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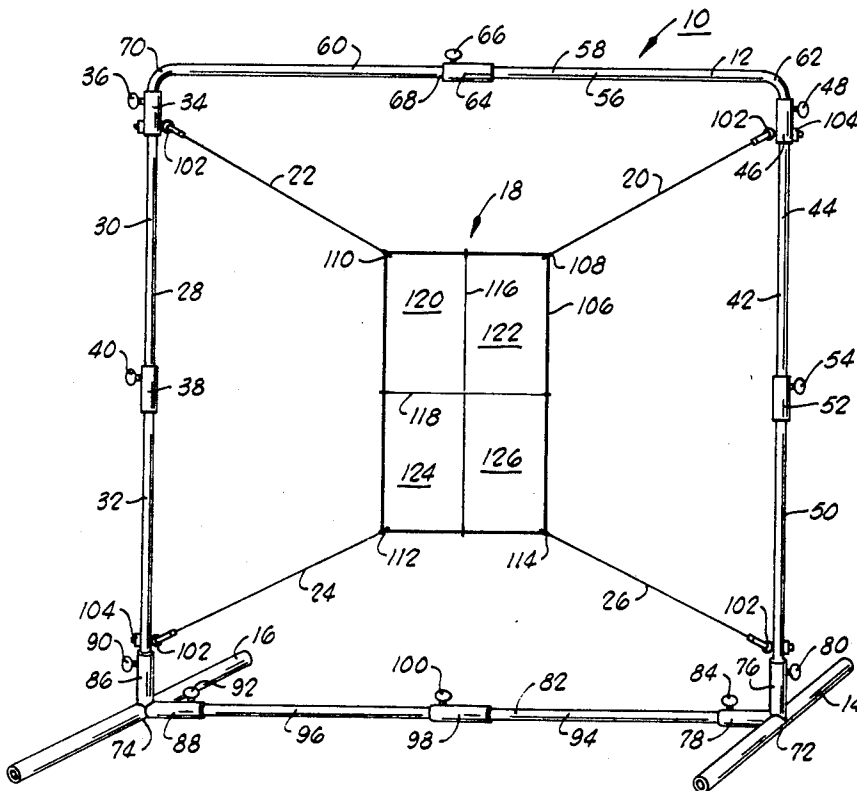
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[54] PRACTICE PITCHING DEVICES 3 Claims, 3 Drawing Figs.

[52] U.S. Cl. 273/26
 [51] Int. Cl. A63d 69/40
 [50] Field of Search 273/26, 29,
 102, 176, 181

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ABSTRACT: A baseball practice pitcher's target having a plurality of frame parts comprising tubular members releasable connected to one another in an end-to-end relationship to form a substantially square frame. The frame is provided with two tubular members perpendicularly attached to the frame at two of its corners for supporting the frame in an upright position. A target simulating an average strike zone comprising a string joined as an endless loop is centrally suspended within the frame by four support lines secured at spaced points about the perimeter of the target and attached to hook eye elements secured approximate each corner of the frame. The target is divided into four sections by two string elements positioned perpendicular to each other and having their ends attached midway the sides of the rectangular strike zone target. A target of smaller dimensions simulating the strike zone for little league ball players is also provided.



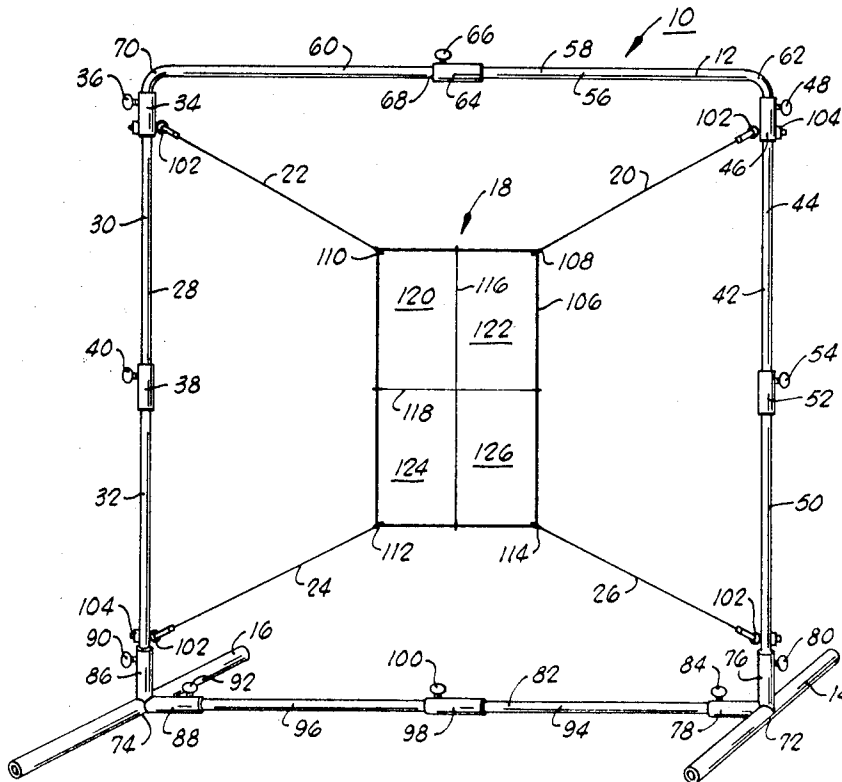


FIG. 1

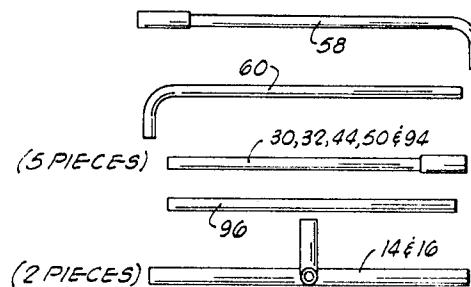


FIG. 2A

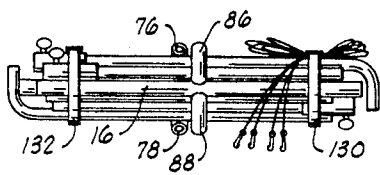


FIG. 2B

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PRACTICE PITCHING DEVICES

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention relates generally to baseball practice apparatus and, more particularly, but not by way of limitation, it relates to an improved pitching practice apparatus which is durable in use and facile in handling and storage.

2. Description of the Prior Art

The prior art includes various forms of practice apparatus which function to supply some type of target, either moving or stationary, for a thrown missile, ball, or whatever. Of these prior types there are two which function to support some form of pitching string line, this in itself being a well known and longtime employed form of pitching exercise. The earliest of such string line supports was simply two spaced posts sunk in the earth and supporting a string line between them in some selected manner. Later types of apparatus growing out of the early concept evolved into various forms of metal or wooden frame structure; however, these prior structures were of a more permanent nature requiring considerable work and time in their disassembly and/or considerable expenditure of effort and waste of space in their storage.

SUMMARY OF THE INVENTION

The present invention contemplates practice pitching apparatus which is easily assembled and set up from a compact, lightweight package. In a more limited aspect, the invention consists of a frame member made up of a plurality of frame parts which are of approximately equal, predetermined length, each frame part including interconnecting affixture means formed integral therewith. Still another pair of support frame parts include affixture means for supporting the frame member upright on a flat, horizontal surface, and the frame member then supports a string outline of an average strike zone within its bounds by means of resilient supporting lines.

Therefore, the object of the present invention is to provide a practice pitching device which can be easily disassembled and bundled as a relatively short parcel capable of storage in standard baseball equipment bags, restricted motor carrier spaces, etc.

It is also an object of the invention to provide a practice pitching device which is adaptable for use by adult sized players or by players of more diminutive average size such as that of a group of Little League players.

Finally, it is an object of the present invention to provide pitching apparatus which is extremely sturdy in use, and yet is lightweight and easily assembled and disassembled for disposition into a small, easily handled parcel.

Other objects and advantages of the invention will be evident from the following detailed description when read in conjunction with the accompanying drawings which illustrate the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the pitching apparatus of the present invention;

FIG. 2A illustrates the individual frame parts contained in the frame and support members of FIG. 1; and

FIG. 2B depicts the packaged practice device as the individual parts each of predetermined length are bundled together.

DESCRIPTION OF THE PREFERRED EMBODIMENT

A practice device 10 of FIG. 1 consists of a frame member 12 supported in perpendicular, upright manner by means of a pair of support members or parts 14 and 16. The frame member 12 supports a string line strike zone 18 centrally therein by means of four, diagonally arrayed support lines 20, 22, 24 and 26.

The frame member 12 consists of a first side frame portion 28 which is made up of upper frame part 30 and lower frame part 32 which are rigidly secured together. The frame parts 30 and 32 are each formed to be of a predetermined length which is consonant with the handling and ease of storage aspects of the invention, e.g. 3 foot lengths, and each is formed with a securing fixture fastened thereon. Thus, one end of frame part 30 has a securing sleeve 34 inserted partially, i.e. about half way, over the end of frame part 30 whereupon it is securely fastened as by welding, brazing or such. A setscrew or thumbscrew 36 is then disposed through the upper end of securing sleeve 34 and its serves as a tightening or fastening agent with respect to any tubular member inserted within securing sleeve 34 as will be further described. The lower frame part 32 is similarly formed with a securing sleeve 38 fastened thereon and having a thumbscrew 40 disposed through the upper or hollow end of securing sleeve 38.

An opposite side frame portion 42 is made up of similar structure. That is, an upper frame part 44 having a securing sleeve 46 and thumbscrew 48 fastened to its upper end, and a lower frame part 50 having a securing sleeve 52 and a thumbscrew 54 fastened to its upper end. The lower end of upper frame part is then inserted within sewing sleeve 52 of lower frame part 50 and upon tightening of thumbscrew 54 the assembly of side frame portion 44 is complete.

A top frame portion 56 is similarly constructed of a pair of end-to-end joined, curved frame parts 58 and 60. The top frame parts 58 and 60, although curved on the ends, still adhere generally to the requirement of being the predetermined length. Thus, top frame part 58 is formed with one end 62 bent into a relatively tight 90° turn while the other end is fitted with a securing sleeve 64 and a thumbscrew 66. The remaining top frame part 60 is made up merely of the frame part 60 having one end 68 for insertion within securing sleeve 64 and having the other end 70 bent into a similar 90° form for insertion and clamping within securing sleeve 34 of side frame portion 28.

Each of support bars 14 and 16 includes a centrally disposed junction fixture 72 and 74, respectively. Junction fixture 72 consists of a pair of securing sleeves 76 and 78 which are secured as by welding, brazing or such at right angles to each other as well as in perpendicular affixture to a central portion of support part 14. Securing sleeve 76 then projects upward to receive frame part 50 therein and a thumbscrew 80 threaded through sleeve 76 serves to tighten and maintain the junction secure. Similarly, the perpendicularly extending securing sleeve 78 receives one end of a bottom frame portion 82 and a thumbscrew 84 provides secure affixture. The same structure is employed for the opposite support part 16. A pair of perpendicularly disposed securing sleeves 86 and 88 are securely fastened to a central point along support parts 16 and respective thumbscrews 90 and 92 provide the tightening and securing function with respect to the lower portion of side frame portion 28 and the other end of bottom frame portion 82.

The bottom frame portion 82 is made up of a pair of frame parts 94 and 96 which, once again, adhere to the size requirement of being a selected length consonant with the packaging and storage features. The bottom frame part 94 may be constructed similar to each of the side frame parts 30, 32, 44 and 50; that is, the frame part 94 has a securing sleeve 98 with thumbscrew 100 rigidly secured to one end thereof. The remaining bottom frame part 96 may merely be a length of frame material cut to the predetermined length and secured in each of securing sleeves 98 and securing sleeve 88 of support part 16.

Each of the individual frame parts, viz. frame parts 44, 50, 58, 60, etc., as well as support parts 14 and 16 may be formed from any of various structural materials. However, in the present case where overall weight and handling is a factor, the individual frame parts may be made from aluminum conduit or such, this tending to lend desired lightweight characteristics while providing more than adequate strength. Thus, in one form, the practice pitching device 10 was constructed with

bottom frame parts 94 and 96 and support parts 14 and 16 constructed from $\frac{3}{4}$ -inch aluminum tubing while the remaining side and top frame parts 30, 32, etc. were formed from one-half-inch aluminum tubing.

A hook eye 102 is secured through each of the top and bottom extremities of side frame portions 28 and 42. Each of hook eyes 102 is inserted through the respective frame parts 30, 32, 44 and 50 and secured as by a nut 104 or other such fastening means. Thus, the pitching target or string line strike zone 18 is supported generally centrally within frame member 12 by means of the support lines 20, 22, 24 and 26 extending outward for connection to respective ones of hook eyes 102. Fastening of support lines 20—26 to respective hook eyes 102 may be by means of snap hooks or such to provide rapid affixture and adjustment.

The string line strike zone 18 consists of a relatively heavy loop 106 of material such as commercially available braided polyethylene rope. Such material blends characteristics of high strength plus resistance to stretching through repeated use. The support lines 20, 22, 24 and 26 may each be a length of braided nylon string, each length being securely connected to string line or rope 106 at respective points 108, 110, 112 and 114 therearound. It is preferable that that joiner of the support lines 20—26 to their respective points 108—114 on zone rope 106 be effected in nonslidable manner. That is, either by interweaving the materials a sufficient number of continuities, or by a heat fusion application as is well known. This then assures that a properly dimensioned rectangular strike zone will be set up each time the string line 18 is suspended within frame 12.

A further pair of quadrant zoning lines 116 and 118, e.g. also a braided nylon string, may be slidably connected across opposite sides of the zone rope 106. Thus, each of the strings 116 and 118 can be adjusted to proportion the size of respective zone quadrants 120, 122, 124 and 126 as necessitated by various practice exercises.

It is also contemplated that a separate and easily detachable strike zone string assembly 18 may be supplied for use in Little League pitching practice where the average strike zone is appreciably smaller. Thus, for adult size use, the diagonal support lines 20, 22, 24 and 26 are each 26 inches in length while the strike zone is dimensioned at 39 inches high by 17 inches wide. An alternative string line assembly 18 for use with Little Leaguers may employ a strike zone having the dimensions of 34 inches by 15 inches with upper diagonal support lines 20 and 22 being 31 inches long and lower diagonal support lines 24 and 26 being 25 inches long.

FIG. 2A shows each of the individual frame parts as when disassembled, and FIG. 2B shows a general outline of the compactness and general disposition of individual frame parts when they are bundled into the carrying or storage package. Thus, in packaging, each of the support pieces 14 and 16 serve as a packaging frame since their right angularly projecting securing sleeves 78, 80, 86 and 88 provide a gathering or gripping extension for holding the remaining linear frame parts therebetween. Thus, as shown in FIG. 2B, support part 16 and its right-angle securing sleeves 86 and 88 reinforce the frame part bundle on one side while the other side is supported by the remaining support part 14 (not shown) as it extends its right-angle securing sleeves 76 and 78 around the other side of the various frame parts. The entire bundle can be secured as by such as a pair of straps 130 and 132 and the array of support lines and zone ropes 106 can be included either by placement in the bundle or by wrapping and tying around the bundle.

While the device is described as utilizing couplings consisting of a securing sleeve secured to and extending from one end of each frame portion with a coupling thumbscrew for securing to a next adjacent frame portion, various equivalents may be employed. For example, each coupling may consist of a freely detachable sleeve having thumbscrews at each end for securing to each of the two adjacent frame portions.

The foregoing discloses a novel practice pitching device which may be used not only at or near a permanent practice site but, due to its ease of disassembly and compact storage capability, can be easily hauled or carried within a standard equipment bag to provide string line pitching practice at any desired location. The invention enables the construction of an economical yet extremely sturdy and reliable string pitching target and, in addition, the device is readily adaptable for practice use by Little League personnel as well as by adult sized players. Further, the device is easily broken down into a compact bundle which is readily storable in such manner that teams, individuals or such not having access to official or permanent storage facility can still have the benefit of a time-honored pitching practice exercise.

Changes may be made in the combination and arrangement of elements as heretofore set forth in this specification and shown in the drawings; it being understood, that changes may be made in the embodiments disclosed without departing from the spirit and scope of the invention as defined in the following claims.

What we claim is:

1. A baseball pitching target defining an average strike zone which can be readily disassembled into a plurality of component frame parts of predetermined, generally uniform length, comprising:

a first frame portion formed by a pair of frame parts of predetermined length affixed in end-to-end relationship and including a pair of hook eyes secured to said frame portion proximate each end thereof, each of said frame parts consisting of tube means of said predetermined length, sleeve means rigidly secured on the end of said tube means, said sleeve means being positioned approximately half way over said tube means, and clamping screw means disposed through said sleeve means outer portion;

a second frame portion formed by a similar pair of said frame parts of predetermined length affixed in end-to-end relationship and including a pair of hook eyes secured to said second frame portion proximate each end thereof;

a base frame portion formed by a pair of frame parts of predetermined length affixed in end-to-end relationship; a pair of support parts of predetermined length;

a pair of junction means each affixed proximate a midpoint of each of said support parts, each of said junction means providing rigid affixture to opposite ends of said base frame portion, and each of said junction means providing rigid affixture to the respective lower ends of said first and second frame portions;

a top frame portion formed by a pair of frame parts of predetermined length affixed in end-to-end relationship and having opposite ends secured to the upper ends of said respective first and second frame members;

string means joined as an endless loop and having a perimeter equal to the length of an average strike zone perimeter;

four support lines secured at spaced points about the perimeter of said string line means, each of said support lines being secured to one of said hook eyes proximate each end of said first and second frame portions to support said string line means as an upright rectangle approximating said average strike zone; and

additional string means joined in an endless loop of a size smaller than said first mentioned string means loop and approximately equal to that of a Little League players strike zone, and an additional set of four support lines each longer in length than said first mentioned support lines and secured at spaced points about the perimeter of said additional string means so that said practice pitching device can be converted to Little League practice use.

2. A practice pitching device as set forth in claim 1 which is further characterized in that each of said first, second, top and base frame portions can be disassembled into their constituent frame parts of predetermined length, and said plurality of

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frame parts can be inserted and tightly held between said support parts and respective junction means for secure packaging.

3. A practice pitching device as set forth in claim 2 which is

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further characterized in that said packaged frame and support parts are approximately 3 feet in length to enable convenient storage and portability.

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