No. 812,558. PATENTED FEB. 13, 1906.

S. FRIEDMAN.

TUCK GUIDE FOR SEWING MACHINES.

APPLICATION FILED OCT. 27, 1904.

Fig. 1.

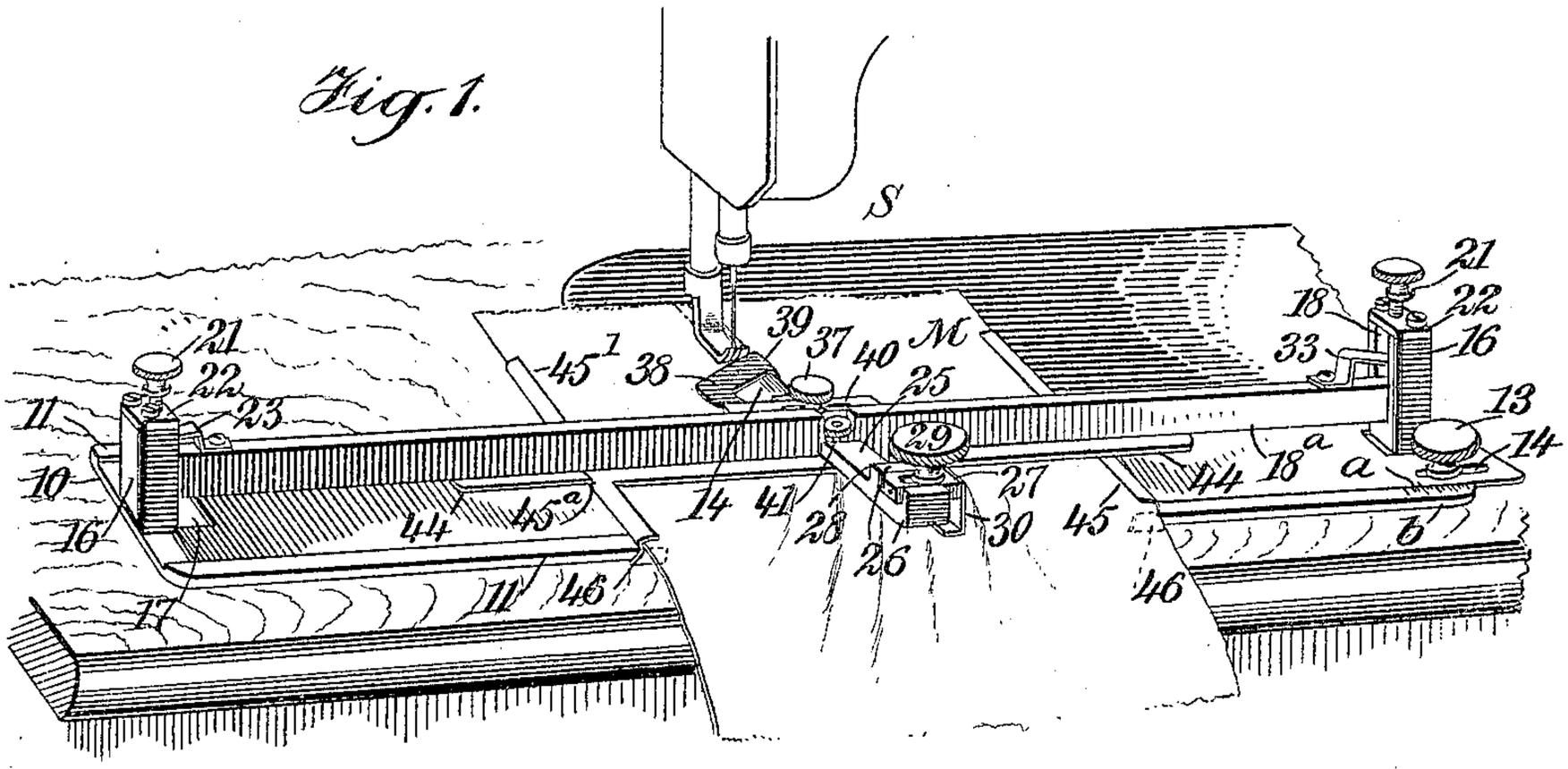


Fig. 2.

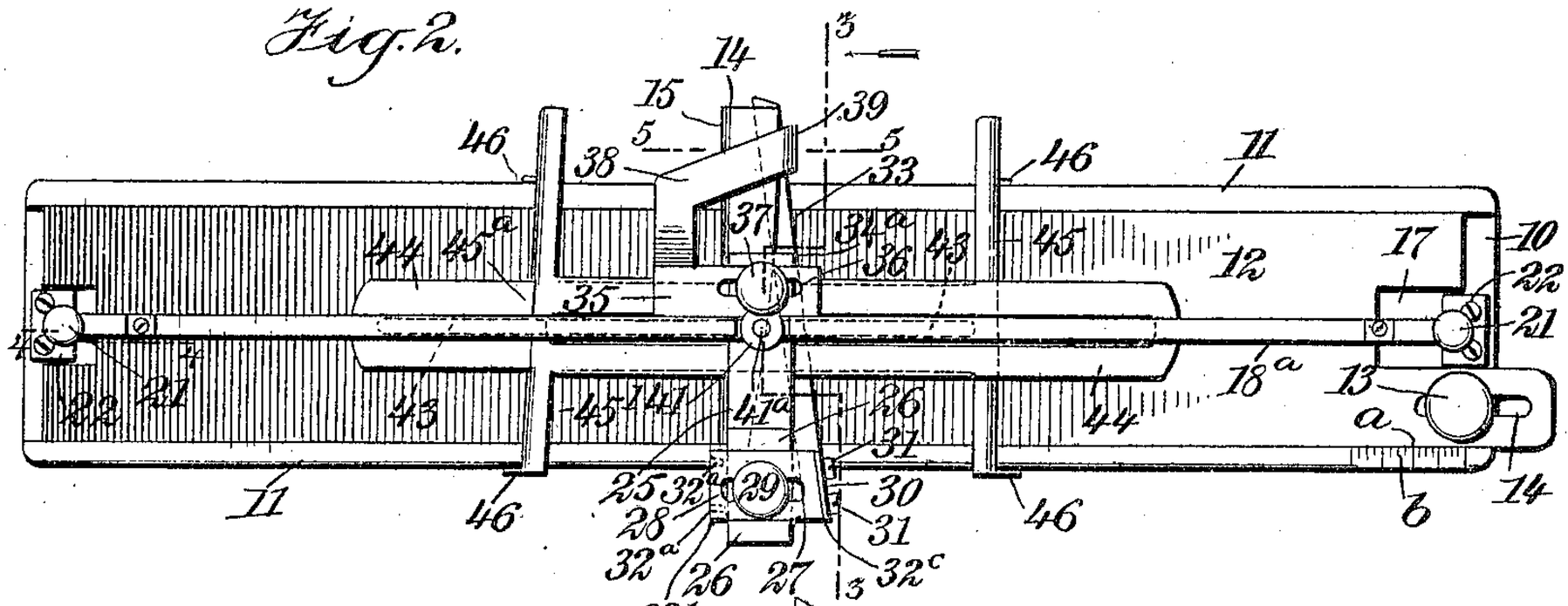


Fig. 3.

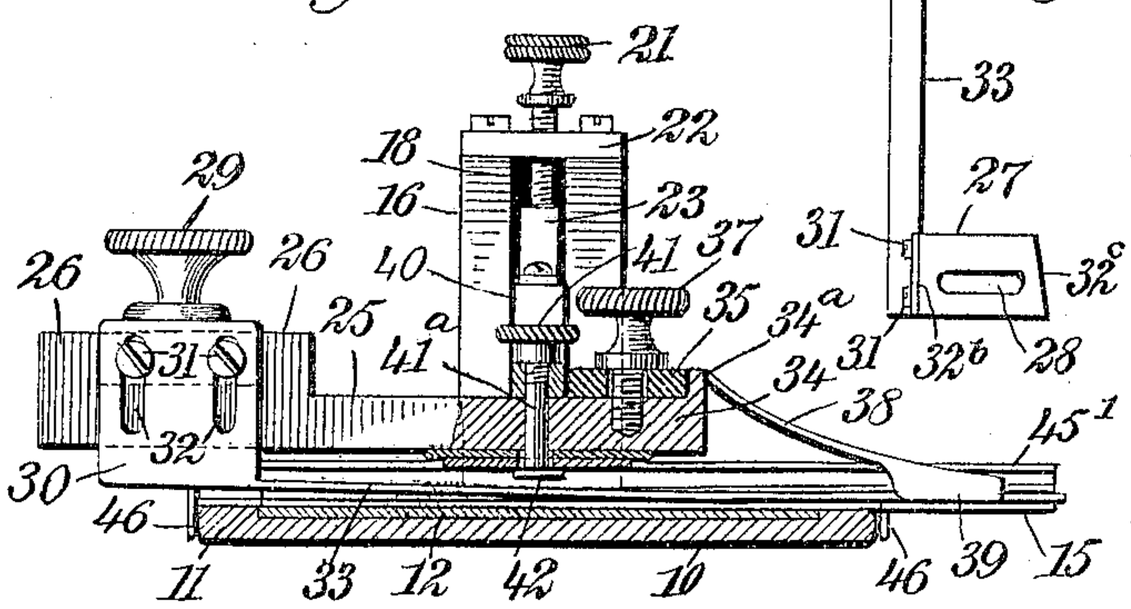


Fig. 6.

Fig. 4.

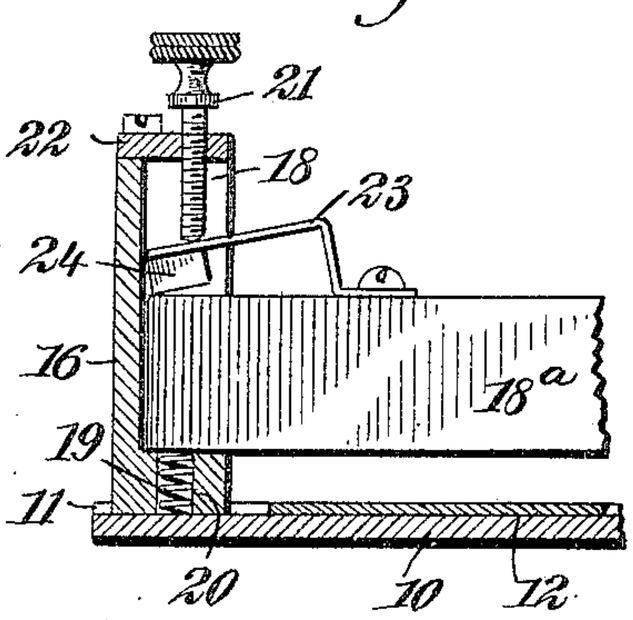
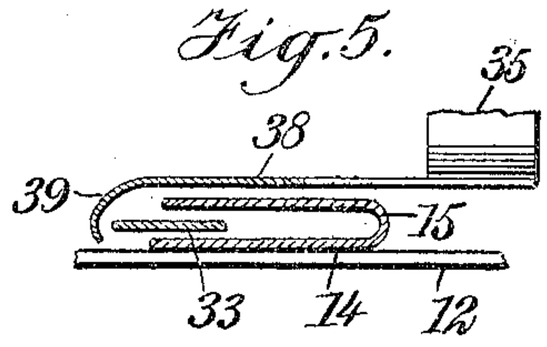


Fig. 5.



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TUCK-GUIDE FOR SEWING-MACHINES.

No. 812,558. Specification of Letters Patent. Patented Feb. 13, 1906.

Application filed October 27, 1904. Serial No. 230,159.

To all whom it may concern:

Be it known that I, SAMUEL FRIEDMAN, a subject of the Czar of Russia, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Tuck-Guide for Sewing-Machines, of which the following is a full, clear, and exact description.

My invention relates to such sewing-machine attachments as tuckers, and has for its principal objects the provision of a device by which work of different widths may be operated upon with a minimum amount of attention and in which the relation of the elements to one another may be changed to meet varying conditions.

It consists in the various features and combinations hereinafter described and more particularly claimed.

Referrence is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of one embodiment of my invention, illustrated in place upon a sewing-machine. Fig. 2 is a top plan view of the device. Fig. 3 is a vertical transverse section on the line 3 3 of Fig. 2. Fig. 4 is an enlarged longitudinal sectional detail on the line 4 4 of Fig. 2. Fig. 5 is a similar view on the line 5 5 of Fig. 2, and Fig. 6 is a top plan view of the folding-blade and its supporting-block.

S designates a portion of a sewing-machine to which my improved tucker is attached. This device as here illustrated consists of a base in the form of a plate 10, which may be secured upon the sewing-machine table in any convenient manner and the length of which should be sufficient to receive the greatest width of material upon which it is desired to operate. In the base-plate is formed a longitudinal way between raised side walls 11 11, serving to receive and guide a movable carrier-plate 12, adjustable upon the base. The carrier-plate may be fixed in its adjusted position by a thumb-screw 13, extending through a longitudinal slot 13^a in the carrier-plate and being threaded into the base. To indicate the position of the carrier-plate and control the relation of the tucking members to be hereinafter described, said plate has upon its edge near one extremity an index-mark *a*, which moves over a scale *b*, situated upon the top of the adjacent wall 11. Fixed upon the carrier-plate is a folding member 14, bent at 15 to form between upper and lower walls a channel to receive the doubled fabric. These walls converge rearwardly or from the machine-needle into contact with one another

Rising from each end of the base is a standard 16, the carrier-plate being cut away at each end at 17 to receive this and permit movement. In each standard opening through the inner side and through the top is a chamber 18, into which extends a bridge-bar 18^a. The lower wall of this chamber is located far enough above the top of the carrier-plate to leave a sufficient space between the bridge-bar and said plate when the former is in its lowest position for the reception of the tucking and guiding elements. This bridge-bar is held normally upward from the carrier-plate by spiral springs 19 19, seated in recesses 20 in the standards. The upward movement of the bridge-bar may be limited by screws 21, threaded through cap-plates 22, which close the tops of the standard-chambers. These screws are shown as contacting with leaf-springs 23, fastened upon the top of the bar opposite the chambers and extending into them. Each spring has at its inner extremity an angular member 24, secured upon its under side. To allow freedom of movement of the bridge-bar, it is found convenient to give it some end play in the standards, and when the bar is in its lowest position or resting upon the walls at the bottom of the chambers this play may be taken up and the bar fixed in position by forcing the members 24 downward by the screws, as is particularly shown in Fig. 4 of the drawings, so that the inner lower corner of each contacts with the bridge-bar, while the adjacent upper corner engages the inner wall of the chamber.

Projecting at substantially right angles from the center of the bridge-bar is an arm 25, which has formed in the end opposite the folding member between walls 26 26 a way, in which may slide a block 27. To provide for the movement of the block in the way and to fix it in position, it has a slot 28, extending longitudinally of the base, through which passes a thumb-screw 29, threaded into the arm. At the end of the block toward the open side of the folding member 14 is secured a plate 30, preferably by means of screws 31,

extending through vertical slots 32 into threaded openings 32^a, which are in both ends of the block, one of said ends 32^b being substantially parallel to the edge 15 of the folding member, while the opposite end 32^c is inclined thereto. This plate carries a folding-blade 33, adapted to enter between the walls of the member 14 and projecting beyond it into proximity with the needle of the sewing-machine. The material M in which the tucks are to be formed is introduced between the folding member and blade in a flat state, it being laid upon the upper wall of the blade, and then as it is forced forward the tuck will be automatically formed as it enters between the inclined blade and the member, and it will be seen that the width of the tuck may be varied by traversing the carrier-plate upon the base, thus moving the folding member toward and from the blade, the distance being determined by the index-mark and scale. At the same time the relation of the blade to the folding member may be changed by shifting the position of its supporting-block upon the arm, this controlling the relation of the fold to the line of stitching. When thicker fabric is to be tucked, a plate provided with a folding member having a wider channel may be mounted upon the base, and when this is done the vertical adjustment of the blade by means of the screws 32 enables it to be kept midway between the walls. In ordinary operation when the tucks are at a sufficient distance from the edge of the fabric the blade-plate is secured upon the end 32^c of the block 27, this giving the folding member and blade a tapering relation which facilitates the gradual formation of the tuck. If, however, the tuck is to be made very near the edge, better results are obtained by having the member and blade parallel to one another, and in this case the block may be reversed between the walls 26 and the blade-plate attached to the opposite end 32^b.

The arm 25 extends beyond the bridge-bar at 34 and has an upturned end wall 34^a, between which and the bar is located a block 35, in which is a longitudinal slot 36 to receive a thumb-screw 37, threaded into the arm extension. From this block projects a retaining member 38, lying across the top of the folding member and having a bent end 39, which extends over the open side of the folding-member channel and the back of the folding-blade and holds in proximity to them the upper layer of material, maintaining it in a horizontal or substantially flat position. The adjustment of this retaining member by means of the screw and slot enables it to be correctly positioned with regard to the folding members. In the top of the bridge-bar above the arm is shown a recess 40 to receive a nut 41 upon a screw 41^a, extending loosely through the bar. This screw has at its lower end an enlargement 42, and above this passes through slots 43 in overlapping guide-plates 44, extending oppositely from the center of the bar and carrying at their outer ends guides 45 45′, lying transversely of the base. The guide 45′ is preferably inclined, converging toward its companion in the direction of the sewing mechanism, this providing for wider portion of the fabric before the tuck is fully formed. These guides have inner grooves to receive the opposite edges of the material to be tucked, one of the guides having an opening at 45^a, through which the end of the companion guide-plate may project. Each of the guides may have a pair of projections 46 46, situated at the opposite sides of the base and serving to prevent lateral movement. Either guide may be slid toward and from the tucking members, so that their grooves may properly coact with the edge of the material whatever the position of the tuck may be and fixed by drawing the screw enlargement against the under side of the lower guide-plate, this being accomplished by screwing down the nut.

From what has been hereinbefore stated it will be evident that material of any width up to the maximum extension of the guides may be operated upon without attention after the tuck has been once started, the coaction of the guides with the material keeping its movement true with relation to the stitching mechanism, while the retaining member maintains the work flat, so that this guiding contact is assured. It will be further seen that the size of the tucks may be widely varied and fabric of different thicknesses successfully operated upon.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination with a base, of a bridge-bar extending above the base, an arm projecting from the bridge-bar, a block movable upon the arm, a folding-blade carried by the block, and a folding member with which the blade coacts.

2. The combination with a base, of a bridge-bar extending above the base, an arm projecting from the bridge-bar, a block movable upon the arm, a folding-blade movable upon the block, and a folding member with which the blade coacts.

3. The combination with the base of a bridge-bar extending above the base and longitudinally thereof, a folding member mounted upon the base, a folding-blade mounted upon the bridge-bar and a retaining member attached to the bridge-bar and adjustable with respect to the folding member.

4. The combination with a base of a bridge-bar extending above the base and longitudinally thereof, an arm projecting from the bridge-bar, a folding-blade movably mounted upon the arm, a folding member attached to the base, and coacting with the

folding-blade, and a retaining member movably mounted upon the arm and adjustable with respect to the folding-blade.

5. The combination with a base, of a bridge-bar extending longitudinally above the base, plates overlapping one another upon the bridge-bar to which they are secured and having guide portions, and folding members situated between the guide portions.

6. The combination with a base, of a bridge-bar extending longitudinally above the base, plates overlapping one another and being provided with slots extending longitudinally of the bridge-bar, a securing device extending through the slots and engaging the bridge-bar, guides carried by the plates, and folding members situated between the guides.

7. The combination with a base, of standards rising therefrom and having recesses, a bridge-bar extending between the standard-recesses, adjusting means coöperating with the bridge-bar, springs carried in the recesses and coacting with the bridge-bar, and folding members mounted upon the base and bridge-bar.

8. The combination with a base, of standards rising therefrom, a bridge-bar extending between the standards, locking members mounted upon the bridge-bar, means for forcing the locking members into contact with the bridge-bar and standards, and folding members mounted upon the base and bridge-bar.

9. The combination with a folding member, of a reversible supporting member having faces lying at different angles with respect to the folding member, and a folding-blade which may be mounted upon said faces of the supporting member.

10. The combination with a base, of a bridge-bar extending above the base, a folding member mounted upon the base, a block carried by the bridge-bar and having one end parallel to the folding member and one end inclined thereto, and a folding-blade attachable to either end of the block.

11. A tucking device comprising a base, coacting folding members mounted thereon, and converging guide members situated at opposite sides of said coacting folding members and adapted for contact with the edges of the work.

12. The combination with a base provided with a way, of a plate movable in the way and having spaces at its ends, a folding member carried by the plate, standards rising from the base through the plate-spaces, a bridge-bar extending between the standards, and a folding-plate mounted upon the bridge-bar.

13. The combination with a base provided with a way, of a plate movable in the way, a folding member carried by the plate, standards rising from the base, a bridge-bar extending between the standards, a folding-plate mounted upon the bridge-bar, and guides supported beneath the bridge-bar at each side of the folding elements.

14. The combination with a base provided with a way, of a plate movable in the way, a folding member carried by the plate, standards rising from the base, a bridge-bar extending between the standards, a folding-plate mounted upon the bridge-bar, guides supported beneath the bridge-bar at each side of the folding elements, and a screw extending through the bridge-bar and engaging the guides.

15. The combination with a base, of a bridge-bar extending above the base, folding members mounted upon the base and bridge-bar, and guides carried by the bridge-bar at opposite sides of the folding members, one of said guides being provided with a slot through which its companion extends.

16. The combination with a base, of a bridge-bar extending above the base, folding members mounted upon the base and bridge-bar, independently-adjustable guides carried by the bridge-bar at opposite sides of the folding members, each of said guides having a groove to receive the work, and means common to both guides for fixing their position.

17. The combination with a base, of a folding member mounted thereon, a bridge-bar extending above the base, an arm extending upon opposite sides of the bridge-bar, a folding-blade carried by the arm at one side of the bridge-bar, and a retaining member carried by the arm at the opposite side of the bar.

18. The combination with a base, of a bridge-bar supported thereon, coacting folding members, one of which is mounted on the bridge-bar, and independently-movable guide members situated at opposite sides of the folding members and having engagement with one another.

19. The combination with a base, of a bridge-bar supported thereon, coacting folding members, one of which is mounted on the bridge-bar, independently-movable guide members situated at opposite sides of the folding members, and means common to both guide members for fixing them in position.

20. The combination with a base, of coacting folding members mounted for movement along said base, and guide members situated at opposite sides of the folding members and having projections extending over the sides of the base.

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

SAMUEL FRIEDMAN.

Witnesses:

ABRAHAM M. ROSENBERG,

LAZARUS ROSENBERG.