

100

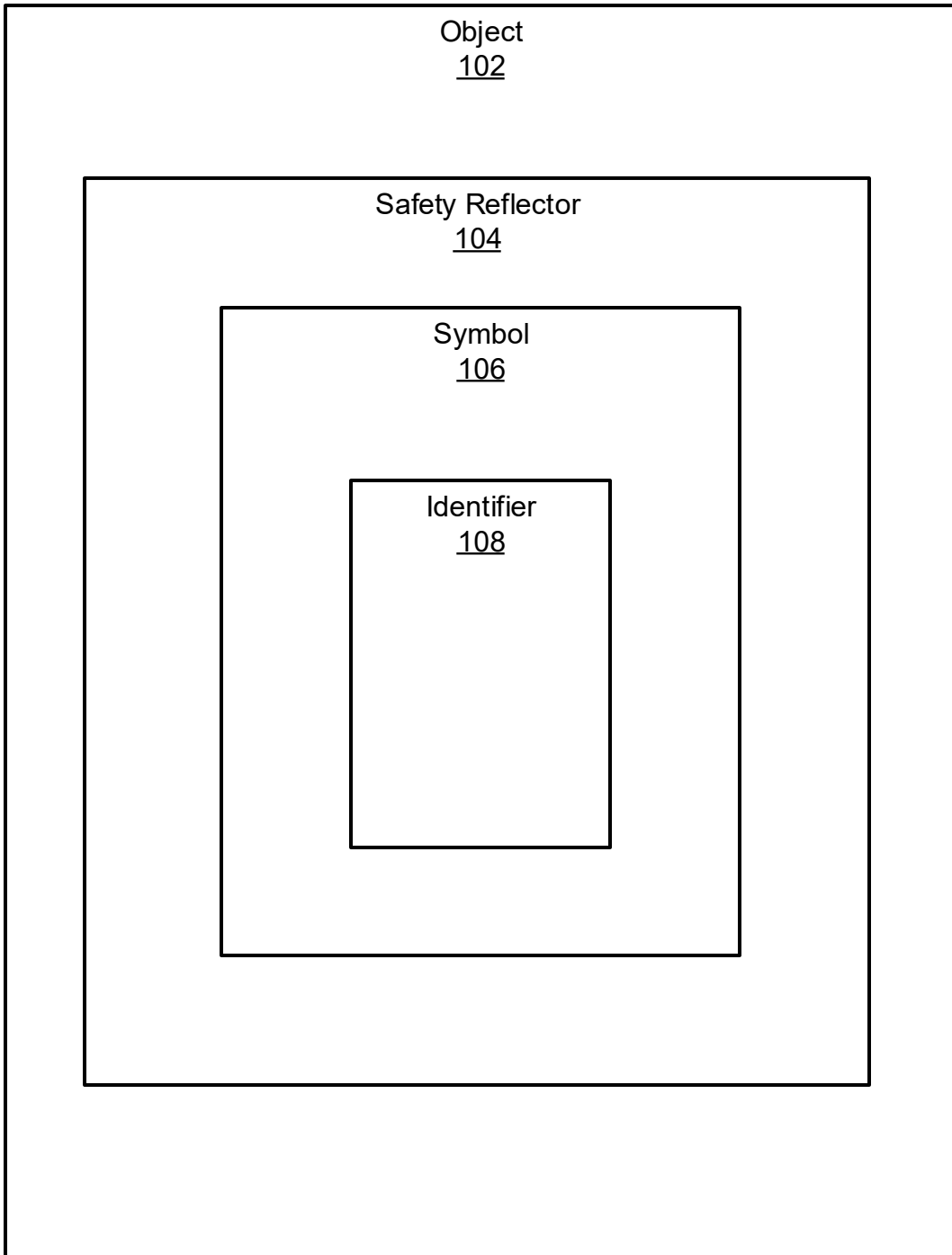


FIG. 1

200 →

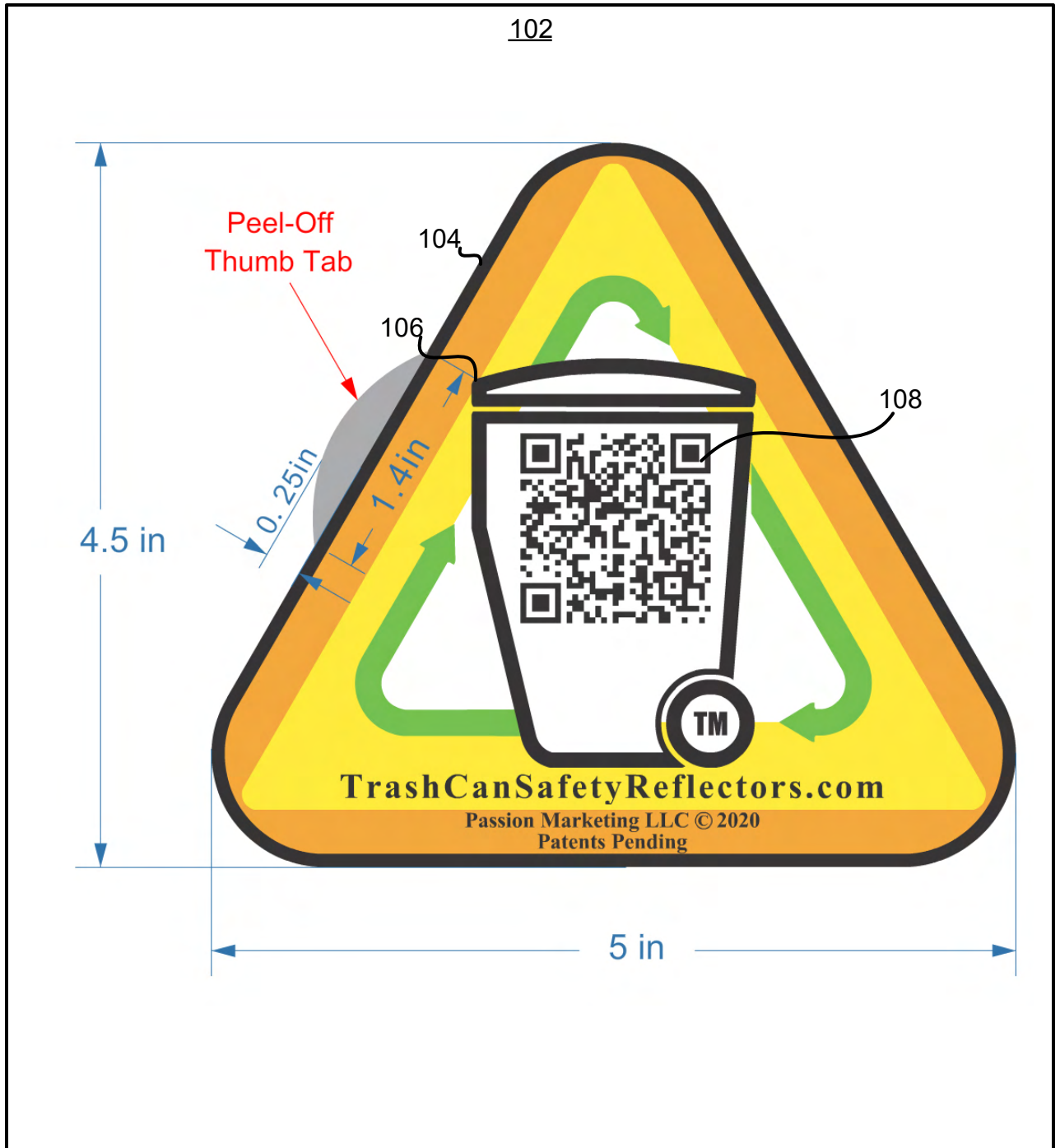


Fig. 2

300 →

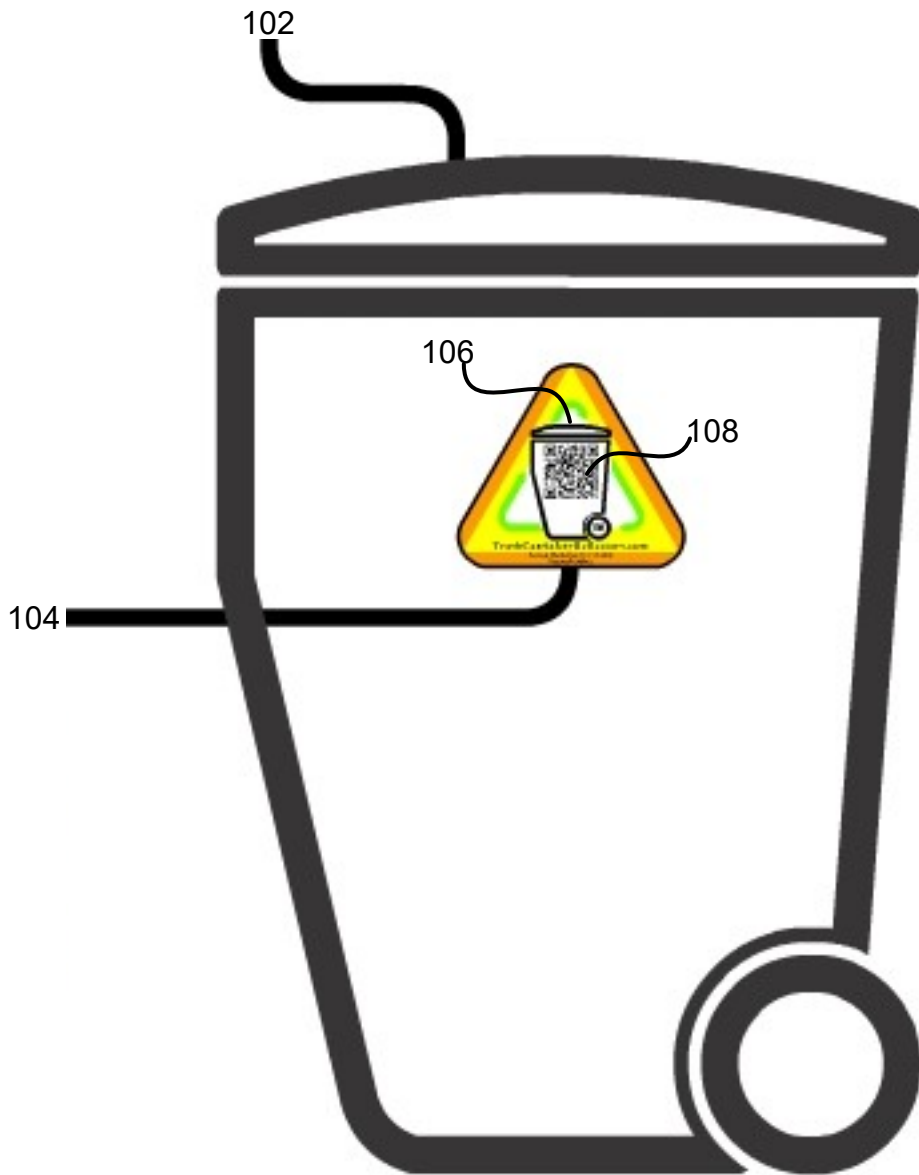


Fig. 3

PROVISIONAL PATENT APPLICATION
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UNITED STATES PROVISIONAL PATENT APPLICATION

of

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for

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for

SAFETY REFLECTOR

SAFETY REFLECTOR

FIELD

[0001] The subject matter of the present disclosure relates generally to safety reflectors. More specifically, this application relates to a safety reflector for a trash receptacle with an integrated identifier.

BACKGROUND

[0002] Many objects can be difficult to see at night. For example, trash cans are often black or dark in color, and can be placed in streets or alleyways at night for pickup the next morning. Vehicles, cyclists, joggers, and the like may have difficulty seeing trash cans or other objects at dusk or in the dark, leading to accident or injury.

BRIEF DESCRIPTION OF THE DRAWINGS

[0003] In order that the advantages of the disclosure will be readily understood, a more particular description of the disclosure briefly described above will be rendered by reference to specific embodiments that are illustrated in the appended drawings.

Understanding that these drawings depict only typical embodiments of the disclosure and are not therefore to be considered to be limiting of its scope, the subject matter of the present application will be described and explained with additional specificity and detail through the use of the accompanying drawings, in which:

[0004] Figure 1 is a schematic block diagram illustrating one embodiment of a system for a safety reflector;

[0005] Figure 2 is a schematic block diagram illustrating a further embodiment of a safety reflector; and

[0006] Figure 3 is a schematic block diagram illustrating a certain embodiment of a safety reflector.

DETAILED DESCRIPTION

[0007] Reference throughout this specification to “one embodiment,” “an embodiment,” or similar language means that a particular feature, structure, or characteristic described in connection with the embodiment is included in at least one embodiment of the present disclosure. Thus, appearances of the phrases “in one embodiment,” “in an embodiment,” and similar language throughout this specification may, but do not necessarily, all refer to the same embodiment. Similarly, the use of the term “implementation” means an implementation having a particular feature, structure, or characteristic described in connection with one or more embodiments of the present disclosure, however, absent an express correlation to indicate otherwise, an implementation may be associated with one or more embodiments.

[0008] In the following description, numerous specific details are provided. One skilled in the relevant art will recognize, however, that the subject matter of the present application may be practiced without one or more of the specific details, or with other methods, components, materials, and so forth. In other instances, well-known structures, materials, or operations are not shown or described in detail to avoid obscuring aspects of the disclosure.

[0009] Figure 1 depicts one embodiment of a system 100 for a safety reflector 104. In the depicted embodiment, the safety reflector 104 is disposed on an object 102 such as a trash receptacle or other large object which may be difficult to see in low light and/or in the dark. The safety reflector 104, in certain embodiments, may include a symbol 106 and/or an identifier 108.

[0010] In one embodiment, the safety reflector 104 comprises a reflective material, that directs light back from the safety reflector 104 toward a viewer or the like. The safety reflector 104 may comprise a bright color (e.g., yellow, orange, green, white, pink, and/or another bright color). The safety reflector 104 may comprise a sticker, a decal, a label, or the like with an adhesive configured to removably and/or fixedly couple

the safety reflector 104 to the object 102. In embodiments where the safety reflector 104 comprises a trash can reflective safety sticker, or the like, (e.g., for objects 102 comprising roll-out curb-side trash cans and/or other trash receptacles), the safety reflector 104 may prevent the trash can or other object 102 from becoming a dangerous obstacle in low light or at night. For example, with one or more safety reflectors 104 on multiple sides of a trash can or other object 102, the trash can or other object 102 becomes easily visible for vehicles, cyclists, joggers, and/or other viewers at dusk or in the dark. In this manner, the safety reflector 104 may prevent vehicle damage, injury, avoid a mess, or the like by putting one or more safety reflectors 104 on an object 102 such as a trash can or other trash receptacle.

[0011] In one embodiment, the safety reflector 104 comprises a symbol 106. The symbol 106, in some embodiments, comprises a representation of the object 102 upon which the safety reflector 104 is disposed. For example, the symbol 106 may comprise a representation of a trash can or other trash receptacle, and the object 102 may also comprise a trash can or other trash receptacle. In this manner, in certain embodiments, the safety reflector 104 may indicate to a viewer an identity of the object 102, even if the object 102 itself may not be completely visible and/or identifiable.

[0012] In one embodiment, the identifier 108 comprises a machine-readable identifier 108 for the object 102. For example, each safety reflector 104 may comprise a unique identifier 108, such as a quick response (QR) code, bar code, radio frequency identifier (RFID), near-field communication (NFC) device, Bluetooth® beacon or other Bluetooth® device, and/or another optical and/or electrical identifier 108.

[0013] In certain embodiments, a user may scan and/or otherwise read an identifier 108, in order to track an attribute of the object 102 (e.g., a location, a weight such as the weight of trash or other waste in a trash receptacle, a usage metric, or the like). In one embodiment, a scanner/reader/receiver may be integrated with an arm or other extension of a garbage truck, such that the identifier 108 may be scanned or

otherwise read automatically in response to collecting, grabbing, and/or otherwise interfacing with the object 102 (e.g., the trash can or other trash receptacle). For example, in embodiments where the object 102 comprises a trash can or other trash receptacle, a garbage truck may scan or otherwise read the identifier 108 (e.g., using a camera or other optical sensor, a receiver, a or the like) to determine a unique identity of the object 102 (e.g., associating the object 102 with a user, an account, an address, or the like), and may weigh the object 102 and/or contents of the object (e.g., the trash can or other trash receptacle), in order to track usage of the object 102, in order to charge the associated user/account for the usage (e.g., by weight or the like), and/or to otherwise track an attribute of the object 102.

[0014] For example, in some embodiments, instead of and/or in addition to weight, a garbage truck or other user may manually or in an automated manner determine whether a lid of the object 102 (e.g., a trash can or other trash receptacle) is at least partially open or propped up, and may charge an overflow fee or the like to the user/owner of the object 102. In a further embodiment, a user/owner of an object 102 such as a trash can or other trash receptacle may receive a credit and/or reduction of a fee, or the like, for trash collection based on a determined weight, volume, or other amount of recycling provided for pick up (e.g., in another object 102 such as a recycling bin or other recycling receptacle). In various embodiments as described herein, garbage collection costs may be applied by weight of garbage/trash/recycling collected, rather than a fixed fee.

[0015] In some embodiments, a user may track aggregated statistics and/or other attributes for multiple objects 102 (e.g., trash and/or recycling usage for a city, county, state, and/or other region; track net weight of garbage; track how many trash cans or other trash receptacles are collected; to whom a trash can or other trash receptacle is assigned; what type of garbage such as trash or recycling is collected; or the like). While a single safety reflector 104 is illustrated in the depicted embodiment, in other

embodiments, an object 102 may comprise multiple safety reflectors 104. For example, an object 102 may comprise a different safety reflector 104 on each side of the object 102, on multiple sides of the object 102, or the like.

[0016] Figure 2 depicts a further embodiment of a system 200 for a safety reflector 104. The safety reflector 104, in certain embodiments, may be substantially similar to the safety reflector 104 of Figure 1 described above. In the depicted embodiment, the symbol 106 comprises a depiction of a trash can or other trash receptacle and the identifier 108 comprises a QR code. The safety reflector 104 comprises a plurality of bright colors, including yellow, green, orange, and white.

[0017] Figure 3 depicts another embodiment of a system 300 for a safety reflector 104. In the depicted embodiment, the safety reflector 104 may be substantially similar to the safety reflector 104 of Figure 1 and/or of Figure 2 described above, and the object 102 comprises a trash and/or recycling can 102 or other receptacle 102.

Additional Embodiments

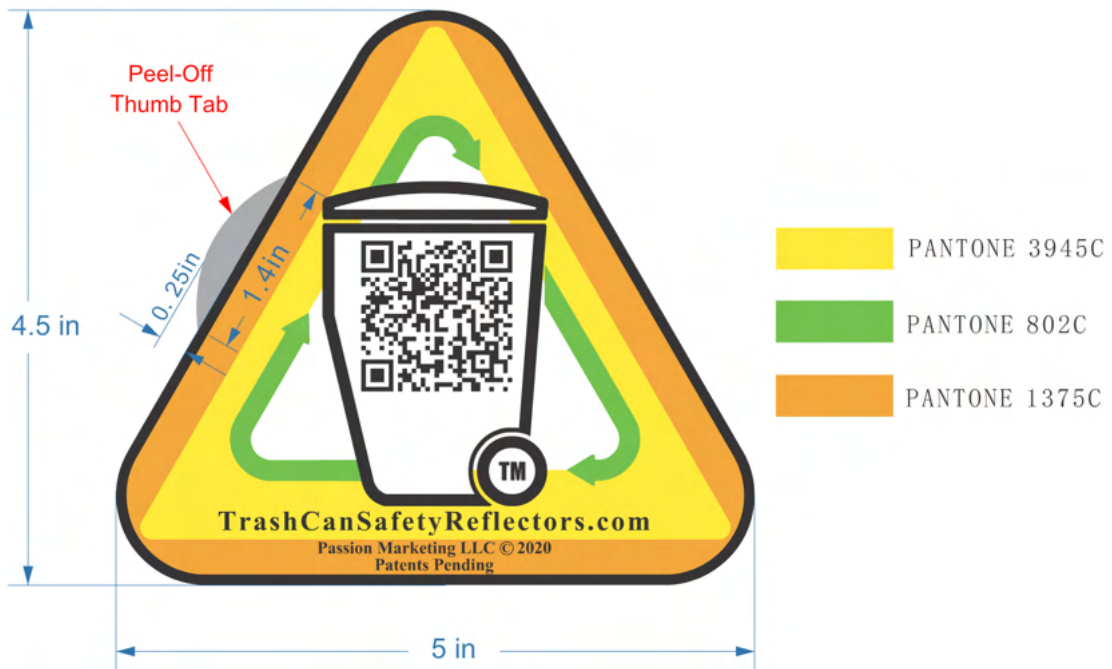


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[0018] In the above description, certain terms may be used such as "up," "down," "upper," "lower," "horizontal," "vertical," "left," "right," and the like. These terms are used, where applicable, to provide some clarity of description when dealing with relative relationships. But, these terms are not intended to imply absolute relationships, positions, and/or orientations. For example, with respect to an object, an "upper" surface can become a "lower" surface simply by turning the object over. Nevertheless, it is still the same object. Further, the terms "including," "comprising," "having," and variations thereof mean "including but not limited to" unless expressly specified otherwise.

[0019] Additionally, instances in this specification where one element is "coupled" to another element can include direct and indirect coupling. Direct coupling can be defined as one element coupled to and in some contact with another element.

Indirect coupling can be defined as coupling between two elements not in direct contact with each other, but having one or more additional elements between the coupled elements. Further, as used herein, securing one element to another element can include direct securing and indirect securing. Additionally, as used herein, “adjacent” does not necessarily denote contact. For example, one element can be adjacent another element without being in contact with that element.

[0020] As used herein, the phrase “at least one of”, when used with a list of items, means different combinations of one or more of the listed items may be used and only one of the items in the list may be needed. The item may be a particular object, thing, or category. In other words, “at least one of” means any combination of items or number of items may be used from the list, but not all of the items in the list may be required. For example, “at least one of item A, item B, and item C” may mean item A; item A and item B; item B; item A, item B, and item C; or item B and item C. In some cases, “at least one of item A, item B, and item C” may mean, for example, without limitation, two of item A, one of item B, and ten of item C; four of item B and seven of item C; or some other suitable combination.

[0021] Unless otherwise indicated, the terms "first," "second," etc. are used herein merely as labels, and are not intended to impose ordinal, positional, or hierarchical requirements on the items to which these terms refer. Moreover, reference to, e.g., a “second” item does not require or preclude the existence of, e.g., a “first” or lower-numbered item, and/or, e.g., a “third” or higher-numbered item.

[0022] The schematic flow chart diagrams included herein are generally set forth as logical flow chart diagrams. As such, the depicted order and labeled steps are indicative of one embodiment of the presented method. Other steps and methods may be conceived that are equivalent in function, logic, or effect to one or more steps, or portions thereof, of the illustrated method. Additionally, the format and symbols employed are provided to explain the logical steps of the method and are understood not to limit the

scope of the method. Although various arrow types and line types may be employed in the flow chart diagrams, they are understood not to limit the scope of the corresponding method. Indeed, some arrows or other connectors may be used to indicate only the logical flow of the method. For instance, an arrow may indicate a waiting or monitoring period of unspecified duration between enumerated steps of the depicted method. Additionally, the order in which a particular method occurs may or may not strictly adhere to the order of the corresponding steps shown.

[0023] The subject matter of the present disclosure may be embodied in other specific forms without departing from its spirit or essential characteristics. The described embodiments are to be considered in all respects only as illustrative and not restrictive. The scope of the disclosure is, therefore, indicated by the appended claims rather than by the foregoing description. All changes which come within the meaning and range of equivalency of the claims are to be embraced within their scope.

[0024] What is claimed is:

1. A system for a safety reflector as described herein and depicted in the drawings submitted herewith.

2. A method for a safety reflector as described herein and depicted in the drawings submitted herewith.

3. An apparatus for a safety reflector as described herein and depicted in the drawings submitted herewith.

4. An apparatus comprising means for a safety reflector as described herein and depicted in the drawings submitted herewith.