



US005366498A

United States Patent [19]

[11] **Patent Number:** 5,366,498

Brannan et al.

[45] **Date of Patent:** Nov. 22, 1994

[54] **DEVICE FOR TREATING FINE SUPERFICIAL FACIAL LINES**

[75] **Inventors:** Ann Brannan, San Francisco; Roseann Burhenne, Los Altos Hills; Frank A. Delustro, Belmont; Thomas L. Smestad, Palo Alto; Louis Fries, Los Altos; Rees M. Orland, Los Altos Hills, all of Calif.

[73] **Assignee:** Collagen Corporation, Palo Alto, Calif.

[21] **Appl. No.:** 16,490

[22] **Filed:** Feb. 10, 1993

Related U.S. Application Data

[63] Continuation of Ser. No. 677,403, Mar. 29, 1991, abandoned.

[51] **Int. Cl.⁵** A61F 2/10

[52] **U.S. Cl.** 623/11; 623/66

[58] **Field of Search** 623/15, 11; 604/187, 604/243; 128/DIG. 8

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,949,073	4/1976	Daniels et al.	424/177
4,424,208	1/1984	Wallace et al.	424/177
4,488,911	12/1984	Luck et al.	106/161
4,582,640	4/1986	Smestad et al.	128/DIG. 8 X
4,642,117	2/1987	Nguyen et al.	623/15 X

OTHER PUBLICATIONS

Sherwood Medical Catalog—Apr. 5, 1989 p. 4 under Needles & Syringe Section.

Primary Examiner—David Isabella

Attorney, Agent, or Firm—Morrison & Foerster

[57] **ABSTRACT**

A device for correcting fine superficial facial lines which comprises a syringe fitted with a 31–33 gauge needle and an aqueous suspension of noncrosslinked fibrillar atelopeptide collagen contained within the syringe barrel, the concentration of collagen in the suspension being in the range of 10 to 50 mg/ml and the suspension exhibiting an extrusion plot in which there is a smooth substantially linear increase in force up to a substantially constant force in the range of 5 to 30 newtons.

6 Claims, No Drawings