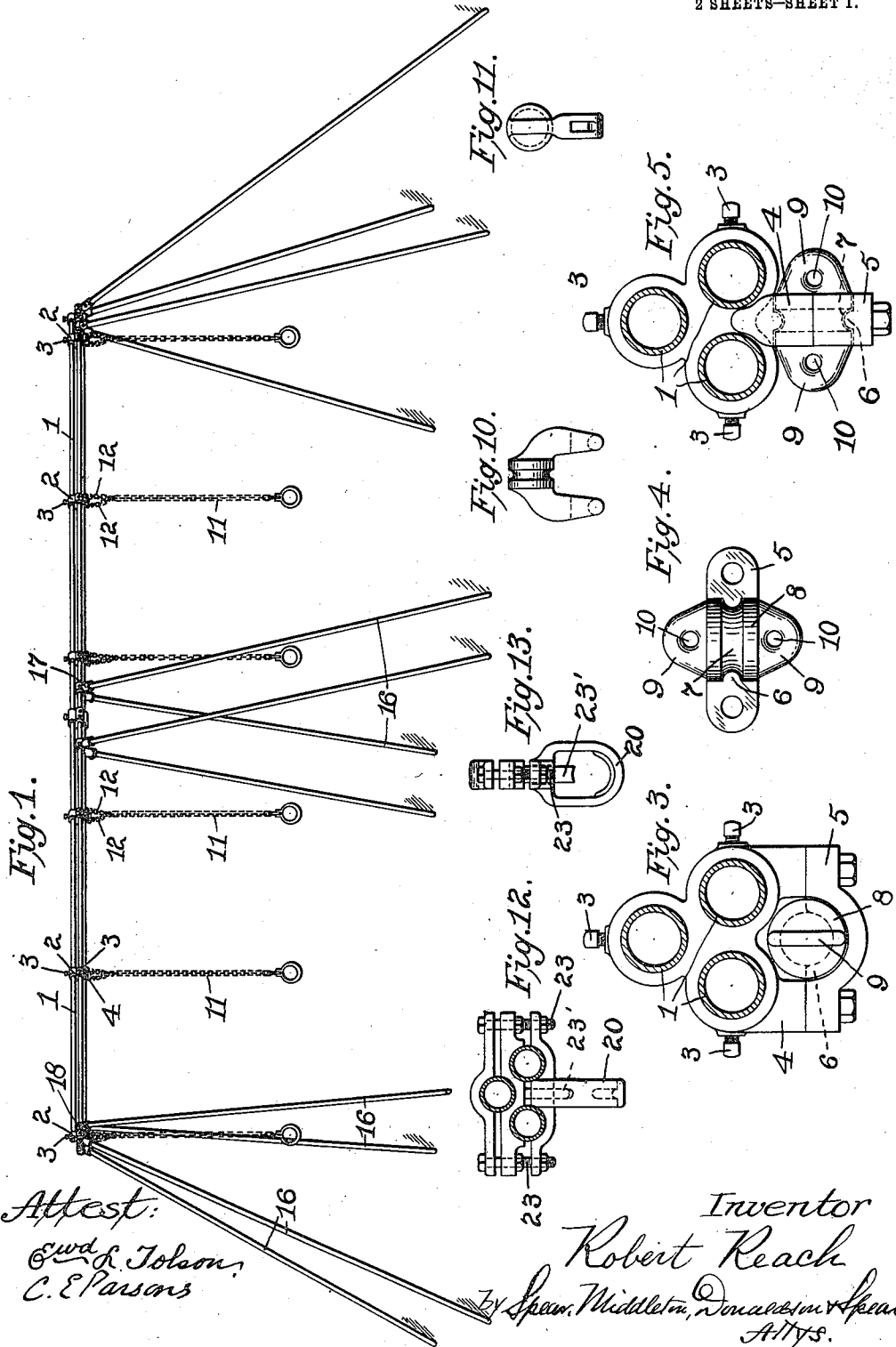


R. REACH.
GYMNASIUM APPARATUS.
APPLICATION FILED NOV. 14, 1911.

1,046,329.

Patented Dec. 3, 1912.

2 SHEETS—SHEET 1.



Attest:
Edw. L. Tolson
C. E. Parsons

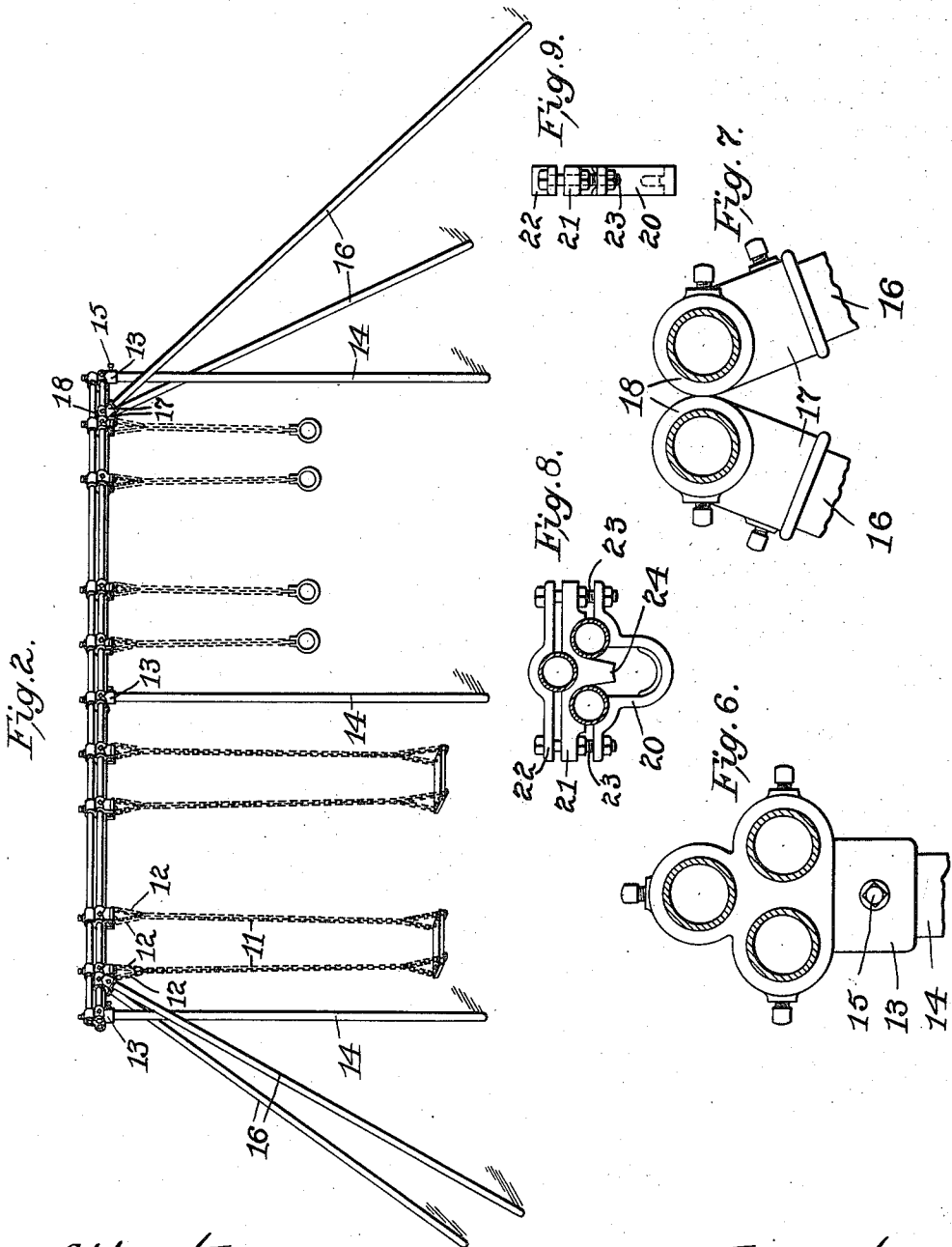
Inventor
Robert Reach
By Spear, Middleton, Donnell & Spear
Attys.

R. REACH.
GYMNASIUM APPARATUS.
APPLICATION FILED NOV. 14, 1911.

1,046,329.

Patented Dec. 3, 1912.

2 SHEETS-SHEET 2.



Attest:
Edw. R. Tolson.
C. E. Parsons.

Inventor:
Robert Reach
by Spear, Middleton, Donahue & Spear
Attys.

UNITED STATES PATENT OFFICE.

ROBERT REACH, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO INTERNATIONAL GYMNASIUM SUPPLY COMPANY, OF SPRINGFIELD, MASSACHUSETTS.

GYMNASIUM APPARATUS.

1,046,329.

Specification of Letters Patent.

Patented Dec. 3, 1912.

Application filed November 14, 1911. Serial No. 660,192.

To all whom it may concern:

Be it known that I, ROBERT REACH, citizen of the United States, residing at Philadelphia, Pennsylvania, have invented certain new and useful Improvements in Gymnasium Apparatus, of which the following is a specification.

My invention relates to gymnasium or children's playground apparatus, and my object is to provide a simple, effective and inexpensive structure, and particularly to provide a fitting which may be assembled with stock material, such as metallic piping to make up the supporting frame and to provide the necessary hangers for the attachment of the exercising device.

The invention consists in the features and combination and arrangement of parts hereinafter described and particularly pointed out in the appended claims.

In the accompanying drawings: Figure 1 is a view of a gymnasium or playground structure in which the exercising device consists of traveling rings suspended by flexible connections from the supporting structure so that the user may swing himself from ring to ring; Fig. 2 is a view of my invention as embodied in connection with swings or swinging rings; Fig. 3 is a side view of one of the fittings with the suspending roller in place, this roller being adapted to support an exercising device, the movement of which is transverse in respect to the main beam; Fig. 4 is a plan view of the lower cap of this fitting; Fig. 5 is a detail view of a fitting, the roller of which has its axis transverse in respect to the main beam; Fig. 6 is a detail view of the fitting adapted to connect with a vertical standard; and Fig. 7 shows the manner of connecting the diverging standards or braces with the main beam. Fig. 8 is a view of another form of fitting; Fig. 9 is a view of Fig. 8 a quarter turn therefrom; Figs. 10 and 11 are views of the roller suspension device; Fig. 12 is a view like Fig. 8, but of a fitting adapted for a swinging action in a direction longitudinally of the main beam; Fig. 13 is a view of Fig. 12 a quarter turn therefrom.

In these drawings, the main beam or supporting member is indicated at 1, made up of three metallic pipes. These are secured together by inserting them in fittings 2 arranged at different points along the struc-

ture, these fittings being cast in one piece, and each having three sockets, one for each of the metallic pipes which are secured in place by set screws 3. The pipes are arranged with two in a lower plane parallel with each other, and with the third pipe elevated in respect to the pair of pipes, and over the space between them. The fittings have also cast therewith a depending portion 4, to which is attached a bearing portion 5. The parts 4 and 5 have a substantially circular opening therein, the inner walls of these parts being provided with a rib 6 projecting inwardly, adapted to fit in a peripheral groove 7 of a roller 8, which is provided with laterally extending ears 9 having openings 10 to receive the suspension connections, which consist preferably of chains 11, the upper end of said chains having diverging portions 12 to connect with the ears 9 on each side of the roller. In order to fit the roller in place, the cap or lower portion 5 of the fitting is removed from the main portion; the roller is then inserted, and the cap is again bolted to the main portion. Where, as in Fig. 1, the structure is intended for use with traveling rings in which the motion of the exercising device or ring is longitudinal of the framework, the roller is arranged to turn in a plane longitudinally of the structure; but where, as in Fig. 2, the exercising device as the swing or the hand ring is adapted to swing transversely of the structure, the suspending roller is arranged with its axis parallel with the longitudinal axis of the main beam. The main beam may be supported in various ways, but at certain points I utilize the fittings above described as means of connection with the supporting standards, for which purpose the fitting which receives the three tubes or pipes of the main beam is provided with a depending socket 13, which receives the upper end of the vertical standard 14, the said standard being secured in place by the set screw 15. Diverging standards, as shown at 16, may be employed, the upper ends of which are held in sockets 17 of fittings 18 which receive the lower members of the main beam, and similar diverging standards or braces may be employed at the ends of the structure similarly secured by fittings to the extended ends of the lower members of the main beams.

It will be observed from the above structure that the various fittings may be furnished to different purchasers or contractors, and by taking stock material, as the gas pipes or tubing, the entire structure may be assembled and set up for use.

In Fig. 8 I show a form of fitting for use with three pipe sections forming a main beam, like in the forms before described, but in this instance the fitting is made in three parts, 20, 21 and 22. The lower member or cap 20 forms a loop-shaped support for the roller, being ribbed as above described to fit the groove in the roller, and having seats for the two lower tubes and ears through which the bolts 23 pass which secure the three members together. The middle section has seats in its lower face for the two lower beam members, and a seat in its upper face for the upper beam member, and the upper section of the fitting has a seat in its lower face for the upper tube or pipe of the frame bar. The bolts serve to clamp all the parts together, and by the construction shown the fittings may be placed on the supports at any point, and after the main supporting structure is set up. As shown, these divided fittings in the one case shown in Figs. 8 and 9, have their loops extending in a direction transversely of the pipes or tubes. In this form the central member of the clamp has a depending projection 24 to act as a retainer for the roller.

In the form shown in Figs. 12 and 13, the loop for holding the roller extends in a direction parallel with the pipes or tubes. By these fittings the provision is made for supporting either swings or traveling rings. In the form shown in Figs. 12 and 13, a projection 23' acts as a retainer for the roller.

The roller is shown in Figs. 10 and 11, it having a groove to receive the rib on the loop and having depending ears to receive the chains or ropes which support the swing.

It will be observed that the roller from which the suspending connections extend downwardly is held in place in the opening in the lower portion of the fitting, the said roller interlocking with the wall of the opening and having a peripheral bearing thereon, no axial bearing being employed, but instead axial projections are provided for the attachment of the suspending means. The stop 24 in Fig. 8 and 23' in Figs. 12 and 13 is formed separate from the lower portion having the opening for the roller, and thus when the parts are separated the roller can be removed, the stop of course being withdrawn. By providing a square hole in the depending ear of the roller as shown in Fig. 11, a hook rectangular in cross section may be used at the top of the suspending chain by which the ears are in effect

provided with rigid extensions to increase the leverage action on the roller.

I claim as my invention:

1. In a gymnasium or like apparatus, a main beam made up of a plurality of bars or tubes, fittings to tie the bars together, and suspension means for an exercising device connected with the said fitting, substantially as described. 70

2. In a gymnasium or like apparatus, a main beam made up of a plurality of bars or tubes, fittings to tie the bars together, said fittings being formed in sections having recesses to receive the bars, means for clamping the members of the fittings to the bars with the said bars between said members, and suspension means for an exercising device connected with the lower portions of the fittings, substantially as described. 75 80

3. In combination a beam, a fitting formed in sections, clamped to the beam, and having an opening at its lower end, a roller seated by its periphery in the said lower opening, and suspension means attached to the roller, substantially as described. 85 90

4. In combination a beam, a fitting having an opening at its lower portion, a roller seated by its periphery in the opening, suspension means attached to the roller, and retainer means movable relative to the opening in which the roller is seated, said retainer confining the roller in position when the parts are assembled on the beam, substantially as described. 95

5. In combination with the beam, a fitting thereon having an opening, a roller seated in the opening having depending ears with a rectangular opening therein, substantially as described. 100

6. A fitting or hanger for a gymnasium apparatus having a socket or sockets to receive the main beam or member thereof, and with a depending portion provided with an opening, a roller seated by its periphery in the said depending portion within the opening, and suspending means connected with the roller, substantially as described. 105 110

7. A fitting for gymnasium and like apparatus having a socket to receive a main bar, and having a depending or hanger portion, a cap secured to the said hanger portion and ribbed on its interior, with means for securing said cap in place, and a roller having laterally projecting ears for the attachment of a suspending means, substantially as described. 115 120

8. A fitting for gymnasium and like apparatus comprising a main portion to be attached to the main cross bar, and having a hanger portion with a recess therein, a roller held in said recess, and having a laterally extending ear for attachment to the suspending means, substantially as described. 125

9. A hanger for gymnasium and like apparatus having an opening with a projec- 130

tion or rib therein, a grooved roller held by said rib within the opening, and having a laterally extending device for the attachment of the suspending means, substantially as described.

10. In combination with a main beam made up of parallel bars or tubes, a fitting formed in sections and consisting of the upper, lower and intermediate members having seats for the bars or tubes, and means for suspending the exercising device therefrom, substantially as described.

11. In apparatus of the class described, a supporting beam made up of a plurality of bars or tubes, fittings for said bars or tubes formed in sections to be clamped thereon, the lower section having a loop depending therefrom, a roller mounted in the said loop with its periphery bearing thereon, and an exercising device suspended from said roller and means for holding the sections together to thereby hold the roller in place.

12. In combination in apparatus of the class described, a supporting beam, fittings mounted thereon and having depending loops, a retainer arranged over the said loops, rollers mounted in the loops and confined by the retainer and exercising devices suspended from the rollers, substantially as described.

13. In combination in apparatus of the class described, a supporting beam made up

of a plurality of bars, fittings mounted thereon and formed in sections, the lower section of the fitting having a loop, a roller supported in the loop, an exercising device suspended from the roller and a retainer on one of the sections extending down between the members of the beam to act as a retainer for the roller, and means for holding the sections together to thereby hold the roller in place, substantially as described.

14. In combination the supporting beam, a fitting having a loop or socket, a roller mounted in said socket and having ears extending laterally therefrom and depending, and an exercising device suspended from the said ears, substantially as described.

15. In apparatus of the class described, a supporting beam, a fitting mounted thereon comprising a portion to engage the beam, and a lower removable portion of substantially semicircular form and a roller interlocking with said portion by its periphery, and held between the same and the upper portion of the fitting, and suspending means connected with the said roller, substantially as described.

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

ROBERT REACH.

Witnesses:

MILTON REACH,

MAY M. OLWELL.