

**WOVEN INTRAVASCULAR DEVICES AND METHODS FOR
MAKING THE SAME AND APPARATUS FOR DELIVERY OF THE SAME**

ABSTRACT

Self-expandable, woven intravascular devices for use as stents (both straight
5 and tapered), filters (both temporary and permanent) and occluders for insertion and
implantation into a variety of anatomical structures. The devices may be formed from
shape memory metals such as nitinol. The devices may also be formed from
biodegradable materials. Delivery systems for the devices include two hollow tubes
that operate coaxially. A device is secured to the tubes prior to the implantation and
10 delivery of the device by securing one end of the device to the outside of the inner
tube and by securing the other end of the device to the outside of the outer tube. The
stents may be partially or completely covered by graft materials, but may also be bare.
The devices may be formed from a single wire. The devices may be formed by either
hand or machine weaving. The devices may be created by bending shape memory
15 wires around tabs projecting from a template, and weaving the ends of the wires to
create the body of the device such that the wires cross each other to form a plurality of
angles, at least one of the angles being obtuse. The value of the obtuse angle may be
increased by axially compressing the body.

Fig. 13



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