July 11, 1939. G. B. BOSCO 2,165,333

SCREED CHAIR

Filed June 3, 1937

FIG. 1.

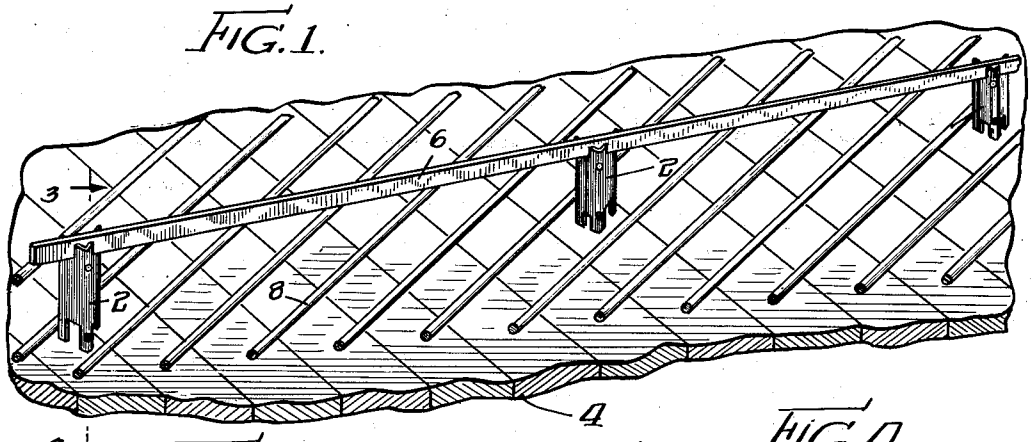



FIG. 3

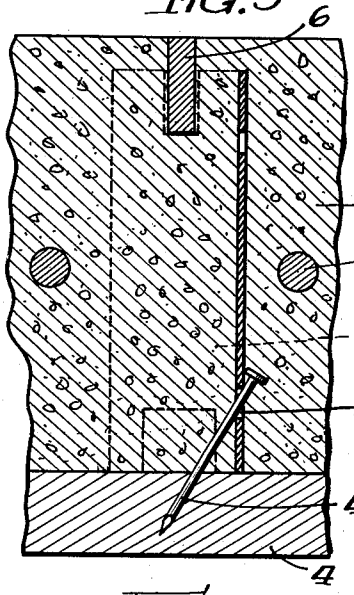



FIG. 2

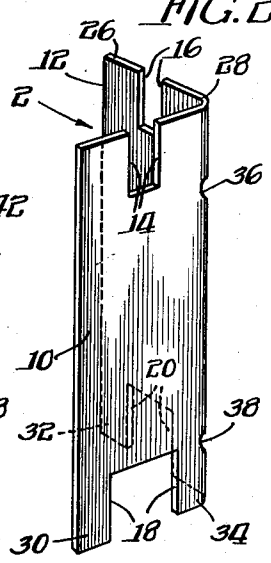



FIG. 4.

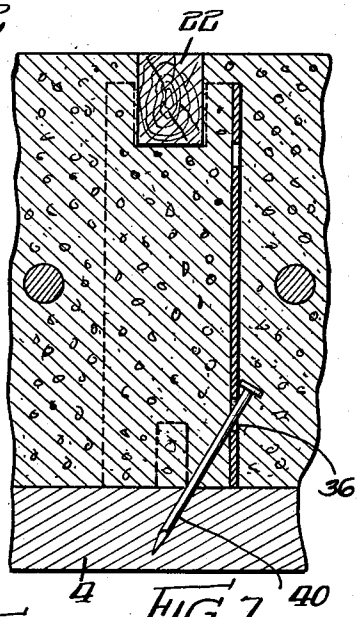



FIG. 5.

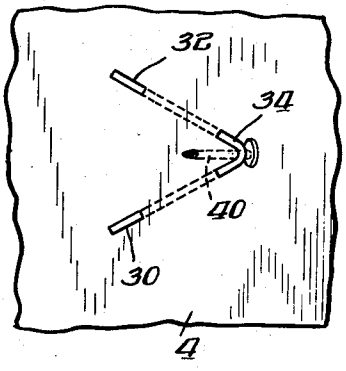



FIG. 6.

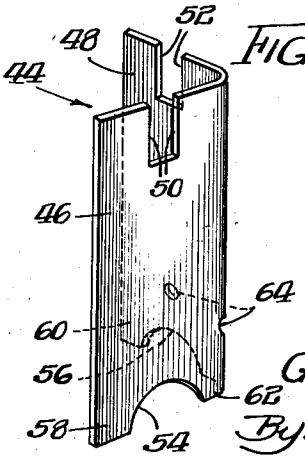
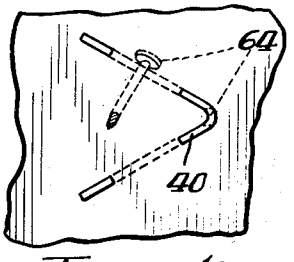



FIG. 7.




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# UNITED STATES PATENT OFFICE

2,165,333

## SCREED CHAIR

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Application June 3, 1937, Serial No. 146,263

9 Claims. (Cl. 72—122)

This invention relates to a screed chair for supporting the screed strip used in laying concrete floors.

An object of the invention is to provide a screed chair adapted to accommodate different sizes of screed strips.

Another object of the invention is to provide a screed chair which, when the floor forms are stripped, does not present an unsightly appearance in the ceiling of the floor below.

Another object of the invention is to provide a screed chair having a three point contact with the floor forms, which contact is of small area.

Another object of the invention is to provide a screed chair which is capable of fastening to the floor forms in a simple and rapid manner.

Another object of the invention is to provide a screed chair adaptable for all purposes including use in supporting a steel screed strip on level floors or a wood strip on sloping floors.

Another object of the invention is to provide a screed chair of light weight and economical structure.

Further objects and advantages of the invention will be apparent from the following description when taken in connection with the accompanying drawing, wherein:

Fig. 1 is a view in perspective showing screed chairs according to the invention as used in supporting the screed strip upon floor forms.

Fig. 2 is a view in perspective of a screed chair constructed according to the invention.

Fig. 3 is a vertical section taken along the line 3—3 of Fig. 1.

Fig. 4 is a section similar to Fig. 3 showing the screed chair supporting a different size and type of screed strip from that shown in Fig. 3.

Fig. 5 is a horizontal section taken along the line 5—5 of Fig. 3.

Fig. 6 is a view in perspective of a modified form of screed chair.

Fig. 7 is a horizontal section taken through the chair of Fig. 6 and showing the manner of attaching this chair to floor forms.

Heretofore screed chairs of channel form have been employed to support the screed strips or leveling bars upon the floor forms, but these screed chairs have embodied laterally extending foot portions through which are passed means for fastening the chair to the floor forms. These laterally extending foot elements in engagement with the rough floor forms cause a tilting of the chair and the leveling bar and also present surfaces of substantial area which are liable to rust, thereby destroying the appearance of the ceiling formed by the lower surface of the floor. Frequent repainting is required to maintain the appearance of the ceiling. Frequent retouching of the ceiling surface about each of the chairs is also required because of the falling away of the concrete about the foot elements.

These known screed chairs are further subject to the disadvantage that they are capable of accommodating only a single size of steel screed bar and therefore have no utility where it is necessary to use wooden screed strips, as for example in the case of sloping floors.

Other screed chairs of the metal wire type are known but these are relatively unstable and are incapable of maintaining the screed strip in preset position on the floor forms.

The screed chair of applicant's invention eliminates these disadvantages of the known types of channel formed screed chairs while at the same time maintaining their superiority of stability in supporting the screed strip. The screed chair of applicant's invention is also capable of accommodating different sizes and types of screed strip both for level and sloping floors.

As shown in Fig. 1, a plurality of screed chairs 2 is supported in an upright position on the top of floor forms 4 and support a screed strip or leveling bar 6. Reinforcing rods 8 may be arranged in the usual manner between the screed strips 6 and the floor forms 4. As shown in Fig. 2, one form of the screed chair of applicant's invention comprises a metallic plate bent centrally to form angularly disposed legs 10 and 12, the angle formed by the legs 10 and 12 being preferably approximately 60 degrees. The leg 10 is provided at its upper end with an inwardly extending recess 14 and the leg 12 is provided with a similar inwardly extending recess 16, the corresponding edges of the recesses 14 and 16 being alined to receive the straight screed strip 6. These recesses 14 and 16 are preferably of a size to receive the usual size of steel screed strip used in laying level concrete floors.

At their lower ends the legs 10 and 12 are provided with inwardly extending recesses 18 and 20 similar to the recesses 14 and 16 and similarly alined but of a size to accommodate the usual size of wood screed strip 22 (Fig. 4), used in the case of sloping floors.

The vertically extending feet 24, 26 and 28 formed by the recesses 14 and 16 and the vertically extending feet 30, 32 and 34 formed by the recesses 18 and 20 provide means for supporting the chair upon the floor forms which are of very

small area and provide a leveling contact of the most efficient type, viz., a three point contact.

In the bent portion connecting the legs 10 and 12 openings 36 and 38 are provided for receiving common nails such as shown at 40 in Figs. 3 and 4, which may be toenailed into the floor forms 4 for securely fastening the chair to said forms.

Where the screed chair is placed upon the floor forms with the feet 30, 32 and 34 contacting the upper surface of the floor forms 4, the nail 40 is passed through the opening 38 and toe nailed into the floor forms. A second screed chair is similarly mounted and secured to the floor forms at a distance from the first chair which is slightly less than the length of the screed strip to be supported by said chairs. The screed strip is then placed on the two end screed chairs and a third or intermediate screed chair may then be placed beneath the approximately center portion of the screed strip and secured to the floor forms in the same manner as the end chairs. When the concrete for the floor slab 42 is poured or placed the recesses 18 and 20 permit a free flow of concrete through the legs 10 and 12 and thereby effect a secure bonding of the chair in the concrete slab. The concrete having set, and the floor forms 4 removed, the projecting ends of the nails 40 are clipped or cut off flush with the lower surface of the floor slab.

It will be evident that by reason of the very small area of contact between the screed chair and the floor forms these chairs will be substantially invisible in the ceiling formed by the lower surface of the floor slab 42 and that therefore the appearance of that ceiling will not be in anywise marred by the screed chairs. Frequent repainting and retouching of the ceiling is therefore not required in order to maintain its sightly appearance.

In the case of sloping floors the screed chair is merely reversed, being supported upon the floor forms 4 by the vertical foot elements 24, 26 and 28 and being attached to said forms by the nail 40 which is passed through the opening 36 and toenailed in the same manner as previously stated, to the floor form 4. The wooden screed strip 22 is then received in the recesses 18 and 20 in the screed chair.

It will be seen from this description that applicant has provided a strikingly simple and economical screed chair supportable in a most desirable manner upon the floor forms and having a very small area exposed in the ceiling formed by the lower surface of the floor slab and that said screed chair is conveniently reversible to accommodate different sizes and types of screed strips.

The screed chair 44 shown in Fig. 6 embodies angularly disposed legs 46 and 48 similar to the legs 10 and 12 of the chair 2 shown in Fig. 2. The legs 46 and 48 are provided at their upper ends with recesses 50 and 52 similar to the recesses 14 and 16 and similarly alined to receive a common size of screed strip. At their lower ends the legs 46 and 48 are provided with arcuate or semicircular recesses 54 and 56 which form vertically extending feet 58, 60 and 62 similar to the feet 30, 32 and 34. Openings 64 in the leg 48 and the bent portion connecting the legs 46 and 48 adjacent to the recesses 54 and 56 each provides means to receive a nail 40 or other fastening means by which the chair is secured to the floor forms 4. This screed chair like the screed chair of Figs. 1 to 5, provides a supporting portion of very small area providing a three point contact with the floor forms and the recesses 54 and 56 permit a relatively free flow of concrete through the legs 46 and 48 whereby to effect a secure bonding of the chair in the concrete slab.

If desired, an opening or openings similar to the openings 64 may be provided in the screed chair 44 proximate the end containing the recesses 50 and 52 in order that the chair 46 may be reversed and the recesses 54 and 56 employed to support a curvilinear or cylindrical rod, the width or diameter of which is greater than the width of the recesses 50 and 52.

It will be understood that details of the construction shown may be varied or omitted without departing from the spirit of the invention as defined by the following claims.

The invention is hereby claimed as follows:

1. A reversible screed chair for supporting screed strips of different sizes upon work forms, comprising integral, substantially flat body portions being parallel in a longitudinal direction but arranged in an acute angle in a transverse direction, each of said portions having a recess at one end for receiving a screed strip of one size and a recess at the opposite end for receiving upon reversal of the chair a screed strip of a different size, each of said recesses forming spaced feet adapted selectively to engage said work forms, said feet lying in planes common with the body portions.

2. A reversible screed chair for supporting screed strips of different sizes upon concrete work forms comprising a one piece member having angularly disposed upstanding body portions, said body portions having a plurality of alined recesses at one end and a plurality of alined recesses of a different size at the other end whereby said chair may be positioned to receive a screed strip of a size corresponding to the uppermost recess and may be turned end for end to receive a screed strip of a different size, the recesses not used permitting free flow of concrete through the screed chair whereby to effect secure bonding of the same thereto, said recesses dividing each of the opposite ends into spaced, substantially alined edges, providing spaced feet lying in planes common to the body portions, said feet being adapted to engage the work forms and providing a three point contact of small area with said work forms.

3. In combination with a work form a reversible screed chair for supporting screed strips of different sizes upon said concrete work form comprising a one piece member having angularly disposed body portions, said body portions having a plurality of alined recesses at one end and a plurality of alined recesses of a different size at the other end whereby said chair may be positioned to receive a screed strip of a size corresponding to the uppermost recess and may be turned end for end to receive a screed strip of a different size, the recesses not used permitting free flow of concrete through the screed chair whereby to effect secure bonding of the same thereto, said recesses extending from the edges of the said ends of the body portions whereby to provide at each of the opposite ends, spaced feet lying in planes common to the body portions, said feet residing flatwise against the work forms and providing a three point contact of small area with said work forms, said chair having openings adapted to receive means to fasten said chair to the work forms.

4. A reversible screed chair for supporting screed strips of different sizes upon concrete work forms comprising a one piece integral angle mem-

ber having angularly disposed body portions extending in parallel lines in a longitudinal direction, said body portions having alined rectangular recesses at one end and a plurality of alined rectangular recesses of a different size at the other end whereby said chair may be positioned to receive a screed strip of a size corresponding to the uppermost recess and may be turned end for end to receive a screed strip of a different size, the recesses not used permitting free flow of concrete through the screed chair whereby to effect secure bonding of the same thereto, said recesses extending from the edge of each of the opposite ends and forming spaced feet lying in planes common to the body portions, said feet being adapted to engage the work forms and providing a three point contact of small area with said work forms.

5. A reversible screed chair for supporting screed strips of different shapes upon concrete work forms comprising a one piece member having angularly disposed body portions, said body portions having a plurality of alined rectangular recesses at one end and a plurality of alined curvilinear recesses at the other end whereby said chair may be positioned to receive a rectangular screed strip of a size corresponding to the uppermost recess and may be turned end for end to receive a curvilinear screed strip, the recesses not used permitting free flow of concrete through the screed chair whereby to effect secure bonding of the same thereto.

6. A screed chair for supporting a screed strip on work forms comprising a longitudinally extending angle member having integral side walls extending longitudinally in the same direction but being angularly disposed in transverse section, the ends of said walls being interrupted by recesses arranged intermediate thereof and being alined along lines intersecting both of said side walls whereby to accommodate screed strips in said alined recesses, said recesses dividing the lower end of said screed chair into three triangularly arranged, spaced feet providing a three-point contact with said forms.

7. A screed chair for supporting a screed strip on work forms, comprising a longitudinally extending angle member having integral, substantially flat side walls extending longitudinally in the same direction but being arranged on an acute angle in a transverse direction, said walls terminating at each end in substantially transversely extending edges, the said edges of said walls being interrupted by recesses arranged intermediate thereof and being alined along the edges intersected by both of said side walls whereby to accommodate screed strips in said alined recesses, said recesses dividing the said transversely extending edges of said screed chair into three triangularly arranged, spaced, flat edge portions providing a three point contact with said forms.

8. A screed chair for supporting a screed strip on work forms, comprising a longitudinally extending angle member having flat side walls arranged in an acute angle, said side walls terminating at both ends in substantially transversely extending straight edges, said screed chair having recesses in said walls alined along lines intersecting said edges and intersecting both of said side walls and being arranged adjacent at least one end of the screed chair for accommodating screed strips, said recesses being arranged intermediate of said end edges and separating the edges into spaced foot portions, providing three point contact with the forms, said foot portions having work contacting edges comprising sections of said transversely extending straight edges and being of substantially transverse extent.

9. A screed chair for supporting a screed strip on work forms, comprising longitudinally extending, angularly disposed, upstanding body portions, said portions having means at one end for receiving a screed strip and for supporting said screed strip with respect to the work forms, the other end of said screed strip terminating in substantially straight, transversely extending edges, said body portions having recesses extending inwardly from said edges and being arranged generally intermediate thereof, said recesses thereby separating the lower end of said body portions and said straight edges into spaced foot portions, said spaced foot portions being arranged substantially in the planes of their respective body portions and having work contacting edges provided by said transversely extending straight edges and being of substantial transverse extent whereby to provide a three point contact for supporting the screed chair upon the work forms.

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