

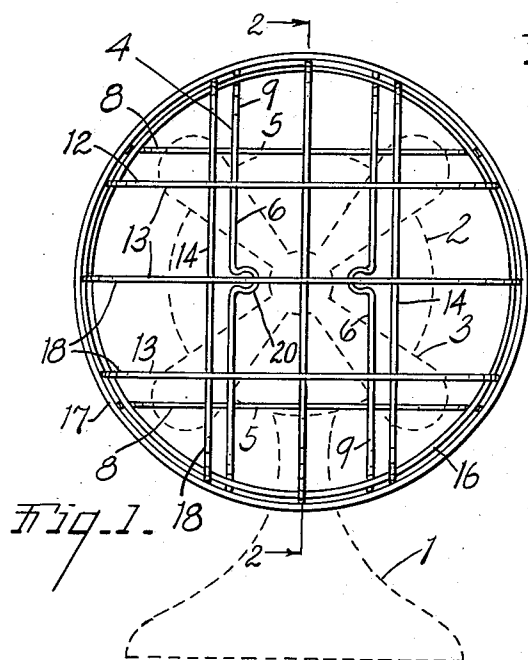
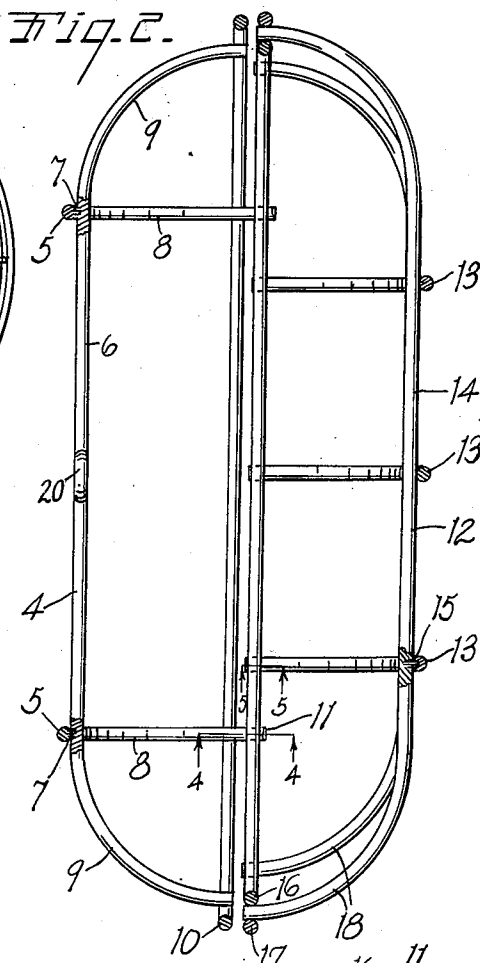
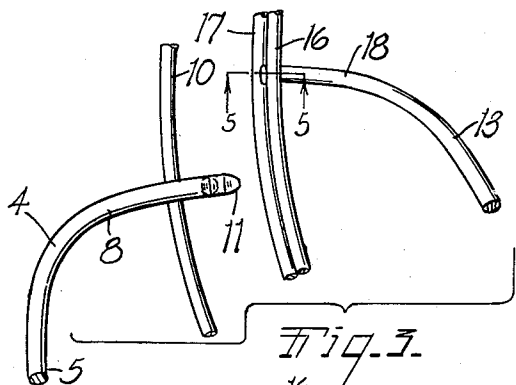
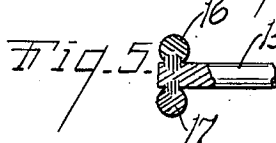
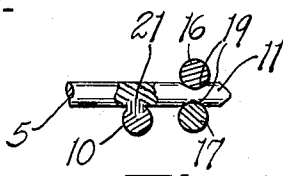
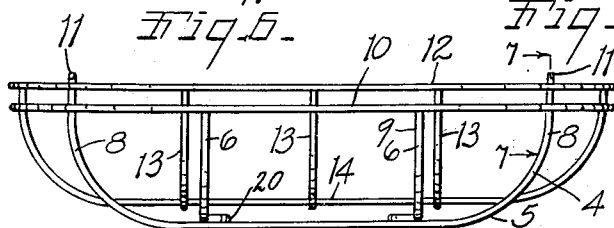
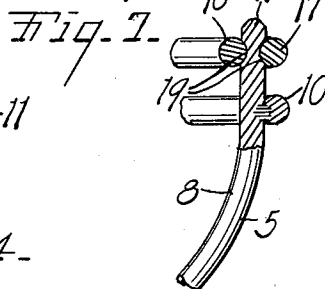
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FAN GUARD

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FAN GUARD

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This invention relates to improvements in fan guards.

The main objects of this invention are:

First, to provide a fan guard which may be formed of wire stock and at the same time is strong and rigid.

Second, to provide a fan guard comprising a base portion adapted for mounting on a fan motor casing or the like and an outer guard or grid section which is detachably engageable with the base section to facilitate the mounting thereof and affording access to the fan.

Objects relating to details and economies of the invention will appear from the description to follow. The invention is pointed out in the claims.

A preferred embodiment of the invention is illustrated in the accompanying drawings, in which:

Fig. 1 is a front elevational view of a fan guard embodying my invention, a fan being conventionally illustrated by dotted lines.

Fig. 2 is an enlarged view in section on a line corresponding to line 2—2 of Fig. 1.

Fig. 3 is a fragmentary disassembled view showing structural details of the guard base member and the outer or grid member.

Fig. 4 is an enlarged fragmentary view partially in section on line 4—4 of Fig. 2.

Fig. 5 is an enlarged fragmentary view partially in section on line 5—5 of Figs. 2 and 3.

Fig. 6 is a side elevational view with the members of the guard in nested relation for packaging or shipping.

Fig. 7 is an enlarged fragmentary view partially in section on line 7—7 of Fig. 6.

In the accompanying drawing 1 represents the fan base and pedestal, 2 the motor housing, 3 the fan blades. These parts are shown in dotted lines and conventionally as they form no part of my present invention, but are illustrated to indicate an application of my invention.

The base member of my fan guard designated generally by the numeral 4 comprises crossed parallel support bars 5, 5 and 6, 6 welded together at their crossing points as indicated at 7. These supporting bars 5 and 6 have forwardly projecting arms 8 and 9 respectively to which the rim member 10 is welded as indicated at 21. The arms 8 are extended to provide lugs 11, the purpose of which will appear later.

The outer guard or grid member designated generally by the numeral 12 comprises spaced parallel grid bars 13 and 14 disposed in crossed relation and welded together at their crossing

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points as indicated at 15. The grid member 12 is provided with inner and outer rim members 16 and 17 disposed in concentric relation on the opposite sides of the rearwardly projecting arms 18 of the grid bars. These rim members 16 and 17 are spaced to receive the lugs 11 of the base member as shown in Fig. 4 when the parts are assembled and in Fig. 7 when the parts are nested as shown in Fig. 6.

The lugs 11 have recesses 19 receiving the rim members 16 and 17 for securing the guard or grid member upon the base. The rim members springably engage the lugs 11.

In commercial practice the structure is so formed that it requires considerable force to assemble the guard member upon the base member as it is important that it shall not be accidentally disengaged and also to avoid all rattling. The parts may be easily disassembled by inserting a screwdriver between the rim members of the guard and the base and prying the lugs out of engagement with the members 16 and 17. The lugs can be easily engaged by the rim members by a pair of pliers.

The base bars 6 are provided with offsets 20 which constitute eyes adapted to receive attaching screws for mounting the guard upon the housing of the fan.

This arrangement of parts enables rapid fabrication of the guard from relatively light wire stock; at the same time the structure is strong and rigid and can be readily assembled on the fan. To accomplish this the fan blades are removed from the shaft and the base member of the guard mounted thereon by means of screws engaging the eyes 20; the fan blades are then replaced and the front guard member or grid is mounted on the base portion. This may be accomplished without the aid of screws or bolts other than such as used to mount the base member on the fan housing. The guard does not vibrate or chatter and the parts may be very compactly nested for shipment or storage. In the nested position illustrated in Figs. 6 and 7 the lugs 11 are shown engaged by the rim members 16 and 17 but quite compact nesting may be had without such engagement.

I have illustrated and described a highly practical embodiment of my invention. I have not attempted to illustrate or describe other embodiments or adaptations which I contemplate as it is believed that this disclosure will enable those skilled in the art to embody or adapt my invention as may be desired.

Having thus described my invention what I

claim as new and desire to secure by Letters Patent is:

1. In a fan guard, the combination of a base member comprising spaced parallel supporting bars disposed in crossed relation and fixedly secured together at their crossing points and having arms at their outer ends turned laterally and projecting from the general plane of said bars, an annular rim member fixedly secured on the outer sides of said arms with the arms of a plurality of the bars projecting beyond the opposite side of the rim from the support bars and constituting lugs, the lugs being recessed on opposite sides thereof, an outer guard member comprising crossed parallel grid bars fixedly secured together at their crossing points and having arms at their ends turned laterally and projecting from the general plane of said grid bars, and annular rim members fixedly secured in radially spaced concentric relation on opposite sides of said arms on said grid bars and adapted to springably receive the said lugs of said base member between them and engage in the recesses of said lugs whereby the outer member is removably mounted on the base member.

2. In a fan guard, the combination of a base member comprising spaced parallel supporting bars disposed in crossed relation and fixedly secured together at their crossing points and having arms at their outer ends turned laterally and projecting from the general plane of said bars, an annular rim member fixedly secured to said arms with the arms of a plurality of the bars projecting beyond the opposite side of the rim from the support bars and constituting lugs, an outer guard member comprising crossed parallel grid bars fixedly secured together at their crossing points and having arms at their ends turned laterally and projecting from the general plane of said grid bars, and annular rim members fixedly secured in radially spaced concentric relation on opposite sides of said arms on said grid bars and adapted to springably receive the said lugs of said base member between them whereby the outer member is removably mounted on the base member.

3. In a fan guard, the combination of a base member comprising spaced parallel supporting bars disposed in crossed relation and fixedly secured together at their crossing points and having arms at their outer ends turned laterally and projecting from the general plane of said bars, an outer guard member comprising grid bars disposed in crossed relation and secured together at their crossing points and having arms adjacent their ends turned laterally and projecting from the general plane of said grid bars, and annular rim members secured in radially spaced concentric relation on said arms of said outer guard member and adapted to springably receive at least certain of the arms of said base member between them for detachably securing the outer guard member to the base member when the members are assembled in facing erected relation.

4. In a fan guard, the combination of a base member comprising supporting bars having arms at their outer ends turned laterally and projecting from the general plane of said bars, an annular rim member fixedly secured on the outer sides of said arms with at least some of the arms projecting beyond the opposite side of the rim member from the supporting bars, an outer guard member comprising grid bars having

arms at their outer ends turned laterally and projecting from the general plane of said grid bars, and annular rim members fixedly secured in radially spaced concentric relation on opposite sides of said arms on said grid bars and adapted to springably receive the projecting arms of the base members between them for removably supporting the outer guard member upon the base member.

5. In a fan guard, the combination of a base guard member comprising supporting bars provided with arms at their outer ends turned laterally and projecting from the general plane of said bars, and a grid guard member comprising grid bars provided with arms on their ends turned laterally from the general plane of the grid bars, one of said guard members being provided with concentrically spaced rim members attached to the arms thereof and the other guard member having notched lug extensions on certain of its arms engageable between said concentric rim members for securing the members in assembled relation.

6. In a fan guard, the combination of a base guard member comprising supporting bars disposed in crossed relation and fixedly secured together at their crossing points and having arms at their outer ends turned laterally and projecting from the general plane of said bars, an outer guard member comprising grid bars disposed in crossed relation and secured together at their crossing points and having arms at their outer ends turned laterally and projecting from the general plane of said grid bars, and an annular rim member secured to the sides of the arm of one of said members with certain of the arms projecting beyond the rim member, the other guard member having concentrically disposed and spaced rim members secured to its arms and adapted to receive the projecting arms of the other guard member for detachably connecting the members in erected position.

7. In a fan guard, a base guard member comprising grid bars, and an outer complementary guard member comprising spaced grid bars, one of said guard members having annular spaced concentric rim elements secured to the ends of at least part of its bars, and the other guard member having lug-like elements formed on the ends of at least part of its bars turned laterally of the bars to be engageable between said rim members for detachably connecting said guard members to each other, the end portions of the bars of at least one of said members being offset laterally from the intermediate portions of the said bars whereby the intermediate portions of the guard members may be spaced from each other when said elements are engaged.

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