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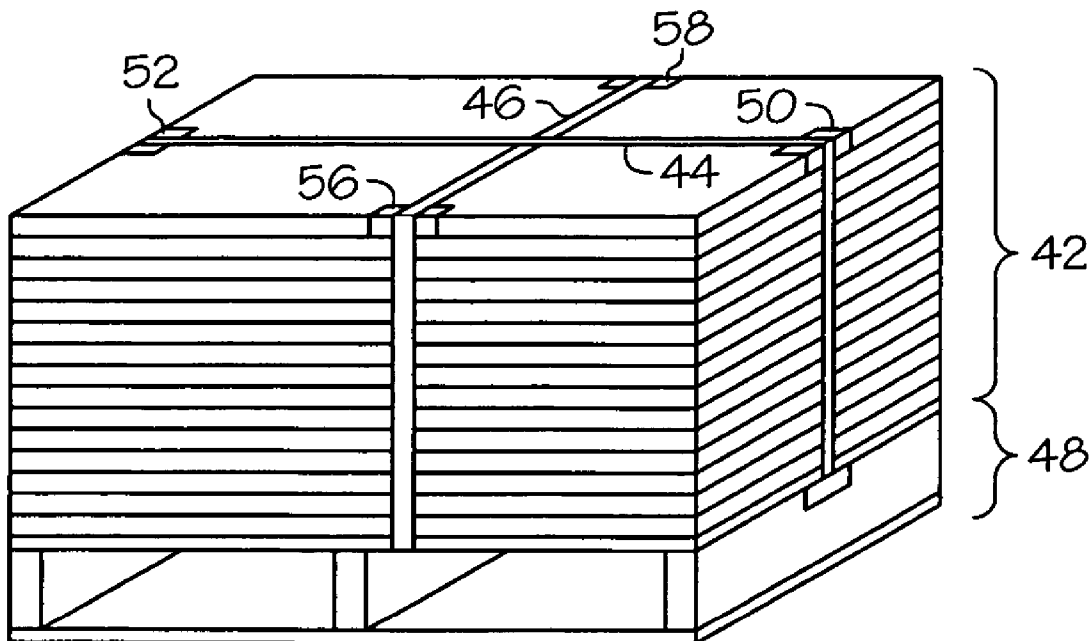
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PEARNE & GORDON LLP**1801 EAST 9TH STREET****SUITE 1200****CLEVELAND, OH 44114-3108 (US)**(21) Appl. No.: **11/231,592**(22) Filed: **Sep. 21, 2005****Related U.S. Application Data**(60) Provisional application No. 60/612,375, filed on Sep.
23, 2004. Provisional application No. 60/621,235,
filed on Oct. 22, 2004.

(57)

ABSTRACT

An edge protector includes first and second face portions arranged at an angle relative to one another. One of the face portions includes a pair of locking tabs extending from the upper surface of that face portion, which are effective to engage and secure the edge protector to a binding material, such a steel band, during use. The other face portion can have a pair of path guides extending from the upper surface thereof to guide the binding material over the other face portion. By securing the edge protector to the binding material, scattering loose edge protectors over the floors of factories or steel mills is largely circumvented, and a work hazard avoided. Also, if the edge protector and the binding material are made from the same or from recyclably compatible materials, then they can be recycled together.



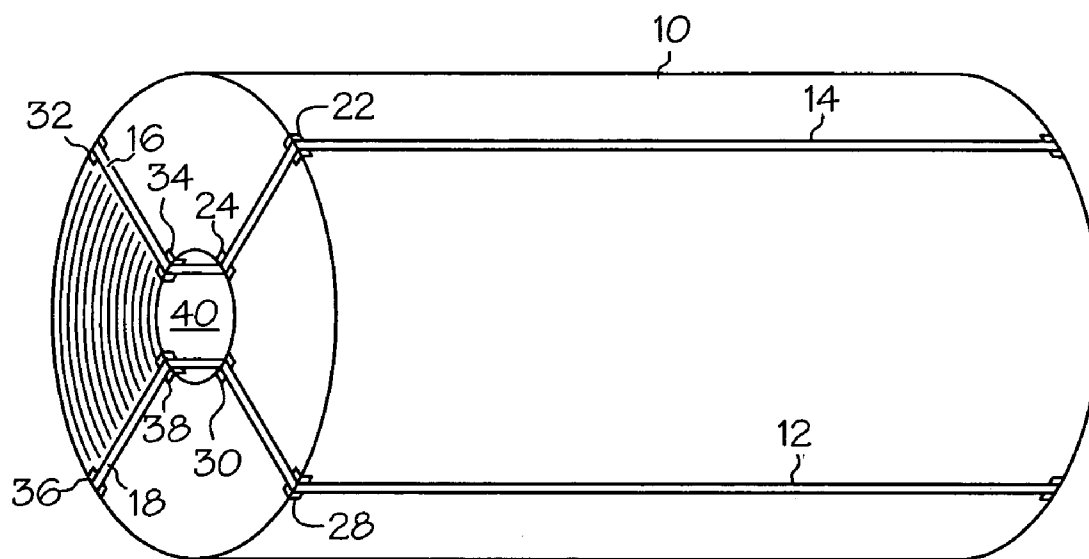


FIG. 1

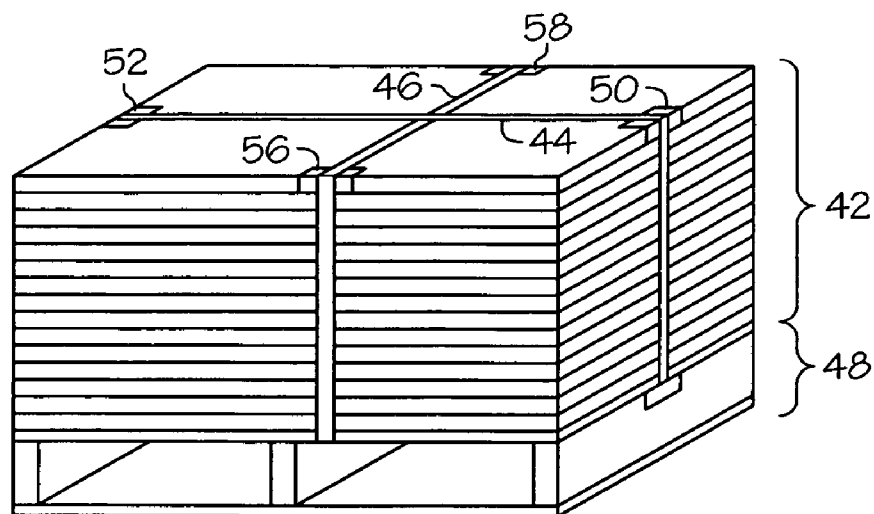


FIG. 2

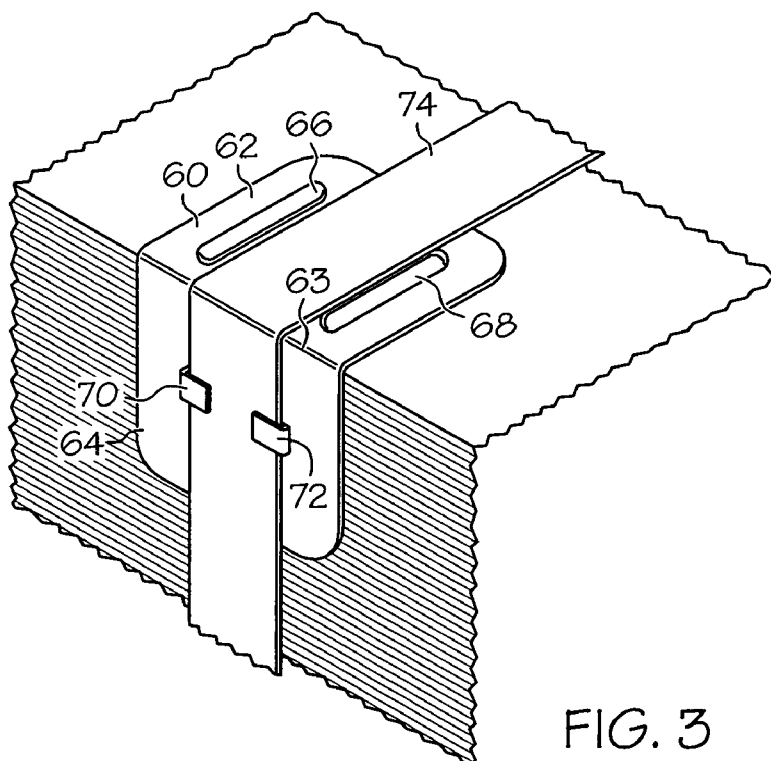


FIG. 3

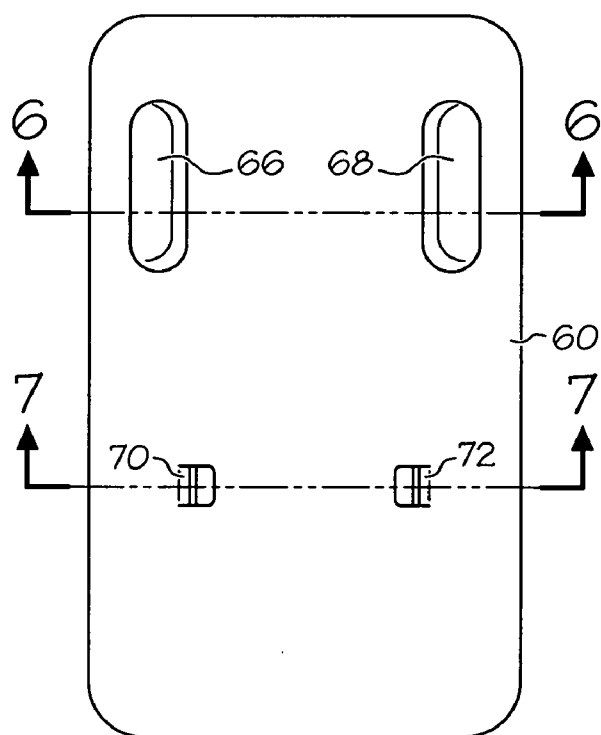


FIG. 4

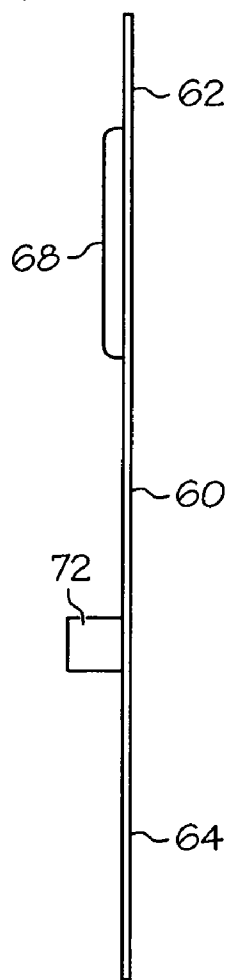


FIG. 5

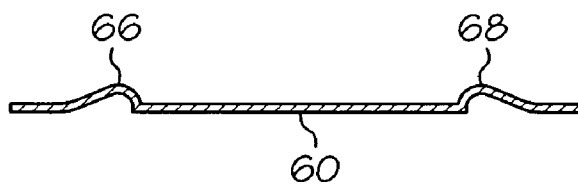


FIG. 6

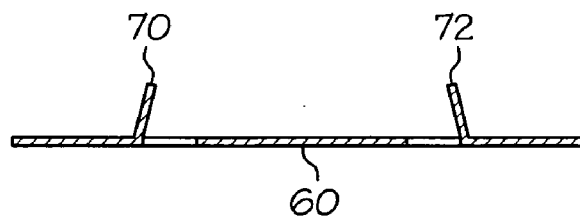


FIG. 7

EDGE PROTECTOR

[0001] This application claims the benefit of U.S. Provisional Patent Applications Ser. No. 60/612,375 filed Sep. 23, 2004 and No. 60/621,235 filed Oct. 22, 2004, the contents of which are incorporated herein by reference in their entirety.

FIELD OF THE INVENTION

[0002] The invention relates generally to an edge protector and more particularly to a metal edge protector comprising tabs that ensure the edge protector remains secured to strapping or banding commonly used to bind together items or goods.

DESCRIPTION OF RELATED ART

[0003] In the storage and transport of goods, such as rolls of steel or steel coils, sheets of glass or sheets of metal, bands or straps often made of steel are commonly used to bind together such goods. Similarly, rope, wire or plastic bands can also be used to bind such goods together. The use of straps or bands to hold together goods presents several disadvantages. Goods bound with metal bands often have damage near the edges adjacent where the band wraps around the edge of the banded goods because the tension of the band can compress or crush the goods at such edges, where the goods are most vulnerable. For example, a metal band can scratch, chip or dent the edge of the goods if the band is secured tightly around the goods. Alternatively, the band may itself become damaged by the goods. For example, if rope or plastic banding is used to band goods together, a sharp edge of the goods may fray or cut the banding, thereby resulting in its breaking or snapping.

[0004] Edge protectors are commonly used in the industry to protect the edges of goods from damage caused by bands or straps secured around the goods under high tension. Similarly, edge protectors also protect banding from becoming damaged by the goods that are banded together. While edge protectors consisting of simple L-shaped pieces have been employed to protect against damage to goods, these edge protectors have not been entirely satisfactory. Edge protectors can become easily displaced during installation of straps or bands, particularly while the bands are being fitted into place, before the final tension is applied. Since the banding is usually relatively rigid and does not initially fit tightly around the stack or goods, the L-shaped edge protectors will not stay in place and regularly are pushed out of position as the band is being fitted to and tensioned around the goods. Furthermore, when such bands, which are secured to the banded goods under high tension, are released or cut from around the goods, the edge protectors fall to the floor and often litter the surrounding area. Alternatively, they can be launched into the surrounding area from the band snapping at high speed once it is cut and the tension is released. In addition to presenting a significant danger to personnel in the vicinity from flying metal objects, edge protectors scattered about the floor also are a serious safety hazard that can cause damage, workplace accidents and a host of other problems.

[0005] Accordingly, there is a need for an edge protector that can be easily secured to banding during installation and that can be moved along the length of the banding if needed to align with an edge of the banded goods. There is also a

need for an edge protector that will not be launched or scattered on the floor on cutting or removal of a high-tension band.

SUMMARY OF THE INVENTION

[0006] An edge protector is provided, which has a first face portion and a second face portion extending at an angle from the first face portion. A pair of locking tabs extend from an upper surface of the second face portion from respective base edges of the locking tabs. The base edges of the locking tabs are spaced apart to accommodate a band therebetween over the upper surface of the second face portion in use. The second face portion is substantially continuous and intact in a region between the locking tabs.

[0007] A combination of an edge protector secured to a length of binding material also is provided. The edge protector includes a first face portion and a second face portion extending at an angle from the first face portion. A pair of locking tabs extend from an upper surface of the second face portion. The locking tabs are engaged over the binding material to secure it to the edge protector. The edge protector and the binding material are made from the same material or from materials that are compatible for recycling.

[0008] FIG. 1 is a schematic perspective view of a roll or coil 10 that is held together by four bands 12, 14, 16, 18, wherein edge protectors as herein described are employed.

[0009] FIG. 2 is a schematic perspective view of a sheet stack 42 on a pallet 48, which stack is secured to the pallet by two bands 44, 46, wherein edge protectors as herein described are employed.

[0010] FIG. 3 illustrates an edge protector 60 as herein described positioned between an edge of a coil or stack of goods and a band 74 used to secure the goods wrapped around the edge.

[0011] FIG. 4 is a top plan view of the edge protector 60 of FIG. 3, prior to being bent into an angle or L-shape.

[0012] FIG. 5 is a side view of the edge protector 60 of FIG. 4.

[0013] FIG. 6 is a cross-sectional view of the edge protector 60 taken along line 6-6 in FIG. 4.

[0014] FIG. 7 is a cross-sectional view of the edge protector 60 taken along line 7-7 in FIG. 4.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS OF THE INVENTION

[0015] In the description that follows, when a preferred range such as 5 to 25 (or 5-25) is given, this means preferably at least 5 and, separately and independently, preferably not more than 25.

[0016] It is understood that the edge protector as discussed herein is preferably made of metal such as 0.029 gage steel. More preferably, the edge protector is coated (i.e. galvanized or plated) metal to prevent rusting. Alternatively, the edge protector can comprise plastic or other composite materials. As will be clear below, if the edge protector is plastic or another composite material, the tabs (described below) of the edge protector should be composed of a material that can be bent or tapped down over a band without snapping off. For example, many plastics are rigid and inflexible and

would break if bent from a vertical position to a horizontal position as is desirable of the tabs discussed herein.

[0017] With reference to **FIG. 1**, there is shown a conventional coil **10** of steel that is held together by four conventional steel binding straps or bands **12, 14, 16, 18**. The coil can also be plastic or any other material that can be transported in the form of a coil. Each band **12, 14, 16, 18** extends longitudinally through the center or eye **40** of the coil and around the outside in a conventional manner. At each location where a steel band rests over or wraps around an edge of the coil **10**, there is an edge protector between the band and the edge of the coil **10** to protect the coil **10** from being damaged by the band. The edge protectors also aid in keeping the bands in position so they do not slide laterally over the edge protectors and onto the coil **10** at the coil edges. The edge protectors are secured tightly over the edge of the coil by the tension in the associated band. As known in the art, an annular plastic eye protector can be placed in the eye **40** at each end of the coil to protect the steel coil **10** from the steel band, but the plastic eye protector is expensive and not composed of steel. Accordingly, edge protectors are preferred to protect the coil edge at the eye **40** (such as via edge protectors **24, 34, 38** and **30**) in addition to the edge located at the outside of the coil (such as via edge protectors **22, 32, 36, 28**).

[0018] With reference to **FIG. 2**, there is shown a stack of material sheets **42** positioned on a pallet **48**. The sheets **42** can be or comprise metal, glass, plastic or any other materials appropriate for shipping in stacks. The bands **44, 46** extend around the stack of the sheets **42** and through an open center portion of the pallet **48** on which the sheets **42** are stacked as known in the art. The bands are locked into place via tensioning similarly as described above. When tensioned, the bands **44, 46** hold together the stack of sheets **42** while simultaneously securing the stack to the pallet **48**. In the illustrated embodiment, four edge protectors **50, 52, 56, 58** are visible and secured by and guide the bands **44, 46** around the edges of the stack. Additional edge protectors also can be provided to protect the edges not visible in **FIG. 2**. Of course, the number of edge protectors used to protect the edges of particular goods, such as the coil or the stack shown respectively in **FIGS. 1 and 2**, will depend on the nature of the goods, the number and the placement of bands it is desired to employ, the tension to be drawn on the bands when secured around the goods, the number and fragility of the edges around which the bands will be wrapped, etc. Those skilled in the art will appreciate that additional loops of banding can be used as deemed appropriate, and that additional edge protectors also can be used to guide such banding around the edges of the goods and to protect those edges from damage. The number and arrangement of the edge protectors shown in **FIGS. 1 and 2** are merely illustrative.

[0019] The edge protectors are further explained and illustrated with reference to **FIG. 3**, where a representative edge protector **60** is illustrated secured to an edge of goods by a band **74**, as well as to **FIGS. 4-7**, which show various other views of the edge protector **60** in **FIG. 3** prior to being bent into an angle shape. With reference to **FIG. 3**, there is shown an edge protector **60** secured under a band **74** and over an edge of a stack or coil of representative goods. The edge protector **60** has two substantially planar face portions **62** and **64** that are joined along a common line or edge **63**, and

which extend from their common edge **63** at an angle relative to one another. By “planar,” it is meant that each of the face portions **62** and **64** principally has a planar expanse (i.e. in two dimensions), with the understanding that each face portion also will have a thickness of a relatively minor magnitude compared to the planar expanse, and also that additional features can be provided that extend away from the planar expanse of each face portion, such as the path guides and the locking tabs described below. The angle between the two face portions **62** and **64** is selected to correspond to and accommodate the angle of the particular edge over which the edge protector **60** is to be fitted in use. For most applications, e.g. where the edges of stacked or coiled goods will be approximately 90°, the angle between the two face portions **62** and **64** of the edge protector correspondingly will be provided at approximately 90°. In this embodiment, the angle between face portions **62** and **64** forms an L-shape. In a further embodiment, the angle between the face portions **62** and **64** is slightly greater than the angle of the edge over which the edge protector **60** will be installed. For example, where the edge protector **60** is to be provided over a substantially right-angle (90°) edge, the angle between the face portions **62** and **64** is slightly greater than 90°, such as 92-105, 95-102, 98-100, or about 100 degrees. This way, as the band **74** wrapped around the goods and over the face portions **62** and **64** is tensioned, the tensile force of that band **74** acts against, tending to compress, the slightly outward (away from the surface of the goods) projection of each of the face portions **62** and **64**, thus forcing or urging the band **74** tightly against the face portions and the underlying goods. As a result, in use the band **74** and the edge protector **60** are tightly pressed against each other so that they stay together, and the edge protector **60** is pressed tightly against the underlying goods making it less prone to being shifted in transit.

[0020] In the alternative, the angle between surfaces **62** and **64** can be 85-115 degrees (e.g. for a right-angle edge), or any other suitable angle to accommodate any particular edge over which the edge protector **60** is to be applied.

[0021] The face portion **62** in **FIG. 3** has a pair of raised band path guides **66** and **68** extending or protruding from the upper surface (facing away from the goods in use), away from the planar expanse of the face portion **62**. The path guides **66** and **68** are aligned substantially longitudinally relative to the pathway of the band **74** over the face portion **62** in use, and are spaced laterally from one another a distance substantially corresponding to the width of the band **74**. In this manner, the face portion **62** will accommodate the band **74** in the flat or “valley” region of its upper surface defined laterally between the path guides **66** and **68** when the edge protector **60** is secured over an edge of underlying goods via the band **74**. In the illustrated embodiment, the path guides **66** and **68** are provided as raised portions or regions in the face portion **62**, extending from and continuous with the upper surface of the face portion **62**. These path guides **66** and **68** can be provided, for example, by pressing from the under surface (facing the goods in use), using an appropriately or correspondingly shaped die, a sufficient degree so as to deflect the face portion **62** in the die-pressed regions to thereby provide and define the raised path guides **66** and **68** extending from the upper surface thereof, and continuous therewith (see **FIG. 6**). When provided according to the described method, the face portion **62** will have

valleys on its under surface corresponding to the raised path guides **66** and **68** protruding from the upper surface, also seen in **FIG. 6**.

[0022] The path guides **66** and **68** are provided to keep the band **74** centered on the face portion **62** of the edge protector **60**, and also to prevent the band **74** from moving or shifting laterally during transport.

[0023] The second face portion **64**, which is joined to and extends at an angle from the first face portion **62**, has a pair of locking tabs **70**, **72** that extend from the upper surface thereof. In an example embodiment, the tabs **70** and **72** are provided by punching through from the under surface of the face portion **64**, such that each tab **70** and **72** is punched out from the planar expanse of the face portion **64** but remains secured thereto and continuous therewith along an edge at the base of each tab, referred to herein as the base edge. The tabs **70** and **72** are punched such that the base edges thereof are parallel and aligned substantially longitudinally relative to the pathway of the band **74** over the face portion **64** in use. The base edges of the tabs **70** and **72** also are spaced laterally from one another a distance substantially corresponding to the width of the band **74**, such that the band can be pressed against or in close proximity with the upper surface of the second face portion **64**, and then the tabs **70** and **72** bent laterally inward, toward one another, over the band **74** such that the band **74** is secured between the upper surface of the face portion **64** and the overlying tabs **70** and **72**.

[0024] Initially, the tabs **70**, **72** extend upward at a significant angle, preferably almost or about 90°, from the upper surface of the second face portion **64** of the edge protector **60**. This permits insertion of the band **74** between the extending tabs **70** and **72** so that it can be either pressed against or provided in close proximity with the upper surface of the face portion **64**, in between the base edges of the opposing tabs **70** and **72**. In practice, the edge protector **60** first is positioned and aligned over the edge of the goods that is to be protected against damage from the tensioned band **74**. The band **74** then is aligned over the first and second face portions **62** and **64** of the edge protector **60** and then is tensioned down over the edge protector **60** as more fully described below. Once the band **74** has been adequately tensioned over the face portion **64** so that it is received between the tabs **70** and **72**, the tabs are bent toward one another over the underlying band **74** to secure the band **74** between the tabs and the upper surface of the face portion **64**. The tabs **70** and **72** can be bent or pressed downward using, e.g., a hammer, block, or other blunt tool or object.

[0025] Preferably the locking tabs **70**, **72** are stamped from the second face portion **64** such that they remain continuous with and extend from the upper surface of the second face portion **64**, as most clearly illustrated in **FIGS. 3 and 4**, thus leaving a cut out of corresponding shape in the face portion **64** from which each of the tabs has been stamped. That is, it is preferred, though not required, the tabs are not separately provided and then attached via other means such as being fused or welded to the upper surface of face portion **64**. In this embodiment, when the tabs are in the initial upright position and prior to installation of the band **74**, one can see through the openings or cut outs in the face portion **64** corresponding to each one of the tabs.

[0026] As evident from above, the tabs **70**, **72** preferably are initially angled toward one another, toward the center of

the upper surface of face portion **64** so as to form an acute angle between each tab and the upper surface of the face portion **64**. Preferably, the acute angle is slightly less than 90 degrees, such as 60-89, 62-80, 65-75, or about 70 degrees. As such, the distance between the tips of the tabs **70**, **72** is somewhat less than the width of the band **74**, which will help prevent the band **74** from coming out from between the tabs during installation, after it has been inserted in between the tabs **70** and **72** but prior to bending the tabs thereafter following tensioning of the band **74**. Another benefit is that because the band **74** is loosely secured between the tabs prior to complete or final tensioning, the edge protector **60** itself is less likely to become dislodged or ejected from between the band and the edge of the goods before the band is fully tightened. Another advantageous feature is that even when the tabs are fully secured (bent) over the tensioned band **74**, the band **74** still has the freedom to slide longitudinally (translate) over the edge protector **60**, through the passage defined between the upper surface of face portion **64** and the tabs **70**, **72**, but not laterally with respect thereto. This is advantageous, e.g., if it is desirable first to secure an appropriate number of edge protectors to a band **74** (corresponding to the number of edges over the goods that the band will traverse when secured thereto), and then to position the band, with attached edge protectors, over the goods prior to final tensioning the band **74**.

[0027] The locking tabs **70**, **72** are formed in or provided to the second face portion **64** in such a way that the planar expanse of the face portion **64** remains present and substantially intact, except for the two relatively small cut out portions in the face portion **64** corresponding in dimension to the respective tabs **70** and **72**, from which those tabs have been stamped. In other words, except for the cut out portions from which the tabs **70** and **72** are stamped, the face portion **64** is continuous and intact in the region between the tabs **70** and **72**. Alternatively, if the tabs **70** and **72** are to be separately provided to the upper surface of the face portion **64**, such as by brazing or welding, then the face portion **64** can be completely continuous and intact in the region between the tabs. As a result of this construction, the underlying goods, such as a steel coil, are significantly protected from contact with and damage from the band. As a band **74** is tensioned around a coil, a stack of metal sheets or other goods, the band presses against the goods with the most force at the edges. Thus, shielding the goods underlying the edge protector **60** from the band is desirable. Also, as noted above once the band **74** is in place between the tabs **70** and **72**, those tabs typically are bent over the band **74** by hammering with a hammer, a block or other blunt tool or object. The substantially continuous planar expanse of the face portion **64** in between the tabs **70** and **72**, which it will be understood is in between the band **74** and the underlying goods, protects and shields the goods from being damaged when the tabs **70** and **72** are pounded down. Otherwise, the band **74**, which typically has relatively sharp edges, or the hammering tool itself may be knocked into the underlying goods and cause damage. Shielding the underlying material or goods from the band **74** and from the hammering tool or object used to pound the tabs significantly reduces the potential for damage to the surface of the underlying material.

[0028] The preferred shape of the locking tabs **70** and **72** is a square or rectangle. A square or rectangle shape provides the largest tab area over the underlying band when the tab is

hammered down, thus providing a more dependable means to secure the edge protector to the band. However, the tabs 70, 72 may be triangular, crescent or any other shape capable of being tapped down over an underlying band.

[0029] The edge protector described herein presents many benefits. For example, the edge protector 60 improves the stability of a band by providing a consistent alignment that will eliminate potential shearing or shifting of the band during transport. The edge protector 60 also protects the outer laps or edges of a coil or sheet stack, thereby eliminating excessive scrap of damaged goods. Less scrap leads to more usable material, which results in more products being manufactured, improved productivity, increased profits and a lower cost to the consumer. Another significant benefit of the edge protector 60 is that it will remain secured to the tensioned band after the band is cut to release the goods due to the engagement of the locking tabs 70, 72, thus eliminating potential hazards on a manufacturing floor. Conventional edge protectors fall to and scatter on the floor after the bands are removed from around the banded goods, as noted above. Edge protectors scattered about the floor, such as in a manufacturing plant or a steel mill, can easily find their way under the feet of workers, into expensive operating equipment, under the wheels of tow motors, etc. Indeed, conventional edge protectors scattered over the floor has been a serious safety hazard in steel mills. By eliminating edge protectors from falling to the floor, workers will have a safer working environment and manufacturers will see reduced clean-up costs, reduced equipment repair costs and enhanced life span of processing equipment.

[0030] By remaining attached to the band, the edge protector 60 provides a benefit to the environment as well. Bands, whether composed of metal or plastic, are often recycled after being used. Thus, because the edge protector remains attached to the band, recycling of edge protectors is assured. For this reason, it is desirable that the edge protector 60 be made from the same material or from a compatible material for recycling purposes as the band 74 to which it will be secured. For example, a steel edge protector is preferred when steel bands are to be used. When a plastic band is to be used, preferably the edge protector 60 is made from the same type of plastic as the band, or alternatively from a compatible class of plastic so they can be recycled together. Ensuring the recycling of edge protectors benefits the environment and reduces scrap costs to the manufacturer.

[0031] In addition to the applications in which the edge protector 60 can be used as discussed above, other uses include, but are not limited to, protecting the edges of a stack of plywood, sheetrock, drywall, lumber, trusses, cardboard, packaging materials, etc. Edge protectors of the present invention can be used with steel or other banding (less preferably plastic or fiber-reinforced plastic banding) wherever such banding is used to band together items or goods such as equipment or hardware, whether alone or to a pallet as known in the art. Broadly, any good or goods that is/are palletized, as well as any goods that are banded with steel or other bands, can utilize the edge protectors described herein to protect the edges thereof from high-tension bands, and to keep those bands in place during transport.

[0032] Alternatively, the edge protector 60 described herein also can be used with other forms of binding, such as rope, wire, cord, etc. It will be understood that the lateral

distance between both the path guides 66 and 68 and the locking tabs 70 and 72 can be varied to accommodate whatever form and dimension of binding is used. Alternatively, if a binding such as cord, wire or twine is to be used, which has no significant width compared to its height, then the locking tabs 70 and 72 can be positioned at substantially the same lateral location, preferably central of the face portion 64, but spaced longitudinally from one another so that the cord, wire or twine is held down against the upper surface of the face portion 64 by the successive tabs 70 and 72 which are bent thereover from opposite lateral directions.

[0033] The edge protector 60 can be offered or supplied in a variety of sizes and configurations, for compatibility with a variety of forms and sizes of bindings, such as different widths and materials for bands 74, as well as for other forms of binding such as cord, rope or twine.

[0034] For example, for steel bands 74, the edge protector 60 can be supplied in two sizes to accommodate the two common widths of steel banding $\frac{3}{4}$ inch and $1\frac{1}{4}$ inch width steel banding.

[0035] In an example embodiment, the edge protector is made from a sheet metal blank measuring $2\frac{1}{2}$ inches wide \times $3\frac{3}{8}$ inches long \times $\frac{1}{32}$ inch thick, with $\frac{3}{8}$ inch radius corners. The respective first and second face portions 62 and 64 are provided by bending the blank at the center of the $3\frac{3}{8}$ inch length dimension, to form their common edge 63 referred to above, to a 95-degree angle. As illustrated in FIG. 3, the upper surface of the first face portion 62, which is parallel with the underlying sheets of goods in the illustrated embodiment, has two raised path guides 66 and 68, which in this embodiment are $\frac{1}{16}$ inch in height, 1 inch in length and are spaced $1\frac{3}{8}$ inches, or slightly farther, apart to define a path of corresponding width for the band 74 (which measures $1\frac{1}{4}$ inches wide) between them over the upper surface of the first face portion 62. The path guides 66 and 68 are inset from the respective side edges of face portion 62 a distance of about $\frac{1}{4}$ inch, and inset from the front edge (opposite the common edge 63 with second face portion 64) a distance of about $\frac{1}{2}$ inch.

[0036] Continuing with the foregoing example embodiment, the second face portion 64, which is perpendicular to the underlying sheets in FIG. 3, has two raised locking tabs 70 and 72 measuring $\frac{7}{16}$ inch long and $\frac{1}{4}$ inch wide. The locking tabs extend in their respective lengthwise directions upward and away from the upper surface of the second face portion 64, and initially (before being engaged over the band 74) are angled slightly toward the center of the face portion 64, toward one another. For example, each of the locking tabs 70 and 72 can be angled inward toward the other at an angle of about 70° from the upper surface of the face portion 64. The tabs are spaced apart approximately $1\frac{3}{8}$ inches, or slightly more, from one another measured from the base edges of each of the tabs, which are common to the face portion 64, to accommodate the band 74 (measuring $1\frac{1}{4}$ inches wide) therebetween. The base edges of the tabs are inset from the respective side edges of the face portion 64 a distance of $\frac{9}{16}$ inch, and inset from the front edge thereof (opposite the common edge 63 with the first face portion 62) a distance of $1\frac{13}{16}$ inch.

[0037] In another example embodiment, suitable for a band 74 measuring $\frac{3}{4}$ inches wide, the edge protector 60 is made from a sheet metal blank that measures 2 inches

widex $3\frac{1}{2}$ inches longx $\frac{1}{32}$ inch thick and has $\frac{3}{8}$ inch radius corners. The differences between this embodiment and the immediately preceding embodiment are that here the edge protector **60** has a width of 2 inches, and the spacing between the path guides **66** and **68** and between the locking tabs **70** and **72** are different. Here, the path guides and the tabs are spaced $\frac{7}{8}$ inch, or slightly further, apart.

[0038] When banding a coil, such as steel, the edge protectors **60** can be installed as follows. Loop the band **74** through the eye **40** of the coil **10**; tension the band **74** just enough to allow the edge protectors **60** to be set in place with the banding **74** between the two locking tabs **70**, **72** in their initial, raised position. Tension the band **74** to the desired final tension. Using a hammer or similar device, hammer the tabs **70**, **72** down to secure the edge protector **60** to the band **74** as shown in **FIG. 3**. The edge protectors **60** can be installed with bands around a stack of sheets, or around a coil or other goods, in a similar manner. As shown in **FIG. 3**, it is desirable that the face portion **64** that has the tabs **70**, **72** is positioned so that it extends from the edge of the underlying goods over a surface of the goods defined by a plurality of edges of sheets or layers of the goods, and not over the flat surface or face of a single sheet or layer of the goods. This is because when the tabs are hammered down, the edges of individual sheets or layers of goods, e.g. steel, can absorb the impact without appreciable damage, but the face or flat surface of a sheet or layer could be more significantly damaged from hammering. Alternatively, if the tab-containing face portion **64** is to be positioned over the flat surface of a material (steel) sheet or layer of the underlying goods, care should be taken when hammering down the tabs so as not to damage the underlying steel or other material.

[0039] Although the above-described embodiments constitute preferred embodiments, it will be understood that various changes or modifications can be made thereto without departing from the spirit and the scope of the present invention as set forth in the appended claims.

What is claimed is:

1. An edge protector comprising a first face portion and a second face portion extending at an angle from the first face portion, and a pair of locking tabs extending from an upper surface of said second face portion from respective base edges of said locking tabs, said base edges being spaced apart to accommodate a band therebetween over said upper surface of said second face portion in use, said second face portion being substantially continuous and intact in a region between the locking tabs.

2. An edge protector according to claim 1 said locking tabs being stamped from said second face portion such that each of said tabs is continuous therewith, and such that said region of said second face portion between said locking tabs is continuous and intact except for a pair of cut outs in said second face portion corresponding to the shape of the respective locking tabs, from which said pair of locking tabs has been stamped.

3. An edge protector according to claim 1, each of said locking tabs having the shape of a square or a rectangle.

4. An edge protector according to claim 1, said pair of locking tabs being angled toward one another so as to form an acute angle between each of said tabs and the upper surface of said second face portion.

5. An edge protector according to claim 4, said acute angle being 60-89° for each of said locking tabs.

6. An edge protector according to claim 1, said locking tabs being capable of being bent down over said band in use so as to secure said band between said upper surface of said second face portion and said locking tabs overlying said band.

7. An edge protector according to claim 6, said locking tabs being of sufficient length as to effectively secure said band to said edge protector in use after said tabs are bent down over said band.

8. An edge protector according to claim 1, said edge protector being made of metal.

9. An edge protector according to claim 1, said edge protector being made of steel.

10. An edge protector according to claim 1, the angle between said first and said second face portions being 85-115 degrees.

11. An edge protector according to claim 1, further comprising a pair of raised band path guides extending from an upper surface of said first face portion, said path guides being spaced laterally from one another to accommodate said band in a region defined between said path guides over said upper surface of said first face portion in use.

12. An edge protector according to claim 11, said path guides being provided as raised portions of said first face portion, extending from and continuous with the upper surface thereof.

13. An edge protector according to claim 11, said path guides being provided as deflected regions of the first face portion, which protrude from the upper surface thereof, and which are continuous with the remainder of said first face portion.

14. A combination comprising an edge protector secured to a length of binding material, said edge protector comprising a first face portion and a second face portion extending at an angle from the first face portion, and a pair of locking tabs extending from an upper surface of said second face portion, said locking tabs being engaged over said binding material to secure it to said edge protector, said edge protector and said binding material being made from the same material or from materials that are compatible for recycling.

15. A combination according to claim 14, said binding material being a band.

16. A combination according to claim 15, said locking tabs extending from respective base edges at the upper surface of said second face portion, said band being accommodated over said upper surface of said second face portion between said base edges of said locking tabs, said locking tabs being bent over said band to thereby secure it between the upper surface of said second portion and said locking tabs overlying said band.

17. A combination according to claim 16, said band being slidable over said edge protector, through a passage defined between said upper surface of said second face portion and said tabs engaged over said band.

18. A combination according to claim 14, said second face portion being substantially continuous and intact in a region between the locking tabs.

19. A combination according to claim 18, said locking tabs being stamped from said second face portion such that each of said tabs is continuous therewith, and such that said region of said second face portion between said locking tabs

is continuous and intact except for a pair of cut outs in said second face portion corresponding to the shape of the respective locking tabs, from which said pair of locking tabs has been stamped.

20. A combination according to claim 14, further comprising a pair of raised path guides extending from an upper surface of said first face portion, said path guides being spaced laterally from one another to accommodate said binding material in a region defined between said path guides over said upper surface of said first face portion.

21. A combination according to claim 20, said path guides being provided as raised portions of said first face portion, extending from and continuous with the upper surface thereof.

22. A combination according to claim 20, said path guides being provided as deflected regions of the first face portion, which protrude from the upper surface thereof, and which are continuous with the remainder of said first face portion.

23. A combination according to claim 14, further comprising an assembly of banded goods having a first surface of the goods and a second surface of the goods intersecting at an edge of the goods,

said edge protector being provided against said edge of the goods such that said first and second face portions of said edge protector extend over respective surfaces of the goods that intersect at the edge of the goods,

said binding material being tensioned against said edge protector, thereby securing said edge protector in place against said edge of the goods, such that said binding material follows a pathway around said edge protector,

said binding material passing over said first face portion, and over said second face portion between said base edges of said locking tabs extending from the upper surface thereof.

24. A combination according to claim 23, further comprising a pair of raised path guides spaced laterally from one another and extending from an upper surface of said first face portion of said edge protector, said binding material being accommodated and passing over said first face portion between said path guides extending from the upper surface thereof.

25. A combination according to claim 23, the angle between said first and second face portions of said edge protector being slightly greater than the angle between the surfaces of the goods that intersect at and define the edge of the goods, such that tensile force of said tensioned binding material tends to compress each of said face portions, thus forcing the binding material more tightly against said face portions and against the underlying assembly of goods.

26. A combination according to claim 23, said binding material being a metal band, said edge protector being made of metal.

27. A combination according to claim 23, said binding material being a steel band, said edge protector being made of steel.

28. A combination according to claim 23, said assembly of goods being a steel coil, said edge of the goods being a coil edge formed at the intersection of a first coil surface defined by a sheet of steel that has been wound into said coil, and a second coil surface defined by edges of a plurality of windings of said sheet of steel that has been wound into said coil.

29. A combination according to claim 28, said first face portion of said edge protector being provided extending over said first coil surface and said second face portion of said edge protector extending over said second coil surface.

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