Sept. 21, 1971 F. J. LODATO 3,606,711

TELESCOPIC DOOR HANGER

Filed March 17, 1969

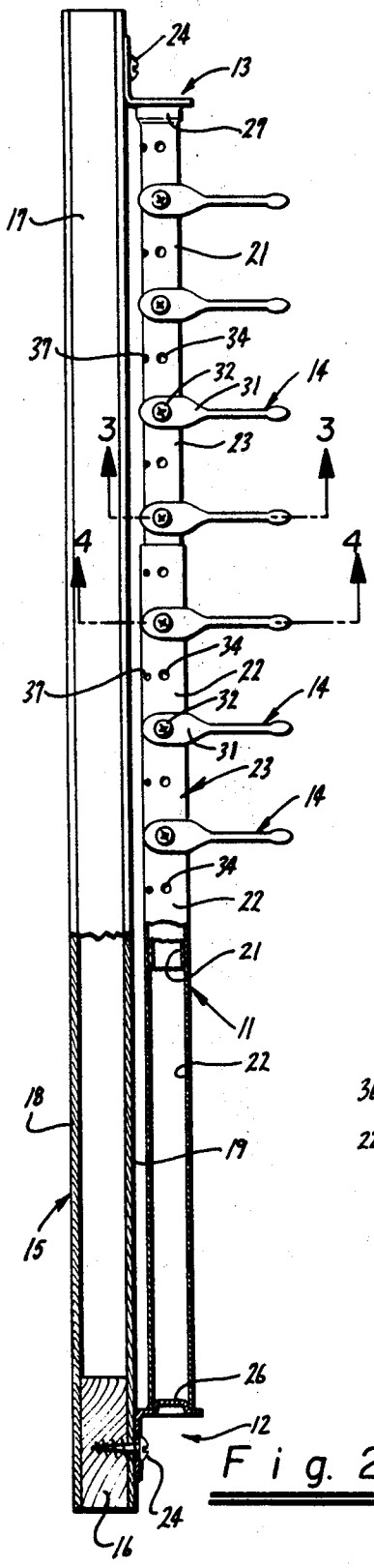


Fig. 2

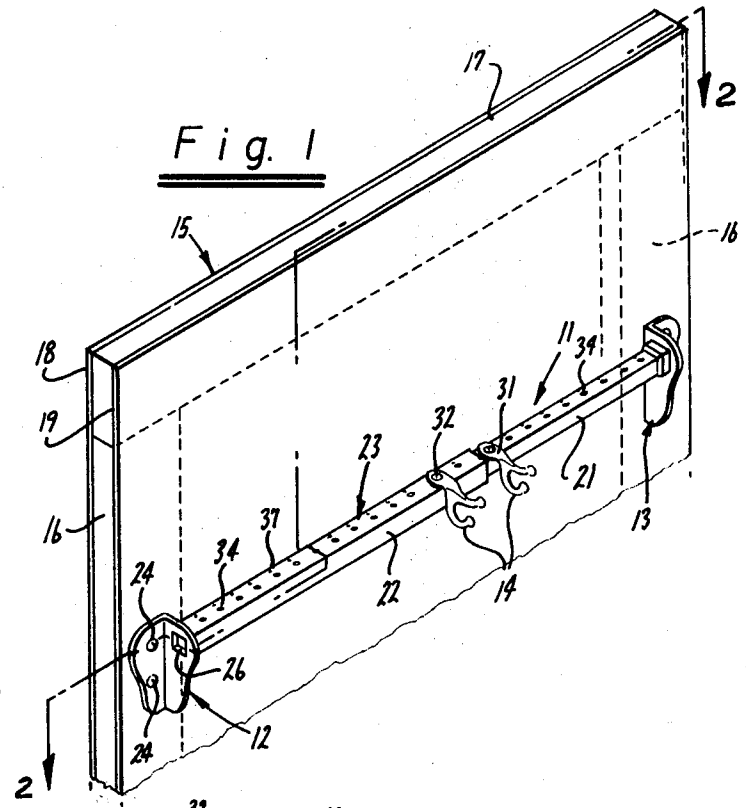


Fig. 1

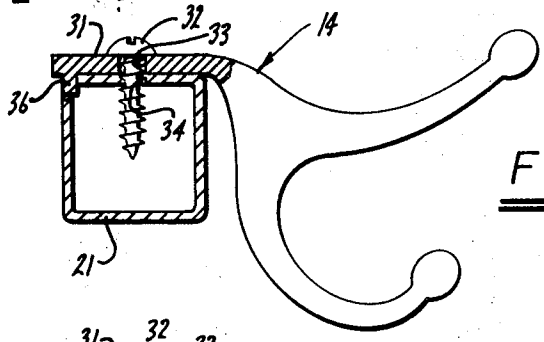


Fig. 3

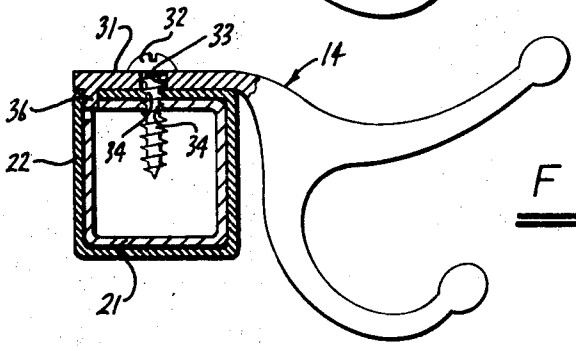


Fig. 4

INVENTOR.

Frank J. Lodato

BY Flehr, Hohbach, Test, Albritton & Herbert

Attorneys

United States Patent Office 3,606,711 Patented Sept. 21, 1971

3,606,711

TELESCOPIC DOOR HANGER

Frank J. Lodato, 83 Spencer Lane, Atherton, Calif. 94025

Filed Mar. 17, 1969, Ser. No. 807,535
Int. Cl. A47h 1/08; E04c 2/28, 2/34
U.S. Cl. 52—27 6 Claims

ABSTRACT OF THE DISCLOSURE

An adjustable door hanger including a telescoping rod assembly, mounting brackets, and hooks removably mounted on the rod. The mounting brackets enable the hanger to be secured to a solid structure, even though the hooks themselves are mounted over a surface which could not otherwise support them.

BACKGROUND OF THE INVENTION

At the present time, most doors used inside buildings, such as houses, apartments and the like, do not have solid cores. Room doors and closet doors are commonly of the hollow core type; that is, they have an outer frame structure on which two panels are mounted to provide the front and rear surfaces of the door. In some instances a honeycomb core is provided between the two panels to give additional support thereto. Other common interior doors include doors having a single panel set in an outer frame and doors having louvered panels

A problem exists in attaching hooks such as closet hooks to the panels of such doors. These hooks are commonly attached by means of screws driven into the bodies on which they are mounted. The panels used on the foregoing types of doors are generally too thin to provide an adequate footing for the mounting screws, with the consequence that when a substantial weight is placed on the hooks, the screws have a tendency to pull out of the door panels.

A somewhat firmer mounting for the hooks can be provided by bolting them to the door panels. However, this approach is not feasible where it is desired that the mounting means not be visible from the side of the door opposite to that upon which the hooks are mounted.

There is, therefore, a need for a new and improved hanger assembly which can be utilized with doors which do not have solid cores.

SUMMARY AND OBJECTS OF THE INVENTION

The door hanger of the present invention includes a rod assembly and mounting brackets for securing the rod assembly to the outer frame of a door. A plurality of hooks are removably mounted on the rod assembly and spaced longitudinally thereof. The rod assembly is made of telescoping sections, whereby it is adjustable to fit doors of different sizes.

It is in general an object of the present invention to provide a door hanger which can be mounted on doors which do not have solid cores.

Another object of the invention is to provide a door hanger of the above character in which the hooks are removably mounted on the rod to permit their number and spacing to be varied as desired.

Another object of the invention is to provide a door hanger of the above character which is readily removable from the door on which it is mounted.

Another object of the invention is to provide a door hanger of the above character which is adjustable to fit doors of different sizes.

Additional objects and features of the invention will be apparent from the following disclosure in which the preferred embodiment is set forth in detail in conjunction with the accompanying drawing.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a perspective view of one embodiment of a door hanger incorporating the present invention, mounted upon a hollow core door.

FIG. 2 is a plan view, partly in section, of the embodiment shown in FIG. 1.

FIG. 3 is a sectional view taken along line 3—3 in FIG 2.

FIG. 4 is a sectional view taken along line 4—4 in FIG. 2.

Like reference numerals are used to designate corresponding elements in all figures of the drawing.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The preferred embodiment of the telescopic door hanger comprises generally an extensible rod **11**, mounting brackets **12** and **13**, and hooks **14**. In FIGS. 1 and 2, this assembly is shown mounted on a hollow core door **15**.

The hollow core door includes an outer framework comprising side frame members **16**, a top frame member **17** and a bottom frame member, not shown. Panels **18** and **19** are mounted on this framework to provide, respectively, the front and rear surfaces of the door.

Extensible rod **11** comprises first and second elongate members or sections **21** and **22**. As illustrated, members **21** and **22** are fabricated of hollow tubing having a substantially square profile. The cross-sectional dimensions of members **21** and **22** are such that section **21** slides telescopically within section **22**. As will be apparent to those familiar with the art, the shape of the tubing used for sections **21** and **22** is not critical, as long as the same shape tubing is used for both sections. It is, however, desirable that the tubing have a substantially flat upper surface **23** to facilitate the mounting of hooks **14**. Likewise, if desired, rod **11** can have more than two sections.

Mounting brackets **12** and **13** are located proximate to the ends of rod **11** and are adapted for securing the rod to the frame members **16** located in the side margins of door **15**. Brackets **12** and **13** are secured to frame members **16** by means of screws **24**.

In the preferred embodiment, brackets **12** and **13** are provided with means for engaging the ends of rod **11** in such a manner that rod **11** is removably mounted to the brackets. Thus, bracket **12** is provided with a raised boss portion **26** adapted for engaging the inner wall surfaces at the end of tubular section **22**. Bracket **13** is provided with a raised shoulder **27** adapted for engaging the outer wall surfaces at the end of tubular section **21**. If desired, the relative positions of boss **26** and shoulder **27** can be interchanged, or bosses or shoulders can be used at both ends of rod **11**. Brackets **12** and **13** are conveniently formed by a conventional stamping process.

Where it is not desired that rod **11** be removably mounted to brackets **12** and **13**, the brackets can be made an integral part of the rod assembly and can be attached thereto by conventional means such as brazing.

Likewise, mounting brackets which engage rod assembly **11** intermediate its ends can be used, if desired.

In the preferred embodiment, means is provided for removably mounting hooks **14** in a longitudinally spaced apart relationship on rod assembly **11**. Hooks **14** include mounting tabs **31** adapted for overlying the upper surface **23** of rod assembly **11**. Tabs **31** are secured to rod assembly **11** by means of screws **32**. Mounting tabs **31** include mounting holes **33**, through which the threaded portions of screws **32** can pass freely. Longitudinally spaced holes **34** are provided in the upper surface **23** of rod assembly **11** and adapted for threadably receiving screws **32**.

Holes **34** are uniformly spaced along both of the sections **21** and **22** of rod assembly **11**. In the region of overlap; that is, where member **21** lies within member **22**, the holes **34** in member **22** are in registry with the corresponding holes in member **21**. Thus, in this region, the screws **32** engage both of the tubular members, thereby locking them together, in addition to securing the hooks **14** to the rod assembly. Alternatively, screws **32** can be made to engage only section **22** in the region of overlap, with separate means, not shown, being provided for adjusting the length of the rod assembly. Where separate locking means is used, rod assembly **11** can be adjusted to any desired length, rather than being limited to the discrete intervals corresponding to the spacing of holes **34**.

Means is provided for preventing rotation of hooks **14** about screws **32**; that is, twisting of hooks **14** with respect to rod assembly **11**. This means comprises a lug **36** formed on the lower surface of mounting tab **31**. Lugs **36** are adapted for engaging longitudinally spaced holes **37** formed in upper surface **23** of rod assembly **11**.

In the drawing, hooks **14** are illustrated as being conventional closet hooks having two vertically spaced hanger prongs. If desired, other types of hooks may be used.

Operation of the door hanger can be described briefly as follows. Let it be assumed that mounting brackets **12** and **13** have been secured to frame members **16** in the side margins of door **15** by means of screws **24**. Rod assembly **11** is collapsed to a length somewhat shorter than the distance between the brackets **12** and **13** by sliding member **21** into member **22**. The assembly is then positioned between the mounting brackets and extended so that the outer end of member **21** engages shoulder **27** on mounting bracket **13** and the end of member **22** engages boss **26** of bracket **12**. Hooks **14** can be mounted as desired on rod assembly **11** by means of screws **32**. Preferably, at least one hook should be located in the region where section **22** overlaps section **21** so that the two sections can be locked together by a mounting screw **32**. If no hook is desired in this region, the sections can be held in place simply by means of a screw **32** inserted in one of the sets of co-registering holes. The rod can be removed from the brackets by removing all screws and hooks in the region of overlap and sliding the two sections together until their ends are free of the mounting brackets.

Alternatively, rod **11** can comprise a single member of fixed length. In this embodiment, hooks **14** can be permanently mounted on rod **11**, if desired. Otherwise, this embodiment is similar to that having a plurality of telescoping sections described above. In either embodiment, the member forming rod **11** can conveniently be fabricated of extruded aluminum.

While the hanger has been described with specific reference to hollow core doors, it will be appreciated that the use of the device is not limited to this type of door or to doors at all. It has been described in regard to this type of door because it allows hooks to be mounted on them where conventional hooks cannot be used.

It is apparent from the foregoing that there has been provided a new and improved telescopic door hanger which enables hooks to be mounted over surfaces which are incapable of supporting hooks themselves. As will be apparent to those familiar with the art, various changes and modifications can be made in the assembly without departing from the scope of the invention as defined by the following claims.

I claim:

1. In a door hanger assembly, an extensible rod assembly including first and second axially elongated members, said members being formed so that said first member is slidably mounted in said second member, said members being telescopically movable to a plurality of predetermined axial positions in which portions of said members overlap each other, each of said elongated members being formed to include a plurality of spaced apart openings, the spacing between the openings in each of said elongated members being equal so that the openings in the overlapping portions of said members are in registry in each of said axial positions, mounting brackets proximate to the outer ends of said first and second members, a plurality of longitudinally spaced hooks, and means removably mounting said hooks in the openings in said elongated members.

2. A door hanger as in claim **1** wherein said second elongated member is fabricated of hollow tubing having a substantially rectangular cross section and wherein said first elongated member likewise has a substantially rectangular cross section.

3. A door hanger as in claim **1** for use on a hollow core door of the type having spaced side frame members and wherein said mounting brackets are adapted to be secured to said side frame members.

4. A door hanger as in claim **1** together with means for preventing twisting of said hooks with respect to said rod assembly.

5. In a combination of the character described, a hollow core door comprising an outer framework, said framework including spaced apart side frame members and first and second panels mounted on said framework to provide front and rear door surfaces, and a door hanger mounted on said hollow core door, said door hanger including first and second axially elongated members, said members being formed so that said first member is slidably mounted in said second member, said members being telescopically movable to a plurality of predetermined axial positions in which portions of said members overlap each other each of said elongated members being formed to include a plurality of spaced apart openings, the spacing between the openings in each of said elongated members being equal so that the openings in the overlapping portions of said members are in registry in each of said axial positions, mounting brackets proximate to the outer ends of said first and second members, a plurality of longitudinally spaced hooks, and means removably mounting said hooks in the openings in said elongated members.

6. In a hanger assembly suitable for use on doors of the type having a rigid outer framework providing at least two mounting surfaces which lie in substantially the same plane, an extensible rod assembly including first and second elongated members, said elongated members being formed so that said first member is telescopically mounted in said second member, mounting brackets mounted on said elongated members proximate to the outer ends thereof, the length of said rod assembly being adjustable to permit said mounting brackets to be mounted on the mounting surfaces of doors having different framework spacings, said elongated members being formed to include a plurality of openings axially spaced apart in such manner that the openings in said first member are in registry with the openings in said second member in the region of overlap between said first and second members, a plurality of longitudinally spaced apart

hooks, and means cooperating with the openings for removably mounting the hooks on the rod assembly.

References Cited

UNITED STATES PATENTS

2,606,733	8/1952	Krajewski	248—215
774,968	11/1904	McKee	248—251X
1,062,478	5/1913	Kroder	211—105.3
1,374,580	4/1921	Kepley et al.	52—615
1,848,937	3/1932	Coventry	248—224
2,060,760	11/1936	Keil	211—87
2,243,022	5/1941	Thomas	52—615
2,594,605	4/1952	Zoppelt	211—123
2,710,732	6/1955	Peters	49—70X
2,825,469	3/1958	Watkins et al.	211—105.3

RAMON S. BRITTS, Examiner

U.S. Cl. X.R.

49—70; 52—615; 211—105.3; 248—215