July 26, 1927. 1,636,681

P. CARBONE

EMBROIDERY FRAME

Filed May 28, 1926 2 Sheets-Sheet 1

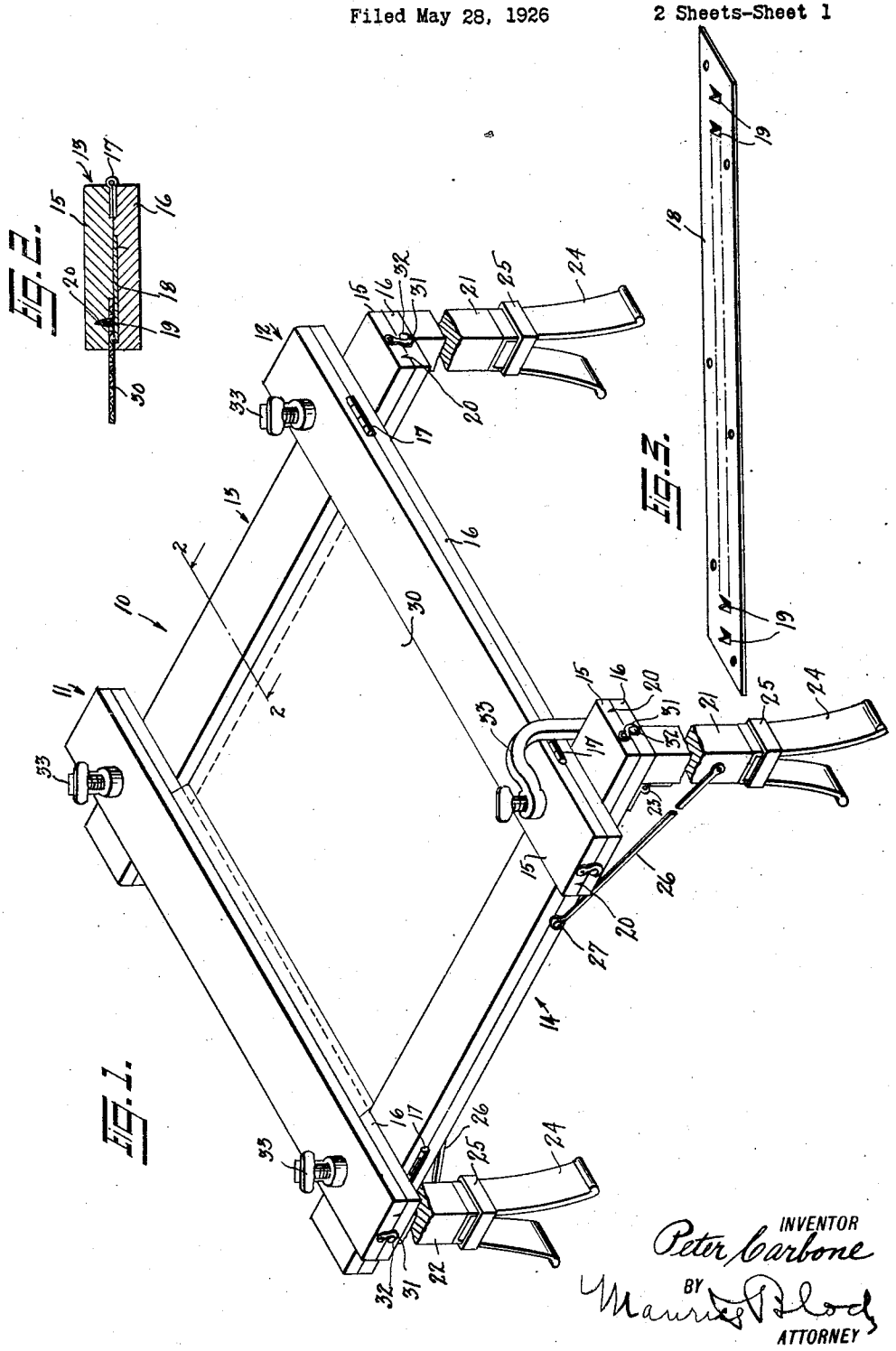


FIG. 1.

FIG. 2.

FIG. 3.

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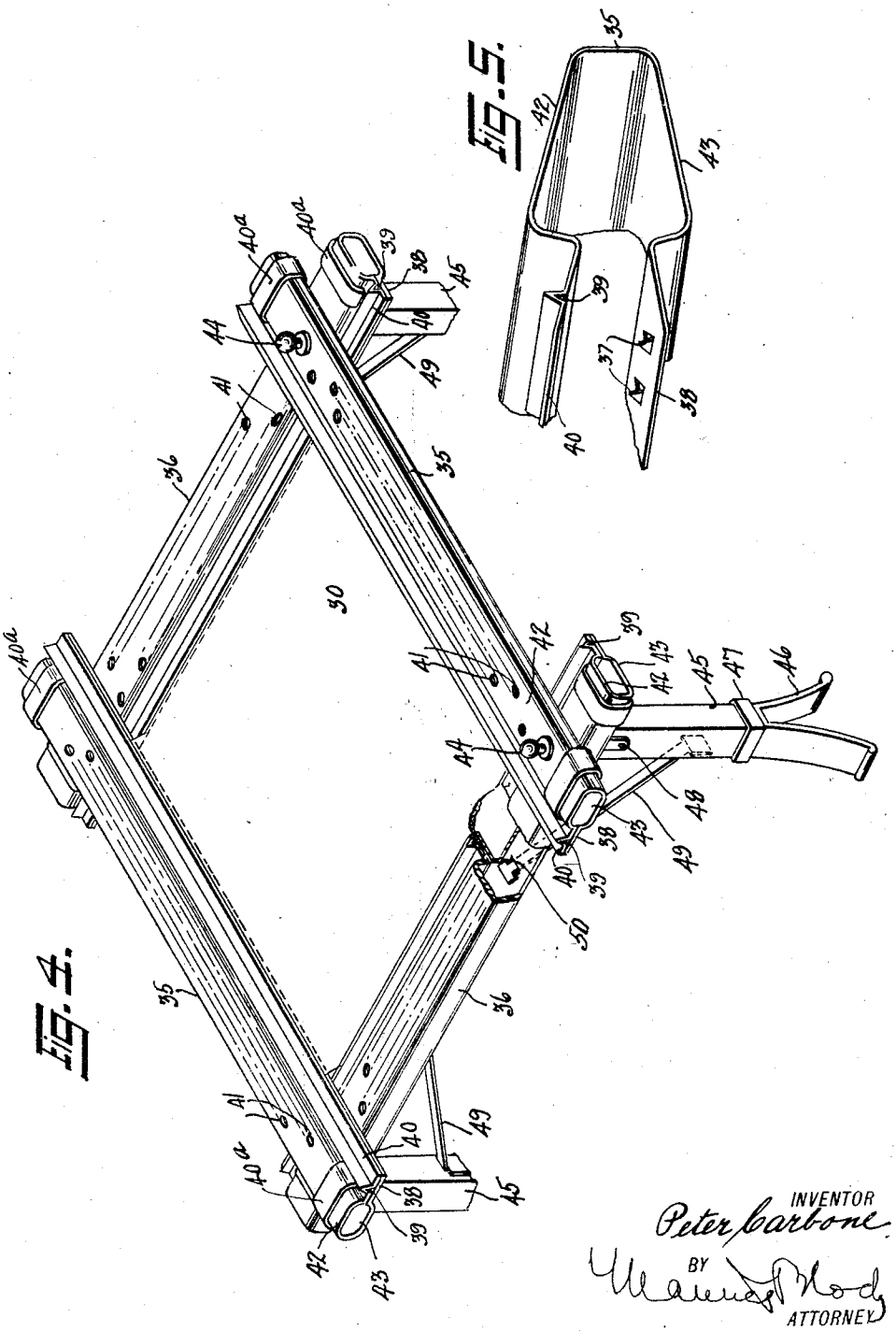


Fig. 4.

Fig. 5.

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Patented July 26, 1927. 1,636,681

UNITED STATES PATENT OFFICE.

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EMBROIDERY FRAME.

Application filed May 28, 1926. Serial No. 112,230.

This invention relates to improvements in embroidery frames in general and more particularly to embroidery frames used in factories where large pieces of fabrics are to be embroidered.

With the embroidery frames now in common use, a great deal of labor is required to stretch the material to be embroidered across such a frame, as it becomes necessary to catch the material on each pin projecting upwardly from a bar of wood and repeat this operation on all sides of the cloth and finally stretch the material by pulling on the bars and clamp the adjacent bars to each other; the frame being supported on wooden horses or the like which require a great deal of space to store them when not in use.

The main object of this invention is to provide an embroidery frame adapted to receive the fabric to be embroidered and be clamped therein in the minimum amount of time necessary for such operation. Another object of this invention is to provide an embroidery frame having legs hingedly and foldably mounted thereon to reduce the amount of space required for storing such frames when not in use.

A further object of the invention is to provide a frame of this nature with a series of projections upon which the fabric to be embroidered can readily and quickly be hooked and then clamped and held against displacement.

Other objects and novel features of construction will become apparent as the specification proceeds.

Referring to the drawings forming a part of this specification:

Figure 1 is a view in perspective of one embodiment of my invention.

Fig. 2 is a cross section on line 2—2 Fig. 1 through one of the frame members.

Fig. 3 is a detail view of the plate containing the projections upon which the fabric is hooked.

Fig. 4 is a modified form of my invention as illustrated in Fig. 1 and.

Fig. 5 is a fragmental view in perspective of one of the frame members shown in Fig. 4.

Referring to the drawings in detail Figs. 1 to 3 10 indicates an embroidery frame consisting of four substantially like jaw members 11, 12, 13 and 14. Each of the jaw members comprises an upper portion or leaf 15 and a lower leaf member 16 joined by hinges 17. Each of the lower leaf members is provided with a plate 18 extending substantially the entire length of the said lower members and the said plate is provided with upwardly extending projections or teeth 19 integral therewith. The upper leaves 15 are each provided with a groove 20 that extends the entire length of the leaves and in line with the row of projections 19 on the plate 18 secured to the lower members 16. The jaws 13 and 14 have hingedly secured to them near their ends legs 21 and 22 that lie adjacent to each other when in folded position.

These legs 21 and 22 are secured to the lower leaves 16 by hinges 23 and terminate in spring metal supporting members 24 secured to the legs 21 and 22 which may be made of wood. A metal ring 25 on each of the legs 21 and 22 may be drawn downwardly over the supporting members 24 to contract them when the legs are folded. Links 26 on the legs 21 and 22 are hooked over pins or studs 27 in the lower leaves 16 to maintain the frame in a rigid open position.

When it is desired to use the frame a cloth or fabric 30 is laid over the projections 19 of either the jaw members 13 or 14 which are then in open position and resting on the legs 21 and 22. The jaws are then closed and the cloth will be pushed down on the teeth by the slot 20 in the upper leaf 15 and the jaw leaves may be hooked together by hooks 31 and pins or studs 32 in the ends of the jaw members. The operation is then repeated at the opposite end of the cloth and then on the other two ends. Two of the jaw members may then be clamped together by clamps 33 and the cloth stretched by pulling on the diagonally opposite corners of the jaw members and when fully stretched in this direction the said jaw members are clamped by another clamp 33 and this operation is repeated until the entire cloth is stretched.

In Figs. 4 and 5 I have shown a modified form of my invention in which I employ spring metal jaw members 35 and 36 provided with teeth 37 in a lower flange 38 and depressions 39 in an upper flange 40 integral with and extending the entire length of the said jaw members. The jaw members are maintained in closed position by locking sleeves 40[a] or the like slipped on either end of the said jaws. Rows of openings 41 passing through the upper and

lower walls 42 and 43 of the jaw members 35 and 36 provide means for inserting pins or studs 44 for joining the said jaw members together instead of the clamps 33 shown in Fig. 1 and for the same purpose. The jaw members 36 are provided with legs 45 terminating in supporting ends 46 adapted to be contracted by collars or sleeves 47 when it is desired to fold the said legs about their pivots 48 when not in use. Flexible links 49 secured to the legs 45 passing through openings 50 in the walls 43 of the jaw members 36 tend to maintain the frame in open position when it is so desired.

In the construction just described the material or fabric 30 to be embroidered is placed upon the teeth 37 of one of the jaw members which is then closed and the sleeves 40 slipped over upon its ends to maintain same in closed position. After the material is thus enclosed on all four sides a pin or stud 44 is inserted into the openings 41 at one corner of crossed over jaw members and the cloth is stretched as previously described and pins inserted at the remaining corners.

From the foregoing it will be seen that I have provided an embroidery frame in which a cloth or the like may be stretched in the minimum length of time required for such an operation and one that can be folded up when not in use and so take up but very little space as compared to the space necessary for storing the wooden horses now in use with embroidery frames, and thus save a considerable amount of money in the manufacturing of embroidered cloths or the like.

Having described my invention, what I claim as new is:

1. In an embroidery frame, a resilient jaw member, a lower leaf on the jaw member, teeth integral with the said leaf, an upper leaf member, a housing bent up on the upper leaf member forming a groove and a slidable sleeve on each end of the leaf members to maintain the jaw in closed position.

2. An embroidery frame, comprising a plurality of jaw members adapted to be opened and closed and provided with rows of openings, means for maintaining material in the jaw members and pins adapted to pass through the said openings to adjustably connect the said jaw members when the material is fully stretched.

In testimony whereof I hereunto affix my signature.

PETER CARBONE.