

March 7, 1944.

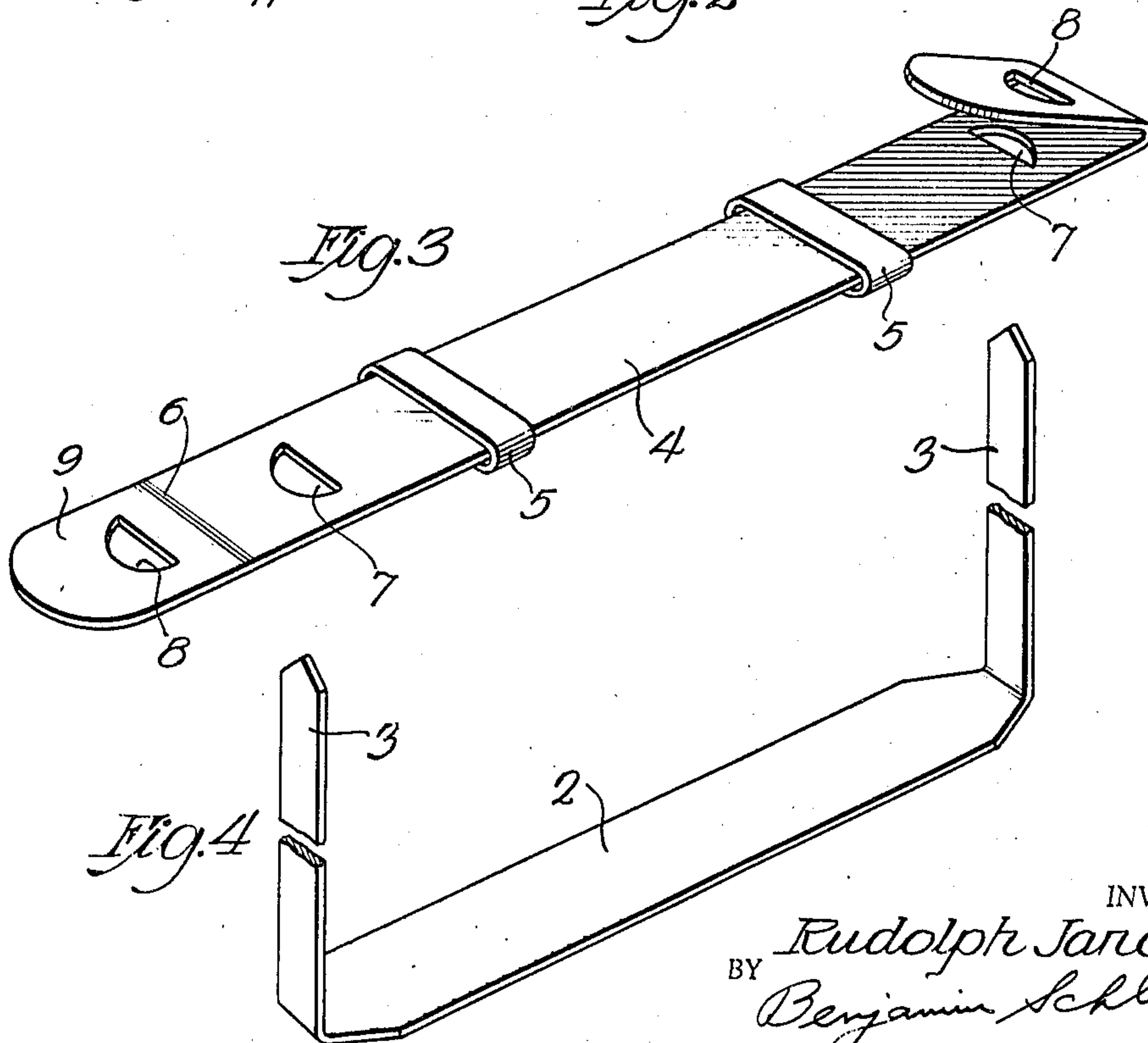
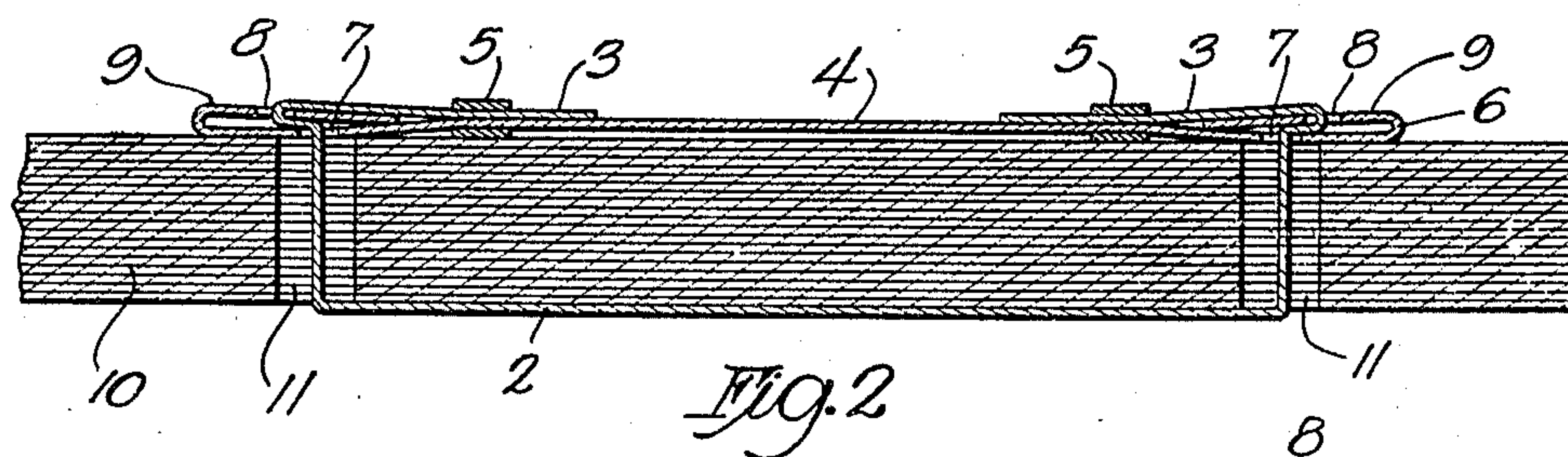
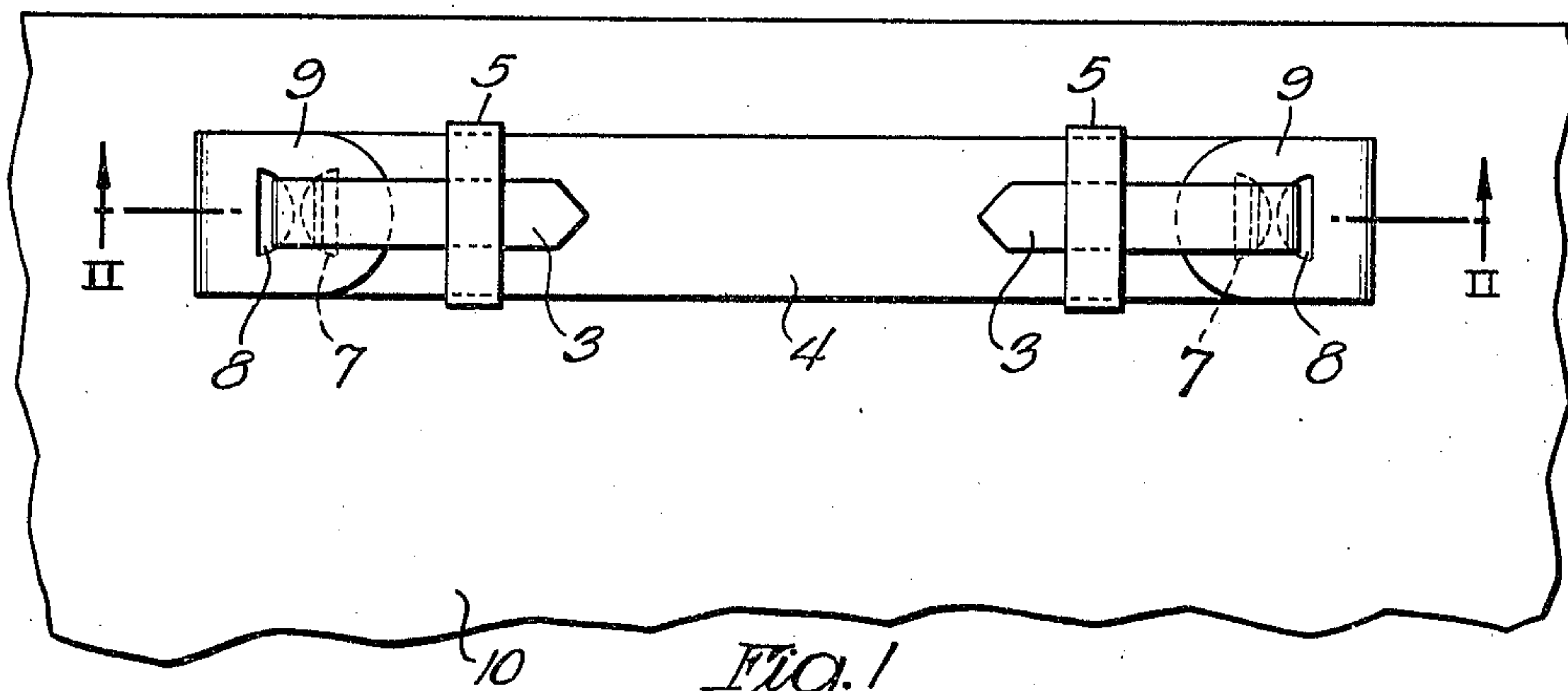
R. JANOVSKY

2,343,413

PAPER FASTENER

Filed Nov. 13, 1942

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 5

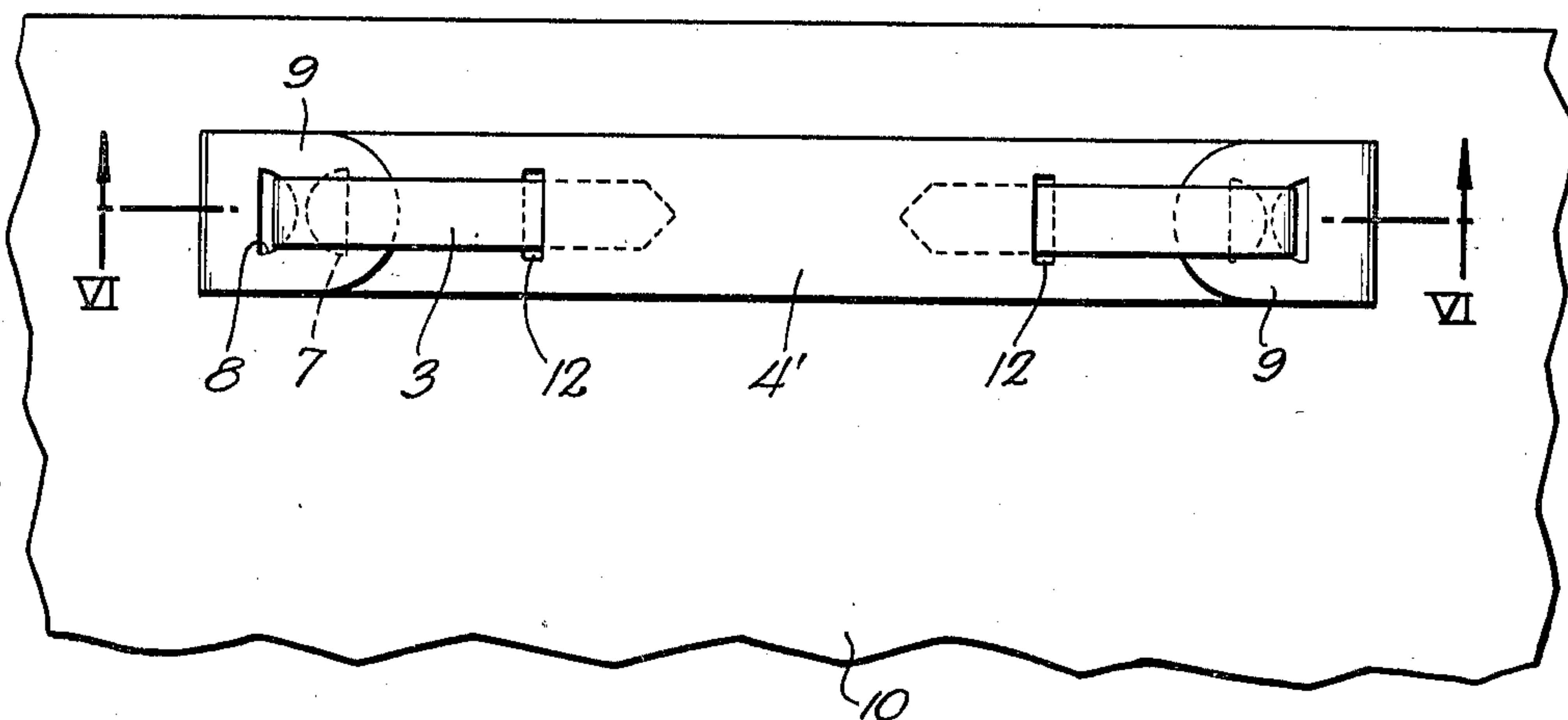


Fig. 6

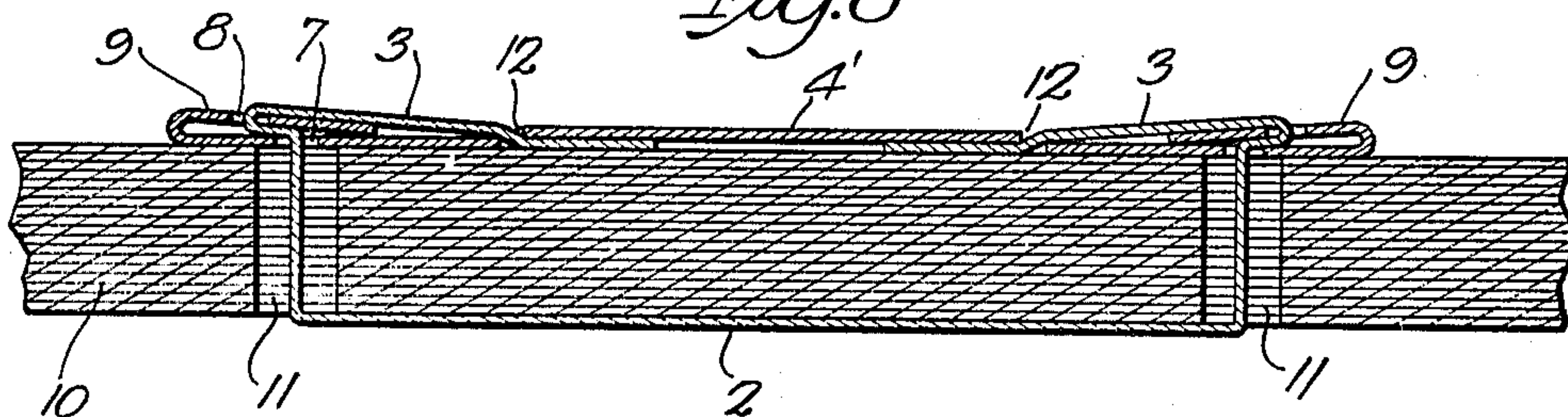
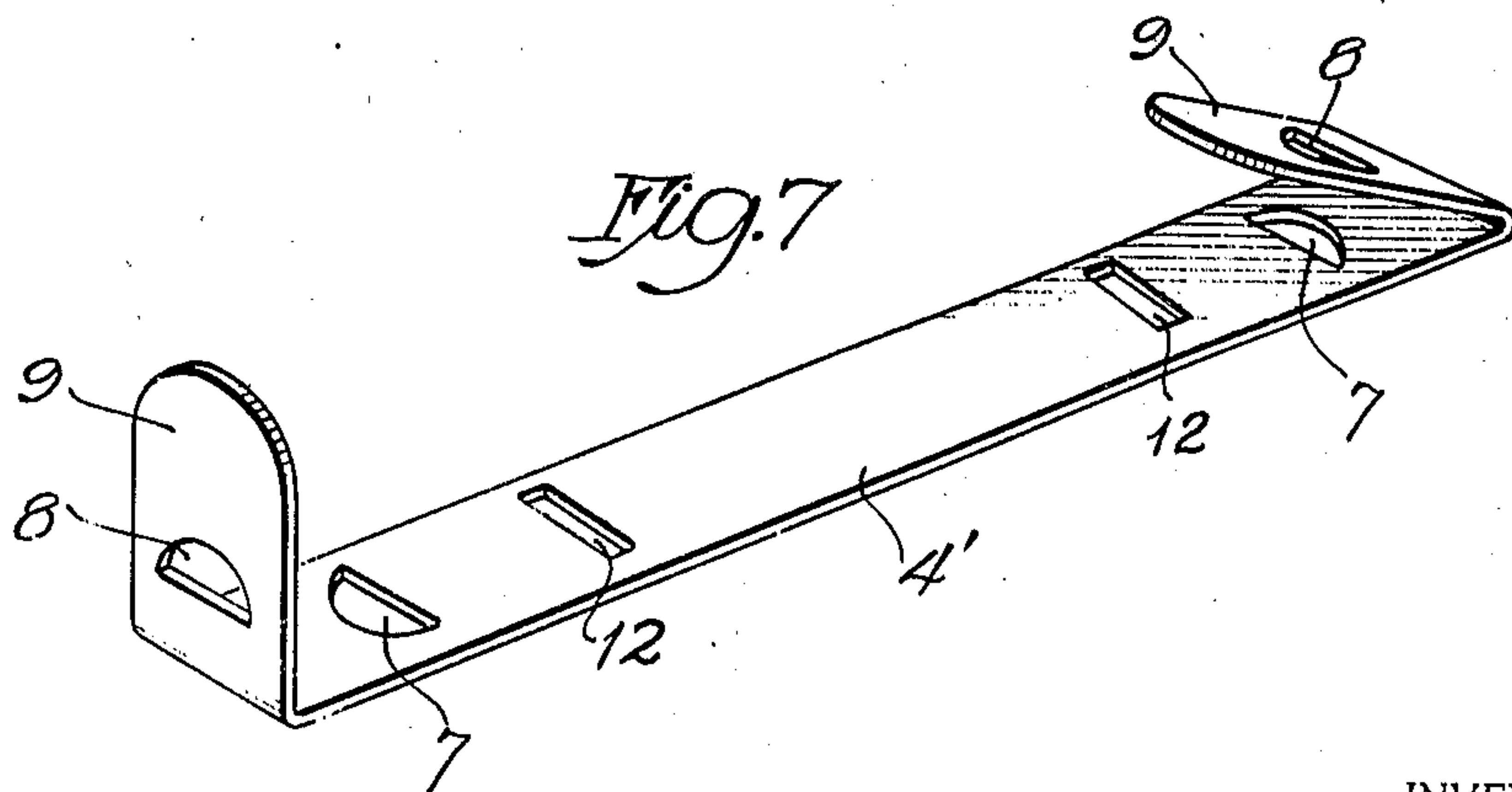


Fig. 7



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UNITED STATES PATENT OFFICE

2,343,413

PAPER FASTENER

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7 Claims. (Cl. 24—153)

This invention relates to a non-metallic paper fastener adapted to secure a plurality of punched sheets in predetermined, orderly arrangement.

It is an object of this invention to provide a base member having prongs of flexible, tough material, such as fiber, with a compressor plate adapted to hold the prongs against separation from said plate. Other objects of this invention will become apparent upon reading the following description, taken in conjunction with the accompanying drawings, in which:

Figure 1 is a top plan view showing one embodiment of my invention in securing a plurality of sheets;

Figure 2 is a cross sectional view taken along the line II—II of Figure 1;

Figure 3 is a detail perspective view of the compressor plate;

Figure 4 is a detail perspective view of the base member;

Figure 5 is a top plan view of another embodiment of my invention in securing a plurality of sheets;

Figure 6 is a cross sectional view taken along the line VI—VI of Figure 5; and

Figure 7 is a detail perspective view of the compressor plate of the embodiment illustrated in Figures 5 and 6.

In the drawings, the reference numeral 2 indicates a base member which is provided with a pair of sheet retaining prongs 3 projecting from its opposite ends. The compressor plate 4 is provided with a pair of sliding keepers 5. The keepers are preferably formed of tubing of such size that when it is flattened, the keepers will snugly fit over the single thickness of the compressor plate. The compressor plate is formed with a transverse scoring 6 spaced from each end of the compressor plate. After the keepers 5 are slid over the compressor plate 4, the ends 9 of the compressor plate are folded inwardly along the scoring 6 to provide a doubled portion at each end. The doubled end portion prevents the keepers 5 from sliding off the compression plate 4 before it is engaged with the prongs 3 of the base member.

The compression plate 4 is provided in each doubled end portion with a pair of offset apertures 7, 8. These apertures are illustrated as being semi-circular, but it will be understood that they may be circular, rectangular or of any other desired shape.

The aperture 8 is spaced closer than the aperture 7 to the scoring 6 so that when the end por-

tion 9 of the compressor plate is bent inwardly the aperture 8 does not register with the aperture 7 to an extent sufficient to permit the prong 3 to pass through both apertures without being deflected from the vertical plane with reference to the base member 2. The degree of deflection of the prongs depends upon the linear distance between the apertures 7 and 8 when the bent end portion 9 is juxtaposed on the body portion of the compressor plate.

In using the paper fasteners, a plurality of sheets 10 provided with apertures 11 is impaled on the prongs 3. The prongs are then inserted through the apertures 7 and 8 of the compressor plate and are bent inwardly when the compressor plate is positioned against the uppermost sheet. The spacing of the apertures 7 and 8 causes the prongs 3 to be deflected outwardly as the compressor plate is positioned on the prongs, and the inward bending of the prongs 3 makes a reverse bend which is sufficient to hold the compressor plate and the base member against accidental separation. The slide keepers 5 are then positioned over the ends of the prongs 3. The keepers 5 fit snugly over the single thickness of the compressor plate 4 and therefore when they are forced over the prongs 3 there is sufficient friction to hold them against accidental sliding movement.

The embodiment illustrated in Figures 5, 6 and 7 is substantially similar to the embodiment hereinabove described, the only difference being in the compression plate. In the embodiment of Figures 5, 6 and 7 the sliding keepers 5 are eliminated and the compression plate 4' is provided with a pair of apertures 12. The apertures may be of any desired shape but are preferably rectangular as illustrated in Figures 5 and 7. In use the ends of the prongs 3 are threaded through the apertures 12 and are maintained against the uppermost sheet 10 by the undersurface of the compression plate 4'.

In both embodiments the compressor plate as well as the base member is made of fiber or some similar non-metallic material. If desired, both members may be provided with a stiffening rib or ribs, but this is not deemed essential. In the embodiment of Figures 1 to 4 such ribs may be spaced apart to provide a channel for the reception of the prongs 3. With either embodiment of the invention the sheets are securely maintained in place and the prongs are held against displacement with sufficient security to prevent accidental separation of the compressor plate from the base member.

Although I have described two embodiments of my invention in detail, it will be understood that the description thereof is illustrative, rather than restrictive, as many details may be modified or changed without departing from the spirit or scope of my invention. Accordingly, I do not desire to be restricted to the exact details of construction described, except as limited by the appended claims.

I claim:

1. In a paper fastener, a compression plate having its ends bent inwardly along a transverse line to form doubled end portions, each of said doubled end portions being provided with a pair of relatively offset apertures.

2. In a paper fastener, a compression plate, the ends of said compression plate being folded to form doubled end portions, and a pair of sliding keepers mounted on said compression plate between said doubled end portions.

3. In a paper fastener, a base member, a pair of sheet retaining prongs projecting from said base member, a compression plate having doubled end portions, each of said doubled end portions being apertured in offset relationship whereby the prongs are deflected outwardly as they are threaded through said apertures, and a pair of sliding keepers adapted to retain the free ends of said prongs, said keepers being positioned between said doubled end portions.

4. In a paper fastener, a base member, a pair of prongs adapted to project vertically from said base member, a compression plate, the ends of said compression plate being bent inwardly to

provide doubled end portions, a pair of apertures in each of said doubled end portions, said apertures being so spaced as to prevent insertion of said prongs through said apertures without deflection from said vertical plane, and means spaced inwardly of said doubled end portions adapted to secure the free ends of said prongs against said compression plate.

5. In a paper fastener, a compression plate comprising a single strip of non-metallic material, said strip being foldable upon a transverse scoring adjacent each end to form doubled end portions, and a pair of sliding keepers encircling said compression plate between said doubled end portions, said keepers being large enough to slide over the single thickness of the compression plate but too small to slide over said doubled end portions.

6. In a paper fastener, a compression plate comprising a body portion provided with an aperture adjacent each end thereof and a pair of end portions folded inwardly of said body portion along transverse scorings, each of said folded end portions being provided with an aperture, the distance from said scorings to the apertures in said adjacent folded portions being less than the distance from said scorings to said first mentioned apertures.

7. In a paper fastener, a compression plate having doubled end portions and a pair of tubular keepers slidable over said compression plate between said doubled end portions.

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