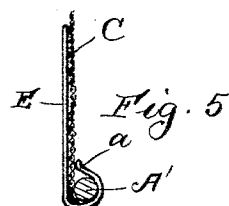
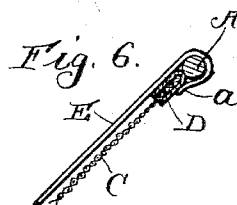
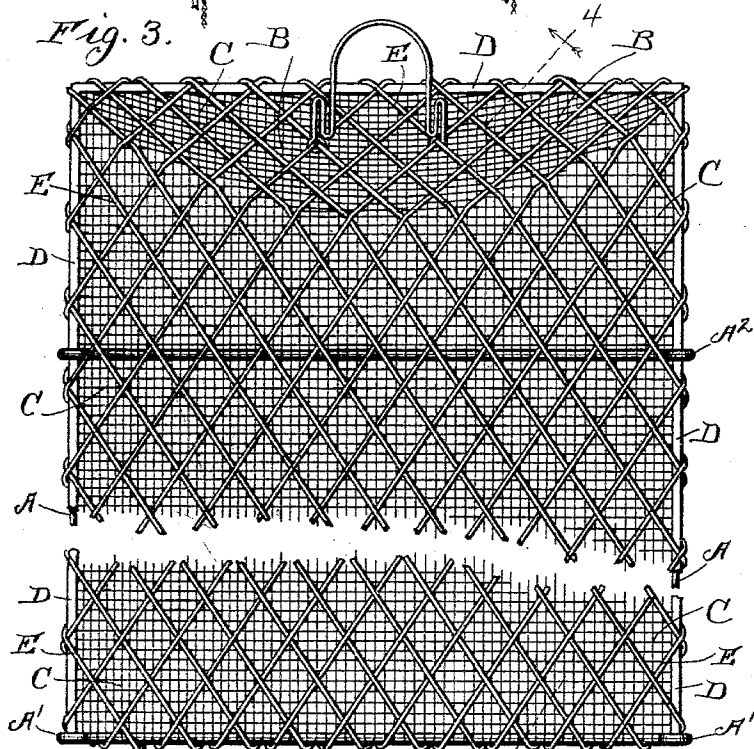
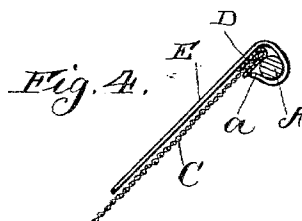
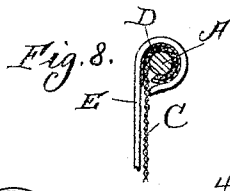
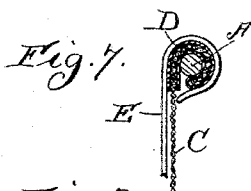
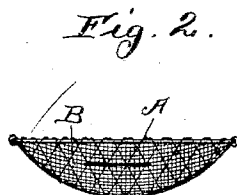
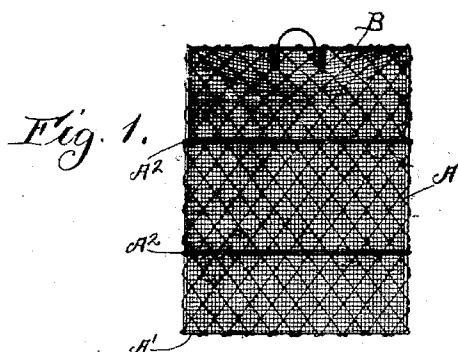


(No Model.)

R. A. DENNISON.
SPARK GUARD, &c.

No. 566,846.

Patented Sept. 1, 1896.



Witnesses:
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Inventor:
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By Chas. C. Tilton, Atty.

UNITED STATES PATENT OFFICE.

ROBERT A. DENNISON, OF CHICAGO, ILLINOIS.

SPARK-GUARD, &c.

SPECIFICATION forming part of Letters Patent No. 566,846, dated September 1, 1896.

Application filed August 23, 1895. Serial No. 560,206. (No model.)

To all whom it may concern:

Be it known that I, ROBERT A. DENNISON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Spark-Guards and Analogous Structures, of which the following is a specification.

This invention relates to improvements in that class of spark-guards made of woven wire and adapted to be used in front of fireplaces, and while it is more especially adapted to be used on such implements, yet it is also applicable to other devices of an analogous nature and similar construction; and it consists, essentially, in the novel and peculiar manner of binding and securing the margin of the cloth and wire composing the article.

The objects of my invention are, first, to provide a spark-guard which shall be simple and inexpensive in construction, strong and durable, and effective in operation, and, second, such a guard in which the margin shall be so bound and secured as to prevent injury to the hands or clothing of the person handling the same.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is a view in front elevation of my spark-guard as it appears in its completed form. Fig. 2 is a plan view thereof. Fig. 3 is an enlarged view in elevation, foreshortened for the convenience of illustration. Fig. 4 is a sectional view, taken on line 4 of Fig. 3, illustrating the construction of the upper portion of the frame. Fig. 5 is a like view, taken on line 5 of Fig. 3, showing the construction and arrangement of the lower portion of the guard. Fig. 6 is a sectional view, taken on line 4 of Fig. 3, of a portion of the upper part or sides of the guard, showing a modification in the manner of securing the inner wires or cloth to the frame; and Figs. 7 and 8 are detail views, partly in section, showing modifications in the manner of securing the lining-cloth to the frame.

Similar letters refer to like parts throughout the different views of the drawings.

A represents the main frame of my guard,

and is made of a wire or piece bent to form three sides of a quadrilateral figure, and has its ends united by means of a brace rod or wire A', which is curvilinear in form, as shown in Fig. 2 of the drawings. Across this frame is stretched a wire-cloth, a fabric C of fine mesh, and also a wire-netting D of coarse mesh—the latter preferably outside the former—as described below. At suitable points on the sides of the frame A are secured other brace-rods A², which are similarly curved and serve to hold the wire cloth and netting in a partly cylindrical shape and at a distance from the fire when the guard is placed in front of the grate or fireplace. It will be observed, by reference to Figs. 1 to 3, inclusive, that the frame A, having the three sides of a quadrilateral figure, is also a plane, and that the wire fabric and netting are downwardly and outwardly inclined, as shown at B in Fig. 3, thus forming a partly cylindrical guard or shield with a sloping roof or top.

On account of the peculiar shape of the guard and of the slope or slant B in the upper portion of the device, it is evident that the warp of the wire fabric, or that portion thereof composing the slanting part of the guard, will be downwardly curved, so that the selvage must be removed, thus leaving an irregular and jagged edge or margin exposed at the top of the guard, and as the side edges of the cloth or fabric are likewise ragged and irregular, there will be three sides of the guard having rough edges which are dangerous to clothing and in handling the device. In order to remove this objectionable feature, I clamp on the side and top edges of the lining cloth or fabric C a thin strip of sheet metal D, which envelops said edges, as is clearly shown in Fig. 3 of the drawings, and prevents them pricking the hands or injuring the clothing of persons in handling the guard. When thus applied to the top and side edges of the lining cloth or fabric C, it is placed on the outer surface of the rod or piece forming the frame A, and is there secured by means of the ends of the netting E, which ends are bent over the outer face of the enveloping-piece D, around the frame A, and contact with and rest against the inner face of the enveloping piece or sheet D, as is shown at a in Fig. 4 of the drawings, which

arrangement firmly clamps the frame made of the sheets or enveloping-pieces D and the frame A firmly and securely together, and in such a manner as to present a neat and attractive appearance, as the frame A will be on the same line of vision as the frame formed by the sheet or pieces D, and thereby concealing the first-named frame. The ends *a* of the netting E being placed in contact with the enveloping-pieces D, it is obvious that said ends are prevented from becoming entangled in the clothing or pricking the hands when handling the guard, and besides such an arrangement affords a more rigid manner for securing the parts together.

Inasmuch as the bottom part of the wire-cloth composing the guard is provided with a selvage, as is shown in Fig. 3 of the drawings, and as said portion is also secured to the curvilinear wire A', the enveloping sheet or piece D is not required at such point, but the fabric C is held in position on the rod A' by means of the wire-netting E, whose ends *a* are bent over the rod A' and into engagement from the rear with the meshes of the fabric C or wire-cloth. Instead of placing the enveloping sheet or piece D on the outer surface of the frame A, I may place it as shown in Fig. 6 of the drawings, that is, with its edge against the inner perimeter of the quadrilateral frame A, and secure it in said position by clamping the ends *a* of the wires E around the wire or pieces forming the main frame until the ends rest against the enveloping-pieces and press it to the wire-netting, as is illustrated.

In Fig. 7 of the drawings I have illustrated another modification in the manner of securing the lining cloth or fabric to the frame, which consists in bending the enveloping-sheet D, either partly or entirely around the rods A of the frame after said enveloping-piece has been clamped on the lining-cloth, and then securing it in said position by bending the wires of the netting thereover.

In Fig. 8 I have illustrated still another modification, which consists in wrapping the lining or fabric C around the rod A of the frame and then covering said portion with the sheet D, which is held in position by the ends *a* of the wires of the netting.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. As an improved article of manufacture,

the herein-described spark-guard or analogous article, the same comprising a supporting-frame, a sheet of wire fabric, an enveloping-strip covering the raw edges of the fabric and conforming with the contour of the frame, and means for clamping the exterior of said enveloping-piece against the frame, as and for the purpose set forth.

2. As an improved article of manufacture, the herein-described spark-guard or analogous article, the same comprising a supporting-frame, a sheet of wire fabric, an enveloping-strip covering the raw edges of the fabric, and wires extending across the fabric and around the frame and having their ends turned in behind the frame, as and for the purpose set forth.

3. As an improved article of manufacture, the herein-described spark-guard or analogous article, the same comprising a supporting-frame, a sheet of wire fabric, an enveloping-strip covering the raw edges of the fabric and conforming with the contour of the frame, and wires extending across the fabric and around the frame and having their ends turned in behind the frame into contact with the enveloping-strip, as and for the purpose set forth.

4. As an improved article of manufacture, the herein-described spark-guard or analogous article, the same comprising a supporting-frame, a sheet of wire fabric, an enveloping-strip covering the raw edges of the fabric and conforming with the contour of the frame, and a wire-netting covering the fabric and having each edge passing over the enveloping-strip and around the frame with its raw edge turned in against said strip, as and for the purpose set forth.

5. As an improved article of manufacture, the herein-described spark-guard or analogous article, the same comprising a supporting-frame, a sheet of wire fabric, an enveloping-strip covering the raw edges of the fabric and having its body lying against the front face of the frame, and a coarse wire-netting covering the outer face of the fabric and having each edge passing over said strip and around the frame with its raw edge turned in against the inner face of the strip, as and for the purpose set forth.

ROBERT A. DENNISON.

Witnesses:

CHAS. C. TILLMAN,
E. A. DUGGAN.