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Burbidge

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[54] **GABION CONNECTOR**

[75] Inventor: **George W. Burbidge,** Edmonds, Wash.

[73] Assignee: **Keystone Consolidated Industries, Inc.,** Peoria, Ill.

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[21] Appl. No.: **398,486**

Related U.S. Application Data

[63] Continuation of Ser. No. 242,970, April 11, 1972, abandoned.

[52] **U.S. Cl.** ..... **24/261 WL,** 256/33

[51] **Int. Cl.** **A47g 5/00,** A44b 21/00

[58] **Field of Search** ..... 256/32, 33, 47, 57; 52/358; 24/29, 261 R, 261 PC, 261 B, 261 WL, 261 WC, 261 PT, 261 G

[56] **References Cited**

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Primary Examiner—Donald A. Griffin

Attorney, Agent, or Firm—Molinare, Allegretti, Newitt & Witcoff

[57] **ABSTRACT**

An improved gabion includes a plurality of steel rings for interconnecting adjacent planar, wire mesh panels of the gabion. The rings are spaced at intervals from two to twelve inches along the connected edges of the adjacent panels.

1 Claim, 7 Drawing Figures

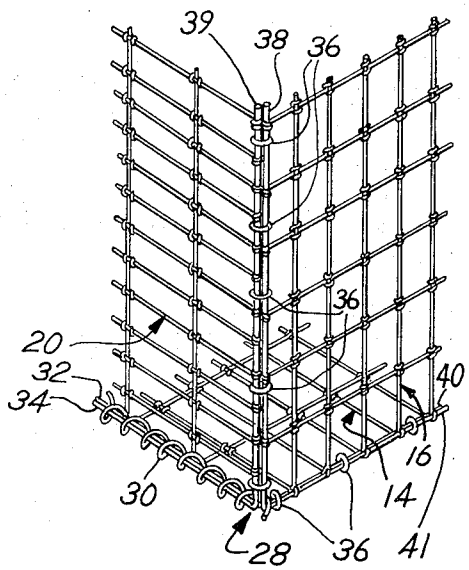


Fig. 1

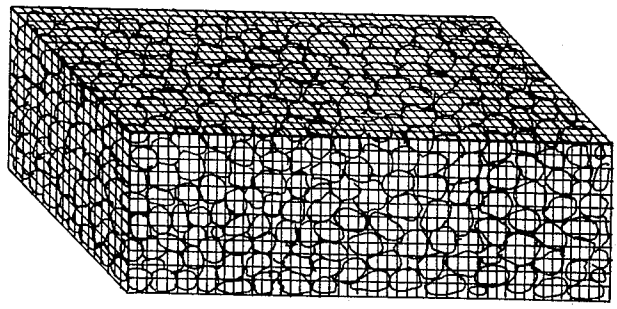


Fig. 3

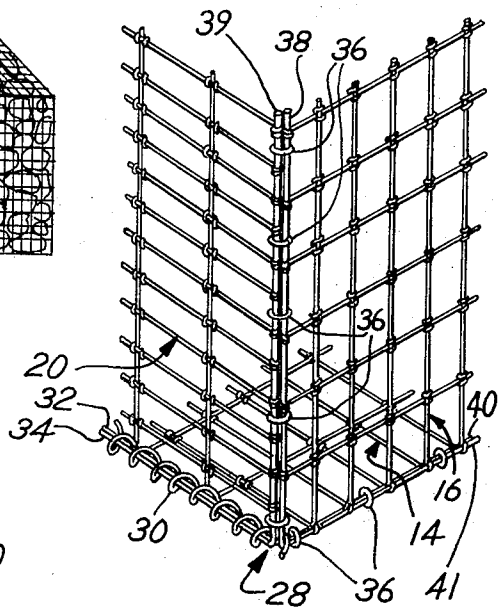


Fig. 2

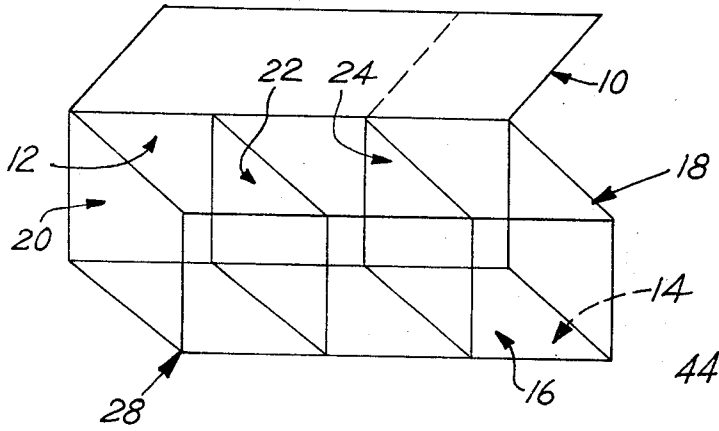
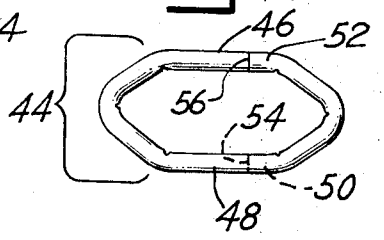


Fig. 4



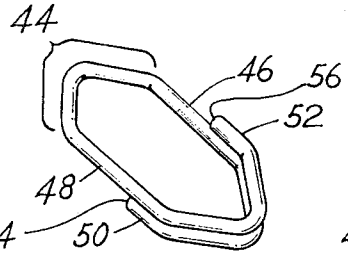


Fig. 6

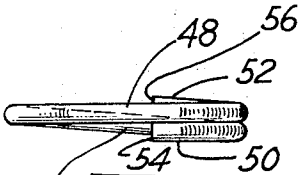
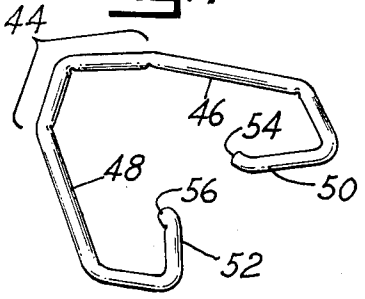


Fig. 5

Fig. 7



GABION CONNECTOR

This is a continuation of application Ser. No. 242,970, filed Apr. 11, 1972, and now abandoned.

BACKGROUND OF THE INVENTION

In a principal aspect, the present invention relates to an improved gabion structure.

A gabion is a rectangularly shaped container made from woven wire mesh. The gabion may be made in any desired length, 1 2, 3 or 4 feet high and 2, 3, 4, or 5 feet wide. The gabion is fabricated from a plurality of substantially planar wire mesh panels which are interconnected with each other by a spiral coil of wire that is coiled about adjacent parallel wires at matching edges of the panels of the gabion. The wire mesh container is filled with rocks usually taken from the gabion site.

Gabions are used to prevent land erosion along streams and rivers, to retain walls along highways and railroads, to provide supports for bridges and piers and other similar uses. These various uses include weirs, revetments, groins and dams.

As briefly discussed above, adjacent planar panels have in the past been connected with each other by means of a spiral coil of wire which is threaded through the edges of panels. This means for assemblying gabions is quite acceptable, particularly in the structural sense since the adjacent panels are effectively held together by the coiled wire arrangement. However, assembly of gabions on site with such a coil wire means is tedious and time consuming. It is this difficulty, among others, which the present invention seeks to overcome.

SUMMARY OF THE INVENTION

In a principal aspect, the present invention comprises the improvement in a gabion of ring connectors for fastening adjacent planar panels of the gabion together. The ring connectors are spaced at intervals of from 2 to 12 inches and can be more easily utilized for on site fabrication of gabions.

It is thus an object of the present invention to provide an improved gabion construction.

It is a further object of the present invention to provide a gabion having the strength and rigidity of prior art gabions yet which is easier to assemble, particularly at a site location.

Another object of the present invention is to provide a gabion wherein adjacent panels of the gabion are interconnected by rings.

These and other objects, advantages and features of the present invention will be set forth in greater detail in the description which follows.

BRIEF DESCRIPTION OF THE DRAWING

In the detailed description which follows, reference will be made to the drawing comprised of the following FIGURES:

FIG. 1 is a perspective view of a typical gabion in an assembled condition;

FIG. 2 is a schematic perspective view of a gabion of the type shown in FIG. 1 prior to placement of rocks in the gabion;

FIG. 3 is an exploded perspective view of one corner of a typical gabion wherein one pair of adjacent panels are interconnected by means of the connector rings of the present invention and another pair of panels are interconnected by the prior art construction;

FIG. 4 is a plan view of the improved gabion connector ring of the present invention;

FIG. 5 is a side view of the ring shown in FIG. 4;

FIG. 6 is a perspective view of the ring shown in FIG. 4; and

FIG. 7 is another perspective view of the ring of the type shown in FIG. 4 wherein the ring is shown in an open position before fastening about wires comprising a portion of adjacent panels of a gabion.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring first to FIG. 1, there is shown a typical gabion which is filled with rocks ready for placement at an appropriate site for desired use. FIG. 2 illustrates the gabion of FIG. 1 prior to filling the gabion with rocks.

The gabion is comprised of a top panel 10 which is hinged to a rear panel 12. A bottom panel 14 and a front panel 16 are fastened as shown in FIG. 2 to form four sides of the gabion. Opposite end panels 18 and 20 are connected with rear panel 12, bottom panel 14 and front panel 16. Diaphragms or intermediate panels 22 and 24 define internal walls of the gabion. All of the walls or panels comprising the gabion are of a wire mesh sufficient to retain rocks within the gabion.

While in FIGS. 1 and 2 there is shown a typical gabion, it is to be understood that the particular shape of the gabion shown in FIGS. 1 and 2 is not a limiting feature of the invention.

Referring now to FIG. 3, there is illustrated in a perspective view a portion of a corner of a gabion. For purposes of illustration this will be taken as the corner 28 of the gabion shown in FIG. 2. The prior art taught that adjacent panels of the gabion would be interconnected by means of a spiral wire 30 passing about edge wires 32 and 34 of adjacent panels 12 and 14 respectively. Threading or attaching the spiral wire 30 is indeed a troublesome chore.

The combination of the present invention is represented by the means for attaching panels 12 and 16 and panels 14 and 16. In these instances, a plurality of specially constructed wire rings 36 are fastened about edge wires 38–41 in the manner illustrated. The rings 36 are preferably spaced at intervals from 2 to 12 inches depending upon the size of the gabion and the specific structural needs. By this construction, the assembly procedures are greatly simplified, particularly for on site assembly. That is, ring attachment apparatus can be utilized to fasten the number of rings desired to assemble the gabion. Additionally, if any weak portions of the gabion walls are noted, a ring may be fastened to strengthen that weak portion. Also, it should be noted that the flat panels may have supplementary strengthening panels fastened thereto by means of the rings 36.

The ring 36 is preferably constructed in a prescribed geometrical configuration as illustrated in FIGS. 4–7. As illustrated in these FIGURES, the ring is comprised of a single length of wire having a central curvature section 44 which defines 180° of the curvature of the ring 36. Adjacent the central curvature section 44 and extending therefrom are substantially straight line parallel sections 46 and 48 respectively which are spaced from one another so as to define a space in which wires as

at **38** and **39** may be fitted. The opposite ends **50** and **52** are curved and overlap one another as illustrated in particular in FIG. **4.** The ends **50** and **52** terminate at a planar end surface **54** and **56** respectively. The curvature of the ends **50** and **52** is such that the ends **50** and **52** define about 180° of the bend of said ring **36.**

Thus, the ring **36** is somewhat eliptical in shape with the overlapping ends **50** and **52** overlapping substantially tightly against one another. In this manner, the ring **36** may be fitted around edge wires as at **38** and **39** to securely hold the edge wires **38** and **39** in a locked position, yet allow for some play to permit ease of fastening the ring **36.** The length of the parallel sections or runs **46** and **48** may be varied depending upon the circumstances and the gauge of the wire involved. The runs **46** and **48** can thus be lengthened to facilitate the ease of fastening the ring **36** over edge wires **38** and **39.**

While in the foregoing there has been set forth a preferred embodiment of the present invention it is to be understood that the invention shall be limited only by the following claims and their equivalents.

What is claimed is:

1. The improvement in an assembly of gabions of fastening means for fastening adjacent wire mesh panels of gabions together, said adjacent panels including substantially parallel, equal diameter edge wires, said panels all connected to form an enclosure for rock material, said improvement comprising, in combination:

a plurality of closed steel rings loosely extending over said adjacent edge wires of separate panels, said rings spaced at intervals of no more than twelve inches, each of said steel rings being formed from a single length of wire into a substantially elliptical shape with a curved middle portion of the wire length forming one end of the elliptical shape, said one end fitted adjacent one edge wire, the opposite ends of said wire being curved and overlapping along about 180° of the curve of said ring, said opposite ends fitting about the other of said edge wires at the other narrow end of said elliptical shaped ring, said middle portion and said opposite ends being connected by spaced, substantially parallel, straight runs whereby said edge wires are loosely held in parallel relation.

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