

ABSTRACT

ELONGATE PLASTIC MEMBER ASSEMBLY AND METHOD AND
APPARATUS FOR MAKING THE SAME

A method of making an elongate plastic member assembly (76,80,84,88) includes providing at least an elongate plastic member (62) having a plastic wall (66). One portion of an elongate plastic member (62) is aligned adjacent to another portion of an elongate plastic member (62) and the walls (66) of the adjacent elongate plastic members are plasticized. The plasticized portions of the walls are flowed into a mold (32) between adjacent elongate portions to fuse the adjacent portions together. A peelable elongate plastic member (76,80,84,88) is made in accordance with the process described above. The elongate plastic member assembly may be made of single elongate plastic member (62) in a coiled configuration or a plurality of elongate plastic members joined in parallel at selected points along their length. Another aspect of the present invention is an apparatus (10) for making an elongate plastic member assembly. The apparatus (10) includes complementary upper (14) and lower (16) radio frequency dies, each die having a leading surface (20',20) with a plurality of parallel grooves (22',22) therein including a first and a last parallel groove. Adjacent parallel grooves of both dies are separated by a land strip (28',28) of the leading surface. An outermost edge of the first and the last parallel grooves of at least one of the upper and lower dies is beveled (34,36,38,40). Parallel grooves of the upper and lower dies, with the leading surfaces in an operative position, define a plurality of receiving channels (30) and the land strips define a plurality of flow chambers (32). A press (60) is provided for bringing leading surfaces of the upper and lower dies into an operative position in close proximity to one another. A radio frequency generator (18) selectively applies an energy potential between the upper and the lower dies to plasticize the elongate plastic

members, whereby plastic flows into the flow chambers (32) to fuse adjacent elongate plastic members together.

Figure 3