

Feb. 3, 1970

R. C. BRAMMER

3,493,209

STABILIZING JACK BASE

Filed Oct. 30, 1967

2 Sheets-Sheet 1

FIG. 1

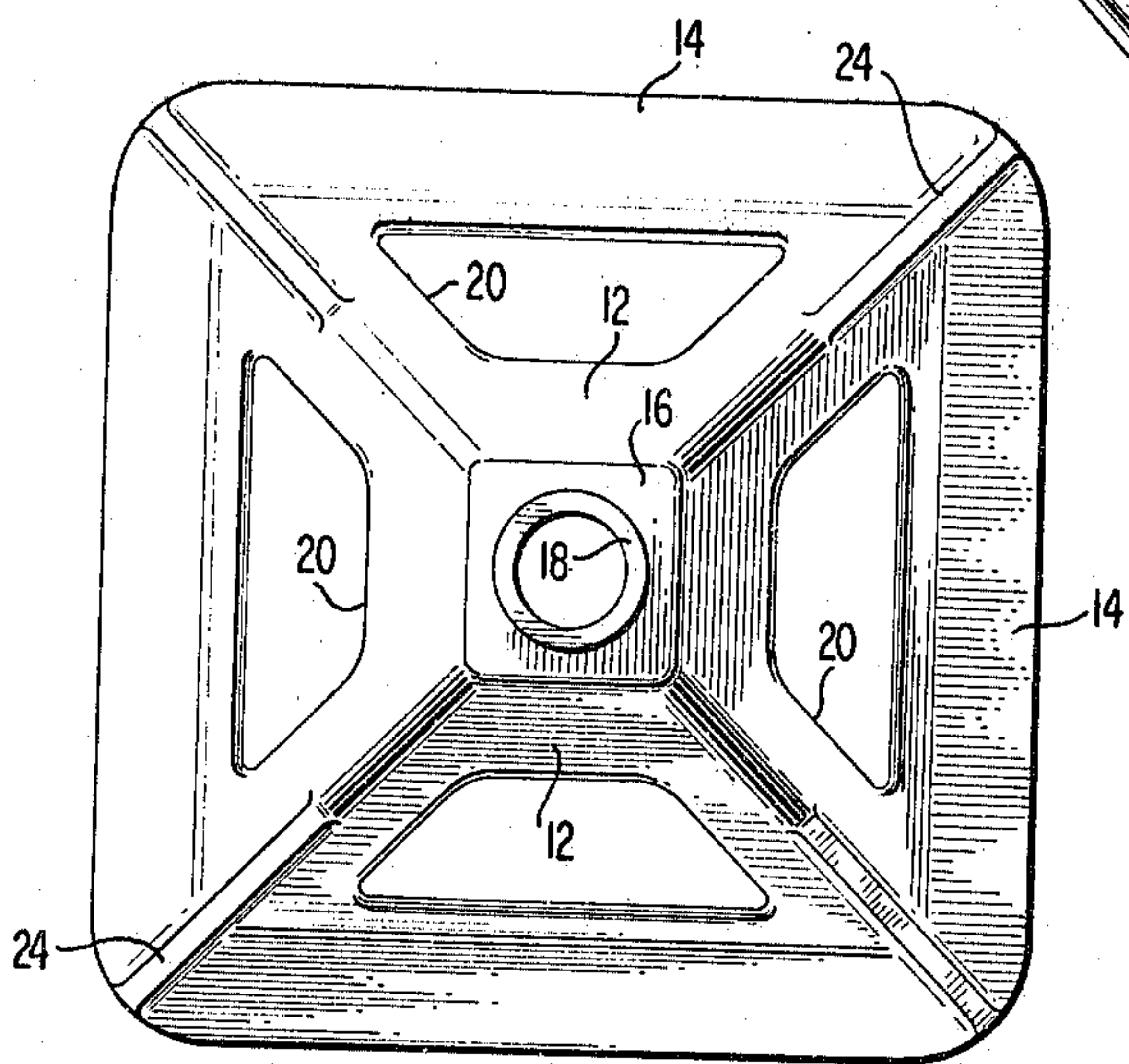
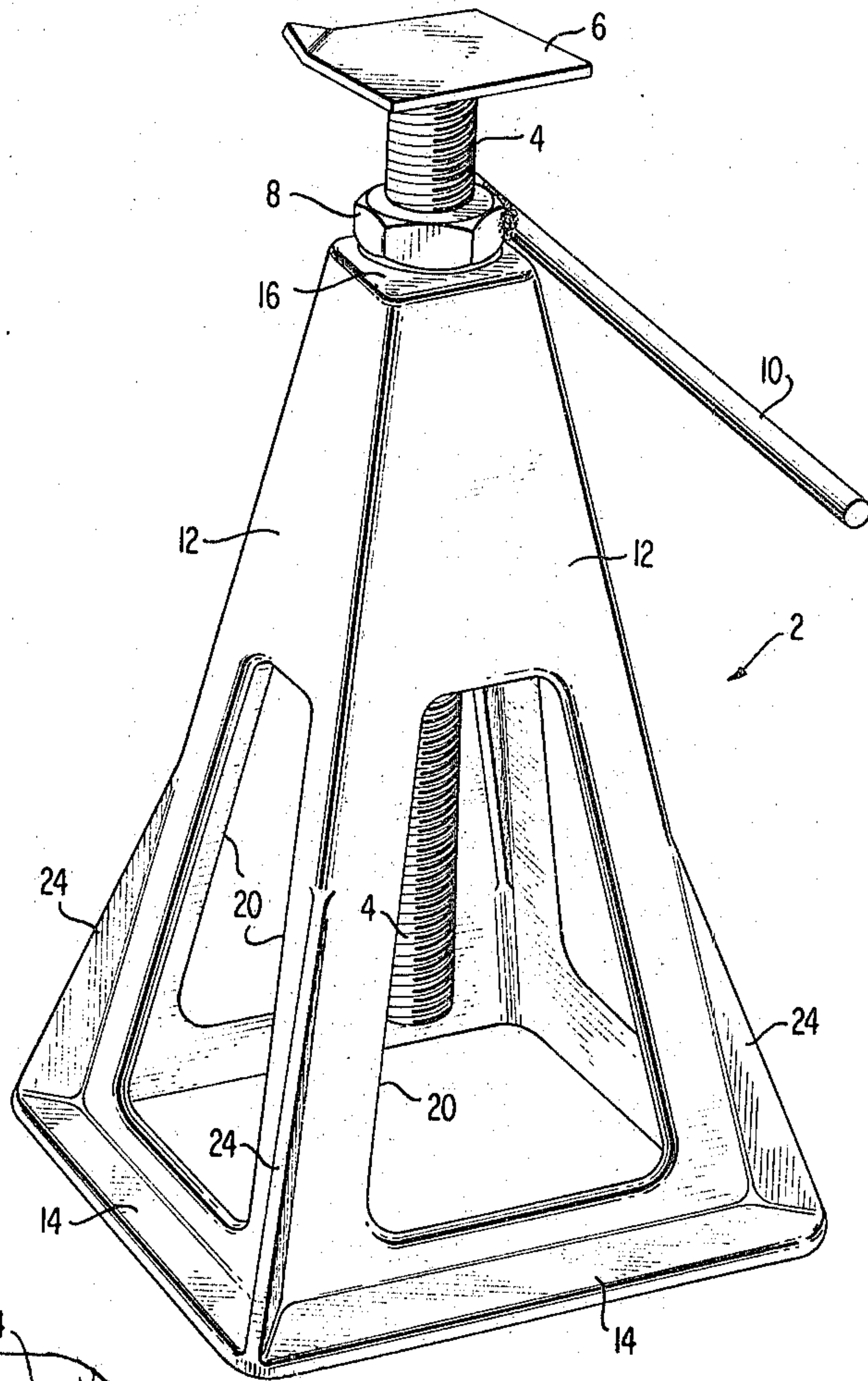


FIG. 2

INVENTOR
ROBERT C. BRAMMER
*Price, Hennel
Huizenga & Cooper*

BY

ATTORNEYS

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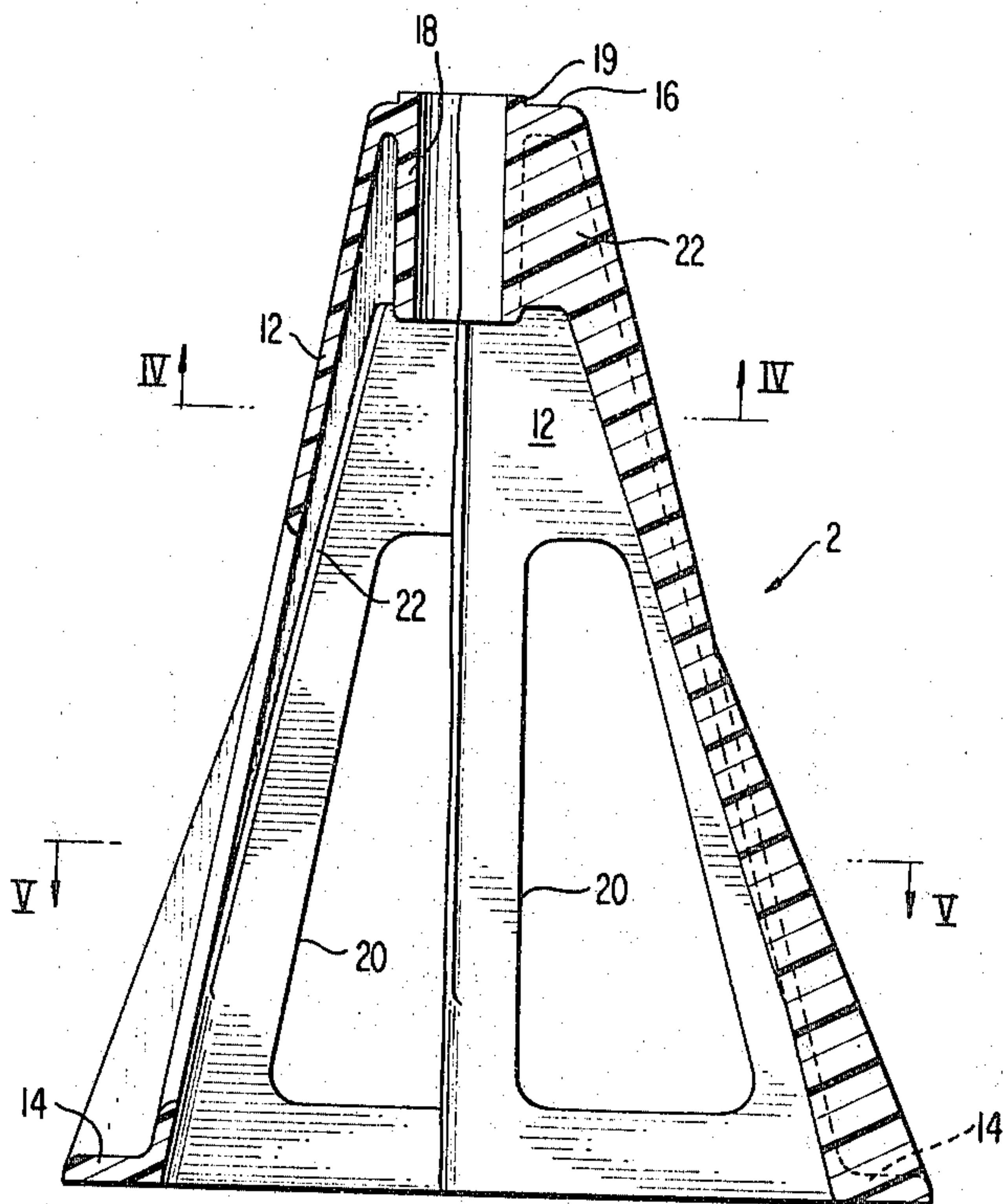


FIG. 4

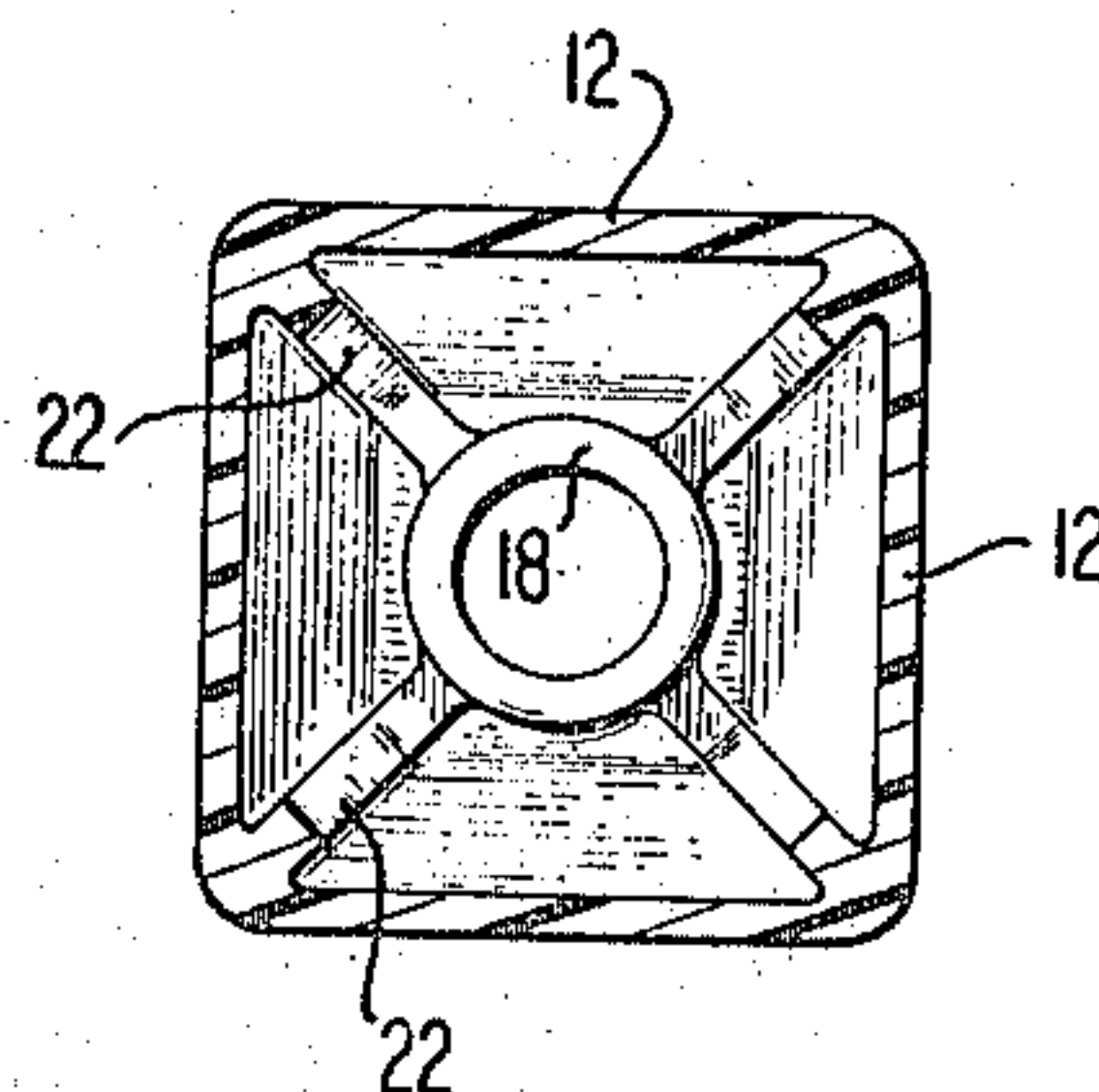


FIG. 3

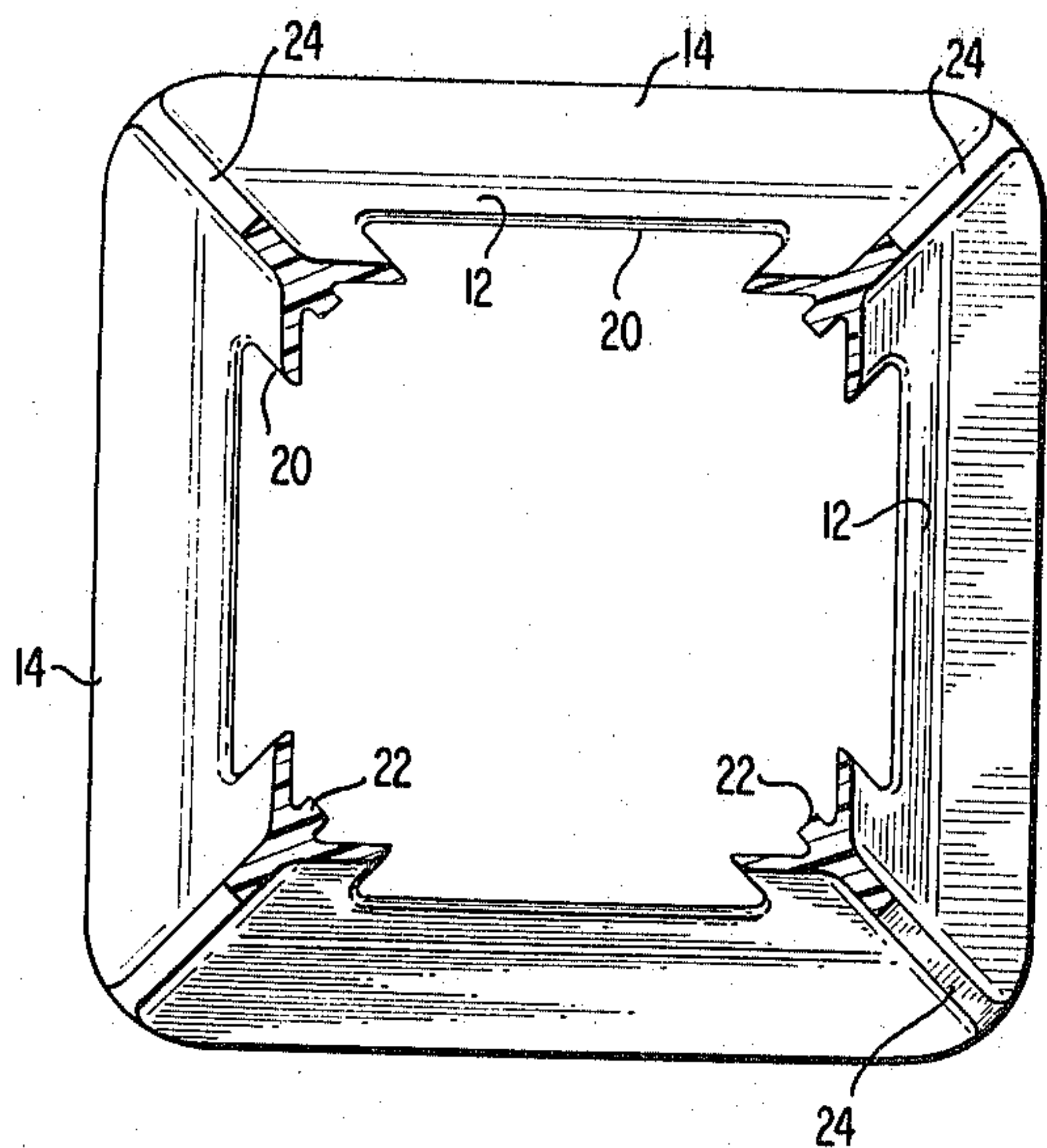


FIG. 5

INVENTOR
ROBERT C. BRAMMER

Price, Hennrich & Cooper

BY

ATTORNEYS

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STABILIZING JACK BASE

Robert C. Brammer, Traverse City, Mich., assignor to Stromberg-Carlson Products, Inc., Traverse City, Mich., a corporation of Michigan

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U.S. Cl. 248—352

8 Claims

ABSTRACT OF THE DISCLOSURE

This disclosure relates to a base support for a leveling jack which employs a threaded rod and nut which rests on top of the base. A vertically extending hole in the top surface of the base is provided for the threaded rod. The base further comprises a multi-sided wall structure with a flange at the bottom portion thereof. Preferably, each side wall has a central portion cut out. The wall structure is reinforced through ribs which extend upwardly from the bottom flange and/or downwardly from the top surface at the corners of the side walls. The base support is preferably integrally formed from a moldable plastic.

Stabilizing jacks are generally used for supporting the sides of camping trailers and coaches. These jacks comprise a base support with a threaded rod and nut which rest on the top of the base with the end of the rod extending through a hole in the top of the base support. The top of the rod has a supporting surface. The jack is adjusted by turning the nut. Conventionally, bases are made from steel or other structural metal because of the load requirements.

For lighter applications, it has been found that certain aluminums can be employed for the bases. In order to make the bases as light as possible, the central portions are cut out of the sides. It was thought that the bases could be cast in one piece without the central portions. However, it was found that sharp edges and burrs remained on the side walls after the casting of the bases. These sharp edges and side walls make gripping of the base at the corners through the holes in the side walls quite dangerous.

It would be desirable to make the base out of a light weight plastic material. However, with the same configuration as the metal, sides are not strong enough to support the loads. The base usually fails at the corners at the side walls wherein buckling occurs.

I have now discovered a base construction for stabilizing jacks which construction is light in weight and strong enough to support the required loads. The construction allows the use of light weight plastic and the side walls can be cut out in the central portions thereof for a lighter weight construction and for gripping without cutting of the hands.

By various aspects of this invention one or more of the following objects can be obtained.

It is an object of this invention to provide a base for a stabilizing jack which is strong in construction and light in weight.

It is a further object of this invention to provide a base for a stabilizing jack having an open sided configuration forming hand gripping areas wherein there are no jagged edges at the gripping area.

It is a further object of this invention to provide a base construction for stabilizing jacks which satisfy strength requirements and can be made from a multiple plastic material.

It is a still further object of this invention to provide a nestable and stackable base construction for stabilizing jacks which have hand gripping areas and satisfies

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the strength requirements even when made from a moldable thermoplastic material.

It is still another object of this invention to provide an injection molded thermoplastic base construction for a stabilizing jack which satisfies strength requirements by integrally molded strengthening means.

Other aspects, objects, and several advantages of this invention are apparent to one skilled in the art from a study of this disclosure, the drawings, and the appended claims.

According to the invention, there is provided a base for stabilizing jack comprising a multi-sided configuration, each side wall having a trapezoidal configuration. The base also has a continuous bottom flange extending laterally of the side wall, and a top wall integrally formed with the side walls and having a vertically extending hole therein. The base according to the invention has a reinforcing rib between the bottom flange and the junction of at least two of the side walls extending upwardly from the bottom flange. Alternately or additionally, the base has a reinforcing rib which is integrally formed of thickened material extending downwardly from the upper surface and positioned between the junction of at least two of the side walls.

In a preferred embodiment of the invention, a reinforcing rib extends upwardly from the bottom flange and a reinforcing rib extends downwardly from the top surface between each of the side walls. In this embodiment, the ribs preferably overlap to provide a completely strengthened corner for the jack.

The invention will now be described with reference to the accompanying drawings in which:

FIG. 1 is a perspective view of a stabilizing base and jack according to the invention;

FIG. 2 is a top plan view of the base without the threaded rod shown in FIG. 1;

FIG. 3 is a sectional view along lines III—III of FIG. 2;

FIG. 4 is a sectional view along lines IV—IV of FIG. 3; and

FIG. 5 is a sectional view along lines V—V of FIG. 3.

Referring now specifically to the drawings, a base 2 supports a threaded rod 4 having a supporting surface 6 through a nut 8 which rests on the top portion of the base 2. The nut 8 threadably engages rod 4 and can be turned by handle 10 to raise or lower the supporting platform 6.

The base comprises a plurality, preferably 4, side walls 12 which are generally of trapezoidal configuration. A flange 14 extends laterally outwardly and continuously around the bottom portion of the side walls 12.

The top surface 16 of the base is integrally formed with the side walls 12. The threaded rod extends through a vertical hole in the top surface 16 formed by a vertical tube 18 which extends downwardly substantially below the top surface 16. Generally, the height of tube 18 will be about one-fifth of the height of the base. The top portion of tube 18 extends slightly above the top surface 16 of the base at 19 to provide the supporting surface for the nut 8. The stress on tube 18 is transmitted to the corners of the base through ribs 22 which are integrally formed of thickened material with the base. The ribs 22 connect the corners of the side walls with the tube 22 and extend downwardly a substantial distance toward the bottom of the side walls.

The side walls are cut out at 20 to reduce the weight and material cost of the base. Further, the cut out portions provide hand gripping areas at the corners of the side walls. If the base is injection molded from a thermoplastic material, such as polystyrene, the edges of the side walls at the cut out portions 20 will not be sharp and will not cut when the corners are gripped.

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Strengthening the side walls is a rib 24 extended upwardly from flange 14 at the outer portion of the corners. The rib 24 is integrally formed with the base and overlaps the downwardly extending rib 22 as best seen in FIG. 3. This overlapping configuration of ribs 22 and 24 adequately strengthen the side walls at the load bearing corners so that the base can be molded from a moldable thermoplastic material.

Whereas the invention has been described with reference to a particular configuration, it is obvious that within the scope of the invention other configurations can be used. For example, the described configuration has rib 24 on the outside of the base. In this configuration, the bases are easily stackable and nestable. However, if this type of a base was not desired, it is within the scope of the invention to extend flange 14 inwardly instead of outwardly and to provide a supporting flange on the inner corners of the side walls 12. In this instance, the lower rib 24 would then join the upper rib 22.

In a preferred embodiment of the invention, the base is injection molded from a polystyrene material. A specific example of a styrene which can be used is high impact Bakelite, PMD-6500.

Reasonable variation and modification are possible within the scope of the foregoing disclosure and the drawings, without departing from the spirit of the invention.

I claim:

1. A base for a jack comprising a plurality of side walls integrally connected, each side wall having a continuous bottom flange extending laterally outwardly thereof, a top wall integrally formed with said side walls, said top wall having a vertically extending hole therethrough, a first reinforcing rib of thickened material integrally formed with said base between said bottom flange and at least one junction of two side walls extending upwardly from said bottom flange, a second reinforcing rib of thickened material integrally formed with said base and extending downwardly from said top wall on an inner portion of said one junction, said first and second ribs being shaped and extending along said junction so as to provide substantially uniform reinforcing strength from said bottom flange to said top wall.

2. A base according to claim 1 wherein said first reinforcing rib tapers upwardly and overlaps with said second reinforcing rib and said second reinforcing rib tapers downwardly.

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3. A base according to claim 1 wherein the central portions of at least two adjacent side walls are cut out so as to form a handle grip at the corners of said side walls.

4. A base according to claim 3 wherein there are four side walls, each side wall has a central portion thereof cut out to form a handle gripping area.

5. A base for a jack comprising a plurality of side walls, a top wall integrally formed with said side walls and having a vertically extending hole therethrough, a vertically extending tube formed around said hole and extending beneath said top wall, a reinforcing rib integrally formed of thickened material beneath said top wall between at least one junction of two of said side walls on the inner surfaces thereof and said vertically extending tube, said reinforcing rib extending downwardly along said junction from said top wall.

6. A base according to claim 5 wherein said rib extends downwardly along the inner surface of said junction below the bottom portion of said tube.

7. A base according to claim 5 further comprising a continuous outwardly extending flange at the bottom of said side walls, a reinforcing rib between the junction of said two side walls at an outer portion thereof and extending upwardly from a bottom portion thereof, said outer reinforcing rib tapering upwardly and said inner rib tapering downwardly such that the combined strength from said reinforcing ribs is substantially uniform from said flange to said top wall.

8. A base according to claim 7 wherein said base is integrally formed from a synthetic plastic material.

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ROY D. FRAZIER, Primary Examiner

J. F. FOSS, Assistant Examiner

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