

March 6, 1951

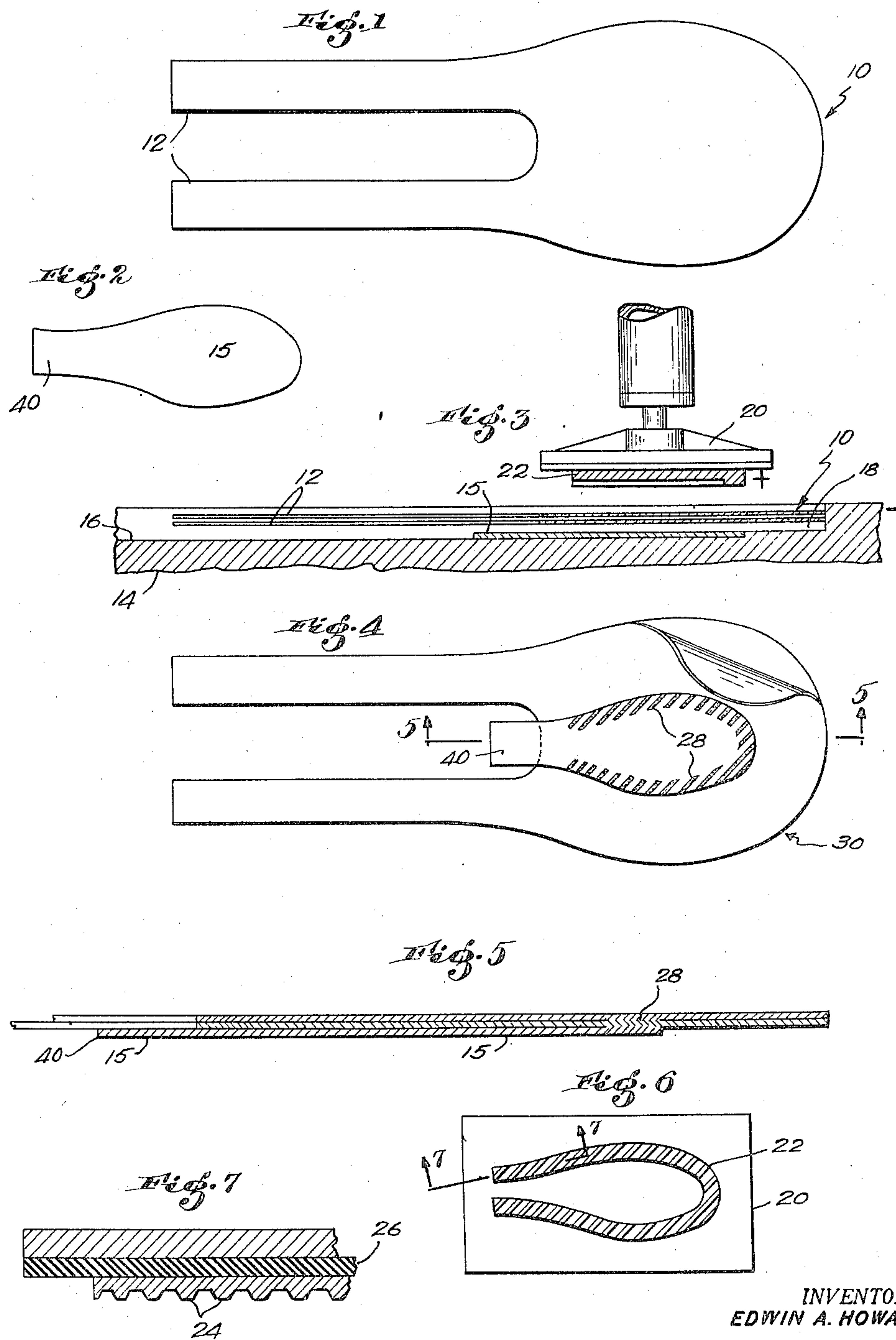
E. A. HOWARD

2,544,264

SHOE PROTECTOR

Filed Sept. 9, 1947

3 Sheets-Sheet 1



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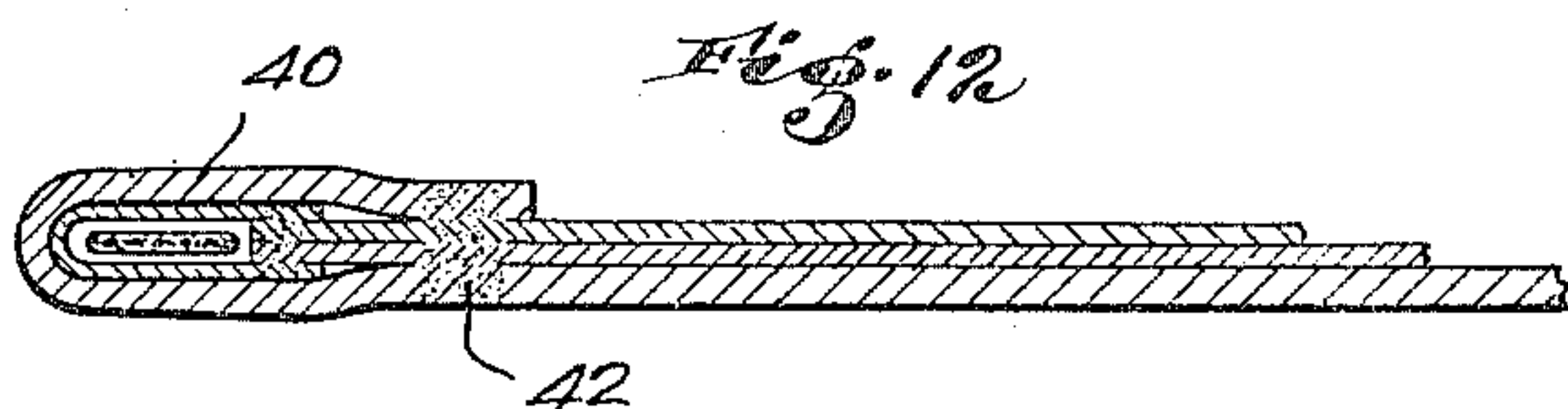
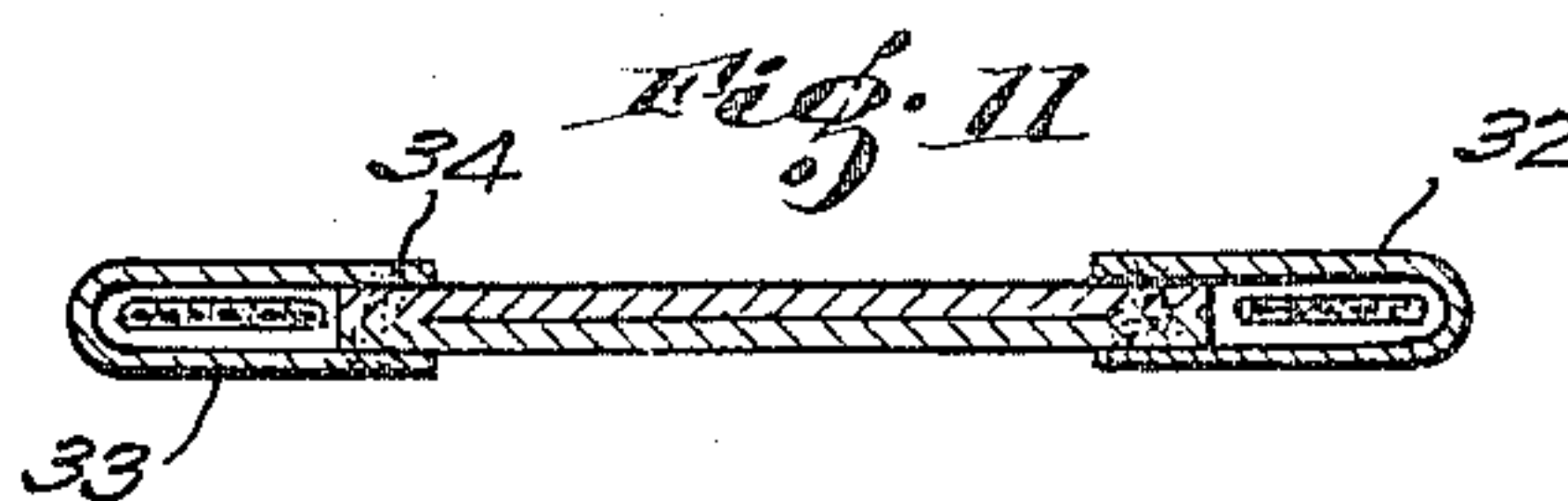
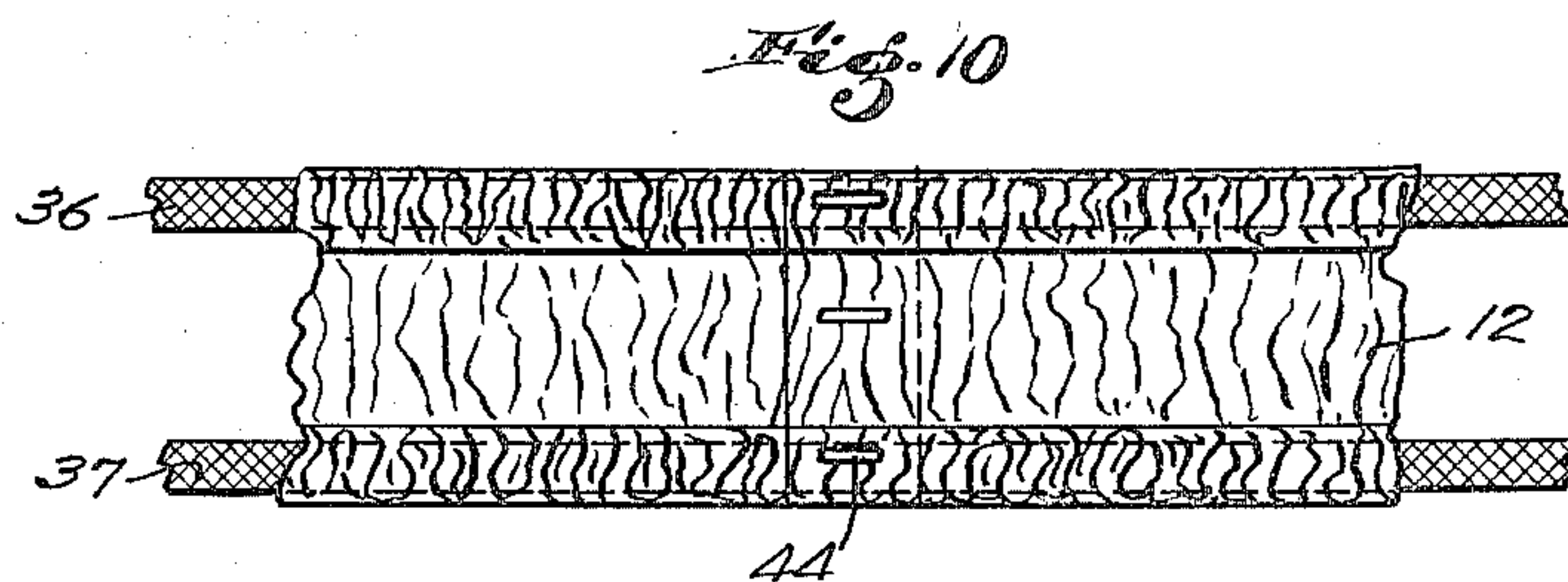
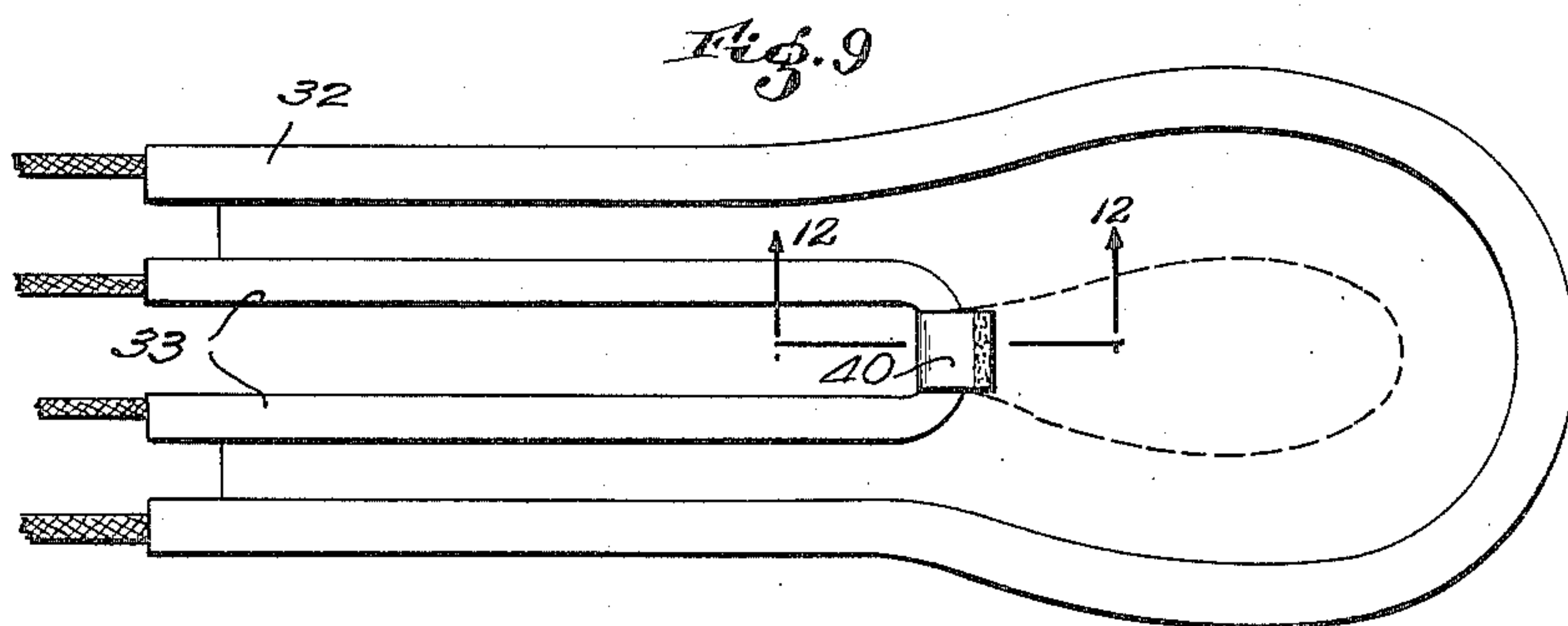
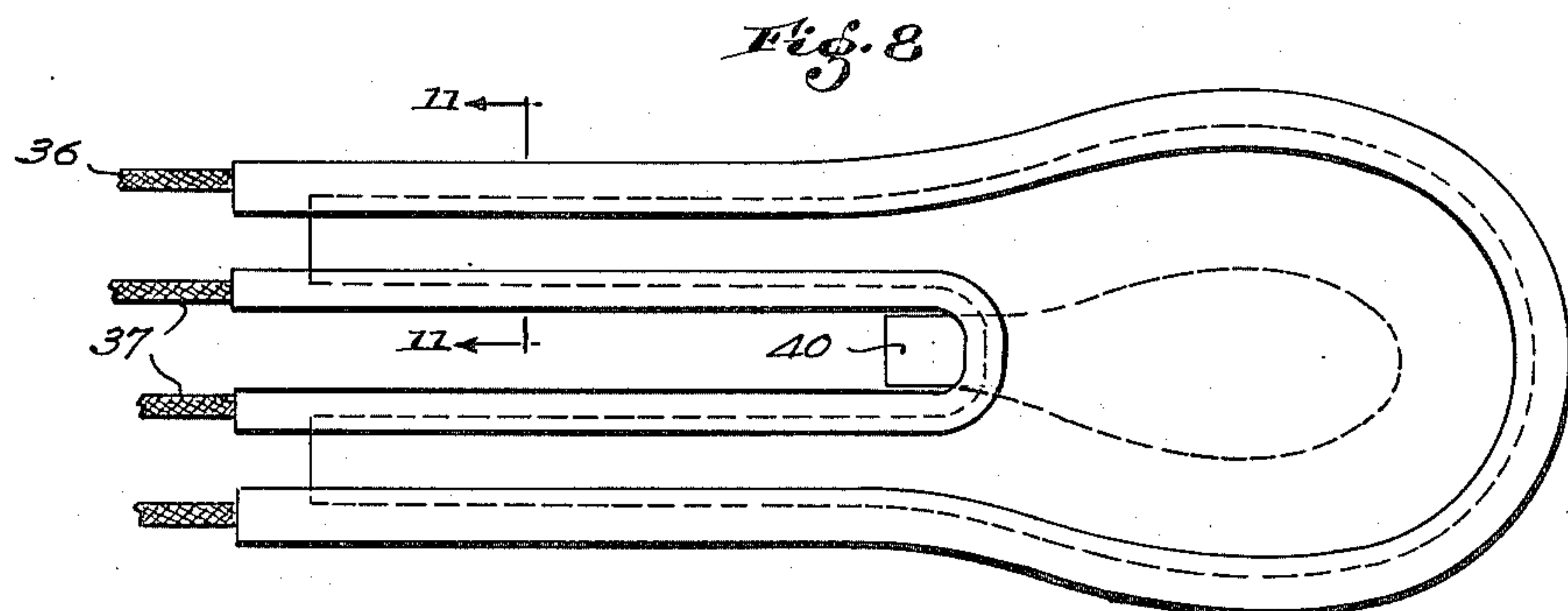
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3 Sheets-Sheet 3

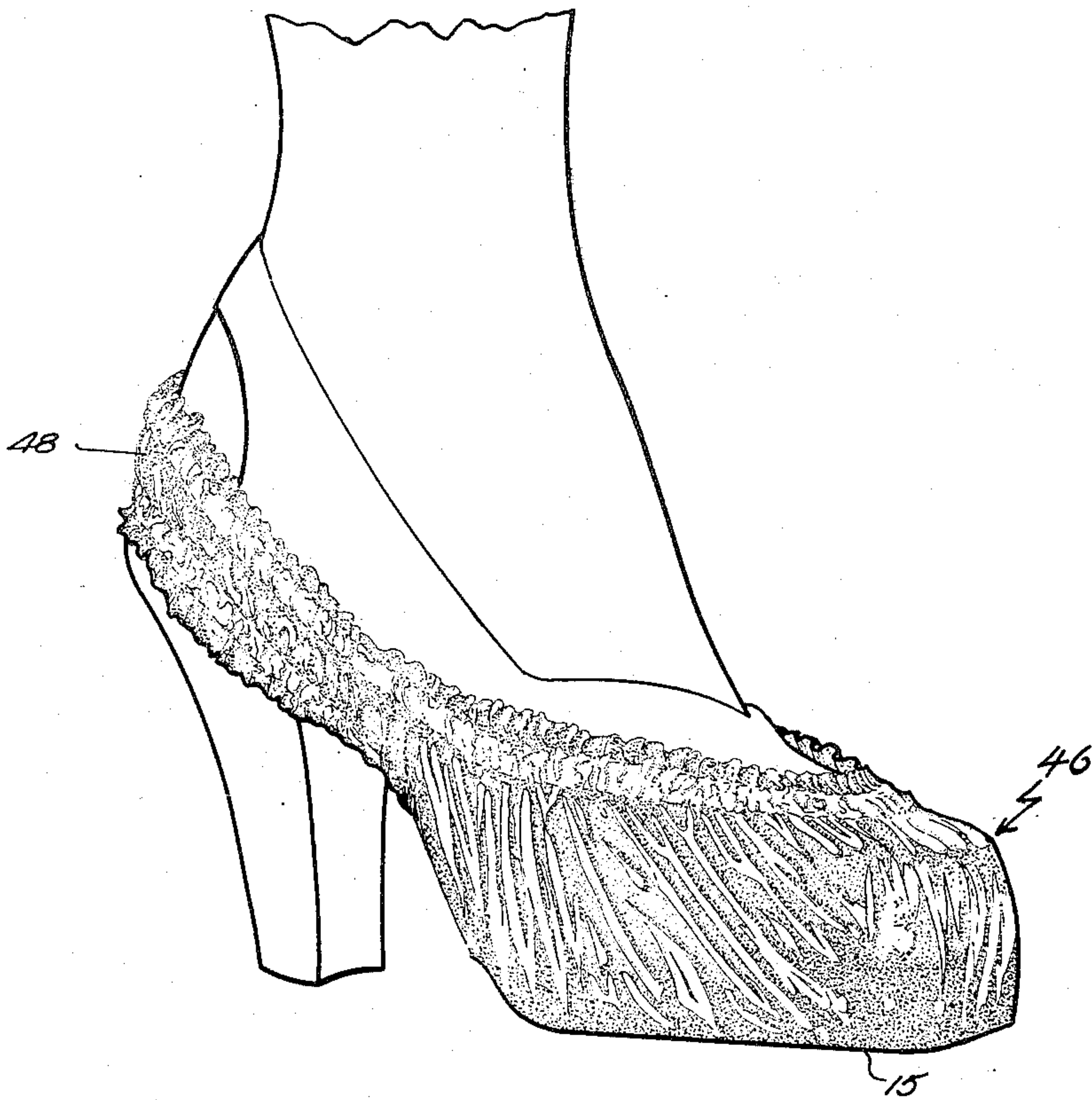


Fig. 13

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## UNITED STATES PATENT OFFICE

2,544,264

## SHOE PROTECTOR

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Application September 9, 1947, Serial No. 773,065

2 Claims. (Cl. 36—7.2)

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This invention consists in a new and improved shoe protector adapted to be slipped on and worn over women's shoes and having both protective and ornamental characteristics in that it is constructed principally of thin transparent, translucent or opaque synthetic resin of attractive coloring. This material is available in the form of thin sheets, tough and waterproof in texture, of light weight and so flexible that the protector as a whole may be folded into small space and comfortably contained in a pocketbook.

The shoe protector of my invention may be manufactured from synthetic sheet material by steps that may be easily and economically carried out, including the superposing of blanks of the sheet material into face to face contact together with a sole piece applied thereto and the applying of elastic draw strings to the margins of the blanks of a length to form into a shoe receiving pocket that portion of the blanks disposed outside of the sole piece. The production of a novel shoe protector of this nature comprises the primary object of the invention.

These and other features of the invention will be best understood and appreciated from the following description of a preferred embodiment thereof selected for purposes of illustration and shown in the accompanying drawings in which—

Fig. 1 is a plan view of a blank employed in constructing my shoe protector.

Fig. 2 is a plan view of a sole piece employed,

Fig. 3 is a sectional view illustrating the assembling of the blanks and sole piece,

Fig. 4 is a plan view of the combined unit,

Fig. 5 is a sectional view taken on line 5—5 of Fig. 4,

Fig. 6 is a bottom plan view of the bonding die shown in Fig. 3,

Fig. 7 is an enlarged fragmentary sectional view taken on line 7—7 of Fig. 6,

Fig. 8 is a plan view of the combined unit with marginal draw strings inserted,

Fig. 9 is a like view showing the rear portion of the sole piece bent about and bonded to the protector,

Fig. 10 is a fragmentary rear end view of the protector showing how the ends of the legs are secured together,

Fig. 11 is an enlarged sectional view taken on line 11—11 of Fig. 8,

Fig. 12 is an enlarged sectional view taken on line 12—12 of Fig. 9, and

Fig. 13 is a perspective view of the shoe protector in use.

The main body portion of my novel shoe pro-

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5 tector is formed from one or more blanks 10 of thin and transparent translucent or opaque plastic film which is tough, waterproof, of light weight and wholly flexible. The blank 10 is died out to the shape illustrated in Fig. 1 and comprises a forepart body and two rearwardly extending strap portions 12. Preferably and as illustrated in the drawings, I employ two blanks 10 in each protector. As illustrated in Fig. 3 these two blanks are superposed together in face to face contact on a forming table 14 above and in superposed relation on a relatively thicker outsole piece 15. The table is recessed at two levels 16 and 18 for receiving and locating the sole piece and blanks. Disposed above the table on a supporting plunger 20 is a bonding die 22 of a configuration (Fig. 6) corresponding to the margin of the sole piece 15. The work engaging face of the die is ribbed at 24 and is insulated from its supporting plunger at 26. Induction heating electric connections are provided for the die and table to effect dielectric heat-sealing of the blanks and sole piece together at 28 when engaged by and between the die and table. The article 30 resulting from these steps of the process comprises the two blanks 10 and the sole piece 15 heat-bonded together in elongated areas 28 in the superposed relation shown in Figs. 4 and 5.

The next step of the process of manufacture consists in uniting the blanks 10 at their margins and providing passages therealong for receiving draw strings. The method which I have illustrated and which is preferred for performing this function is indicated in Fig. 11 and comprises the employment of binding strips 32 and 33 of light plastic material folded in U-shape cross section and overlapping the margins of the blanks, the strip 32 being applied at the outer margin and the strip 33 being applied at the inner margin of the blanks. The blanks with the strips thus applied are then run through an induction high frequency station which heat-bonds them together along the overlapping margins of the strips 34. Elastic draw strings or runners 36 and 37 are then threaded through the channels formed in the binding strips at the outer and inner margins of the blanks.

A further anchoring of the sole piece 15 to the blanks 10 is effected through the employment of a tab 40 formed integral with the sole piece and extending rearwardly beyond the inner margin of the blanks between and at the junction of the two strap portions 12. The free end portion of this tab (Fig. 8) is folded over and about



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the inner margin of the blank and is securely heat-bonded together at 42 (Figs. 9 and 12).

The protector is completed by pulling the draw strings out to a length to form into a shoe receiving pocket that portion of the blank disposed outside of the sole piece 15 and securing together the ends of the strap portions 12 and draw strings. These ends can be conveniently and efficiently connected by overlapping and stapling them at 44 (Fig. 10) or by such other means as may be found desirable. The final product (Fig. 13) comprises an upper pocket 46 of thin film material having a sole piece 15 bonded to its bottom face and an endless rearwardly extending band or ankle loop 48 for engaging about the counter of the shoe and holding the protector in place thereon. The two elastic draw strings tend always to maintain the protector as a whole in gathered or pleated condition as shown in Fig. 13. When not in use the protector can be folded into small space and easily carried in a hand bag ready for use in any emergency.

Having thus disclosed my invention and described in detail an illustrative example thereof, I claim as new and desire to secure by Letters Patent:

1. A shoe protector comprising a pair of plies of translucent flexible plastic material substantially coextensive in area and superposed, each ply having a solid forepart merging into a pair of rearwardly extending strap members, binding strips of U-shape cross section bonded to the superposed plies along parallel marginal lines in

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the strap members to form peripheral passages extending along both margins thereof, an endless elastic runner disposed in each of said passages and maintained under tension urging the plies to pocket formation, an outsole bonded to the forepart portion of one of said plies, and a tab integral with said outsole at the rear end thereof and turned over a margin of the plies and bonded to the upper surface thereof.

2. A shoe protector comprising a two-ply forepart pocket of translucent plastic material merging rearwardly into an integral ankle band loop, a binding strip of U-shaped cross-section bonded about the top edge of the forepart pocket and of the ankle band loop, and a second similar binding strip bonded to the lower edge of the ankle band loop, and elastic draw strings in the passages provided by said binding strips maintaining the forepart of the protector normally in gathered condition and also maintaining the ankle band loop in gathered condition.

EDWIN A. HOWARD.

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