

H. JANES.
FOLDING CRIB AND PLAY PEN.
APPLICATION FILED NOV. 5, 1907..

Patented Apr. 12, 1910.

2 SHEETS—SHEET 1.

955,076.

Fig. 1.

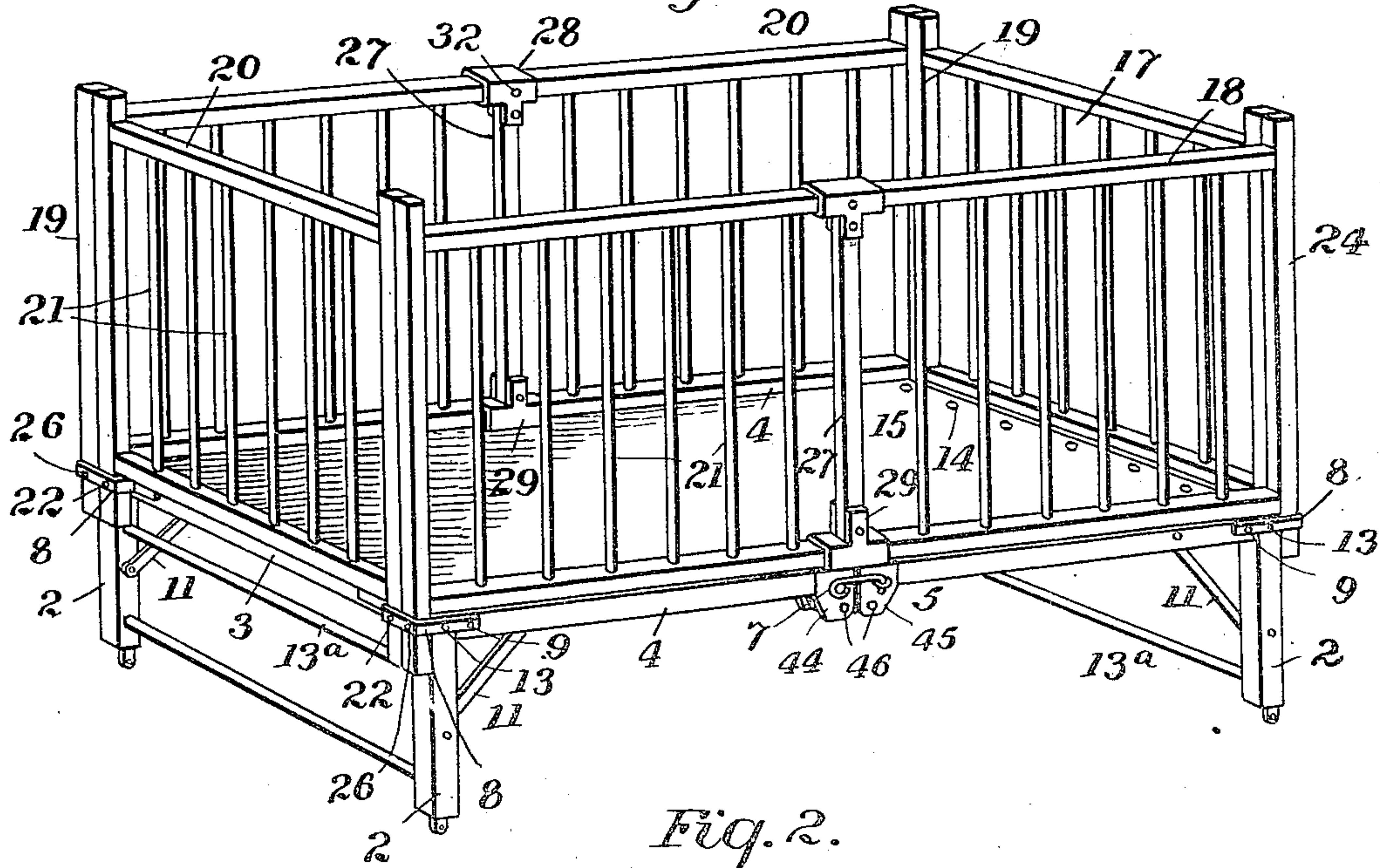
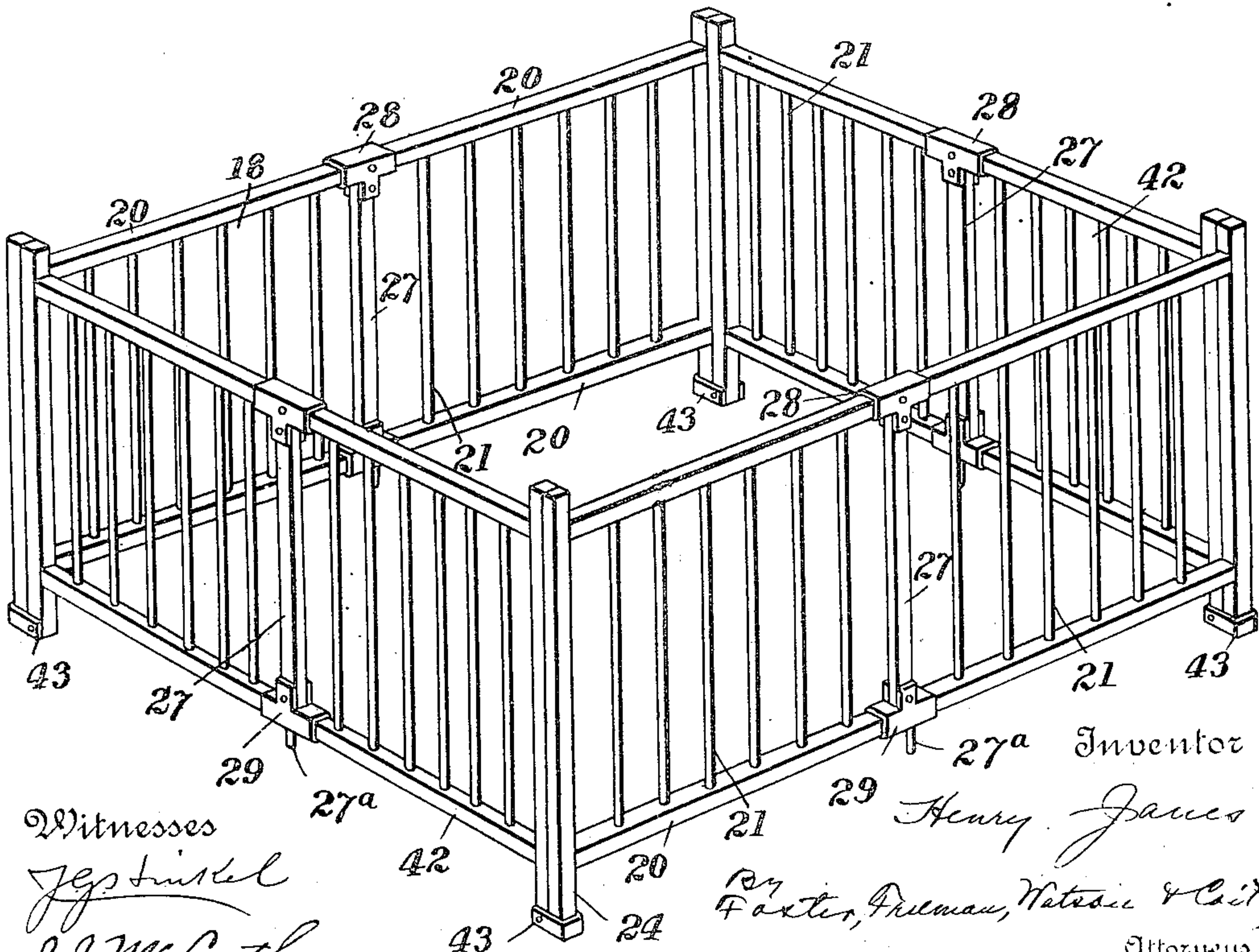


Fig. 2.



Witnesses

J. J. McCarthy
J. J. McCarthy

Inventor

Henry James

By Foster, Freeman, Watson & Co.
Attorneys

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2 SHEETS—SHEET 2.

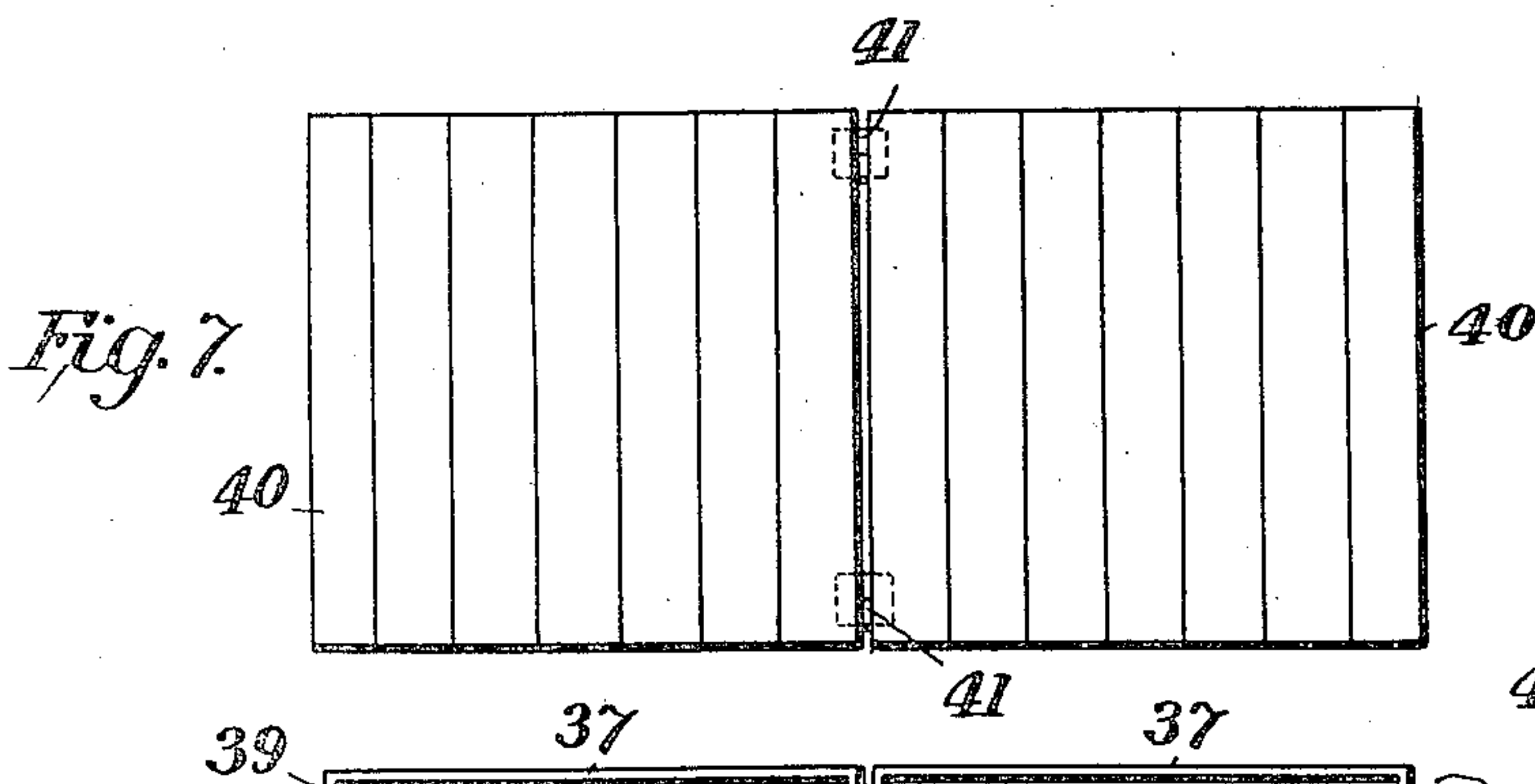
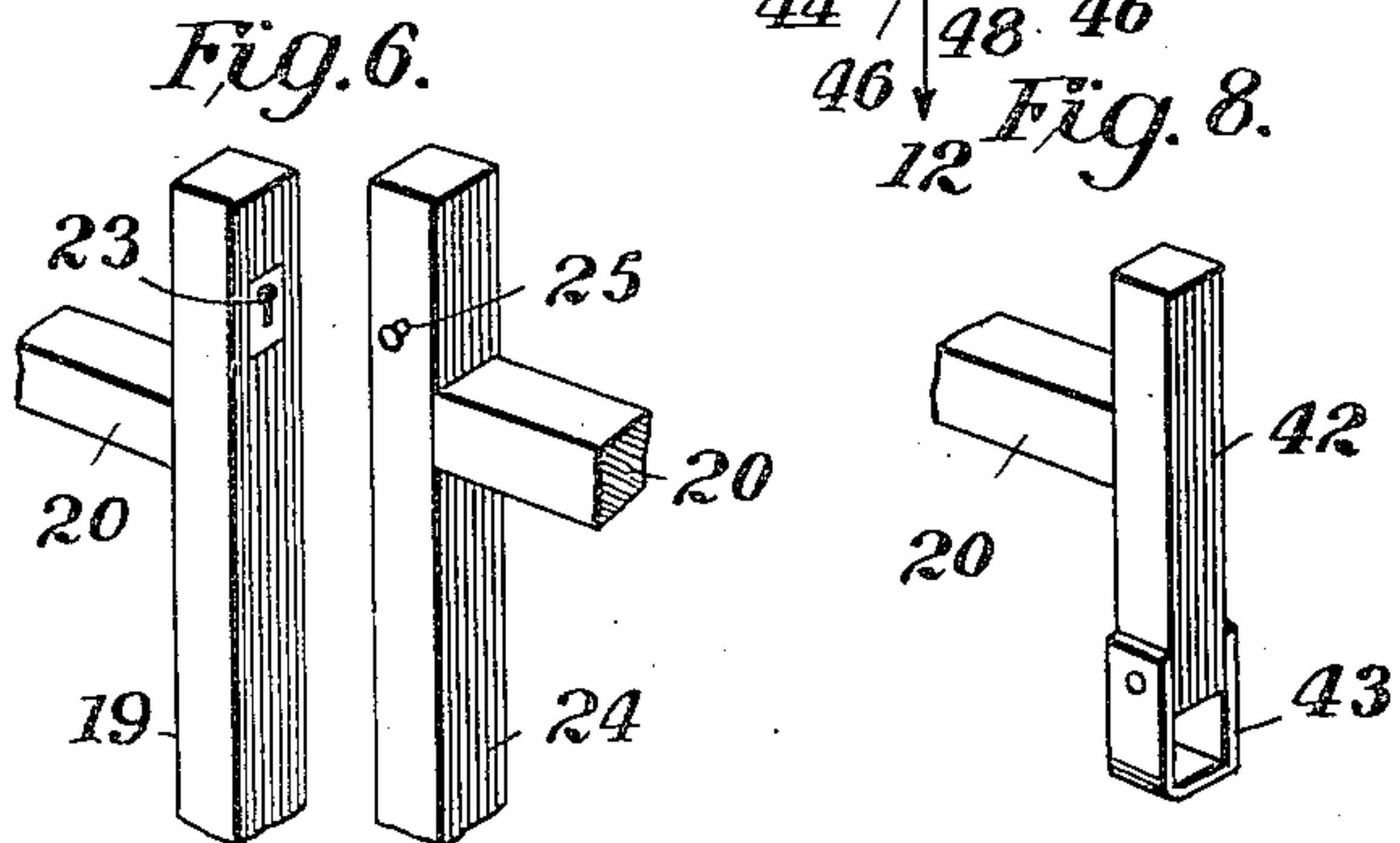
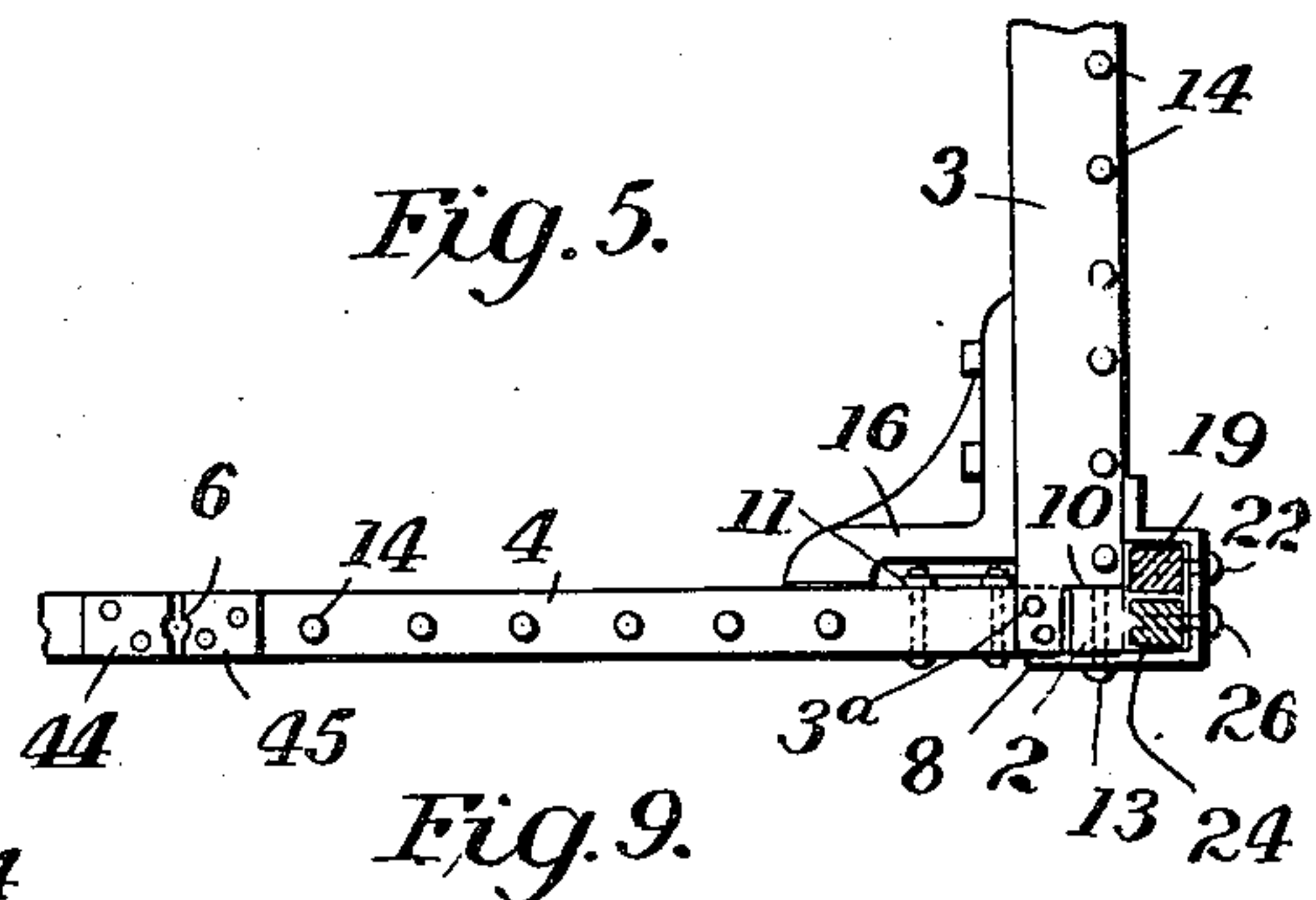
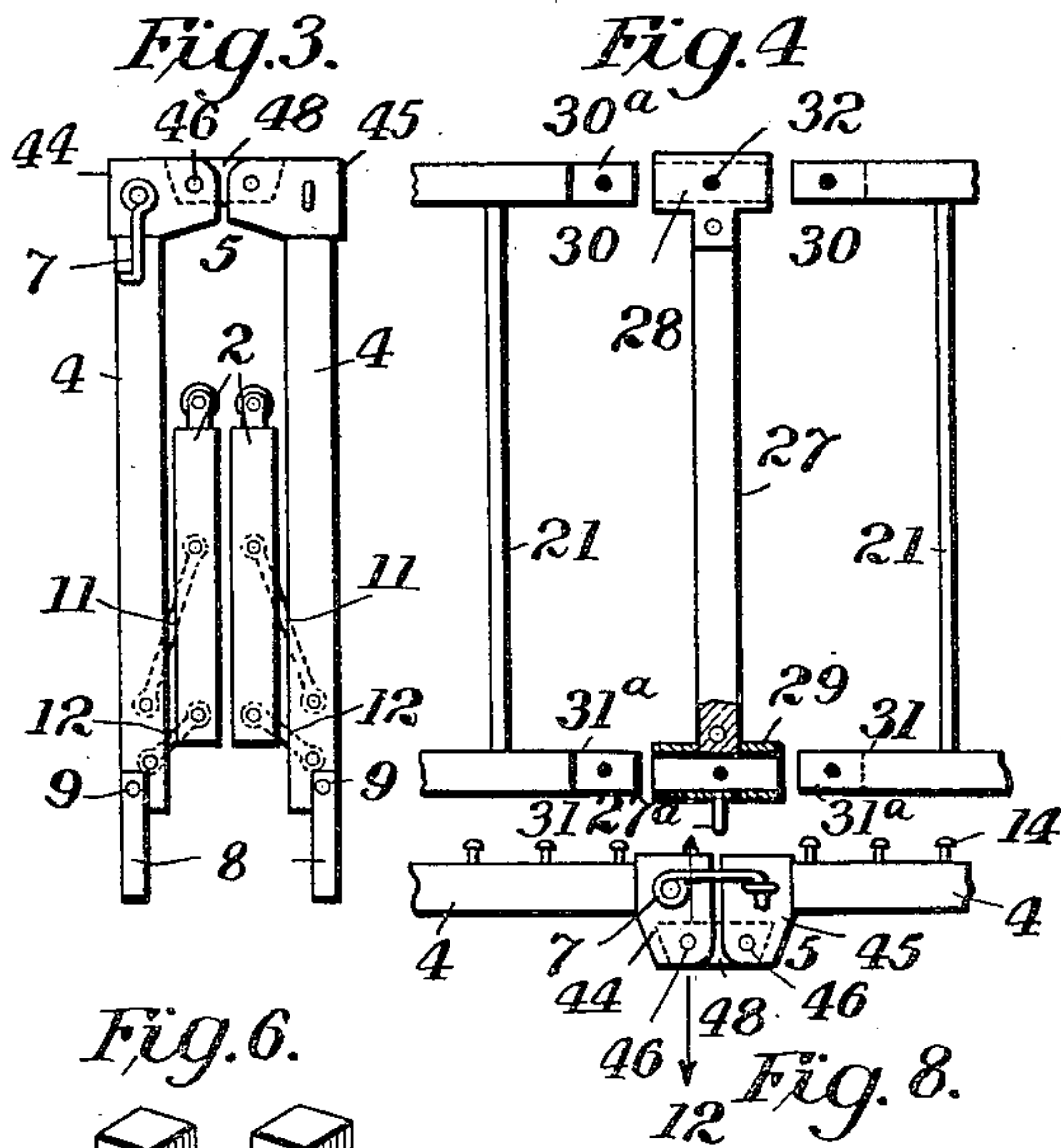


Fig. 11.

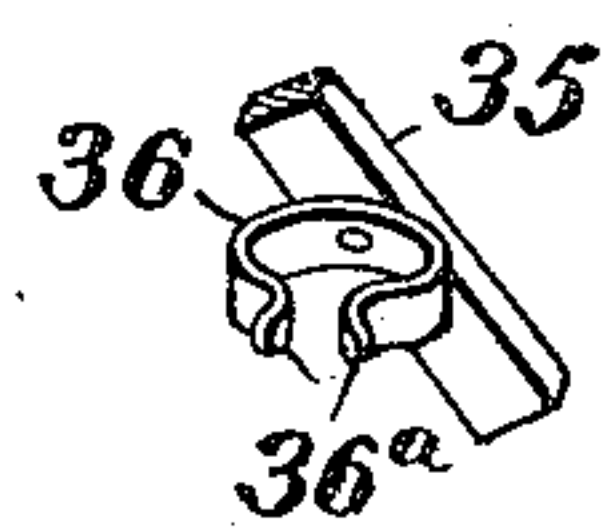
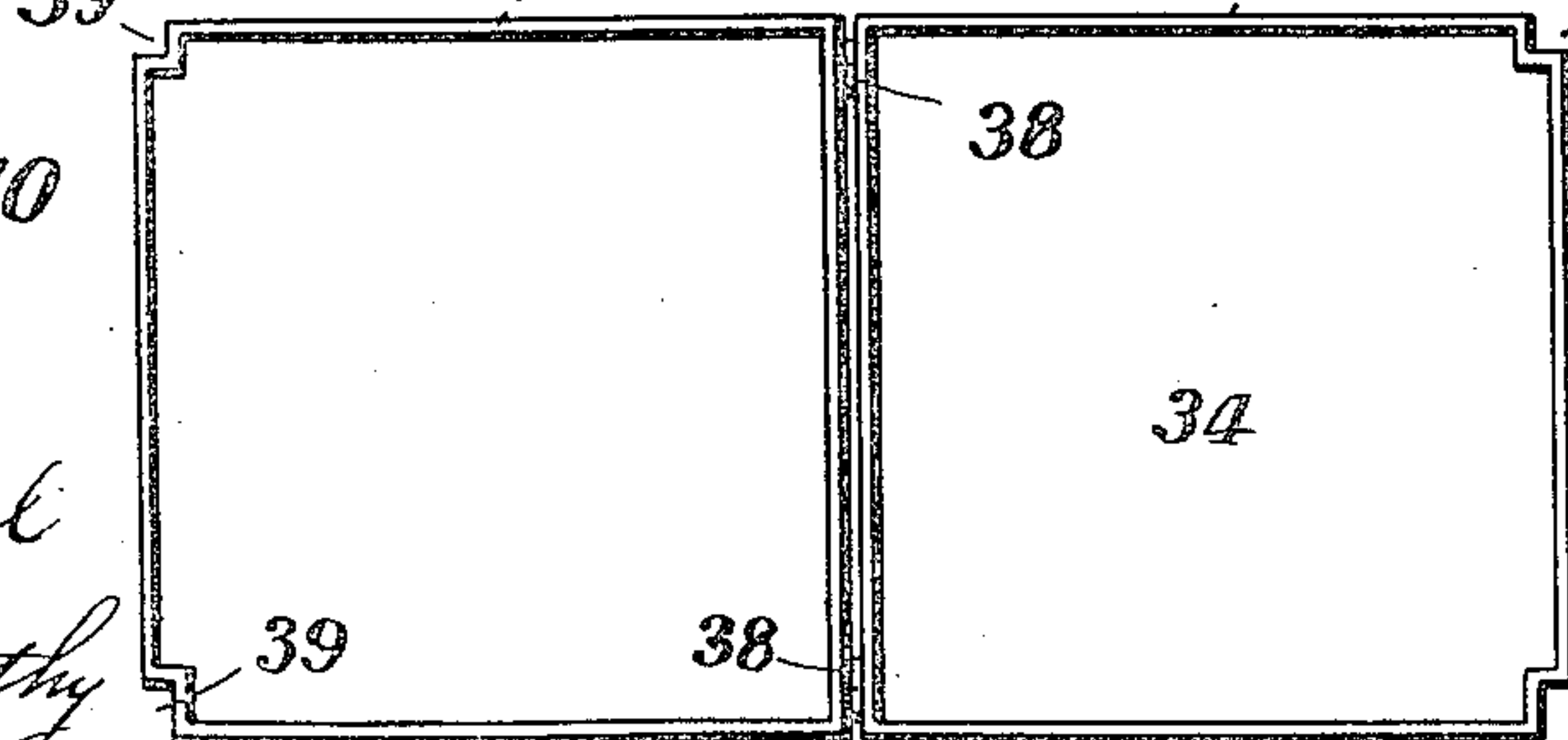


Fig. 12.

Fig. 10

Witnesses
J. J. McConthy



Inventor
Henry Janes
By
Foster, Freeman
Watson & Co.
Attorneys

UNITED STATES PATENT OFFICE.

HENRY JANES, OF NEWTON FALLS, OHIO.

FOLDING CRIB AND PLAY-PEN.

955,076.

Specification of Letters Patent.

Patented Apr. 12, 1910.

Application filed November 5, 1907. Serial No. 400,864.

To all whom it may concern:

Be it known that I, HENRY JANES, a citizen of the United States, residing at Newton Falls, in the county of Trumbull and State of Ohio, have invented certain new and useful Improvements in Folding Cribs and Play-Pens, of which the following is a specification.

This invention relates to beds in general being in part alike applicable to folding bed frames of adult size and to infant cribs or cradles, but the preferred form of the invention is embodied in a child's crib, which with certain supplementary parts may be converted into an elevated play pen or a play pen or inclosure for the floor of a room.

The principal object of the invention is to provide a bed or crib adapted to the various uses above mentioned and being so constructed that it may be taken apart and folded into a convenient compass.

Figure 1 is a view in perspective of a crib embodying some of the features of my invention; Fig. 2 is a view, also in perspective, of a play pen or inclosure formed by combining the sectional sides of the crib with supplementary sections; Fig. 3 is a side view of the body portion of the crib or bed in folded position; Fig. 4 is a detail view of the side connecting pieces and fragments of the contiguous parts of the sides and body portion of the crib; Fig. 5 is a detail plan view of one of the corners and a portion of the side frame of the body portion of the crib or bed; Fig. 6 is a detail view in perspective of the pin and slot corner connection between the inclosing crib sections; Fig. 7 is a plan view of a false bottom designed for use in forming an elevated play pen; Fig. 8 is a view in perspective of the corner of one of the supplementary sections used in forming the play pen; Fig. 9 is a view in elevation of one of the side screen sections; Fig. 10 is a plan view of the two part top screen section; Fig. 11 is an enlarged view of the clip used to secure the screen frames to the crib sections; and Fig. 12 is a cross section on the line 12—12, Fig. 4, showing the structure of the hinge.

The body portion of the bed or crib comprises the frame 1 and the four corner legs 2 hinged thereon. The frame 1 is formed of ends 3 and sides 4 preferably of approximately twice the length of the ends, and said sides are each in two parts connected by hinges 5, the pivot points of which are pref-

erably below the plane of said sides, whereby when the frame is folded sufficient space will be left between the divided parts to receive the legs which are folded as hereinafter set forth. The butts of the hinge sections are provided with corresponding vertical grooves which, when the frame is open, form a recess 6 between the abutting ends of said sides to receive a spike hereinafter described. A hook 7, or other form of fastener is provided to secure the sides against folding ends downwardly when the frame is open, and it will be noted that the abutting ends of the sides in connection with the peculiar construction of hinge above described prevent the sides from folding ends upwardly. The hinge 5 is made up of the socket pieces 44, 45 which receive the ends of the sides 4, the side pieces of said sockets extending below the piece 4 and being provided with holes for pins 46. The extensions of sockets 44, 45 are cutaway as shown and two plates 48, 49 make a hinged strengthening connection between the sockets below the line of the side pieces. Pins 46 pass through holes in plates 48, 49 and they have surrounding them the spacing sleeves 50. It will be noted that the extensions of the sockets and the plates 48, 49 are held in position between the ends of sleeves 50 and the heads of pins 46. This not only makes a flexible connection, but strengthens the hinge and prevents buckling even where the material used is thin. It also permits the proper separation of the parts when folded. The ends 3 and sides 4 are bolted together at the corners as at 3^a, Fig. 5, and are also connected by strap irons 8 secured by screws 9 and bent preferably as shown in Fig. 5 to provide a recess 10 at each corner. This recess should be of such shape and size as to receive the top of the leg 2 and the ends of two other posts hereinafter referred to. In this connection it will be noted that this corner strap iron may be otherwise formed and the recess may be in the ends 3 or the sides 4, or several recesses may be formed instead of one to receive the leg and posts referred to. Each of the legs 2 is connected to the frame by a long link 11, and a short link 12 pivoted to the leg and frame respectively, as best shown in Figs. 1 and 3. This arrangement permits of the legs being folded under and against the frame so that they lie closely thereto and the frame may then be folded upon itself and the legs will lie with-

in the folded parts. In its open position the top of the leg enters the recess 10 and is held therein by means of a pin 13, or other fastening device. The legs at each end may be connected by rods 13^a if desired.

Any suitable bottom may be used but preferably the frame 1 is provided with a series of pins 14 upon which is stretched a canvas bottom 15 which is thereby adapted to be removed for cleaning purposes. As this arrangement would tend to draw the sides 4 together there is provided a bracket 16 at each corner of the frame. These brackets may be made of any suitable form and of any desired length, and it will be understood that since they make contact with the sides and ends some distance from the corners they serve as braces and prevent drawing the sides together. They are in the plane of the frame out of the way and since they are at the corners they are not in the way of the canvas bottom when the bed is in use.

So much of the invention as is above described in detail is equally applicable to a double bed of adult size, a "cot" bed, or a child's crib, and the applicant does not limit himself to any one of these structures.

Upon this body portion or frame are mounted the individual crib sections 17 and 18, the end sections 17 being identical and therefore interchangeable and preferably formed of the two corner posts 19, cross pieces 20 and suitable slats or rods 21, making a strong yet light and presentable framework. The posts 19 extend slightly below the lower cross pieces 20 and are adapted to enter the recesses 10 at the corners of the body portion, and suitable pins 22 or other fastenings may be used to hold them therein. Near the top each post is provided with a key-hole slot 23 the use of which will be presently described. The side crib sections 18 are also identical and therefore interchangeable, and have cross pieces 20 and slats 21 similar to the end sections. Only one corner post 24 is provided for each section 18 since two of these sections are required for each side of the crib and the sections are placed end to end and connected by suitable means about to be described. Near the top each corner post 24 is provided with a projecting headed pin 25 adapted to enter and slide in the key-hole slot 23 in the adjoining post 19 of the end section. The posts 24 also extend slightly below the lower cross pieces 20 and are adapted to enter the recesses 10 at the corners of the body portion and be held therein by pins 26.

A connecting piece 27 is provided to couple the meeting ends of the side crib sections which are arranged end to end on each side of the crib, and it is formed with an upper socket 28 and a lower socket 29 to receive respectively the ends 30 and 31 of the

upper and lower cross pieces 20. The meeting ends 30 and 31 above referred to may be mortised as shown at 30^a and 31^a and a pin 32 passed through them and the walls surrounding the socket to hold them in place, or other fastenings may be used if desirable. The lower socket 29 is provided with a projecting spike 27^a adapted to enter the recess 6 hereinbefore described. Thus it will be seen that the crib sections are securely and detachably mounted upon the body portion, are joined at the corners by a concealed fastener, and are coupled together at the sides by a simple and effective device.

To effectively screen the crib, there are provided the identical side screen sections 33 and the two-part top section 34. Each side screen section is made up of a frame 35 covered with screening material and is fastened to the slats on the inside of the crib sections by spring clips 36. These clips are formed of a single piece of spring material nearly circular and provided with the flaring ends 36^a. The sections 33 are preferably six in number, of the same size as the crib sections, and completely cover said crib sections when in place. The two part top section 34 is formed of a light framework 37, hinged together at 38, covered with screening material and cut away at the corners forming recesses 39 to fit around the corner posts of the crib sections.

When it is desired to use the crib as an elevated play pen, the canvas bottom 15 may be removed and a rigid false bottom 40 substituted therefor. This bottom 40 is preferably constructed of wood and hinged at 41 to permit folding. It will be understood that its size is such that it will pass inside of the crib sections and its edge rest upon the frame 1.

When an enlarged play pen or inclosure on the floor is desired the side crib sections 18 coupled by their connecting pieces 27 may be used in conjunction with supplementary sections 42, two of which are coupled end to end by similar connecting pieces 27. Each of these supplementary sections is formed similar to the side crib sections 18 except that its corner post is provided with a key-hole slot to cooperate with the pin of the crib section and with the strap iron 43 pivoted thereto as shown best in Fig. 8. This strap iron is in the form of a loop and is adapted to receive the lower extension of the corner post 24 of the contiguous crib section or when not in use it may be turned down under the foot of the post. By using four of these supplementary sections coupled together in pairs, the play pen may be set up as shown in Fig. 2, the invisible pin and slot fastenings again being of service to prevent the child releasing the posts.

It will be understood that the smaller

play pen may be set up on the floor by the use of strap irons 43 detachably pivoted adjacent the bottom of the corner posts of the end crib sections, the arrangement being similar to that shown in Fig. 8 in connection with the supplementary sections.

It will be noted that the end and side crib sections 17 and 18 are of approximately square outline and substantially the same size, thus the crib will be twice as long as wide and therefore when the body portion is folded with the legs inside, all of the parts will be of substantially a uniform outline and thus easily and conveniently packed. This is true also of the supplemental sections, the false bottom and the screen sections, above referred to. In other words, all of the principal parts of the crib and its accessories are in size some multiple of a given unit and capable of being folded to the size of that unit. Preferably the unit is represented by the frame in its folded position, but this is not essential, as additional hinges may be used in the frame, and pieces similar to 27 may be used in the sides and ends to reduce the bed when folded to yet smaller compass.

Having thus described my invention what I claim and desire to secure by Letters Patent is:

1. In a crib, a bed portion comprising a rectangular frame twice as long as wide and adapted to fold in two parts end downward, legs adapted to fold under and against said frame, whereby said bed portion may be folded square, and six individually detachable crib sections supported on said bed portion, each of said sections being approximately of the outline of said bed portion in its square folded position, and means for detachably securing said sections together and to the bed portion when the latter is in open position.

2. In a crib, a frame provided with vertically extending recesses at the corners, a crib section for each end of said frame having corner posts adapted to enter said recesses, two crib sections arranged end to end on each side of said frame, said sections having corner posts adapted to enter said openings at opposite ends of said frame, means for detachably connecting the contiguous corner posts of said sections, and means for detachably connecting the meeting ends of said side sections.

3. In a crib, a frame having vertically extending recesses at the corners, crib sections having corner posts adapted to enter said recesses, and concealed fastenings connecting the contiguous corner posts of separate sections.

4. In a crib, a frame having vertically extending recesses at the corners, and crib sections having corner posts adapted to enter said recesses, the contiguous corner posts of

separate sections having the one a key-hole slot and the other a pin adapted to enter and slide in said slot.

5. In combination with the independent crib side sections arranged end to end and means for securing the meeting ends together, said sections having downwardly extended corner posts, of supplemental sections arranged end to end, means for securing the meeting ends together, said supplemental sections also having downwardly extended corner posts, and means for connecting the corner posts of the side sections to the corner posts of the supplemental sections, whereby a play pen or inclosure may be formed.

6. In a bed or crib, a rectangular frame divided between its ends, hinges connecting the divided sides of said frame and having grooves in their butts whereby vertical recesses are formed between the meeting ends of said sides, independent crib sections supported by said frame, two of said sections meeting over said hinges, and connecting pieces for said meeting sections, each comprising a post having sockets adapted to receive the abutting ends of said meeting sections and a spike at its lower end adapted to enter one of said recesses and hold the connecting piece against lateral displacement.

7. The combination with a crib, the sides and ends of which are in size the multiple of a given unit, of a series of screen sections equal in size to said unit, and means for detachably securing said screen sections to the framework of said crib, whereby said crib may be completely screened and the screen sections rendered interchangeable.

8. The combination in a crib, of a rectangular frame adapted to fold to a given unit of size, legs pivoted on said frame and adapted to fold within said unit, and individual detachable crib sections supported by said frame, each of said sections being approximately of the outline of said given unit, whereby the parts may be easily and conveniently packed.

9. In a bed, a rectangular frame, corner legs therefor, and brackets secured to one bar of the frame and extending outwardly therefrom so as to bear on the meeting bar at right angles some distance from the corner for bracing the corners of the frame, the said brackets extending horizontally across the corner and being secured to only one of the bars of the frame whereby the parts may be folded.

10. In a bed, a rectangular frame, corner legs therefor, a bottom of somewhat yielding material secured to said frame, and bracing brackets secured to one bar of the frame and extending outwardly therefrom so as to bear on the meeting bar at right angles some distance from the corner at the corners of said frame, the said brackets extending hori-

zontally across the corner and being secured to only one of the bars of the frame whereby the parts may be folded.

11. The combination in a crib, of a rectangular frame divided between its ends and adapted to fold to a given unit of size, hinges connecting the divided sides of said frame, the said hinges embodying abutting sockets to receive the ends of the sides, extensions of said sockets below said sides, strengthening

plates joining said extensions, and pivotal pins passing through said plates and extensions whereby the parts will be sufficiently separated when folded.

In testimony whereof I affix my signature 15
in presence of two witnesses.

HENRY JANES.

Witnesses:

FRANK W. MOUERY,
G. M. BINGHAM.