March 27, 1951 E. J. FOOTE 2,546,735

FRICTION DRAG FOR WINDOWS

Filed Oct. 28, 1949

Fig. 1

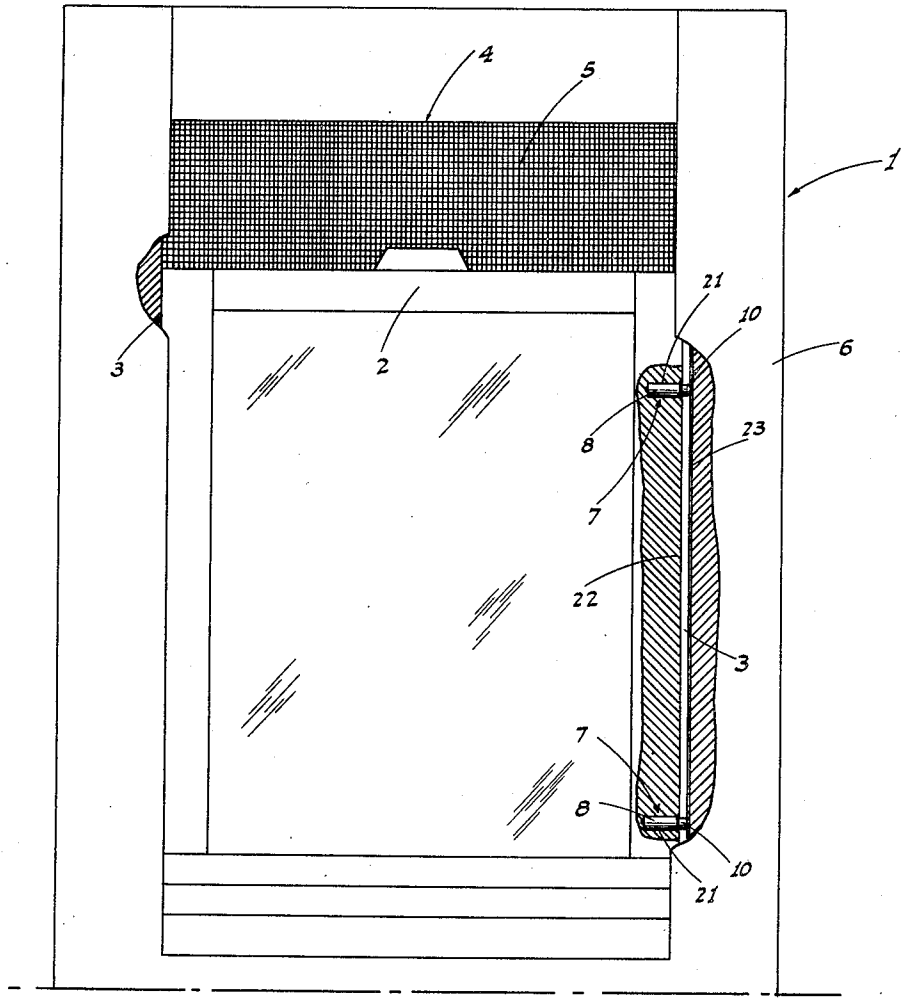


Fig. 2

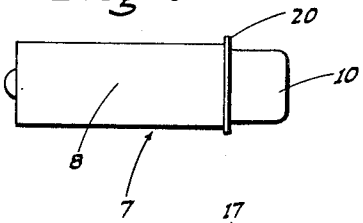


Fig. 3

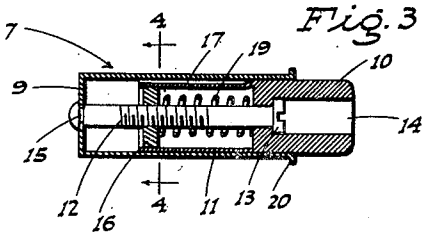
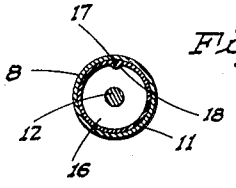


Fig. 4



INVENTOR

Edward J. Foote

BY Webster & Webster

ATTORNEYS

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FRICTION DRAG FOR WINDOWS

Edward J. Foote, Antelope, Calif.

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2 Claims. (Cl. 292—74)

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This invention is directed to, and it is an object to provide, a novel friction drag adapted to adjustably hold a window sash, of vertically slidable type, in any selected position of adjustment.

Another object of the invention is to provide a friction drag, for windows, which comprises a tubular housing inserted in a lateral bore in the side of the sash, and a spring-pressed plunger projecting out of the tubular housing into frictional engagement with a wear strip in the bottom of the adjacent sash guide channel of the window frame.

A further object of the invention is to provide a friction drag, as above, which includes a novel arrangement for adjustment of the spring load on the plunger without altering the projection of the latter.

An additional object of the invention is to provide a friction drag wherein such adjustment is accomplished from the outer end of the device and without removing the same from the sash.

It is also an object of the invention to provide a friction drag for ready and economical manufacture; the device being easy to install, and long-lived in service.

Still another object of the invention is to provide a practical and reliable friction drag for windows, and one which will be exceedingly effective for the purpose for which it is designed.

These objects are accomplished by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings:

Fig. 1 is a fragmentary elevation, partly broken away, of a combination screen door and sash embodying the present invention.

Fig. 2 is a side elevation of one of the friction drags, detached.

Fig. 3 is a sectional elevation of one of the friction drags, detached.

Fig. 4 is a cross section on line 4—4 of Fig. 3.

Referring now more particularly to the characters of reference on the drawings, the invention is here shown as embodied in a combination screen door and sash, the door being indicated generally at 1 and the sash at 2; the latter being vertically slidable in sash guide channels 3 relative to a window opening 4 fitted with a screen 5. The sash guide channels 3 are formed, in the present embodiment, in the stiles 6 of the door 1.

At one side thereof the sash 2 is fitted, at vertically spaced points, with friction drags, each indicated generally at 7; the purpose of said drags

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being to automatically hold the sash 3 in any selected position of vertical adjustment thereof.

As each of the friction drags 7 is identical, a description of one will suffice for both.

Each friction drag comprises a tubular housing 8 open at its outer end, but closed at its inner end, as at 9.

A plunger 10 is slidably disposed in the outer end portion of the housing 8 and projects some distance out therefrom.

At its inner end the plunger 10 is fitted, in unitary relation, with a sleeve 11 which runs in the housing 8 with an easy fit.

A longitudinal screw 12 extends centrally through the above described assembly; said screw having a screw head 13 on its outer end seated in a shouldered bore 14 open to the exposed end of said plunger. At its inner end the longitudinal screw 12 is secured, as at 15, to the closed end 9 of the housing 8, for rotary but non-axial motion.

A circular nut 16 is threaded on the screw 12 within the confines of the sleeve 11; such nut 16 being free to travel along the screw in said sleeve but being held against turning motion by a longitudinal rib 17 deformed downwardly in the sleeve and bearing in a transverse notch 18 in the periphery of said nut.

A compression spring 19 surrounds the screw 12 between the nut 16 and the inner end of the plunger 10; the nut serving as a stop for the spring, and the latter being under constant load and urging the plunger 10 outwardly.

At its outer end the tubular housing 8 is formed with a radial annular flange 20.

Each friction drag 7 is disposed in a lateral bore 21 in one side bar 22 of the sash 2; such bore being of a depth that the flange 20 abuts the outer edge of said side bar.

The plunger 10 of each friction drag projects laterally into relatively strong frictional engagement with a metal wear strip 23 in the bottom of the adjacent sash guide channel 3; the plunger riding inwardly, against the spring 19, on screw 12.

With a pair of friction drags 7 mounted as described they serve effectively to automatically maintain the window sash 2 in any selected position of vertical adjustment, yet permitting such adjustment to be made manually whenever desired.

To alter the spring load on the plunger 10 of each friction drag, it is only necessary to insert a screw driver in the bore 14 and to thus rotate the longitudinal screw 12, whereby to either ad-

vance or retract the circular nut 16. This adjustment, with the arrangement described, is attained without any alteration in the extent of the projection of the plunger 10 beyond the outer end of the tubular housing 8.

Friction drags constructed as described are capable of being manufactured economically, and can be installed readily and quickly without the use of any special tools.

From the foregoing description it will be readily seen that there has been produced such a device as substantially fulfills the objects of the invention, as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described the invention, the following is claimed as new and useful, and upon which Letters Patent are desired:

1. A friction drag, for a window sash, comprising a tubular housing, a plunger projecting from one end of the tubular housing, the other end of the housing being closed, a longitudinal screw disposed centrally in the housing, the rear end of the screw being turnably attached to the closed end of the housing, a screw head on the outer end of the screw, the plunger having a shouldered bore through which the screw extends and in which the head is seated, a stop nut on the screw rearward of the plunger, a compression spring surrounding the screw between the stop nut and inner end of the plunger, and means to prevent rotation of the nut without restricting axial motion thereof.

2. A friction drag, for a window sash, comprising a tubular housing, a plunger projecting from one end of the tubular housing, the other end of the housing being closed, a longitudinal screw disposed centrally in the housing, the rear end of the screw being turnably attached to the closed end of the housing, a screw head on the outer end of the screw, the plunger having a shouldered bore through which the screw extends and in which the head is seated, a stop nut on the screw rearward of the plunger, a compression spring surrounding the screw between the stop nut and inner end of the plunger, a sleeve projecting inward from the plunger about the screw, the nut being in the sleeve, and means to prevent rotation of the nut in the sleeve without restricting axial motion of said nut therein.

EDWARD J. FOOTE.

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