

Sept. 24, 1935.

F. G. ROSE

2,015,412

MACHINERY BASE

Filed Aug. 8, 1934

2 Sheets-Sheet 1

Fig. 2

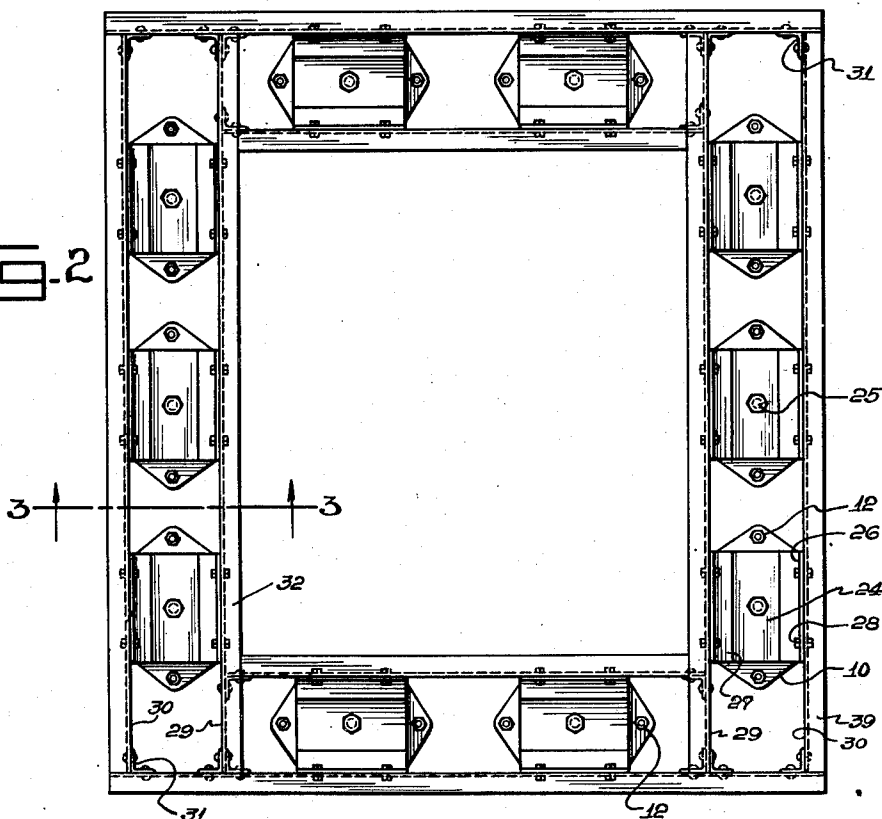


Fig. 3

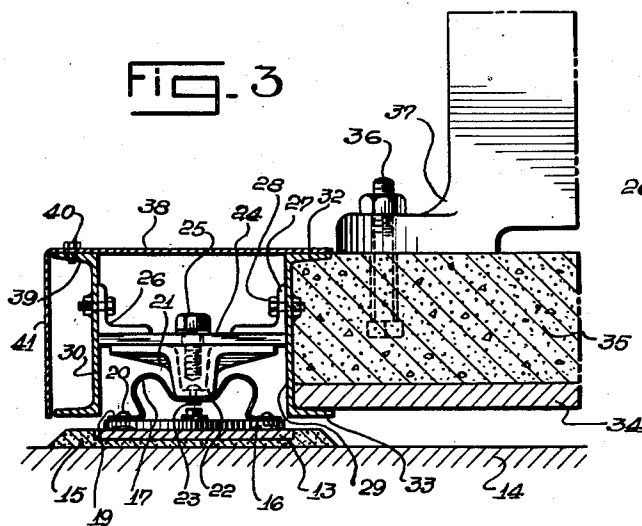
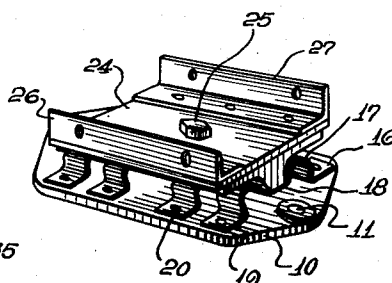


Fig. 1



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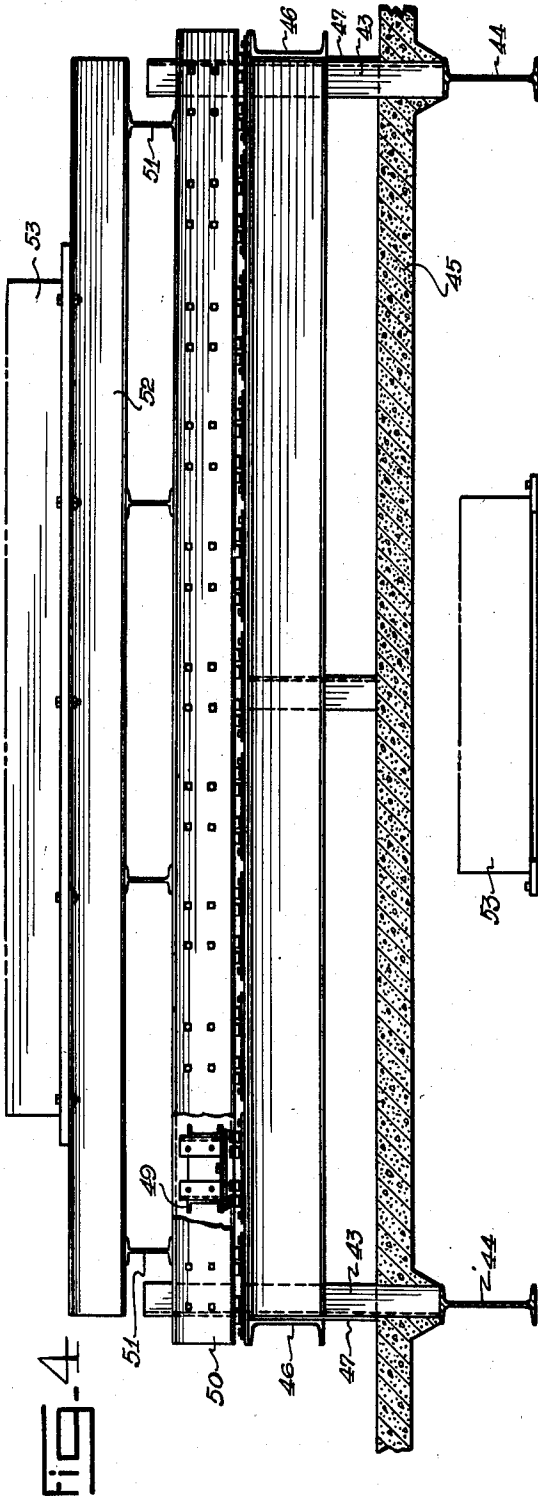
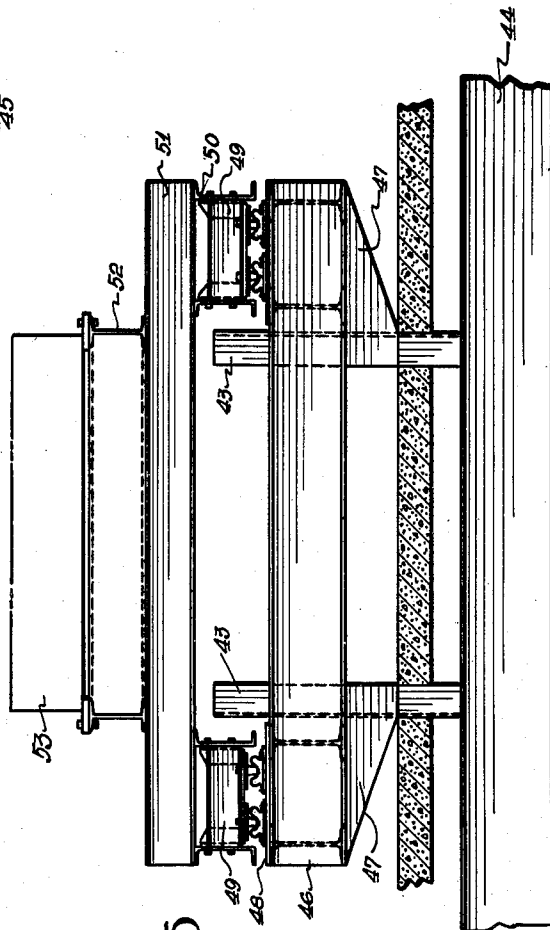


FIG-5



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## UNITED STATES PATENT OFFICE

2,015,412

## MACHINERY BASE

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4 Claims. (Cl. 248—20)

This invention relates to anti-vibration machinery bases and relates more particularly to machinery bases of the class described which can be readily constructed in the field from standard structural shapes.

In the construction of anti-vibration machinery bases, it is desirable to ship stock resilient units to a customer who then constructs the machinery base around the resilient units from structural steel members secured locally. It is desirable to construct these resilient units so that they can be readily removed from the machinery base without disturbing the remaining resilient units, thus permitting the resilient units removed to be inspected and repaired from time to time.

An object of this invention therefore is to provide resilient units which may be shipped to the customer and built into a machinery base from structural steel members obtained locally.

Another object of the invention is to provide a machinery base in which the resilient units can be easily removed for inspection and repair without stopping the operation of the machine; also to improve machinery bases in other respects hereinafter specified and claimed.

Reference is to be had to the accompanying drawings forming a part of this specification, in which

Fig. 1 is a perspective view of one of the resilient units embodying the present invention,

Fig. 2 is a plan view of the assembled machinery base,

Fig. 3 is a sectional elevation through the completed machinery base taken on line 3—3 of Fig. 2,

Fig. 4 is an elevation, partly in section, of a modified form of machinery base suitable for supporting heavy machinery, and

Fig. 5 is a sectional elevation through the machinery base shown in Fig. 4.

One of the resilient units as shown in Fig. 1 comprises a base plate 10 having apertures 11 for receiving bolts 12 which secure said plate to a metal strip 13. A floor 14 supports the plate 13, suitable cementitious grouting material 15 intervening between the floor 14 and strip 13. A plurality of resilient flat springs 16 are provided with a pair of spaced resilient loops 17 connected by a saddle member 18. Outstanding legs 19 are formed on the loops 17 and are secured to the plate 10 as by bolts or rivets 20. A bracket 21 has a depending rib 22 which rests upon the saddle member 18 and are secured thereto by rivets 23. A reinforcing plate 24 is secured to the bracket 21 by a bolt 25. Spaced angle strips

26 are secured to the outer edges of bracket 21 as by welding. Upstanding flanges 27 are formed on the strips 26 and are secured by bolts 28 to the webs of spaced channels 29 and 30 which form the framework of the machinery platform. The flanges 27 may be cast integrally with the brackets 21 if so desired. The ends of the channels 29 and 30 are secured together by angle attaching clips 31 in the manner shown in Fig. 2 so that spaced channels extend entirely around the periphery of 10 the machinery base.

The inner channels 29 have inwardly extending upper flanges 32 and lower flanges 33. Form boards 34 are laid across the flanges 33, and a cementitious platform 35 is formed on top of the boards 34, said platform having anchoring bolts 36 embedded therein for firmly anchoring a vibrating machine 37. A shield 38 extends on top of the channels 29 and 30 resting on flanges 32 and upper flanges 39 formed on the channels 30, 20 said shield being removably attached to the flange 39 by a bolt 40. A depending flange 41 on shield 38 conceals the channels 30 and presents a finished exterior appearance. When it becomes necessary to remove a resilient unit for inspection or 25 repair, bolt 40 and shield 38 is removed. Bolts 12 and 28 are then removed and the resilient unit is removed vertically from the frame without disturbing the remaining resilient units or stopping the machine 37. The vertical removal of the 30 resilient units greatly facilitates the operation of making replacements of the resilient units.

For resiliently supporting extremely heavy machinery, it is desirable to use the structure shown in Figs. 4 and 5 in which vertical standards 43 35 have their lower ends resting directly upon steel beams 44 forming the framework of the building. A concrete floor slab 45 also rests upon the beams 44 and embeds the lower ends of standards 43. Steel structural members 46 are secured to the upper ends of standards 43, being provided with suitable gusset plates 47. A plate 48 is supported on top of the beams 46 and resilient units 49 are supported on said plates 48. Spaced channels 50 45 are supported on the resilient units 49 in a manner similar to that previously described. A superstructure of beams 51 and 52 is supported on the channels 50 and forms a platform for supporting the vibrating machine 53.

I would state in conclusion that, while the illustrated examples constitute practical embodiments of my invention, I do not wish to limit myself precisely to these details, since manifestly the same may be considerably varied without 55

departing from the spirit of the invention as defined in the appended claims.

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

- 8 1. In a resilient machinery base, a pair of spaced structural members arranged around each of the sides of a polygon having at least four sides, the webs of said structural members extending vertically, resilient units each comprising  
10 a base to be removably secured to a supporting member and an upper bracket having spaced, vertically extending flanges, means for removably securing said flanges to said webs, and a machinery supporting platform extending horizontally  
15 across the center of said polygon.

2. In a resilient machinery base, a plurality of structural members arranged in spaced pairs around the periphery of a machinery platform, and a plurality of resilient units removably secured  
20 between each pair of structural members, said units being connected to vertically extending parts on said members so as to be removable

from said members by vertical movement for inspection and repair.

3. In a resilient machinery base, a plurality of structural members arranged in spaced pairs around a polygon having at least four sides, vertically removable resilient units between said pairs of structural members, said units being secured to vertically extending parts on said members, inwardly extending lower flanges on the inner of said structural members, a form member laid across said flanges, and a cementitious machinery platform on said form member. 10

4. In a resilient machinery base, a plurality of structural members arranged in spaced pairs around the periphery of a machinery platform, a plurality of resilient units removably secured between vertical parts of each pair of structural members, said units being removable from said members for inspection and repair, by a vertical movement, and a shield removably secured across  
20 said structural members above said resilient units.

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