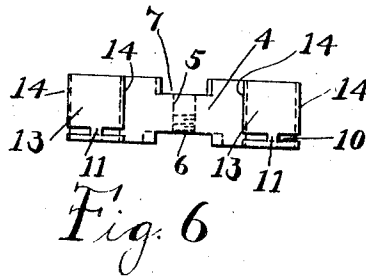
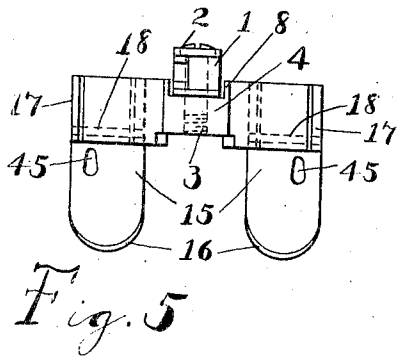
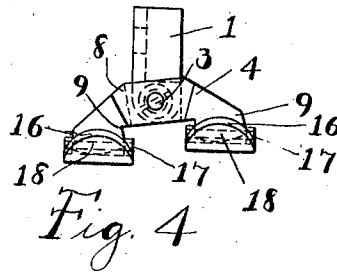
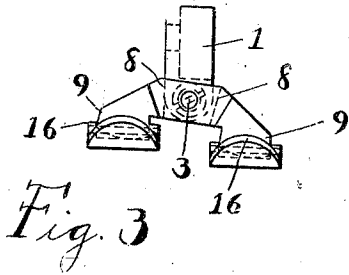
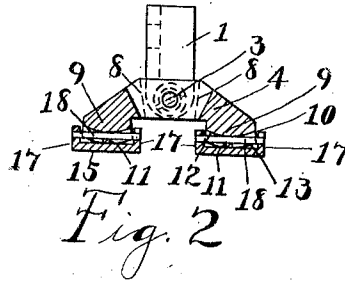
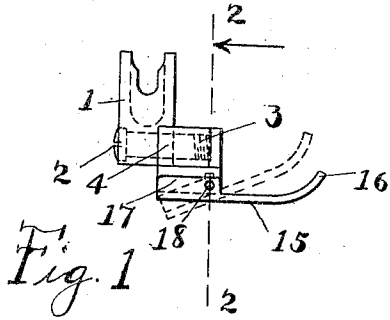


J. P. WEIS.
PRESSER FOOT FOR SEWING MACHINES.
APPLICATION FILED JUNE 7, 1909.

1,016,462.

Patented Feb. 6, 1912
2 SHEETS—SHEET 1.



WITNESSES:

M. Herkovitz
d. J. Stockley

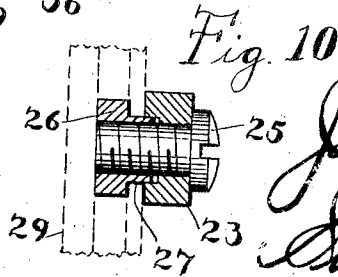
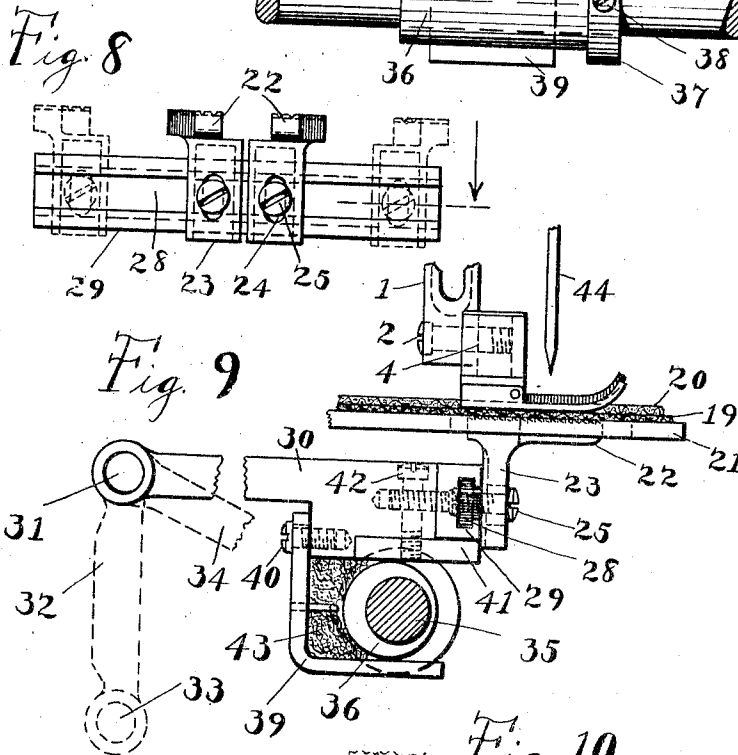
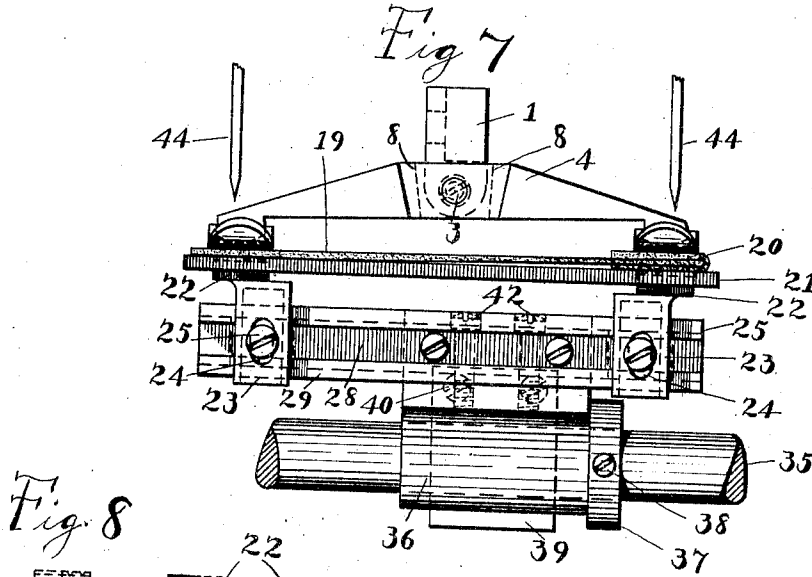
INVENTOR:

John P. Weis
Attorney

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WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN P. WEIS, OF NYACK, NEW YORK.

PRESSER-FOOT FOR SEWING-MACHINES.

1,016,462.

Specification of Letters Patent.

Patented Feb. 6, 1912.

Application filed June 7, 1909. Serial No. 500,857.

To all whom it may concern:

Be it known that I, JOHN P. WEIS, a citizen of the United States, residing in Nyack, county of Rockland, and State of New York, have invented a new and useful Improvement in Presser-Foot for Sewing-Machines, of which the following is a description.

This invention relates to presser-feet for sewing machines and particularly to feet of a type capable of yielding to varying thicknesses of work passing thereunder.

Among the objects of my invention may be noted the following: to provide a presser-foot capable of yielding universally to thicknesses of work passing thereunder and varying thicknesses of work passing under different parts thereof; to provide a presser-foot by means of which a uniform pressure can be maintained upon the work notwithstanding varying thicknesses which may be passing thereunder, or under different parts thereof; to provide a presser-foot by means of which a proper and substantial control of the work can be maintained in machines employing two or more needles and irrespective of the gage of the machine; and to provide a presser-foot by which, in single or plural needle machines, perfect control of the work can be maintained and compensation had for varying thicknesses operated upon by the feeding mechanism.

With the above objects in view, and others which will be detailed during the course of this description, my invention consists in the parts, features, elements, and combinations of elements as hereinafter described and claimed.

In the drawings forming part of this description: Figure 1 is a side elevation of my presser-foot, showing in dotted lines a position which one or both of the foot-parts may assume; Fig. 2 is a section on the line 2-2 of Fig. 1; Fig. 3 is a front elevation of the presser-foot showing the same in one position; Fig. 4 is a front elevation of the presser-foot showing the same in another position; Fig. 5 is a top-plan view; Fig. 6 is a bottom-plan view of the shank; Fig. 7 is a front elevation of the presser-foot, the work-plate and a portion of the feeding mechanism of a wide-gage sewing machine, parts of the needle being also shown in juxtaposition; Fig. 8 is a front elevation of the feed-bar and dogs showing, in dotted lines, positions to which said dogs may be adjusted; Fig. 9 is a side elevation of Fig. 7, a part of

the feed-actuating mechanism having been added by dotted and full line representation; and Fig. 10 is a sectional detail and partial transparency illustrating the mode of securing and adjusting the feed-dogs on the feed-bar.

Referring to the drawings, the numeral 1 indicates the socket-portion of the presser-foot into which the lower end of the presser-bar is set and held by means of an adjusting-screw in any usual manner. Centrally of the base of the socket-portion an aperture is bored transversely for the reception of a screw 2, the major portion of the shank of which is smooth, but the outer end of which is screw-threaded as shown by dotted-line representation 3 in several of the figures. The screw 2 is the journal for a presser-foot which, in this instance of my invention, is shown as duplex in character; that is to say, including two independent presser-feet supported and operating independently. The shank 4 of the foot is transversely bored at 5 and a portion of the bore is screw-threaded at 6 for cooperation with the screw-threaded forward end 3 of the screw 2, on which said shank is journaled and on which it rocks or oscillates relatively to the socket-portion. At its rear, the shank 4 is provided with the recess 7, the opposite walls of which are inclined, as indicated by the dotted lines 8, so that the rocking movement of said shank will be permitted but limited in opposite directions by contact of said walls with the respective sides of the socket-portion 1. At its opposite ends, the shank 4 is provided with the depending legs 9, which, as more clearly shown in Figs. 2 and 6, are each transversely and vertically grooved at 10, the opposite side walls of said groove being connected by a web 11 and the top wall of which groove is convexed, as shown at 12. The bottom walls 13 of said depending legs are likewise convexed. The end walls 14 of said depending legs are substantially vertical. Each foot is formed so as to have the longitudinal, flat, bottom-portion 15, the forward end of which is upturned to provide the usual toe 16, and the rear end of which is provided with the opposite-side, vertically-extending walls or flanges 17, which extend substantially parallel with the end walls 14 of the depending legs 9. Each foot is connected to its depending leg 9 by means of a pivotal and journal pin 18, which passes through the vertical walls or flanges 17 of

the foot and through the groove 10 of the depending leg and pivots upon the transversely-extended web 11 of said leg. The convexed walls 12 and 13 of the legs 9, permit the free rocking movement of the feet.

By forming the shank, legs and feet of the presser-foot, and combining them, as described, and clearly shown in the drawings, the shank can journal or rock on the screw 2 in the socket-portion 1 and, in consequence, each foot has a partial revolving motion bodily around said screw 2 as a center. In addition, each foot has a rocking motion transversely of its length, and relatively to the shank, on the web 11, as a center, limited by contact of the flanges 17 of the foot with the end walls 14 of the depending leg. Also, each foot has a longitudinal pivotal or rocking motion on and relatively to its supporting-leg, this rocking movement being also on the web 11, limited by contact of the bottom-portion 15 of the foot with the front and rear ends of the said leg-portion. Thus, it will be seen that each of the feet has six motions, four of which are independent of each other and two of which are bodily together. It will also be seen that the pressure on the two feet and the pressure of the latter on the work is uniform, since the pressure on the shank 4 is centrally thereof and midway between the two feet and is distributed equally to the latter; and this is true irrespective of the thicknesses, or varying thicknesses, passing under the respective feet.

Figs. 1, 3 and 4 give ideas of the manner in which the feet may yield and operate relatively and together; but, in order to show the scope and mode of operation of my invention, reference is made to Figs. 7 to 10, wherein the duplex-foot is shown in a wide-gage machine operating upon the body-material 19, on one side and upon the body-material and binding 20, on the other side, said materials resting upon the work or throat-plate 21 and being engaged under each foot by a feed-dog 22, the shank-portion 23 of each of which being provided with a vertical slot 24, through which passes an adjusting-screw 25, which is tapped into a block 26, having a rib 27, which engages a groove in the back of the shank 23, said block 26 being received in a groove 28, extending longitudinally of the cross-bar 29, supported upon the feed-bar 30, the rear end of which is journaled in usual manner at 31 on the upper end of the rocking-frame 32, which, as is well known, is journaled at its lower end 33 to the bed-plate of the machine. The usual connection 34 from the rocking-frame to the driving-shaft is only partially indicated, said shaft being indicated by 35 and shown as carrying an eccentric 36, which, in this instance, is considerably elongated, as shown in Fig. 7, and

is secured to the shaft 35, by means of its collar 37 and a spot-screw 38 tapped through said collar and spotted on the shaft in usual manner. The eccentric coöperates with the yoke formed by the L-shaped frame 39, secured to the feed-bar 30 by screws 40 and a bearing-plate 41 secured by screws 42 to the bottom of said feed-bar 30. A suitable packing 43 for lubricating purposes is shown in Fig. 9. The needles are indicated by 44 and may be one or more in number, each foot being provided with one or more needle-apertures 45 for the needles to pass through, as is usual. The feed-dogs 22, as clearly shown in the several figures, are vertically adjustable upon the cross-bar 29, by means of the slot and screw 24-25, and are longitudinally adjustable upon said cross-bar by means of the said screw 25 and the block 26 operating in the groove 28. Hence, said dogs can be adjusted to any extent desired, according to the gage of the machine along the length of the cross-bar, as shown by dotted and full line positions in Fig. 8, and may be adjusted vertically for more or less of gripping action, or feeding engagement with the work. The width or size of the foot used will depend entirely upon the gage of the machine and the character of the work to be operated upon and the results desired; and the duplex-foot of Figs. 1 to 6 is shown of ordinary size, while the foot of Figs. 7 and 9 is shown of extraordinary gage or size. Irrespective of size, the operations and movements of the feet relatively and bodily together are substantially identical, and the pressure, as previously stated, being central is necessarily equal on both feet and upon all portions of the work engaged thereby. Furthermore, the variations in thickness of the work passing under the foot will not alter the operative pressure of the latter upon the work, which, as previously stated, will be maintained throughout, owing to the uniform pressure at the middle of the shank of the foot; and it will be noted that, while one foot may be riding on thin work and, at the same time, one or both feet may be momentarily riding on varying thicknesses of work produced by cross seams and may, in consequence, yield both laterally and longitudinally independently.

While I have shown my foot as duplex in character, it is obvious that the features of construction shown and described may be embodied in a single foot. In consequence, I purpose phrasing certain of my claims to cover my invention irrespective of the number of feet carried by the shank.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A presser-foot comprising a socket-portion, a shank-portion journaled on the

socket-portion so as to swing on and relatively thereto, and a foot-portion journaled on said shank-portion so as to swing on and relatively thereto at a right-angle to the direction of swing of the shank-portion, substantially as described.

2. A presser-foot comprising a socket-portion, a shank journaled on a horizontal pivot extending from front to rear of the socket-portion, said shank having a depending leg extending at a right-angle thereto, and a foot-portion journaled on the said depending leg so as to swing on and relatively thereto.

3. A presser-foot comprising a socket-portion,

a shank journaled on a horizontal pivot extending from front to rear of the socket-portion and having a pair of depending legs arranged in parallelism, each of said legs having journaled on it a foot-portion whereby the latter may swing on and relatively to said leg.

In testimony whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOHN P. WEIS.

Witnesses:

OSCAR DEVOE,

A. BENDER.