This invention relates to anti-rattling devices for use with a contact device between a window regulator and the window sash.

The present day requirements of closed 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 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, also in providing a relatively small and inconspicuous member to afford the pressure which keeps the parts from rattling.

In the drawings:

Fig. 1 is a fragmentary view of an automobile body, showing a lever type of regulator.

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 described and claimed particularly in United States Patent No. 1,541,951, of June 16, 1925, and No. 1,533,084, of April 14, 1925. However, 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.

The roller is mounted on a stud e, which is up-ended as at f, and which may be riveted over as at g to rotatably support the roller a on the end of the arm. This stud is supported as at i, and has a thin annulus j which can be spun down over the fiber plunger k, which is pressed outwardly by the helical spring 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 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 yielding spacer be employed. It will also be apparent that the only sliding contact between the lifting arm and the track is a non-metallic one, the other contact being a rolling one. This avoids squealing or other harsh noises in case there is a harsh contact on metallic and dry surfaces.

In the constructions shown and described in Patents No. 1,541,951 and 1,533,084, practically no clearance is intended between the 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 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 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 continuous contact with the side of the track, the contacting surface between said projecting portion and said track being relatively small.

2. A traveling connection for use between 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 continuous contact with the side of the track, said last named means being formed of a different material than that of the track whereby to eliminate undesirable noise during its movement in the track.
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.