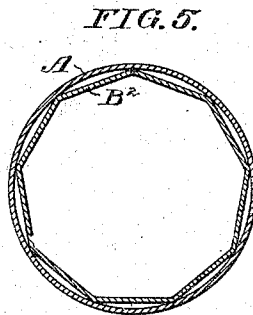
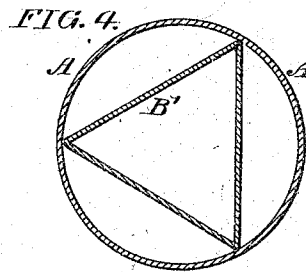
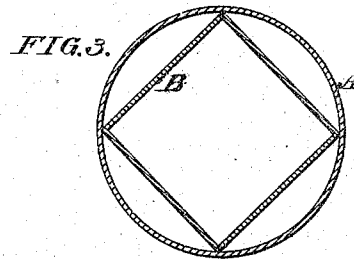
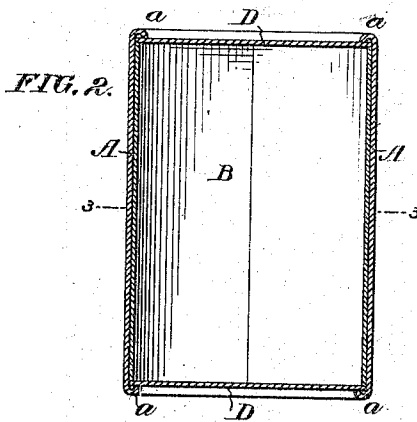
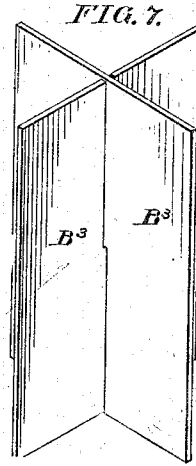
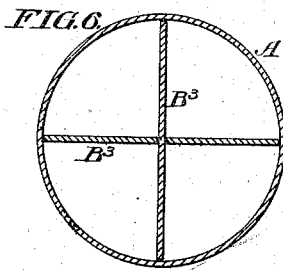
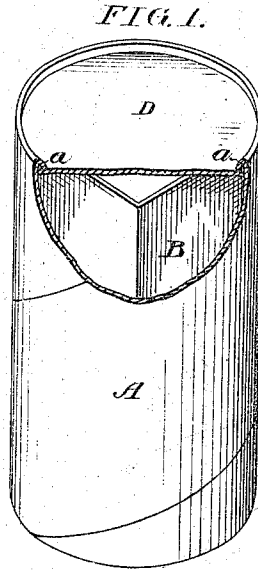
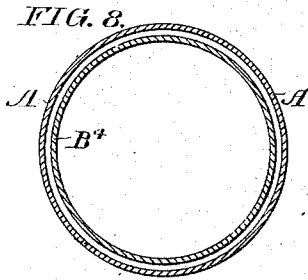


(No Model.)

G. E. GRIMM.
CORE FOR RIBBON ROLLS.

No. 567,898.

Patented Sept. 15, 1896.



Witnesses:

F. D. Goodwin
J. B. Benner

Inventor:

Gerhardt E. Grimm
by his Attorneys
Hudson & Ransom

UNITED STATES PATENT OFFICE.

GERHARDT E. GRIMM, OF CAMDEN, NEW JERSEY.

CORE FOR RIBBON-ROLLS.

SPECIFICATION forming part of Letters Patent No. 567,898, dated September 15, 1896.

Application filed October 4, 1895. Serial No. 564,658. (No model.)

To all whom it may concern:

Be it known that I, GERHARDT E. GRIMM, a citizen of the United States, residing in Camden, New Jersey, have invented Improvements in Cores for Ribbon-Rolls, &c., of which the following is a specification.

The object of my invention is to provide a strong, light, and cheap cylindrical box-like structure, especially adapted as a core upon which ribbons, tapes, and the like can be wound, although available for other uses. This object I attain by means of a structure of paper comprising a cylindrical shell or body, opposite end disks, upon which the ends of said cylindrical body are intumed, and an interior support, preferably in the form of an internal bracing-frame of angular form, as fully set forth hereinafter.

In the accompanying drawings, Figure 1 is a perspective view of my improved paper box or core for ribbon-rolls or the like, showing parts of the outer shell and one of the end disks broken away in order to illustrate part of the internal supporting-frame. Fig. 2 is a vertical sectional view of the structure. Fig. 3 is a sectional plan view on the line 3-3, Fig. 2; and Figs. 4 to 9, inclusive, are views illustrating modified forms of internal support for the end disks or heads.

The structure shown in Figs. 1, 2, and 3 comprises an outer cylindrical casing A, formed of paper, preferably by coiling a strip in the manner common in making mailing-tubes and the like. Within this cylindrical shell is a square frame B, likewise of paper and slightly less in length than the shell or casing A. Seated upon the opposite ends of this internal frame B are disks D, of paper, of the same diameter as the internal diameter of the shell A, these disks being firmly retained in place against the ends of the internal frame B by turning in the projecting ends of the shell A over the same, as shown at a in Figs. 1 and 2. The angles of the internal frame B bear against the inner face of the shell A and thus serve to brace and stiffen the same.

A structure of this character is cheap, light, and extremely strong, and therefore presents a very acceptable substitute for the

blocks or tubes usually employed as cores for ribbon-rolls and the like, although it is available also for other uses, for instance, as a box for powdered or granular substances.

Although I prefer to adopt the square form for the internal supporting and bracing frame B, other forms of angular cross-section may be adopted without departing from my invention. For instance, in Fig. 4 I have illustrated an internal frame B' of triangular form, while in Fig. 5 I have shown an internal frame B², having nine sides, and in Figs. 6 and 7 I have shown an internal frame composed of two strips B³, crossing each other at right angles and interlocked at the crossing-point.

While the angular form of internal supporting-frame is always preferred, it is not absolutely essential to the broadest embodiment of my invention, as a circular shell, slightly less in diameter than the outer shell A, such, for instance, as shown at B⁴ in Fig. 8, may be used, if desired, or the internal support might even in some cases be made on the outer shell itself, as, for instance, in the form of an internal rib, as shown at B⁵ in Fig. 9.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. The within-described paper box or core, said box or core consisting of a cylindrical body or shell, end disks upon which the ends of said cylindrical body or shell are intumed, and an internal support forcing said disks against said intumed edges, substantially as specified.

2. The within-described paper box or core, said box or core consisting of a cylindrical body or shell, end disks upon which the ends of said cylindrical body or shell are intumed, and an internal supporting-frame, independent of the outer shell, forcing said disks against said intumed edges, substantially as specified.

3. The within-described paper box or core, said box or core consisting of a cylindrical body or shell, end disks upon which the ends of said cylindrical body or shell are intumed, and an internal supporting and bracing

frame of angular form the angles or lateral
extremities of said frame bearing against the
inner wall of said cylindrical body, and the
ends of the frame forcing the end disks
5 against said inturned edges of the body or
shell, substantially as specified.

In testimony whereof I have signed my

name to this specification in the presence of
two subscribing witnesses

GERHARDT E. GRIMM.

Witnesses:

WILL. A. BARR,

JOS. H. KLEIN.