Nov. 28, 1961 E. H. BARD 3,010,591

JACK AND CARRIER UNIT

Filed Sept. 12, 1957

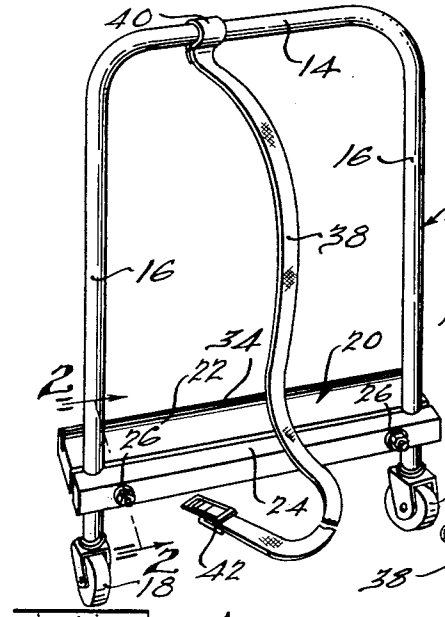


FIG. 1.

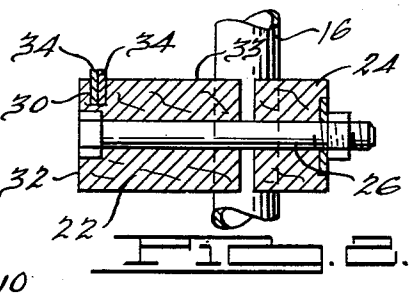


FIG. 2.

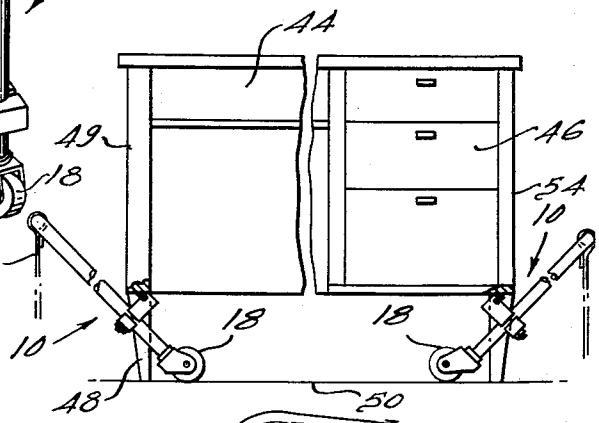


FIG. 3.

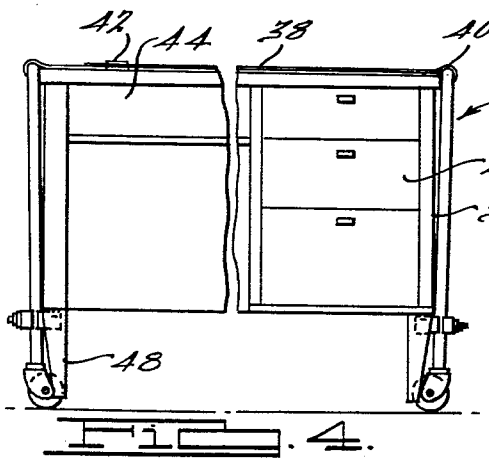


FIG. 4.

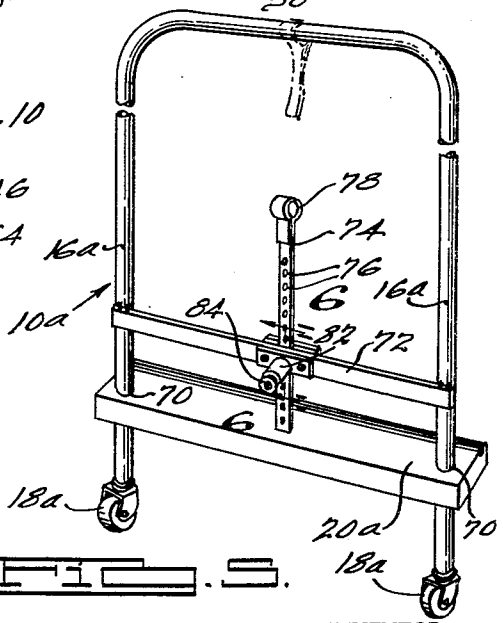


FIG. 5.

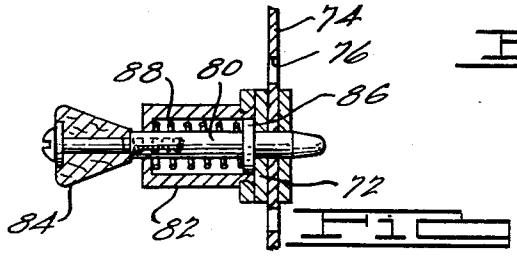


FIG. 6.

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JACK AND CARRIER UNIT

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This invention relates generally to load handling apparatus and more particularly to a manually operable wheeled jack and carrier unit for moving furniture such as office desks and the like.

The principal object of this invention is to provide a wheeled jack and carrier unit for use particularly in moving office desks and the like. Service and cleaning personnel in an office building or the like spend considerable time in moving desks and other furniture to permit floor cleaning and similar operations. Furthermore, these moving operations require considerable manual effort on the part of persons of a size capable of exerting the forces necessary to move a desk. The wheeled jack and carrier unit of this invention is operable initially to easily lift one end of a desk or the like off the floor to a supported postion on the unit. When a second unit has been similarly assembled with the opposite end of the desk, the desk is readily rolled to an out of the way position.

Further objects, features and advantages of this invention will become apparent from a consideration of the following descripton, the appended claim and the accompanying drawing in which:

FIGURE 1 is a perspective view of the jack and carrier unit of this invention;

FIG. 2 is an enlarged sectional view looking substantially along the lines 2—2 in FIG. 1;

FIG. 3 is an elevational view of a pair of units of this invention in initial assembly positions with opposite ends of a desk;

FIG. 4 is an elevational view like FIG. 3 showing the units in assembly position with the desk after the units have been manipulated to raise the desk;

FIG. 5 is a perspective view of a modified jack and carrier unit of this invention; and

FIG. 6 is an enlarged sectional view looking along the line 6—6 in FIG. 5.

With reference to the drawing, the jack unit of this invention, indicated generally at **10**, is illustrated in FIG. 1 as including an inverted U-shape frame member **12**. The frame member **12** has a base or bight portion **14** and a pair of substantially parallel legs **16** provided at their lower terminal ends with casters **18**. A load engaging block **20** of rectangular shape is adjustably mounted on the legs **16** for up and down movement to a desired horizontal position. The block **20** which is illustrated as being formed of wood (FIG. 2), but which it is to be understood can be formed of any suitable material, is split longitudinally so that it consists of a front section **22** and a rear section **24** smaller than the front section **22**. A pair of bolts **26** extend transversely through the block sections **22** and **24** so that on tightening of the bolts **26**, the sections **22** and **24** are clamped against opposite sides of the legs **16** to hold the block in an adjusted position.

A rectangular groove **30** in the top side **33** of the front section **22**, adjacent the front side **32** of the block has a pair of gripping members **34** frictionally held therein. Each of the members **34** is conveniently formed of a strip of rubber or an equivalent material having a high coefficient friction and, as best appears in FIG. 2, projects above the top surface **33** of the block **20**.

A fabric strap **38** is secured at one end **40** to the base portion **14** of the frame **12** and carries a buckle **42**, of usual type, for attaching the opposite end of the strap **38** to a similar strap on another unit **10**, as will be explained later.

In use, assume that a desk **44** having a body **46** and legs **48** is to be moved on a floor surface **50**. First, the load block **20** is adjusted vertically on the legs **16** so that the top side of the block is spaced from the remote sides of the casters **18** a distance slightly greater than the length of the desk legs **48**. The first unit **10** is then moved to the inclined position illustrated in FIG. 3 at the left end **49** of the desk **44**. In this position of the unit **10**, the casters **18** therefor are supported on the floor **50** and the gripping members **34** engage the underside of the desk body **46**. The base portion **14** of the frame **12** is manually swung in a clockwise direction as viewed in FIG. 3 so that the base **14** is moved upwardly toward the end **49** of the desk. As a result, the frame **12** acts as a lever to move the desk body **46** upwardly to a position supported on the block **20** and engaged with the gripping members **34** to prevent slipping of the desk off the unit **10**. By virtue of their resilient construction, the gripping members **34** bend over against the top surface **33** to provide for a maximum frictional engagement of the gripping members **34** with the desk. In the substantially vertical position of the frame **12**, the end **49** of the desk is raised so that the legs **48** are above the floor surface **50**. A second unit **10** is similarly assembled with the right hand end **54** of the desk **44** so that the entire desk is caster supported, as illustrated in FIG. 4.

After each unit **10** has been manipulated to a position in which the frame therefor is against the adjacent end of the desk **44**, the straps **38** for the units are extended across the desk top and connected together at their ends by means of the buckle **42**. This connection of the units **10** prevents accidental movement of the units out of a substantially vertical supporting relation with the desk **44**. It is apparent that the units **10** may be assembled in any order with the desk **44**, the above sequence in which the left unit **10** was first assembled being only for the purpose of illustration.

While the unit **10** has been illustrated with respect to moving the desk **44**, it is to be understood that it is to be usable with all types of furniture and the like having horizontal portions supportable on the blocks **20**. Also, it is not necessary that the frames **12** project above the desk top, as illustrated in FIG. 4, since the straps **38** are effective to connect the frames **12** whether or not they extend above the desk.

The modified unit **10*a*** illustrated in FIGS. 5 and 6, is substantially identical to the unit **10**. Accordingly, like numerals with the letter suffix "*a*" are used on the unit **10*a*** to indicate like parts on the unit **10**. The load carrying block **20*a*** for the unit **10*a*** is of a one piece construction, having laterally extending openings **70** through which the frame legs **16*a*** are extended. A horizontal bar member **72** is connected to and extends between the legs **16*a*** for slidably supporting a vertically extending strap **74** secured at its lower end to the block **28**. The strap **74** has a longitudinally extending row of openings **76** and is provided at its upper end with a finger loop **78** so that the strap **74** can be manually grasped to raise and lower the block **20*a***.

A holding pin **80** carried in a housing **82** on the bar **72** is engageable in an opening **76** for holding the strap **74** at a moved position corresponding to the desired horizontal position of the block **20*a***. The pin **80** is provided at one end with a handle **84** and has a disk **86** positioned within the housing **82** and engaged with a spring **88** in the housing for maunally biasing the pin **80** in a direction toward the strap **74**. The unit **10*a*** is usable in the same manner described above for the unit **10**.

A cleaning crew equipped with one or more pairs of

the units 10 can readily move the desks in an office or the like out of the way for cleaning of the floor area in a minimum period of time. It can be readily understood that in an office building having a considerable number of offices and each of which has a multitude of desks, a substantial saving in time is achieved during each day's floor cleaning operation.

Although the invention has been described with respect to several embodiments thereof, it is to be understood that it is not to be so limited, since changes can be made therein which are within the scope of the invention as defined by the appended claim.

What is claimed is:

A wheeled jack and carrier apparatus consisting of a pair of identically constructed units, each for supporting one end of a normally stationary object to be moved, each of said units comprising: a unitary frame member of inverted U-shape having a base portion and downwardly extending legs; casters swivelly mounted directly on the lower ends of said legs; a substantially horizontal load engaging block slidably mounted on and extending between said legs, said block including a pair of longitudinally extending side by side sections; connecting means extending transversely through said sections for clamping them against opposite sides of said legs, said connecting means being operable to maintain said block in a vertically adjusted position on said legs; a gripping member having high frictional characteristics supported in and extending upwardly from an elongated slot in said block and engageable with said stationary object for preventing slipping of the object relative to said frame member, said block being engageable with an underside portion at one end of said stationary object when said frame member is inclined and said casters are positioned below the underside portion whereby manual movement of said base portion toward the stationary object will cause said casters to move to positions directly below said block whereupon said one end of the object will be elevated by said block to a supported position; and single strap means secured at one end to said base portion and attachable adjacent the opposite end with the single strap on the complementary unit similarly positioned at the opposite end of the stationary object to be moved, whereby said units will maintain said stationary object in a fully supported and elevated position.

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