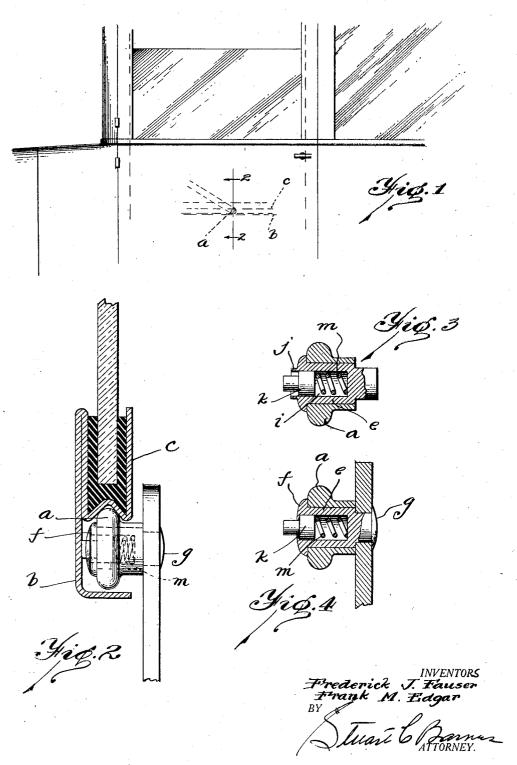
WINDOW REGULATOR CONNECTION

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## UNITED STATES PATENT OFFICE

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## WINDOW-REGULATOR CONNECTION

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vices for use with a contact device between a window regulator and the window sash.

The present day requirements of closed 5 body construction make it necessary that all operating hardware in an automobile body be substantially rattle-proof. To this end we have designed what we believe to be a new improvement that is especially adapted for 10 use in connection with the roll and track of a lever arm lifter. This is an improvement over such anti-rattling devices heretofore proposed in avoiding the metal contact between the yielding member and the track, 15 also in providing a relatively small and inconspicuous member to afford the pressure which keeps the parts from rattling.

In the drawings:

20 mobile body, showing a lever type of regu-

Fig. 2 is a fragmentary cross section through the bottom of the window sash, showing our improved anti-rattling device.

Fig. 3 is a cross section of the anti-friction roller and the anti-rattling device before assembly.

Fig. 4 is a cross section through the same

after assembly.

The prevailing type of window regulator now is the so-called lever type regulator, which is provided with a slide or roller such as a, that rides in the form of a track b on the

bottom of the window channel c.

The window channel shown in the drawings is the well known "Ternstedt" channel States Patent No. 1,541,951, of June 16, 1925, ing portion and said track being relatively and No. 1,533,084, of April 14, 1925. How-small. ever, the invention here shown is not limited to this form of channel, or this form of assembly of regulator arm and window channel. It is capable of wider application.

45 up-ended as at f, and which may be riveted tion projecting from the end of such member 95 over as at g to rotatably support the roller a for continuous contact with the side of the on the end of the arm. This stud is supported as at i, and has a thin annulus j which a different material than that of the track

This invention relates to anti-rattling despring m and when the roller is assembled in the track as explained in Patent No. 1,533,-084, by tilting one with respect to the other, it will be seen that the fiber plunger k acts as a yielding spacer. This exerts pressure on 55 the end of the lifting arm so that it is yieldingly held between two points on the track to prevent any rattling or drumming. It will be obvious that the track might be considerably altered and yet the principle of our 50 yielding spacer be employed. It will also be apparent that the only sliding contact between the lifting arm and the track is a nonmetallic one, the other contact being a rolling one. This avoids squealing or other harsh 65 noises in case there is a harsh contact on metallic and dry surfaces.

In the constructions shown and described Fig. 1 is a fragmentary view of an auto- in Patents No. 541,951 and 1,533,084, practically no clearance is intended between the 70 roller and the channel, but in actual manufacturing practice very often this clearance occurs through the irregularity, and hence it is one of the objects of the invention to provide an anti-rattling device which functions 15

when such a clearance does occur.

Fig. 2 shows a channel that does have a slight clearance.

What we claim is:

1. A traveling connection for use between so a window regulator and window sash track, comprising a member arranged for engagement with the window sash track in traveling relation and including a yieldable portion projecting from the end of such member for \$5 continuous contact with the side of the track, described and claimed particularly in United the contacting surface between said project-

2. A traveling connection for use between 90 a window regulator and window sash track, comprising a member arranged for engagement with the window sash track in travel-The roller is mounted on a stud e, which is ing relation and including a yieldable porcan be spun down over the fiber plunger k, whereby to eliminate undesirable noise durwhich is pressed outwardly by the helical ing its movement in the track.

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3. A traveling connection for use between a window regulator and a window sash track of the open type having a downwardly extending wall, comprising a stud arranged to be carried by the regulator, and being apertured to receive a plunger and spring, the said plunger being adapted to continuously contact with the downwardly extending side wall.

In testimony whereof we have affixed our signatures.

FREDERICK J. FAUSER. FRANK M. EDGAR.