SUPPORT ASSEMBLY FOR ELIMINATOR BLADES


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ABSTRACT
A support assembly for facilitating installation and removal of eliminator blades for cleaning includes a base having a plurality of spaced bars extending transversely of a plurality of spaced vertical eliminator blades, the bars having a plurality of spaced aligned grooves therein receiving a marginal portion of a blade, at least one such transverse bar spaced above the base, and a movable bar having similar grooves therein is insertable adjacent the top of the blades so that the grooves receive and support marginal portions of the blades.

4 Claims, 3 Drawing Figures
SUPPORT ASSEMBLY FOR ELIMINATOR BLADES

BACKGROUND OF THE INVENTION

The eliminator blades described herein may be but are not necessarily of the type described in U.S. letters Patent No. 3,338,035. Generally, eliminator assemblies constructed in accordance with the patent include blades which have installation requiring insertion of the blades in an upper support prior to being aligned at the base. Since a conventional frame is used in the assembly for positioning the blades, it is difficult to align and position the lower portions of the eliminator blades in the spaced slots provided in horizontal members located adjacent the base. Another eliminator blade assembly is illustrated in U.S. letters Patent No. 3,504,484, wherein the eliminator blades are positioned for lateral swinging movement from supports at the top from which the eliminator blades depend. A comb is provided for means for positioning same adjacent the base of the assembly. Such a construction has the disadvantage of providing very little room within which to work, and the blades are not positively positioned.

SUMMARY OF THE INVENTION

It has been found that the installation and removal of eliminator blades may be facilitated by providing an assembly wherein a base portion includes a plurality of spaced bars extending transversely of the spaced vertical eliminator blades. The bars have a plurality of spaced aligned grooves therein permitting insertion of the blades into the grooves from the top. At least one such transverse bar is spaced above the base and the grooves receive a marginal portion of a blade in each of the grooves. A movable bar having such grooves therein may be used to comb a side edge of the blades upwardly facilitating positioning of the blades within the grooves of the aforesaid bar which is spaced about the base. The movable bar may then be inserted adjacent the top of the blades so that the blades are then positively positioned by the respective bars. It has also been found that the positive positioning of the blades may be facilitated by employing substantially V-shaped grooves having a notch adjacent the base thereof for receiving an annular portion of a blade therein.

The construction designed to carry out the invention will be hereinafter described, together with other features thereof.

The invention will be more readily understood from a reading of the following specification and by reference to the accompanying drawings forming a part thereof, wherein an example of the invention is shown and wherein:

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view, looking toward the exit end, illustrating a support assembly constructed in accordance with the present invention, with parts omitted for clarity of illustration.

FIG. 2 is a longitudinal sectional elevation taken on the line 2-2 in FIG. 1, and

FIG. 3 is a partial plan view with parts omitted for clarity of illustration.

DESCRIPTION OF A PREFERRED EMBODIMENT

The drawings illustrate a support assembly for elimina-
which supports the blades in operation may be raised about the hinge for easy inspection and removal of the blades.

A bracket member has a vertical wall 33 and a leg 34 carried adjacent the free-end for attachment as to the insulated wall 12 by suitable brackets 35. The vertical wall 33, approximating the angle of the blade, may be secured as by rivets 36 to an arcuate portion 12b of the eliminator blades. The opposite edge of the vertical wall has a transversely extending wall 37 which carries a marginal fastening portion 38 for attachment as by rivets 39 to the wall 11. Thus, the spacing between blades is preserved, since no irregular spacing occurs between an end blade and the adjacent wall.

While a preferred embodiment of the invention has been described using specific terms, such description is for illustrative purposes only, and it is to be understood that changes and variations may be made without departing from the spirit or scope of the following claims.

What is claimed is:

1. A support assembly for eliminator blades used to separate particles from a moving gas stream comprising: a base including a plurality of spaced bars extending transversely of a plurality of spaced vertical eliminator blades; said bars having a plurality of aligned grooves therein, spaced in accordance with the spacing of the blades, receiving a marginal base portion of a blade in respective grooves; at least one such transverse bar spaced above the base, the grooves of which receive a marginal side portion of a blade in respective grooves; and a movable detached bar having such grooves therein insertable transversely adjacent the top of said blades, the grooves of which receive a marginal portion of a blade in respective grooves; whereby the blades may be readily installed and removed for cleaning.

2. The support assembly set forth in claim 1, at least some of said grooves including, inwardly converging sides defining a substantially V-shaped opening at an edge of said bar, substantially parallel sides extending inwardly from an inner portion of each of said inwardly converging sides, and a bottom together with said parallel sides defining a substantially rectangular notch at the base of of each of said V-shaped grooves for receiving and positively and accurately positioning a blade therein.

3. The support assembly set forth in claim 1, including, a cover for a top portion of said blades, and hinge means carrying said cover thereon.

4. The support assembly set forth in claim 1 including, a bracket having a vertical wall at an angle approximating an angle of the blade.

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