April 3, 1956 E. L. JOHNSON 2,740,345

VIBRATORY PLATE RETOUCHING APPARATUS

Filed June 12, 1952

Fig. 1.

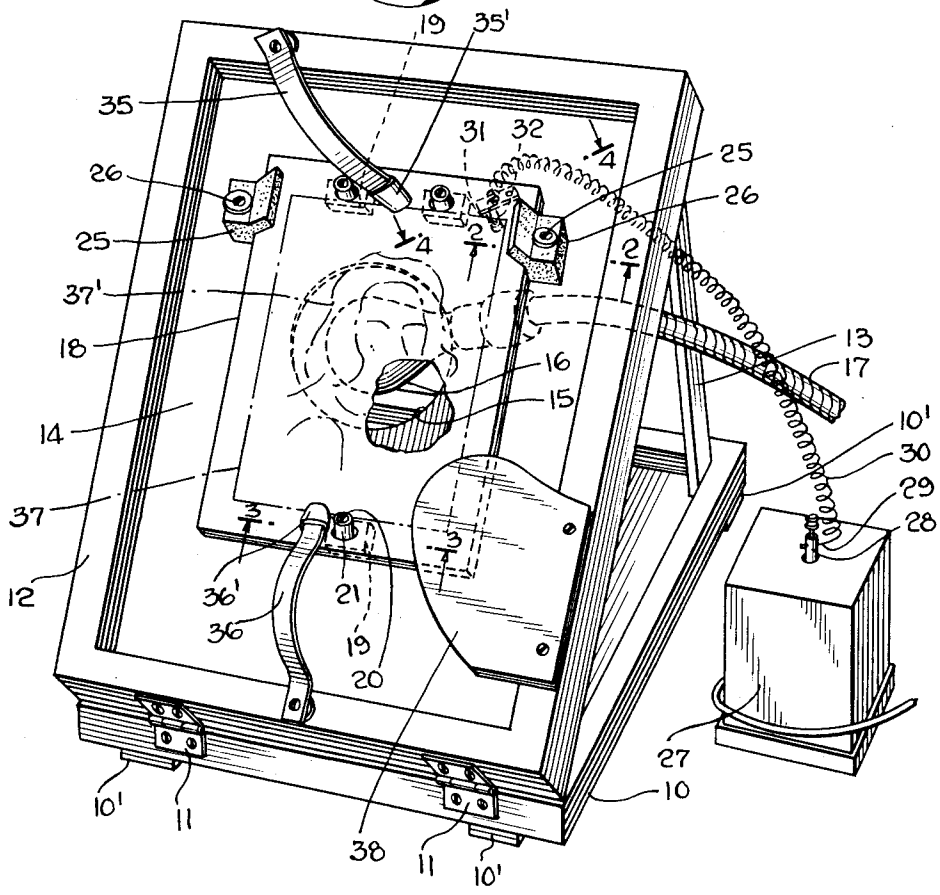


Fig. 2.

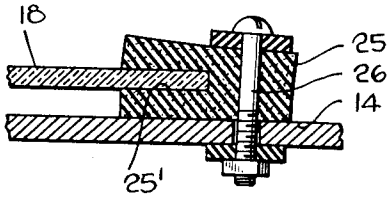
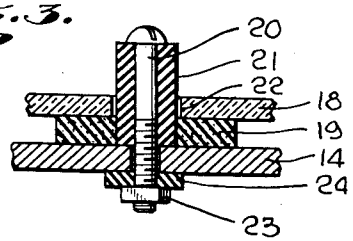


Fig. 3.



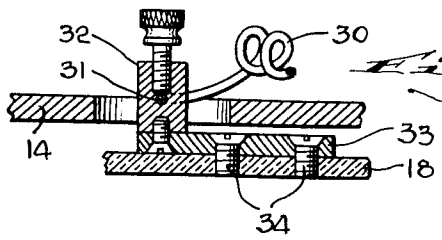


Fig. 4.

INVENTOR
EVERARD L. JOHNSON

BY

ATTORNEY

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VIBRATORY PLATE RETOUCHING APPARATUS

Everard L. Johnson, Patchogue, N. Y.

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4 Claims. (Cl. 95—103)

This invention relates to vibrator apparatus for use in retouching photographic films or plates. More particularly, the invention deals with an apparatus of this type and kind wherein the plate used for supporting the film or picture to be retouched is vibrated or agitated in applying retouching markings to the film or picture. Still more particularly, the invention deals with an apparatus of the type and kind which is collapsible to facilitate shipment and storage thereof.

The novel features of the invention will be best understood from the following description, when taken together with the accompanying drawing, in which certain embodiments of the invention are disclosed and, in which the separate parts are designated by suitable reference characters in each of the views and, in which:

Fig. 1 is a perspective view diagrammatically illustrating the retouching apparatus in set-up condition with part of the construction broken away.

Fig. 2 is a partial section on the line 2—2 of Fig. 1 on an enlarged scale.

Fig. 3 is a partial section on the line 3—3 of Fig. 1 on an enlarged scale and omitting part of the construction; and

Fig. 4 is a partial section on the line 4—4 of Fig. 1.

In Fig. 1 of the drawing, I have shown diagrammatically my improved retouching apparatus in set-up condition. The apparatus comprises a rectangular base frame **10** to which is hinged, as seen at **11**, a plate supporting frame **12**, also rectangular in form, the frame **12** being normally collapsible on the frame **10** and held in raised operative position by a pair of easel rods one of which is shown at **13** in Fig. 1, the rods being pivoted to the upper portion of the frame and collapsible within the frame **10**. The frame **10** preferably has cushion supporting feet **10'** for preventing marring of the surface on which the apparatus is supported.

The frame **12** includes a back wall or panel **14** having a round opening **15** centrally of the upper portion thereof, and adjustably supported rearwardly of the opening **15** is an electric bulb **16** having a flexible arm support, part of which is seen at **17** in Fig. 1. Yieldably supported on the wall or panel **14** is a vibratory plate or picture mount **18** composed of suitable translucent material. The plate **18** is supported on three sponge rubber pads **19** and is aligned on the wall **14** by three bolts **20** on the shanks of which are disposed sponge rubber bushings **21** which fit in apertures **22** in the plate **18**, this construction being clearly shown in Fig. 3. It will also be noted in said Fig. 3 that the nut **23** of the bolt bears against a rubber washer **24**.

To further support and hold the plate **18** on the wall **14**, I provide two U-shaped sponge rubber blocks **25** secured to the wall **14** by bolts **26** in the manner clearly illustrated in Fig. 2 of the drawing. Side edge portions of the plate **18** fit in the channel or slot **25'** of the blocks as noted in Fig. 2. From the foregoing, it will be apparent that the plate **18** has an all-rubber mounting on

the wall **14** so as to facilitate vibratory action of the plate by the vibratory means which is employed.

At **27**, I have shown an electric vibrator having the vibratory post **28** with which is coupled one end portion **29** of a transmitting coil spring **30**. The other end **31** of this spring is coupled with a post **32** attached to a strip **33** secured to the plate **18** by screws or other fastenings as at **34**.

Supported on the frame **12** are two negative supporting spring arms **35** and **36** having cushioned tips **35'**, **36'** which will engage a negative and prevent marring thereof. At **37**, I have indicated in dot and dash lines the outline of a negative for a suitable picture representation as at **37'** disposed in alignment with the aperture **12** and which is to be retouched. Also supported on the frame **12** is a hand supporting platform **38** which extends over the wall **14** and is in spaced relation thereto and protrudes in an upward direction so that the hand can be supported in close proximity to the picture representation as at **37'**.

In the operation of the device, a suitable retouching tool or implement is supported in the end which rests on the platform **38** with the point or marking end of the instrument arranged over the area of the picture **37'** to be retouched. Then the vibrator is put in operation to vibrate the plate **18**. Vibratory action of the plate **18** will provide the necessary distribution of the mark and the marking implement will simply be moved to change the areas to be retouched.

It will be understood that the plate **18** is formed of any suitable transparent or translucent material, glass and plastics being desirable. It is also preferred that the translucency be substantially similar to what is generally referred to as "frosted glass."

The electric vibratory device **27** diagrammatically shown in Fig. 1 is of the type and kind disclosed in my prior Patent No. 2, 404,134, granted July 16, 1946, the post **28** being similar to the vibratory post as disclosed in said patent.

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

1. A vibratory photograph retouching frame, comprising a pair of rectangular frames hingedly coupled for relative movement, means supporting one frame in angular position with repsect to the other frame, a panel in one of said frames, said panel having an opening in the central portion thereof, a translucent picture supporting plate, means comprising sponge rubber supports mounted in connection with said panel and engaging the plate to yieldably support and position the plate on said panel, means for yieldably supporting a picture on said plate in alignment with the opening in said panel, means rearwardly of the panel opening for illuminating that part of the plate exposed to said opening, an electric vibratory device, means yieldably coupling said device with said plate to vibrate the plate on said panel, said paneled frame having a hand rest platform fixed to one side of the frame and extending over and in spaced relation to the panel of said frame, and said second named means comprising bolts having yieldable bushings arranged in apertures of said plate in yieldably positioning the plate on said panel.

2. A vibratory photograph retouching frame, comprising a pair of rectangular frames hingedly coupled for relative movement, means supporting one frame in angular position with respect to the other frame, a panel in one of said frames, said panel having an opening in the central portion thereof, a translucent picture supporting plate, means comprising sponge rubber supports mounted in connection with said panel and engaging the plate to yieldably support the plate on said panel, means for yieldably supporting a picture on said plate

in alignment with the opening in said panel, means rearwardly of the panel opening for illuminating that part of the plate exposed to said opening, an electric vibratory device, means yieldably coupling said device with said plate to vibrate the plate on said panel, said paneled frame having a hand rest platform fixed to one side of the frame and extending over and in spaced relation to the panel of said frame, said second named means comprising bolts having yieldable bushings arranged in apertures of said plate in yieldably positioning the plate on said panel, and U-shaped yieldable clips enveloping peripheral edges of said plate and fixed to said panel.

3. A device of the character described comprising a frame, a panel closing the major portion of the frame leaving an opening therein, a translucent plate, means comprising all rubber mountings including sponge rubber pads for yieldably supporting and spacing the plate on the panel with the plate disposed over and covering the opening in said panel, at least two of said pads having channels receiving peripheral edges of the plate to retain the plate against displacement from the panel, and said mountings including yieldably bushed bolts arranged in openings in said plate for yieldable alignment of the plate on said panel.

4. A device of the character described comprising a frame, a panel closing the major portion of the frame leaving an opening therein, a translucent plate, means

comprising all rubber mountings including sponge rubber pads for yieldably supporting and spacing the plate on the panel with the plate disposed over and covering the opening in said panel, at least two of said pads having channels receiving peripheral edges of the plate to retain the plate against displacement from the panel, said mountings including yieldably bushed bolts arranged in openings in said plate for yieldable alignment of the plate on said panel, said frame having a hand rest platform extending over and in spaced relation to the panel and plate, a pair of yieldable fingers for supporting a workpiece on the surface of the plate in registering alignment with the opening in said panel, a post fixed to said plate, an electric vibrating device having a vibratory post, and means yieldably coupling the post of said vibratory device with the post of said plate.

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