

Jan. 14, 1958

J. S. MATEJA
KNOCKDOWN BACKSTOP

2,819,901

Filed Feb. 23, 1955

3 Sheets-Sheet 1

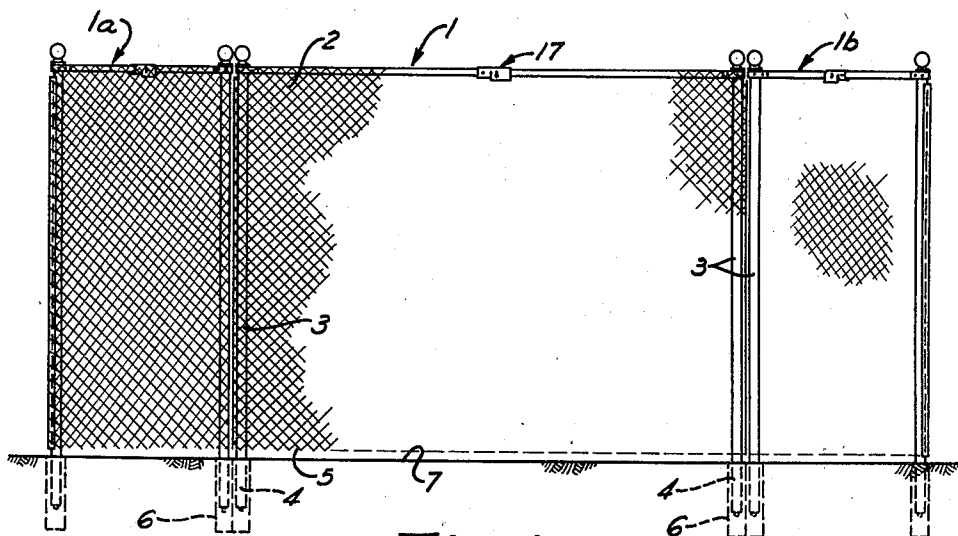


Fig. 1

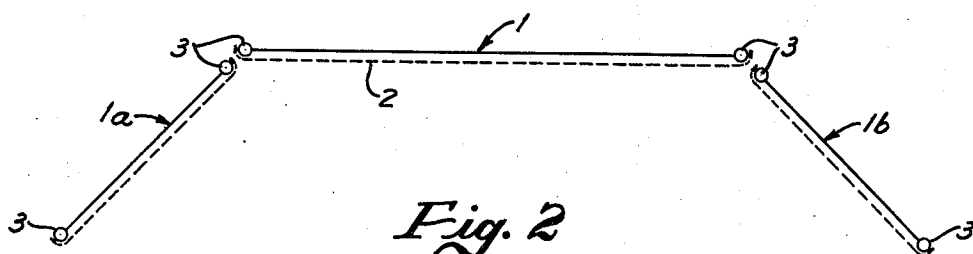


Fig. 2

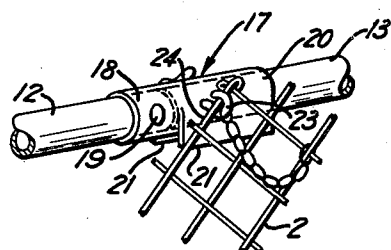


Fig. 6

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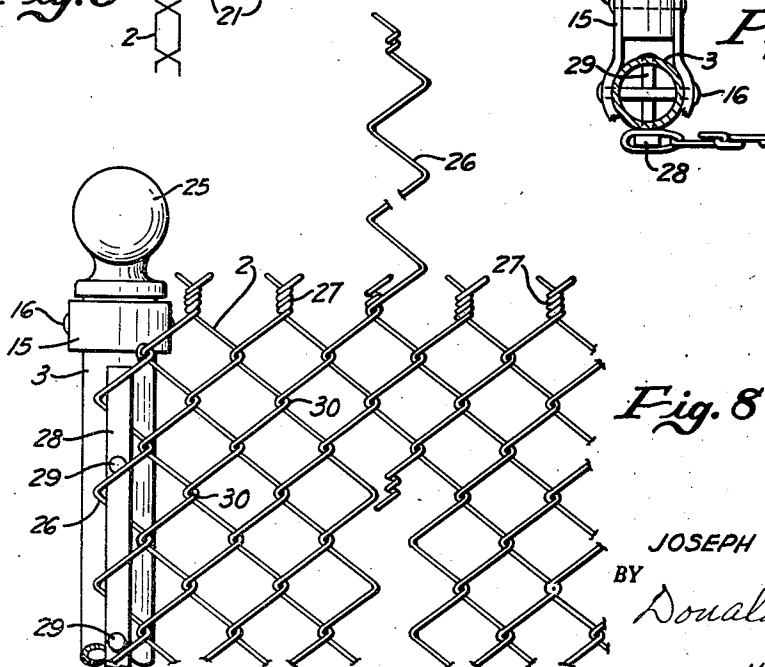
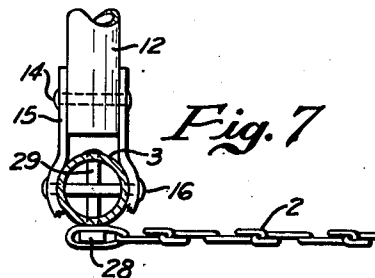
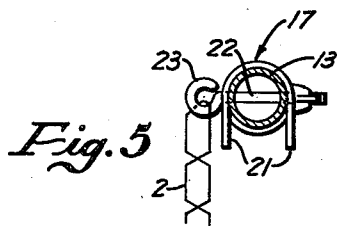
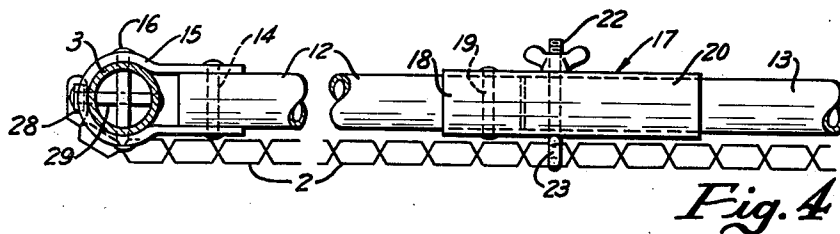
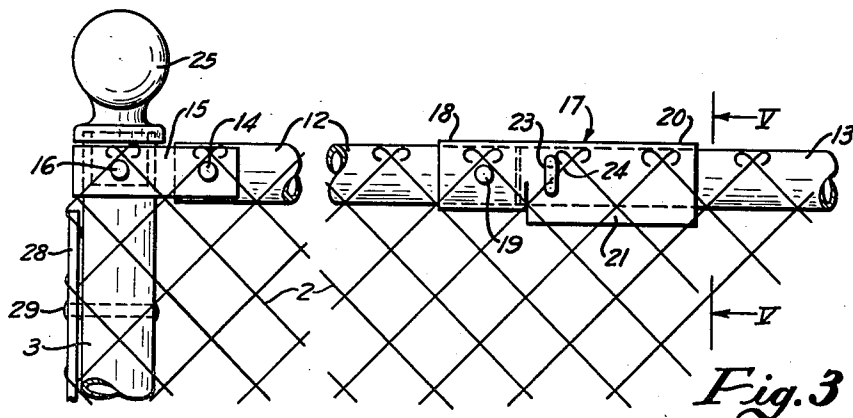
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3 Sheets-Sheet 3

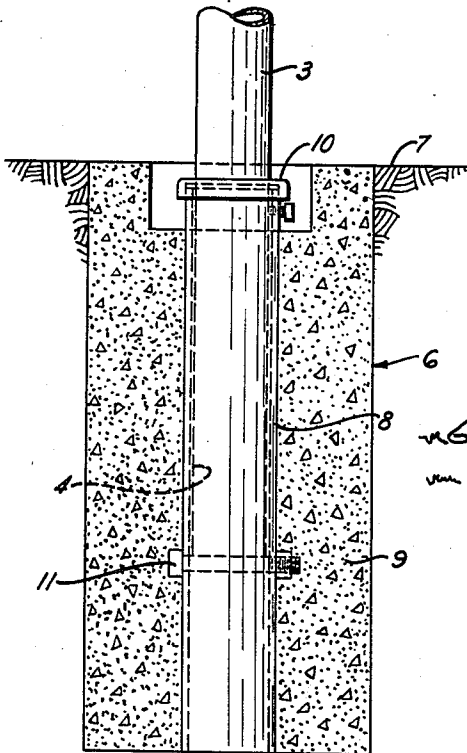


Fig. 9

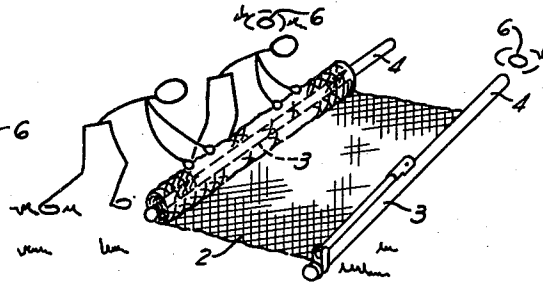


Fig. 10

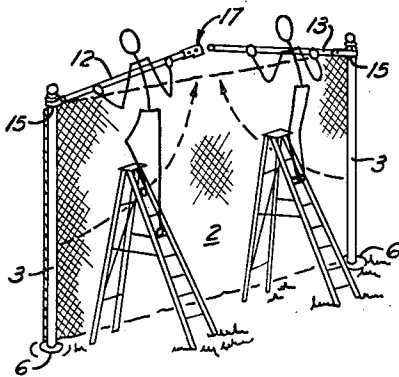


Fig. 12

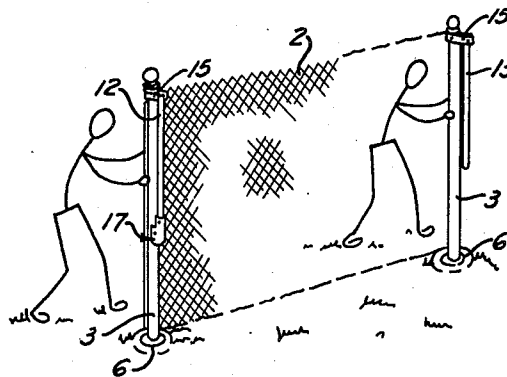


Fig. 11

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KNOCKDOWN BACKSTOP

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7 Claims. (Cl. 273—25)

This invention relates as indicated to a wire-mesh knockdown backstop and, more particularly, to a backstop which can be quickly assembled on and removed from a playing field and which can be rolled into a compact bundle for storage purposes.

The backstop of this invention is especially adapted for the playing of softball on athletic fields such as are provided at school playgrounds, public parks, summer camps and the like. Conventional backstops for this purpose are commonly constructed of wire screen mounted on posts secured in the playing field and are of a permanent nature such that, once installed, they remain in assembled position until replacement is required. Since softball backstops interfere with other games commonly played on fields of the character referred to, the permanent nature of conventional backstops renders them undesirable for many playing fields where, as a consequence, they are not provided.

One of the principal objects of this invention is to provide a knockdown backstop for use in the playing of softball and the like which may be quickly disassembled and removed when other games are to be played and which when disassembled may be stored in a compact bundle for subsequent use.

A further object of the invention is to provide a knockdown backstop which is formed of wire mesh screen having mounting posts at its ends about which the screen may be rolled for storage purposes and unrolled when it is to be assembled into operative position.

A further object of the invention is to provide a knockdown backstop of the character referred to with a collapsible bracing bar for bracing connection with the upper ends of the mounting posts and which, when collapsed, is movable to a position lying alongside the posts where it will not interfere with rolling the screen thereabout.

A still further object of the invention is to provide a novel arrangement of spaced socket supports which are permanently constructed in the playing field and in which the backstop mounting posts are received when the backstop is mounted in position.

Another object is to provide a collapsible and removable backstop having a wire mesh screen of the chain-link type in which the pallets of the chain link mesh are arranged parallel to mounting posts secured to opposite edges of the screen so that the screen may be rolled and unrolled about the mounting posts.

Other objects and advantages of the invention will be apparent from the following description.

In the drawings, there is shown a preferred embodiment of the invention. In this showing:

Figure 1 is a front elevational view of a backstop constructed in accordance with the principles of this invention;

Figure 2 is a plan view of the backstop shown in Figure 1;

Figure 3 is an enlarged and fragmentary elevational view showing the construction of the bracing bar at the tops of the mounting posts;

Figure 4 is a plan view of structure shown in Figure 3 and in which the upper end of the mounting post is shown in horizontal section;

Figure 5 is a sectional view taken along the line V—V of Figure 3;

Figure 6 is a fragmentary perspective view of the fastening connections shown in Figures 4 and 5 for securing the outer ends of the bracing bars against movement relative to each other;

Figure 7 is a view similar to Figure 4 and showing the relative arrangement of the bracing bar before movement to its assembled position;

Figure 8 is an elevational view looking from the front of Figure 7 and illustrating the manner in which the tension bar secures the end pallet of the wire mesh to one of the mounting posts;

Figure 9 is an enlarged elevational view of one of the mounting sockets which shows in vertical section the structure of a concrete foundation therefor; and

Figures 10 through 12 are diagrammatic perspective views illustrating respectively the various steps in the assembly of the backstop of this invention.

For a purpose to be described, the wire mesh in the backstop shown in the drawings is preferably of the chain-link type and, with the exception of Figures 7 and 8, has been illustrated diagrammatically. In Figures 1 and 2, the backstop is shown as comprising a center section 1 and end or wing sections 1a and 1b arranged angularly with respect to the center section 1. The wing sections 1a and 1b may be omitted if desired. Each of the sections 1, 1a and 1b comprises a wire mesh screen 2 of rectangular shape having mounting posts 3 secured to opposite edges thereof. The mounting posts 3 have lower ends 4 which extend below the lower edge 5 of the screen 2 for insertion in mounting sockets 6 which are permanently installed in the playing field below the surface 7 thereof.

As best shown in Figure 9, the mounting sockets 6 comprise a metal sleeve 8 which is mounted vertically in a concrete foundation 9. The upper end of the concrete foundation 9 is flush with the surface 7 of the playing field, and the upper end 10 of the sleeve 8 is below the surface 7 so that there will be nothing projecting above the surface 7 when the backstop is removed from the sockets 6. A metal cap (not shown) is provided for the upper end of the sleeve 8 when the post 3 is removed therefrom. A bolt 11 extends transversely of the sleeve 8 for limiting downward movement of the mounting posts when their lower ends 4 are inserted in the socket sleeves 8. As shown in Figure 1, each section of the backstop is provided with a pair of mounting sockets 6 which are spaced apart a distance corresponding to the length of the mesh screen 2 between its mounting posts 3, and the mounting sockets 6 thus operate to space the lower ends 4 of the posts relative to each other.

As shown in Figures 3 and 4, the upper ends of the posts 3 are connected together and held in spaced relation by a bracing structure comprised of a pair of links 12 and 13. Each of the links 12 and 13 has a tubular shape and is pivotally connected at its outer end by a pivot 14 to a collar 15 which is secured to the upper end of a post 3 by rivets 16. The other or inner ends of the links 12 and 13 are detachably connected together by a fastening connection designated as a whole by the numeral 17.

As best shown in Figure 6, the connection 17 is a tubular blank having one end 18 thereof secured by a

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rivet 19 to the inner end of the link 12. The other end 20 is split along its underside and shaped to the form of an inverted U, the sides of which are designated by the numerals 21 (see Figure 5). The sides 21 provide a downwardly facing opening into which the inner end of the link 13 may be pivoted. An eye-bolt 22 is inserted through aligned openings in the end of the link 13 and the end 20 of the connector 17 to fasten the inner end of the link 13 to the fastener 17. The eye-bolt 22 has an eyelet 23 of hook shape at one end which is hooked over a strand 24 of the mesh 2 to secure the upper edge of the mesh 2 to the bracing structure formed by the links 12 and 13. The upper end of each post 3 is provided with a standard ball top 25.

The mesh 2 is preferably a chain-link fabric of the type shown in a fragmentary manner in Figure 8. Referring to Figure 8, the fabric 2 is shown as comprised of spiral wire pickets 26 which are interwoven in meshing relation to form the screen 2, one of the pickets 26 being shown in partially unwound position. The pickets 26 are arranged vertically and parallel to each other and to the posts 3 and have their upper ends twisted together as at 27. Each end picket 26 of the screen 2 is wound about a tension bar 28 which is fastened by rivets 29 to one of the mounting posts 3, the tension bars 28 extending along the length of the posts 3 to the bottom edge of the screen 2 and through the spiral end pickets 26. The parallel arrangement of the pickets 26 with respect to the posts 3 enables adjacent pickets 26 to pivot relative to each other at their points 30 of intermeshing engagement about axes which are parallel to the mounting posts 3. This pivotal movement of the pickets 26 relative to each other enables rolling and unrolling of the mesh 2 about the posts 3 without bending of the wire from the screening fabric 2. In this manner, the fabric 2 may be rolled tightly about the posts 3 into a compact bundle from which it can be unrolled in a flat condition for installation in an upright position.

The manner in which the backstop is removed and bundled for storage and thereafter reassembled in position will be best understood by considering first the operations which take place in removing the backstop from its assembled position as shown in Figure 1 for storage. To remove the backstop, it is first elevated to lift the ends 4 of the mounting posts out of the sockets 6 after which it is placed flat on the ground. The fastening connection 17 is then released by removing the eye-bolt 22 after which the links 12 and 13 are folded by pivoting to positions lying against the posts 3. The posts 3 are then rotated to wind the mesh 2 thereabout. The mesh may be wound entirely about one of the posts 3 so that the other post will be positioned on the outside of the bundle or it may be rolled partially about both posts. The resulting bundle is of course fastened by binding to prevent unrolling.

The operations required for assembling each backstop section will be best understood in connection with the diagrammatic showings of Figures 10 through 12. The bundle of rolled screen 2 with end posts 3 attached is placed on the ground with the lower ends 4 of the end posts adjacent the sockets 6, the sockets 6 having previously been installed in position spaced a proper distance from each other corresponding to the size of the screen 2. The screen 2 is then unrolled to a flat condition resting on the surface of the ground with the ends 4 adjacent the sockets 6 as shown in connection with one of the end posts 3 in Figure 10. After unrolling the screen in this manner, two operators lift the backstop to a vertical position and insert the ends 4 in the sockets 6 as shown in Figure 11. In this position, it will be noted that the links 12 and 13 are positioned along a side of the posts 3 directly opposite the tension bars 28 which secure the mesh 2 to the posts 3 and as shown more particularly in Figure 7. The links 12 and 13 are then pivoted outwardly relative to the posts 3 to a horizontal position and

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then swung inwardly toward each other to the positions shown in Figure 12 so that their inner ends may be connected together by the fastener 17. Attention is particularly directed to the fact that the inward swinging movement required to assemble the connection 17 results in rotation of the posts 3 in opposite rotational directions. This rotational movement of the posts 3 causes movement of each tensioning bar 28 from a position as shown in Figure 7 through an angle of 90° to a position as shown in Figure 4 and applies a tightening or tensioning action to the fabric 2. After the inner end of the link 13 is inserted in the connector 17, the connection of the links 12 and 13 is completed by applying the eye-bolt 22 in the manner described above. Completion of the assembly of the connection 17 in this manner secures the links 12 and 13 against movement relative to each other so that they form an effective brace for holding the upper ends of the posts 3 against movement toward each other and with the screen 2 stretched tightly therebetween. Removal of the backstop sections for storage is accomplished by the steps just described in reverse order.

As indicated, a wire fabric 2 of the chain-link type having the pickets thereof arranged parallel to the mounting posts 3 and secured by tensioning bars 28 to the posts 3 represents the preferred practice of the invention. However, it will be understood that other forms of wire mesh and fabric are contemplated within the principles of the invention as explained above.

When the backstop is assembled in its operative vertical position, it will be noted that the screen 2, as best shown in Figures 2 and 4, has a planar shape and covers the entire area in front of the posts 3 and bracing links 12 and 13. The screen coverage of the posts 3 in this manner is effected by reason of the pivotal mounting of the links 12 and 13 on opposite sides of the posts with respect to the location of the tension bars 28 which, it will be further noted, furnish a fastening connection of the screen 2 to the posts along the entire length of the end pickets 26. As a consequence, the screen 2 is wound around the sides of the posts 3 when the connection 17 for the links 12 and 13 is completed. The provision of a screen coverage over the posts 2 and links 12 and 13 of course eliminates danger due to uncontrolled bouncing of balls and, moreover, protects players from injury upon falling against or running into the backstop.

While one embodiment of my invention has been shown and described it will be apparent that other adaptations and modifications may be made without departing from the scope of the following claims.

I claim:

1. A collapsible and removable backstop comprising a pair of end posts for mounting vertically in spaced socket supports, a wire mesh screen covering the entire area between and in front of said posts, said screen having opposite edges extending around and arranged along sides of said posts which face outwardly relative to each other, fastening connections securing said opposite screen edges to said post sides, a pair of links having pivot connections securing their outer ends to the upper ends of said posts at points respectively located diametrically opposite said sides for movement from vertical positions lying along said posts to horizontal bracing positions behind and parallel to said screen, and a detachable connection securing said links at their inner ends against movement out of said horizontal bracing positions.

2. A collapsible and removable backstop comprising a pair of end posts for mounting vertically in spaced socket supports, a wire mesh screen having opposite edges secured to sides of said posts along lines extending axially thereof, a pair of bracing links having pivot connections securing their outer ends to the upper ends of said posts at points respectively located diametrically opposite said lines for pivotal movement from vertical positions lying along said posts to horizontal bracing positions behind and

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parallel to said screen, and a detachable connection securing said links at their inner ends against movement out of said horizontal bracing positions.

3. A collapsible and removable backstop comprising a pair of end posts for mounting vertically in spaced socket supports, a chain-link wire mesh screen formed of parallel spiral wire pickets in which adjacent pickets are wound in intermeshing engagement with each other, a pair of tension bars about which the end pickets of said screen are wound, fastening connections securing said tension bars to said posts along lines extending axially thereof, a pair of bracing links having pivot connections securing their outer ends to the upper ends of said posts at points respectively located diametrically opposite said tension bar connection lines for pivotal movement from vertical positions lying along said posts to horizontal bracing positions behind and parallel to said screen, and a detachable connection securing said links at their inner ends against movement out of said horizontal bracing positions.

4. A collapsible and removable backstop comprising a pair of end posts for mounting vertically in spaced socket supports, a chain-link wire mesh screen formed of parallel spiral wire pickets in which adjacent pickets are wound in intermeshing engagement with each other, a pair of tension bars about which the end pickets of said screen are wound, fastening connections securing said tension bars to said posts along lines extending axially thereof, each of said posts having a mounting collar rigidly secured to its upper end and providing a pivot at a point diametrically opposite the line along which one of said tension bars is secured, a pair of bracing links having connections at their outer ends respectively with one of said pivots for pivotal movement from vertical positions lying along said posts to horizontal bracing positions behind and parallel to said screen, and a fastening assembly for detachably connecting the inner ends of said links and for holding said links against movement out of said horizontal bracing positions.

5. A collapsible and removable backstop comprising a pair of end posts for mounting vertically in spaced socket supports, a chain-link wire mesh screen formed of parallel spiral wire pickets in which adjacent pickets are wound in intermeshing engagement with each other, a pair of tension bars about which the end pickets of said screen are wound, fastening connections securing said tension bars to said posts along lines extending axially thereof, each of said posts having a mounting collar rigidly secured to its upper end and providing a pivot at a point dia-

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metrically opposite the line along which one of said tension bars is secured, a pair of bracing links having connections at their outer ends respectively with one of said pivots for pivotal movement from vertical positions lying along said posts to horizontal bracing positions behind and parallel to said screen, and means securing said links against movement out of said horizontal bracing positions comprising a downwardly opening U-shaped connector in which the inner end of one of said links is received when it is swung to said horizontal position, said connector being secured to the inner end of the other of said links, and a fastening pin, said inner end of said one link and said connector having aligned openings in which said pin is received in fastening relation.

6. A backstop as defined in claim 5 characterized by said pin having a hook at one end in supporting engagement with the center portion of said screen adjacent its upper edge.

7. A collapsible and removable backstop comprising a pair of end posts for mounting vertically in spaced socket supports, a wire mesh screen having opposite edges secured to sides of said posts along lines extending axially thereof, a pair of bracing links having pivot connections securing their outer ends to the upper ends of said posts at points respectively located diametrically opposite said lines for pivotal movement from vertical positions lying along said posts to horizontal bracing positions behind and parallel to said screen, a U-shaped connector secured to the inner end of one of said links, said U-shaped connector opening downwardly when said one link is in its said horizontal bracing position and the inner end of said other link being received in said connector when it is pivoted to its said horizontal bracing position, said connector and said other link inner end having aligned openings when both of said links are in bracing position, and a fastening pin for insertion in said openings to secure said links against movement out of said bracing positions.

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