outer sides of the door assembly 20 detachably connects the retaining element 60 of the inner wall of the building. Therefore, the board 21 of the outer sides of the door assembly 20 is fixed temporarily.

In another embodiment of the present invention, with reference to Figs. 7 and 8, a difference between the two embodiments of the present invention is that the boards 21A may be glass boards.

Each of the boards 21A further has two mounting assemblies 212. The mounting assemblies 212 are mounted respectively in two ends of the top end surface of the board 21A.

The wheel assemblies 211 are mounted on a top end surface of each of the mounting assemblies 212.

The two clamps 31 are mounted respectively in the two mounting assemblies 212 that are mounted on the boards 21A of the two outer sides of the door assembly 20. The clamps 31 are mounted on a side surface of the mounting assembly 212 ~~that is disposed on~~towards the middle portion of the door assembly 20.

The two positioning wheels 32 are mounted respectively in two ends of a top end surface of the board 21A that is disposed in the middle portion of the door assembly 20. The cord 33 is mounted in the grooves of the two positioning wheels 32, and is clamped by the two clamps 32.

CLAIMS:

1. An interactive sliding-door device mounted in an inner space of a building, the interactive sliding-door device comprising:

a track assembly ~~(10)~~ having

multiple elongated members ~~(11)~~ disposed side by side and mounted on a top end of the inner space of the building; and

multiple positioning blocks ~~(12)~~ arranged in pairs, and each pair of the positioning blocks ~~(12)~~ mounted respectively in two ends of an inside wall of a corresponding elongated member ~~(11)~~; and

a door assembly ~~(20)~~ mounted slidably in the track assembly ~~(10)~~ and having

multiple boards ~~(21)~~ disposed side by side, mounted in the elongated members ~~(11)~~ respectively, and each of the boards ~~(21)~~ having

multiple wheel assemblies ~~(211)~~ mounted slidably inside the elongated members ~~(11)~~, wherein the wheel assemblies ~~(211)~~ are mounted on a top end surface of the board ~~(21)~~ and are detachably mounted in the positioning blocks ~~(12)~~; and

an interacting assembly ~~(30)~~ mounted on the top end surface of the board ~~(21)~~ of the door assembly ~~(20)~~, and connecting the boards ~~(21)~~ together, wherein one of the boards ~~(21)~~ is pushed or pulled to drive the other boards ~~(21)~~ to slide~~.~~;

wherein the multiple elongated members are three elongated members in amount, two of the three elongated members are disposed on two outer sides of the track assembly, and the other one elongated member is disposed on a middle portion of the track assembly; and

the multiple positioning blocks are six positioning blocks in amount, wherein the positioning blocks are arranged in pairs and mounted in the elongated members respectively;

a number of the boards is three, wherein two of the three boards are disposed on two outer sides of the door assembly, and the other one board is disposed on a middle portion of the door assembly; and

each of the boards has

two wheel assemblies mounted on the top end surface of the board, and mounted slidably inside the elongated member; and

the interacting assembly has

two clamps mounted respectively in the two boards disposed on the two outer sides of the door assembly, and mounted respectively in one end of each of the two boards;

two positioning wheels mounted respectively on two ends of the top end surface of the board disposed on the middle portion of the door assembly, wherein each of the positioning wheels has a groove defined annually in an outer surface of the positioning wheel and being parallel to the top end surface of the board; and

a cord mounted in the grooves of the two positioning wheels and clamped by the two clamps.

~~2. The interactive sliding-door device as claimed in claim 1, wherein~~

~~the multiple elongated members (11) are three elongated members (11) in amount, wherein two of the three elongated members (11) are disposed on two outer sides of the track assembly (10), and the other one elongated member (11)~~

~~is disposed on a middle portion of the track assembly (10); and~~

~~the multiple positioning blocks (12) are~~

~~six positioning blocks (12) in amount, wherein the positioning blocks (12) are arranged in pairs and mounted in the elongated members (11) respectively;~~

~~a number of the boards (21) is three, wherein two of the three boards (21) are disposed on two outer sides of the door assembly (20), and the other one board (21) is disposed on a middle portion of the door assembly (20); and~~

~~each of the boards (21) has~~

~~two wheel assemblies (211) mounted on the top end surface of the board (21), and mounted slidably inside the elongated member (11); and~~

~~the interacting assembly (30) has~~

~~two clamps (31) mounted respectively in the two boards (21) disposed on the two outer sides of the door assembly (20), and mounted respectively in one end of each of the two boards (21);~~

~~two positioning wheels (32) mounted respectively on two ends of the top end surface of the board (21) disposed on the middle portion of the door assembly (20), wherein each of the positioning wheels (32) has a groove defined annually in an outer surface of the positioning wheel (32) and being parallel to the top end surface of the board (21); and~~

~~a cord (32) mounted in the grooves of the two positioning wheels (32) and clamped by the two clamps (31).~~

~~3~~2. The interactive sliding-door device as claimed in claim ~~2~~1, wherein each elongated member ~~(11)~~ has

two sliding parts ~~(111)~~ formed on a bottom surface of the elongated member ~~(11)~~, wherein the two sliding parts ~~(111)~~ are disposed opposite each other; and

a slot ~~(112)~~ defined between the two sliding parts ~~(111)~~ in a longitudinal direction of the elongated member ~~(11)~~; and

each positioning block ~~(12)~~ of the track assembly ~~(10)~~ has

an attaching seat ~~(121)~~ mounted in an end of the elongated member ~~(11)~~; and

a holding part ~~(122)~~, wherein one of two ends of the holding part ~~(122)~~ attaches to the attaching seat ~~(121)~~, and the other end is U-shaped extending away from the attaching seat ~~(121)~~;

each wheel assembly ~~(211)~~ of the board ~~(21)~~ has

a base part ~~(2111)~~ mounted on the top end surface of the board ~~(21)~~ and having

a protruding part ~~(2113)~~ formed on and protruding from one of two ends of the base part ~~(2111)~~, and detachably mounted in the U-shaped end of the holding part ~~(122)~~ of the positioning block ~~(12)~~; and

two pairs of rollers ~~(2112)~~ mounted respectively in two side surfaces of the base part ~~(2111)~~, wherein the rollers ~~(2112)~~ of each pair are spaced apart at an interval, and the rollers ~~(2112)~~ are mounted in the sliding part ~~(111)~~ of the elongated member ~~(11)~~; and

a bolt ~~(2110)~~ mounted through the slot ~~(112)~~ of the elongated member ~~(11)~~ and mounted in the base part ~~(2111)~~ by threading.

4~~2~~3. The interactive sliding-door device as claimed in claim ~~2~~1, wherein

the interacting assembly ~~(30)~~ further has

two sliding tracks ~~(34)~~ mounted respectively on a bottom end surface of the two boards ~~(21)~~ disposed on the two outer sides of the door assembly ~~(20)~~; and

two sliding blocks ~~(35)~~ mounted respectively on two side surfaces of a bottom end of the board ~~(21)~~ disposed on the middle portion of the door assembly ~~(20)~~, the two sliding blocks ~~(35)~~ attached respectively to the two sliding tracks ~~(34)~~ mounted on the two boards ~~(21)~~ disposed on the two outer sides of the door assembly ~~(20)~~.

~~5~~4. The interactive sliding-door device as claimed in claim 4~~3~~, further having

two door locks ~~(40)~~ mounted respectively on an outer edge of each of the two boards ~~(21)~~ disposed on the two outer sides of the door assembly ~~(20)~~;

two pairs of door handles ~~(50)~~ mounted respectively on two side surfaces of the two boards ~~(21)~~ disposed on the two outer sides of the door assembly ~~(20)~~; and

two retaining elements ~~(60)~~ mounted respectively on two inner walls of the inner space of the building, and detachably connected to the two door locks ~~(40)~~ respectively.

~~6~~5. The interactive sliding-door device as claimed in claim ~~3~~2, wherein the interacting assembly ~~(30)~~ further has

two sliding tracks ~~(34)~~ mounted respectively in a bottom end surface of each of the two boards ~~(21)~~ disposed on the two outer sides of the door assembly ~~(20)~~; and

two sliding blocks ~~(35)~~ mounted respectively on two side surfaces of the board ~~(21)~~ disposed on the middle portion of the door assembly ~~(20)~~, the sliding blocks ~~(35)~~ attached respectively to the two sliding tracks ~~(34)~~ mounted on the two boards ~~(21)~~ disposed on the two outer sides of the door assembly ~~(20)~~.

~~7~~6. The interactive sliding-door device as claimed in claim 5~~6~~, further having

two door locks ~~(40)~~ mounted respectively on an outer edge of each of the two boards ~~(21)~~ disposed on the two outer sides of the door assembly ~~(20)~~;

two pairs of door handles ~~(50)~~ mounted respectively on two side surfaces of the two boards ~~(21)~~ disposed on the two outer sides of the door assembly ~~(20)~~; and

two retaining elements ~~(60)~~ mounted respectively on two inner walls of the inner space of the building, and detachably connected to the two door locks ~~(40)~~ respectively.

~~8~~7. The interactive sliding-door device as claimed in claim 1, wherein

~~the multiple elongated members (11) are three elongated members (11) in amount, wherein two of the three elongated members (11) are disposed on two outer sides of the track assembly (10), and the other one elongated member (11) is disposed on a middle portion of the track assembly (10); and~~

~~the multiple positioning blocks (12) are six positioning blocks (12) in amount, wherein the positioning blocks (12) are arranged in pairs and mounted in the elongated members (11) respectively;~~

~~a number of the boards (21) are three, wherein two of the three boards (21) are disposed on two outer sides of the door assembly (20), and the other one~~

~~board (21) is disposed on a middle portion of the door assembly (20), wherein each board (21) is a glass board;~~

each of the boards ~~(21)~~is a glass board and has

~~two wheel assemblies (211); and~~

two mounting assemblies ~~(212)~~ mounted respectively on two ends of the top end surface of the board ~~(21)~~, wherein each wheel assembly ~~(211)~~ is mounted on a top end surface of each mounting assembly ~~(212)~~;

~~the interacting assembly (30) has~~

the two clamps ~~(31)~~ mounted respectively in the two mounting assemblies ~~(212)~~ mounted on the two boards ~~(21)~~ disposed on the two outer sides of the door assembly ~~(20)~~ and mounted respectively in one end of each of the two boards ~~(21)~~, wherein each clamp ~~(31)~~ is mounted on a side surface of the mounting assembly ~~(212)~~ disposed on the middle portion of the door assembly ~~(20);~~.

~~two positioning wheels (32) mounted respectively on two ends of the top end surface of the board (21) disposed on the middle portion of the door assembly (20), wherein each of the positioning wheels (32) has a groove defined annually in an outer surface of the positioning wheel and being parallel to the top end surface of the board (21); and~~

~~a cord (32) mounted in the grooves of the two positioning wheels (32) and clamped by the two clamps (31).~~

8~~9~~. The interactive sliding-door device as claimed in claim 8~~7~~, wherein each of the elongated members ~~(11)~~ has

two sliding parts ~~(111)~~ formed on a bottom surface of the elongated

member ~~(11)~~, wherein the two sliding parts ~~(111)~~ are disposed opposite each other; and

a slot ~~(112)~~ defined between the two sliding parts ~~(111)~~ in a longitudinal direction of the elongated member ~~(11)~~; and

each positioning block ~~(12)~~ of the track assembly ~~(10)~~ has

an attaching seat ~~(121)~~ mounted in an end of the elongated member ~~(11)~~; and

a holding part ~~(122)~~, wherein one of two ends of the holding part ~~(122)~~ attaches to the attaching seat ~~(121)~~, and the other end is U-shaped extending away from the attaching seat ~~(121)~~;

each wheel assembly ~~(211)~~ of the board ~~(21)~~ has

a base part ~~(2111)~~ mounted on the top end surface of the board ~~(21)~~ and having

a protruding part ~~(2113)~~ formed on and protruding from one of two ends of the base part ~~(2111)~~, and detachably mounted in the U-shaped end of the holding part ~~(122)~~ of the positioning block ~~(12)~~;

two pairs of rollers ~~(2112)~~ mounted respectively in two side surfaces of the base part ~~(2111)~~, wherein the rollers ~~(2112)~~ of each pair are spaced apart at an interval, and the rollers ~~(2112)~~ are mounted in the sliding part ~~(111)~~ of the elongated member ~~(11)~~; and

a bolt ~~(2110)~~ mounted through the slot ~~(112)~~ of the elongated member ~~(11)~~ and mounted in the base part ~~(2111)~~ by threading.

~~10~~9. The interactive sliding-door device as claimed in claim ~~8~~7, further having

two sliding tracks ~~(34)~~ mounted respectively on a bottom end surface of the two boards ~~(21)~~ disposed on the two outer sides of the door assembly ~~(20)~~; and

two sliding blocks ~~(35)~~ mounted respectively on two side surfaces of a bottom end of the board ~~(21)~~ disposed on the middle portion of the door assembly ~~(20)~~, the two sliding blocks ~~(35)~~ attached respectively to the two sliding tracks ~~(34)~~ mounted on the two boards ~~(21)~~ disposed on the two outer sides of the door assembly ~~(20)~~.

~~11~~10. The interactive sliding-door device as claimed in claim ~~10~~9, further having

two door locks ~~(40)~~ mounted respectively on an outer edge of each of the two boards ~~(21)~~ disposed on the two outer sides of the door assembly ~~(20)~~;

two pairs of door handles ~~(50)~~ mounted respectively on two side surfaces of the two boards ~~(21)~~ disposed on the two outer sides of the door assembly ~~(20)~~; and

two retaining elements ~~(60)~~ mounted respectively on two inner walls of the inner space of the building, and detachably connected to the two door locks ~~(40)~~ respectively.

~~12~~11. The interactive sliding-door device as claimed in claim ~~9~~8, wherein the interacting assembly ~~(30)~~ further has

two sliding tracks ~~(34)~~ mounted respectively on a bottom end surface of each of the two boards ~~(21)~~ disposed on the two outer sides of the door assembly ~~(20)~~; and

two sliding blocks ~~(35)~~ mounted respectively on two side surfaces of a bottom end of the board ~~(21)~~ disposed on the middle portion of the door

assembly ~~(20)~~, the two sliding blocks ~~(35)~~ attached respectively to the two sliding tracks ~~(34)~~ mounted on the two outer boards ~~(21)~~.

~~13~~12. The interactive sliding-door device as claimed in claim ~~12~~11, further having

two door locks ~~(40)~~ mounted respectively on an outer edge of each of the two boards ~~(21)~~ disposed on the two outer sides of the door assembly ~~(20)~~;

two pairs of door handles ~~(50)~~ mounted respectively on two side surfaces of the two boards ~~(21)~~ disposed on the two outer sides of the door assembly ~~(20)~~; and

two retaining elements ~~(60)~~ mounted respectively on two inner walls of the inner space of the building and detachably connected to the two door locks ~~(40)~~ respectively.