July 29, 1958 F. J. B. ANTONIETTI 2,845,208

TRAVELING STEP LADDER

Filed March 11, 1955

Fig.1

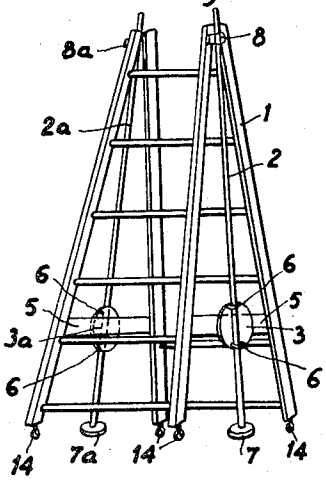


Fig.4

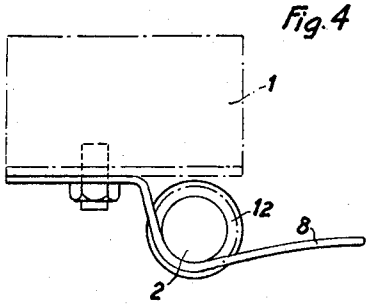
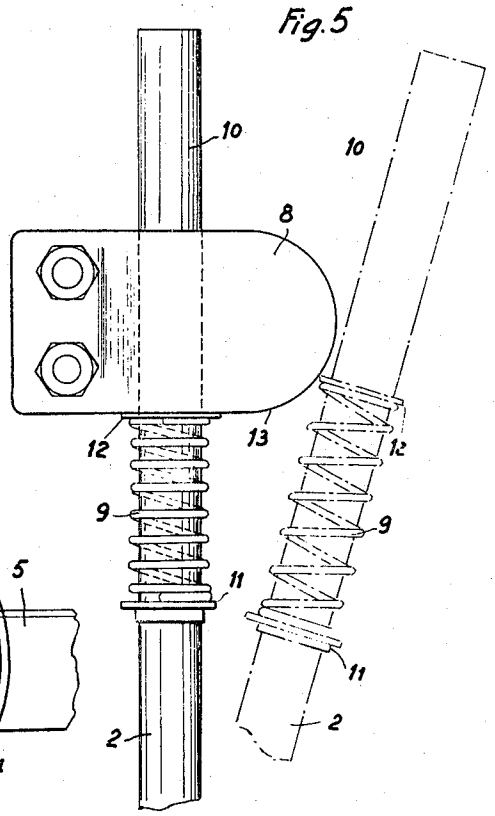


Fig.5



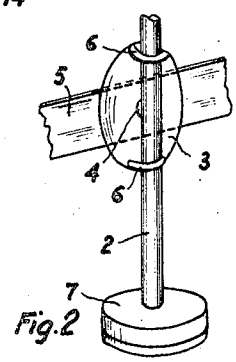


Fig.2

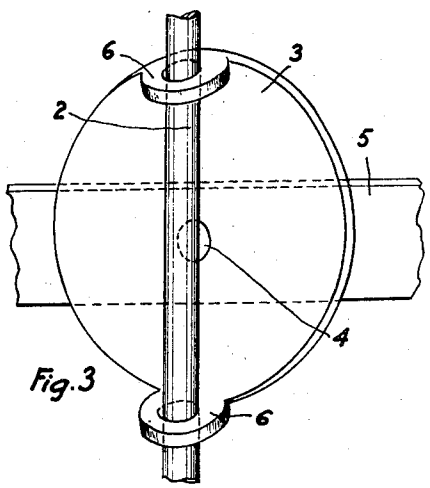


Fig.3

INVENTOR

FLORENTIN J. B. ANTONIETTI

BY Wenderoth, Lind & Ponack

ATTORNEYS

United States Patent Office

2,845,208

Patented July 29, 1958

2,845,208

TRAVELING STEP LADDER

Florentin J. B. Antonietti, Herzogenaurach, Germany

Application March 11, 1955, Serial No. 493,600

Claims priority, application France March 18, 1954

2 Claims. (Cl. 228—15)

The present invention relates to a device permitting the movement of ladders without it being necessary to climb down therefrom, in particular double-ladders or folding ladders, the ones used for example by painters, plasterers, decorators, glaziers, etc.

Its purpose is to avoid stepping down, moving and stepping up the ladder, so much tiring operations and losses of time for the user of the ladder who whishes to move from one part of his work to another.

The device according to the invention is essentially comprised of two propelling shafts, two adherent shoes at the lower ends thereof, pivoting means provided on said ladder for receiving said shafts with a free lengthwise movement thereof, and locking means for engagement of said shafts.

In a preferred embodiment, the device according to the invention also comprises resilient means, and abutments on said shafts, said resilient means being placed between said abutments and said locking means, so as to engage said latter means in locking position for pushing said shafts downwards.

Other characteristics and advantages of the present invention will appear from the following description, with reference to the accompanying drawings, given only as illustration and showing one embodiment of the invention.

Figure 1 is a perspective view of the ladder according to the invention.

Figures 2 and 3 are detailed views of the device enabling the movement of the ladder.

Figures 4 and 5 are also detailed views, showing the stopping devices and the safety locks completing this stopping.

In the embodiment shown, the device enabling the moving of the ladder **1** is essentially made up of two propelling shafts or tubes **2** and **2***a*, attached to each side of the ladder and slidable in plates **3** and **3***a*. These plates swivel on axles **4**, attached to the cross-pieces **5** holding the double-ladder. The tubes **2** and **2***a* slide freely in the rings **6** fixed to the plates **3** and **3***a* (Figs. 1, 2 and 3).

The propelling shafts or tubes **2** and **2***a* end at the bottom in an adherent shoe **7** and **7***a*.

One easily understands that by means of these components the user may move his ladder without stepping down therefrom. Indeed, in operating the tubes **2** and **2***a* somewhat in the manner of ski-sticks he is able, by exerting pressure on the ground, through the adherent shoes **7** and **7***a*, to advance, reverse or even turn the ladder he is standing on.

By lowering and properly sliding tubes **2** and **2***a* to find a point of support in front or in back, the user is able to advance or reverse his ladder. To turn it suffices to operate one of the propelling shafts in a direction opposite the other, depending upon whether he wishes to turn left or right.

At rest the propelling shafts or tubes **2** and **2***a* are brought at right angle to the ground and can be held in this position by the side parts forming stops **8** and **8***a*. These parts are attached in such a manner as not to disturb the movement of the shafts **2** and **2***a* when they are freed therefrom (Figs. 4 and 5).

To secure the ladder against motion, a safety device made of a coil spring **9**, may be slipped on the tubes **2** and **2***a*, below their handles **10** (Fig. 5).

The spring **9** is attached at one end **11** thereof to its supporting tube; its other end receives a washer **12** arranged to engage the lower edge of the stop part **8** which is shaped accordingly in **13**.

When the propelling tubes **2** and **2***a* are brought to a position at right angle to the ground, the washers **12** of their safety locks follow the curved edges **13**, simultaneously compressing the spring **9** which locks the tubes against motion. The user must only pull lightly on the handles **10** to unlock the tubes by releasing the springs **9**.

The ladder is of course mounted on pivotable casters **14** to enable easy operating and moving.

The above embodiments have only been given by way of example and many changes may be brought therein without departing from the scope of this invention.

I claim:

1. In a ladder having a device enabling its moving without descending therefrom, two propelling shafts, two adherent shoes at the lower ends thereof, two cross-pieces holding the ladder in spread position, pivoting means provided on said cross-pieces for receiving said shafts with a free lengthwise movement thereof in a vertical plane, and locking means for locking said shafts in a vertical position, said shafts being pushed downwards with a resilient force in said locking position.

2. In the ladder of claim 1, spring means provided on said shafts, and abutments provided on said shafts below said locking means in spaced relationship therewith, said spring means being placed on said shafts above said abutments, said spring means being engaged and compressed between said abutments and said locking means in locking position, said locking means being provided at the upper ends of the ladder, somewhat below the upper ends of said shafts.

References Cited in the file of this patent

UNITED STATES PATENTS

808,252	Padon	Dec. 26, 1905
1,306,546	Keepfer	June 10, 1919
1,619,668	Gordon	Mar. 1, 1927
2,380,160	Fieroh	July 10, 1945

FOREIGN PATENTS

40,169	Norway	Nov. 3, 1924
522,207	Germany	Apr. 7, 1931
599,277	France	Oct. 17, 1925