Aug. 6, 1940. W. STIEGLITZ 2,210,047

KNOCKDOWN STOOL

Filed July 30, 1938

Fig. 1.

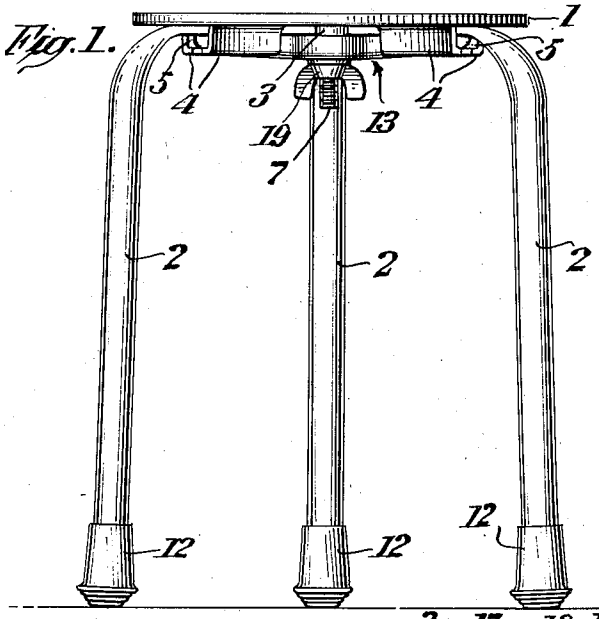
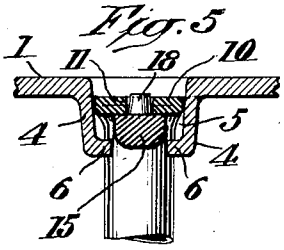


Fig. 5



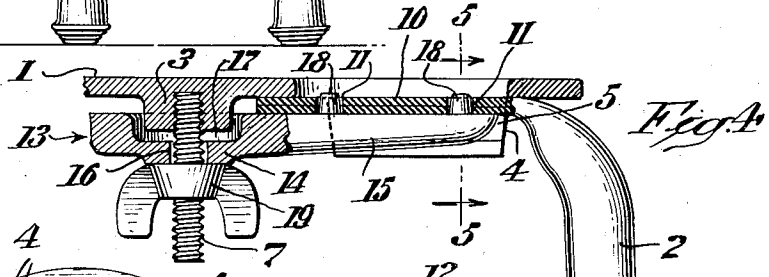


Fig. 4

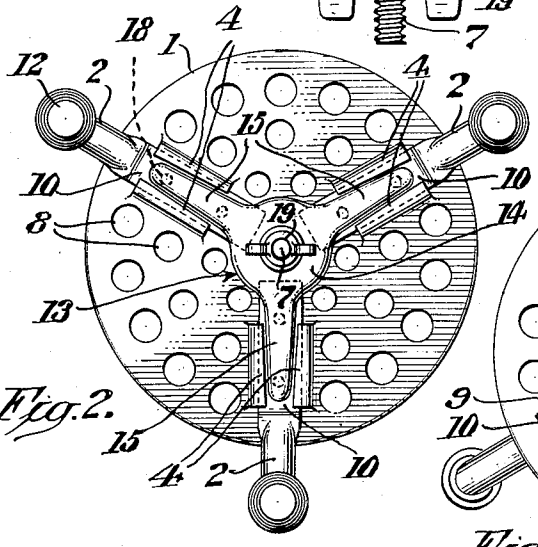


Fig. 2.

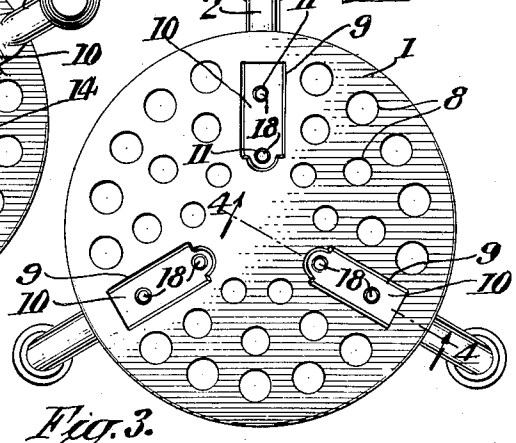


Fig. 3.

INVENTOR
William Stieglitz
BY Wm. R. Davis
ATTORNEY

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KNOCKDOWN STOOL

William Stieglitz, Brooklyn, N. Y.

Application July 30, 1938, Serial No. 222,182

5 Claims. (Cl. 155—196)

Important objects of the present invention are, to provide an improved knockdown stool designed for easy and quick assembly and take-down of its parts; to provide such a stool designed for great strength so that it may be sat upon or stood upon without danger of collapse or distortion of its structure; and to provide such a stool designed for collapsing into a very compact form so that it may be carried conveniently for use by a spectator at parades, games, etc.

Other objects of the invention will appear hereinafter.

In the drawing, Fig. 1 is a side elevation of the stool;

Fig. 2 is a bottom plan view;

Fig. 3 is a top plan view;

Fig. 4 is an enlarged detail section on line 4—4 of Fig. 3; and

Fig. 5 is a section on the line 5—5 of Fig. 4.

The stool includes a top or seat 1 and legs 2. The seat is a flat, rigid metal disk. In the present instance the disk is a casting. At its under side the disk is cast with a central boss 3 and with three pairs of rigid guide ribs 4 radiating from the center of the disk. The opposite ends of these ribs are open and spaced from the boss 3 and from the periphery of the disk. Each pair of ribs forms a guide channel 5 directly beneath the under side of the seat. At their lower margins the ribs are thickened, as at 6, to contract the lower portion of the channel. At the boss 3 the seat bears a fixed, depending screw 7 whose upper end is secured in a threaded socket in the boss. Said screw has a material length below the boss. As shown at 8, the seat is apertured to reduce its weight. It also has larger openings 9 directly over the guide channels 5.

Each leg 2 is formed of a metal tube whose upper end portion is flattened and bent to form a horizontal extension 10 underlying the stool seat and of a width to fit in one of the guide channels 5. Said extension has a plurality of apertures 11 spaced therealong. At its lower end the leg has a cushioning foot 12 comprising a rubber thimble fitted over said end.

For securing the legs to the seat or top of the stool there is provided a clamping member 13. In the present instance the said clamping member is also a rigid casting. It is of spider form and has a central portion or hub 14 and three radiating arms 15. The hub has an aperture 16 to freely receive the screw 7, and a depression 17 at its upper side to receive the hub 3 on the seat. Arms 15 are of a width to enter the space between the lower portions 6 of the guide ribs 4 and, at their upper side, the arms are flat to bear against the flat extensions 10 of the legs in the guide channels. Each arm also has a plurality of rigid leg positioning and anchoring studs 18. These taper upwardly and are arranged to enter the apertures 11 of the opposed leg extension. Below the clamping member a winged nut 19 is screwed upon the screw 7.

In assembling the stool the clamping member 13 is placed over the screw 7, and the nut 19 is screwed on only part-way, to leave the clamping arms 15 only partly entered in the space between the lower portions of the guide ribs 4 and the anchoring studs 18 retracted from the stool seat a distance exceeding the thickness of the leg extensions 10. The leg extensions are inserted endwise through the outer ends of the guide channels and over the studs 18 and positioned to register their apertures 11 with the studs. Then the nut 19 is screwed home to advance the clamping arms 15 more deeply into the guide channels 5, enter the studs 18 into the apertures 11 and firmly clamp the leg extensions between the clamping arms and the under side of the stool seat. The assembled stool structure then has maximum strength and rigidity and it can be sat upon or stood upon with safety to the user and without wobble or distortion of the stool parts.

The stool can be quickly taken down by unscrewing the nut 19 enough to permit sufficient retraction of the clamping spider for withdrawal of the studs 18 from the holes 11 in the leg extensions. Then the leg extensions 10 can be withdrawn radially outward from the guide channels 5. Said channels are of material depth so that the arms of the spider can remain partly within the channels when the studs 18 are fully retracted from the holes 11. Thereby the arms are held in proper relation to the channels and are keyed against rotation with the nut 19.

It will be seen that my invention provides a stool structure designed for strength, durability, easy assembly and take-down and convenient portability. While I have disclosed a very satisfactory construction of my improved stool, modification of structural details is possible without departing from the invention as defined in the appended claims.

What I claim is:

1. A knockdown stool comprising a seat, detachable legs having lateral extensions at their upper ends, guides borne by the seat at the under side thereof and defining channels radiating from a central point of the seat to receive said exten-

sions, said channels being open at the bottom, a clamping member beneath the seat and having radiating arms to bear against said leg extensions in the guide channels, screw means at the center of the seat and at the center of said clamping member operable to force the clamping member toward the under side of the seat and force said arms to clamp the leg extensions to the under side of the seat, and anchoring means between the clamp arms and the leg extensions to positively hold the leg extensions against longitudinal outward shift from the guides, said anchoring means being releasable by release of the clamping member whereby the legs are detachable from the seat after release of the clamping member.

2. A stool according to claim 1, characterized in that the said guide channels are of sufficient depth to contain the said clamp arms at least partly when the clamp is retracted sufficiently to release the said anchoring means, for the purpose set forth.

3. A knockdown stool comprising a seat, detachable legs having lateral extensions at their upper ends, guides borne by the seat at the under side thereof and defining channels radiating from a central point of the seat to receive said extensions said channels being open at the bottom, a clamping member beneath the seat and having radiating arms to bear against said leg extensions in the guide channels, and screw means at the center of the seat and at the center of said clamping member operable to force the clamping member toward the under side of the seat and force said arms to clamp the leg extensions to the under side of the seat.

4. A knockdown stool comprising a seat, detachable legs having lateral extensions at their upper ends, guides borne by the seat at the under side thereof and forming channels radiating from the center of the seat to receive said leg extensions said channels being open at the bottom, a leg-securing member beneath the seat and having radiating arms to enter said channels and underlie the leg extensions in the guide channels, and anchoring means between said arms and the leg extensions to prevent longitudinal withdrawal of the leg extensions from the guide channels, said anchoring means being releasable by retraction of said securing member from the under side of the seat, and screw means to advance the leg-securing member toward the under side of the seat to apply and hold the anchoring means in operation.

5. A knockdown stool according to claim 1, characterized in that the seat is rigid and formed of metal, the said guides are rigid and formed integrally with the seat and are of such size to engage the opposite side edges of the said leg extensions and positively hold them against crosswise displacement, the said arms of the clamps have upwardly extending anchoring projections, and the said leg extensions have apertures to receive said anchoring projections.

WILLIAM STIEGLITZ.