

(No Model.)

W. KOOTZ.
FLY NET.

No. 546,860.

Patented Sept. 24, 1895.

Fig. 1

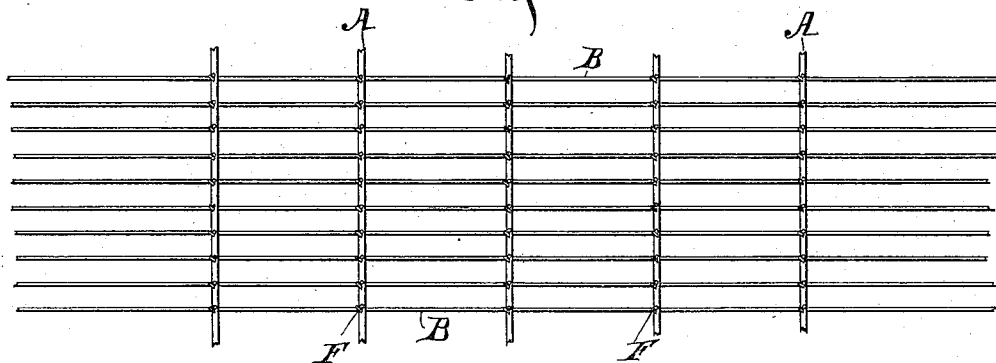


Fig. 2.

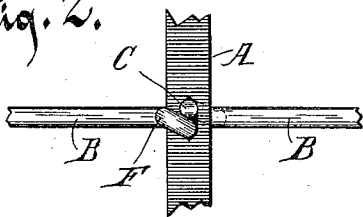


Fig. 3.

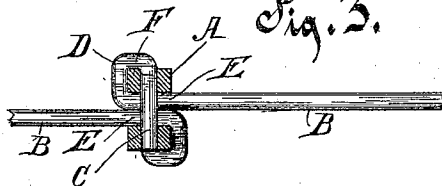


Fig. 4.

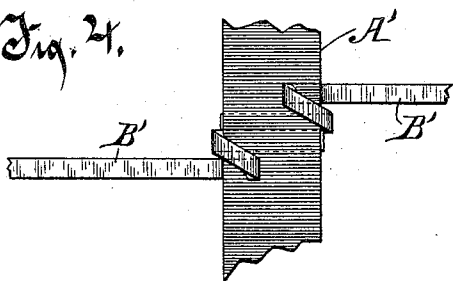


Fig. 6.

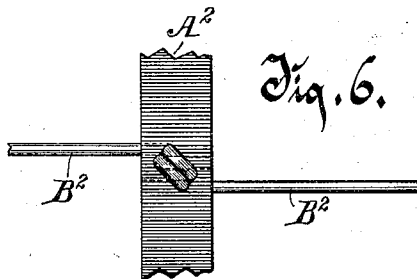


Fig. 5.

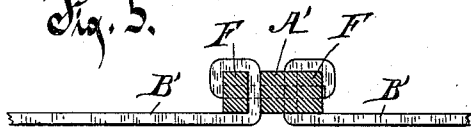
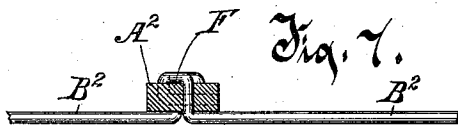


Fig. 7.



Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM KOOTZ, OF MILWAUKEE, WISCONSIN.

FLY-NET.

SPECIFICATION forming part of Letters Patent No. 546,860, dated September 24, 1895.

Application filed July 16, 1894. Serial No. 517,675. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM KOOTZ, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a new and useful Improvement in Fly-Nets, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention relates to a fly-net, especially to that class of nets that are manufactured of leather and consist of longitudinal bars or straps and transverse strings secured to the straps.

The object of the invention is to provide means for utilizing short strings, such as are long enough only to extend from one strap to the adjacent strap, or as are of sufficient length to serve for depending fringe along the sides of the net. Such strings are more readily and less expensively provided than long strings are, and their utilization is therefore desirable.

The especial purpose of this invention is the providing a means for securing the ends of the strings firmly in the straps or bars without the use of staples, rivets, tacks, or other extrinsic means.

In the drawings, Figure 1 is a fragment of my improved net, in which is shown all of the parts of a net laterally, but which includes only a small portion of the net longitudinally. Fig. 2 is an enlarged plan view of the method of securing the strings in a bar or strap. Fig. 3 is a transverse section of the bar or strap shown in plan in Fig. 2, showing the method of securing the strings in the strap. Figs. 4 and 5 are respectively a plan and a sectional view of a modified form of the net, showing another method of making the knot or tie by which the strings are secured in the strap or bottom. Figs. 6 and 7 are a plan and a sectional view, respectively, of still another modified form of net, showing another method of forming the knot or tie by which the strings are secured in the strap or bar.

In the drawings, A A are the straps or bars, preferably constructed of leather, which extend longitudinally of the net and are larger and stronger than the transverse strings. These bars may be made narrow and arranged to be on their edges with reference to the top and bottom of the net, as shown in Figs. 2 and

3, or may be wider and disposed with their wide surfaces toward the top and bottom or outside and inside of the net, respectively.

The strings B B are secured to the bars A by being inserted through the bars centrally along its longer transverse axis, as shown at C, and at one edge being turned around the edge of the strap over its side, as shown at D, and thence passing centrally through the bar along its shorter axis, as shown at E, from which it extends to the right or left of the bar. This form of knot or tie is made in the abutting ends of two strings B B, Fig. 3, which, as shown, both pass through the bar in the same slits or apertures therefor, the two apertures through the bars being made substantially at a right angle to and across each other. This method of inserting the end of a string in a bar knots or ties the string about a strand F of the bar, whereby the string is permanently secured in the bar.

In the form of device shown in Figs. 4 and 5 the ends of the strings B' B' are inserted in a slit or aperture in the bar A' along its longer transverse axis, and are then turned over the edges of the bar and are thrust through apertures therefor transversely thereof parallel with its shorter axis, and are then bent or turned outwardly in the direction of the plane of the greater transverse axis of the bar. This method of tying the knot in the end of a string also includes passing the string through the bar in two directions at right angles to each other and bending or carrying the intermediate portion of the string around a strand of the bar.

In the form of device shown in Figs. 6 and 7 the ends of the strings B² B² are inserted in slits or apertures in the bar A² along the longer transverse axis of the bar from one edge nearly across the bar, and the strings are then turned or carried outwardly at right angles thereto and over and about a central strand of the bar and thence in slits or apertures therefor transversely through the bar medially, substantially at a right angle to the longer transverse axis of the bar, to the other greater surface thereof, and are thence turned outwardly parallel to that surface. This form also includes the passing the strings through the bar in one direction and partially through in a direction at a right angle thereto and car-

rying it intermediate thereof around a strand F of the bar, whereby the string is adequately secured in the bar.

It will be observed that the slits or apertures through the bar transversely of each other at the same point are so arranged as to intersect or cut into each other, so that the parts of a string that cross each other in the bar contact with or bear against each other, so as to bind the parts and hold the end of the string thus secured more surely against escape from the bar.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a fly net, a bar and a string secured at its end to the bar, the extremity of the string being inserted in a slit or aperture therefor in the bar transversely thereof in one direction, said string continuing thence around a strand of the bar and through the bar transversely thereof in a direction, substantially at a right angle to its said first direction in the bar, and projecting laterally therefrom, a

part of the string crossing alongside and bearing against another part of the string in the bar, whereby the end of the string is effectually secured to the bar, substantially as described.

2. A fly net comprising longitudinal bars, and short transverse strings, extremities of the strings being secured to the bars by being inserted transversely in the bars in one direction, the strings thence continuing about a strand of the bar and again passing through the bar in a direction at right angles to said first direction, a part of the string crossing alongside and bearing against another part of the string in the bar, substantially as described.

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

WILLIAM KOOTZ.

Witnesses:

C. T. BENEDICT,
ANNA V. FAUST.