprises:
  - a first lower clamping wall, extending from the lower fixing wall;
  - a second lower clamping wall, connected to the first lower clamping wall and spaced from the lower fixing wall; and
  - a third lower clamping wall, connected to a side of the second lower clamping wall away from the first lower clamping wall and extending towards the lower fixing wall;
  - wherein the lower fixing wall, the first lower clamping 20 wall, the second lower clamping wall, and the third lower clamping wall cooperatively define the second fixing slot.
- 9. The puzzle platform according to claim 8, wherein the abutting portion abuts against edges of the first lower clamping wall, the second lower clamping wall, and the third lower clamping wall.
- 10. The puzzle platform according to claim 2, further comprising a reinforcing member and a base plate, wherein, the reinforcing member is disposed between the puzzle plate 30 and the base plate to support the puzzle plate; the support assembly is configured to mount and support the base plate; and an edge of the base plate is fixedly received in the second fixing slot.
- 11. The puzzle platform according to claim 10, wherein, 35 the puzzle platform further comprises the reinforcing member, the reinforcing member is disposed between the puzzle plate and the base plate to support the puzzle plate; and two ends of the reinforcing member are connected to the two support members respectively.
- 12. The puzzle platform according to claim 11, wherein, the partition wall is arranged with an insertion portion, each of the two ends of the reinforcing member defines an insertion slot, and the insertion portion is inserted into the respective insertion slot.
- 13. The puzzle platform according to claim 2, wherein, the support member has a plurality of openings, located in the middle part, wherein the plurality of openings are respectively located between the first side wall and the partition wall and between the partition wall and the second 50 side wall.
- 14. The puzzle platform according to claim 13, wherein, the puzzle plate, the bottom plate, the first extending member, the second extending member, and the reinforcing member cooperatively define a receiving space communi- 55 cating with the plurality of openings.
- 15. The puzzle platform according to claim 13, further comprising a plurality of storage drawers, each of the

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plurality of storage drawers is received in the receiving space through a respective one of the plurality of openings.

- 16. A puzzle platform, comprising:
- a puzzle board, having a playing portion configured for playing a plurality of puzzle pieces thereon;
- a support assembly, configured to mount and support the puzzle board; and
- a rotating assembly, connected to a side of the puzzle platform away from the puzzle board;

wherein the rotating assembly is configured to enable the puzzle platform to self-rotate for 360° on a placement plane;

- wherein, the support assembly comprises: a first extending member; a second extending member that is substantially parallel to and is spaced apart from the first extending member; and two support members that are substantially parallel to each other, wherein, each of the two support members is connected between an end of the first extending member and an end of the second extending member;
- each support member comprises: an upper part and a middle part, wherein the upper part is configured to support the puzzle board; the middle part extends downwardly from a lower side of the upper part;
- the middle part comprises: a first side wall connected to the upper part and the first extending member; a second side wall connected to the upper part and the second extending member; and a partition wall connected to the upper part and spaced from the first side wall and the second side wall.
- 17. The puzzle platform according to claim 16, wherein, the puzzle board further comprises a plurality of connection members, wherein the plurality of connection members comprise: a first set of connection members arranged in a first direction; and a second set of connection members arranged in a second direction, each of the plurality of connection members defines a connection slot.
- 18. The puzzle platform according to claim 17, wherein, a base plate defines a plurality of connection holes corresponding to a plurality of connection slots defined in the plurality of connection members; a plurality of screws are configured to be inserted into the plurality of connection holes and corresponding connection slots to connect the base plate to the puzzle board.
- 19. The puzzle platform according to claim 16, further comprising a reinforcing member, arranged on the puzzle board and connected to the partition wall, wherein the reinforcing member comprises a plurality of limiting ribs and a plurality of limiting slots, wherein, each of the plurality of limiting slots is located near a respective one of the plurality of limiting ribs.
- 20. The puzzle platform according to claim 19, further comprising a drawer, wherein, the drawer defines a plurality of limit grooves corresponding to the plurality of limit ribs to enable the drawer to be mounted to the reinforcing member.

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