ABBSTRACT
A packaging container is provided for shipping and the like that includes reinforced corners that utilizes rigid metal or plastic inserts housed in an internal, or external receiving slot.
PACKAGING BOX WITH REINFORCED CORNERS

RELATED APPLICATIONS
0001 The present invention was first described in Disclosure Document Number 479,755 filed on Sep. 14, 2000 under 35 U.S.C. §122 and 37 C.F.R. §1.14. There are no previously filed, nor currently any co-pending applications, anywhere in the world.

BACKGROUND OF THE INVENTION
0002 1. Field of the Invention
0003 The present invention relates generally to packaging containers for shipping and the like and, more particularly, to reinforced corner box that utilizes rigid metal or plastic inserts housed in an internal, or external receiving slot.
0004 2. Description of the Related Art
0005 Those of us who work in an office environment find nothing more aggravating than having to refill the copy machine when it runs out of paper, with the possible exception of finding the refill paper box damaged by rough handling. This rough handling is directly transmitted to the paper itself inside, which is only protected by a thin layer of cardboard. Of course when the paper is damaged, it will not feed through the automatic mechanism of the copier, the printer or the fax machine, and the paper must usually be tossed directly into the recycle bin or trash container. While this is a problem with boxes that store copy paper, it is a problem with all shipping boxes that are subject to damage on the corners or edges of the box.
0006 A search of the prior art did not disclose any patents that read directly on the claims of the instant invention; however, the following references were considered related.
0007 The following patents disclose a corrugated cardboard box with corner support posts:

0008 U.S. Pat. No. 5,850,965 issued in the name of Boyle et al.
0009 U.S. Pat. No. 5,673,848 issued in the name of Garza
0010 U.S. Pat. No. 5,535,941 issued in the name of Garza
0011 U.S. Pat. No. 3,162,351 issued in the name of Rudowsky
0012 The following patents describe a stackable container with reinforced corners:

0013 U.S. Pat. No. 5,549,242 issued in the name of Gimeno
0014 U.S. Pat. No. 5,415,345 issued in the name of MacKinnon
0015 U.S. Pat. No. 5,294,044 issued in the name of Clark discloses a fiberboard box with reinforced corners.
0016 U.S. Pat. No. 5,289,970 issued in the name of McClure describes a paperboard container having reinforced corners.

0017 U.S. Pat. No. 4,799,620 issued in the name of Vilella discloses a corner construction of stackable cardboard boxes.
0018 Consequently, there exists a need for a means by boxes and their associated contents can be protected from impact damage along the edges or corners of the box.

SUMMARY OF THE INVENTION
0019 It is therefore an object of the present invention to provide an improved packaging containers for shipping and the like.
0020 It is a feature of the present invention to provide an improved packaging box with reinforced corners.
0021 Briefly described according to one embodiment of the present invention, a packaging box with reinforced corners is provided as a shipping box with corners that are reinforced with either metal or plastic. From outward appearance the invention looks remarkably like any other cardboard shipping container, but after closer inspection, it can be seen that the corners and edges are reinforced with either plastic or metal strips. The reinforcing strips can be located on the interior of the box, the exterior of the box, or internal to the box walls. While the invention may be used for any purpose, it is specifically intended to reduce damage to copy paper, fax paper or printer paper, which is frequently damaged in transport.
0022 The use of the present invention provides the users of shipping containers the confidence and reassurance that their product or parcel will arrive in an undamaged state in a manner which is quick, easy and effective.
0023 An advantage of the present invention is that its use protects products or parcels during shipping.
0024 Specifically intended for paper used in copiers, fax machines and computer printers, use of the present invention incorporating reinforced corner protects edges and corners from impact damage, thereby preserving the contents.

BRIEF DESCRIPTION OF THE DRAWINGS
0025 The advantages and features of the present invention will become better understood with reference to the following more detailed description and claims taken in conjunction with the accompanying drawings, in which like elements are identified with like symbols, and in which:

0026 FIG. 1 is a perspective view of an improved packaging box with reinforced corners according to the preferred embodiment of the present invention;
0027 FIG. 2a is a top plan view of a corner according to a first configuration therein; and
0028 FIG. 2b is a top plan view of a corner according to a second configuration therein.

DESCRIPTION OF THE PREFERRED EMBODIMENTS
0029 The best mode for carrying out the invention is presented in terms of its preferred embodiment, herein depicted within the Figures.
[0030] 1. Detailed Description of the Figures

[0031] Referring now to FIG. 1, a packaging box 10 is shown of a generally conventional configuration having an internal storage volume 12 formed by a plurality of intersecting box sides 14. Access to and egress from the internal storage volume 12 is through an opening orifice which is covered by a lid 16. Although shown herein as a hinged, pivoting lid, other types, such as a four-part flap lid or a completely separate removable lid can be incorporated into the improvement disclosed herein. A reinforced corner 20 is provided at each outer side box corner.

[0032] Referring now to FIG. 2A, a reinforced corner 20 is shown in greater detail. At each corner 20 is formed of a pair of cardboard sidewalls 14 folded at a vertical seam 22. A shell member 24, made of paper or similar material is affixed along the outer surface of the corner 20 in a manner to allow access to a reinforcing rod receiving cavity 26. An angular profiled reinforcing rod 28 is thereby inserted into the cavity 26.

[0033] Referring now to FIG. 2B, an alternate version of a reinforced corner 20 is shown in greater detail. At each corner 20 is formed of a pair of cardboard sidewalls 14 folded at a vertical seam 22. A shell member 24, made of paper or similar material is affixed along the inner surface of the corner 20 in a manner to allow access to a reinforcing rod receiving cavity 26. An angular profiled reinforcing rod 28 is thereby inserted into the cavity 26.

[0034] 2. Operation of the Preferred Embodiment

[0035] In operation the present invention is used as one would use any other cardboard shipping container. The reinforcing strips can be located on the interior of the box, the exterior of the box, or internal to the box walls. While the invention may be used for any purpose, it is specifically intended to reduce damage to copy paper, fax paper or printer paper, which is frequently damaged in transport.

[0036] The use of the present invention provides the users of shipping containers the confidence and reassurance that their product or parcel will arrive in an undamaged state in a manner which is quick, easy and effective.

[0037] The foregoing descriptions of specific embodiments of the present invention have been presented for purposes of illustration and description. They are not intended to be exhaustive or to limit the invention to the precise forms disclosed, and obviously many modifications and variations are possible in light of the above teaching. The embodiments were chosen and described in order to best explain the principles of the invention and its practical application, to thereby enable others skilled in the art to best utilize the invention and various embodiments with various modifications as are suited to the particular use contemplated. It is intended that the scope of the invention be defined by the Claims appended hereto and their equivalents. Therefore, the scope of the invention is to be limited only by the following claims.

What is claimed is:

1. In a packaging box having an internal storage volume formed by a plurality of intersecting box sides and where access to and egress from the internal storage volume is through an opening orifice which is covered by a lid, the improvement comprising:
   a reinforced corner provided at each outer side box corner.
2. The improvement of claim 1, wherein said reinforced corner comprises:
   a shell member affixed along the outer surface of the corner in a manner to allow access to a reinforcing rod receiving cavity; and
   a reinforcing rod inserted into said cavity.
3. The improvement of claim 2, wherein said reinforcing rod has an angular cross sectional profile.
4. The improvement of claim 1, wherein said reinforced corner comprises:
   a shell member affixed along the inner surface of the corner in a manner to allow access to a reinforcing rod receiving cavity; and
   a reinforcing rod inserted into said cavity.
5. The improvement of claim 4, wherein said reinforcing rod has an angular cross sectional profile.