To all whom it may concern:

Be it known that I, FRED W. KRUGER, a citizen of the United States, and a resident of Little Cedar, in the county of Mitchell and the State of Iowa, have invented a certain new and useful Detachable Top and Seat for School Wagons, of which the following is a specification.

This invention relates to improvements in cover attachments for wagon boxes such as are used for conveying children to and from school. In consolidated school districts it is customary to provide wagons for conveying the children to and from the school. There are a good many wagons designed especially for this purpose which are to be motor driven or drawn by horses, but in certain months of the year in the northern climates it is impractical to operate either the motor driven or horse driven wagons and it becomes necessary to haul the children in sledges. These sledges are designed to carry the regular wagon boxes which are provided with no sheltering means whatever for the children, or the proper seating arrangement.

And it is, therefore, the object of my invention to provide a detachable body member which may be easily and quickly applied to the ordinary wagon bed, and at the same time provide ample protection for the children against the weather and also the proper seating arrangement.

A further object is to provide a detachable body for wagon beds of simple, durable and inexpensive construction which may be easily and quickly placed in position on a wagon bed and secured in position thereon with a minimum number of bolts. A further object is to provide a detachable covered body portion for wagon beds so constructed and arranged that it may be easily and quickly taken down and placed in a compact pile for shipping or storage.

A still further object is to provide in a detachable enclosed body portion for wagon beds having knocked down features, improved means for securing the various members of the device in position relative to each other when set up.

These and other objects will be apparent to those skilled in the art.

My invention consists in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which:

Figure 1 is a side elevation of my improved detachable cover member for wagon boxes showing a portion of the cover removed, and the manner in which the cover member is applied to a wagon box.

Figure 2 is a longitudinal sectional view of Figure 1.

Figure 3 is a transverse sectional view taken on the line 3—3 of Figure 1.

Figure 4 is a rear end elevation of my completed device as applied to a wagon bed.

Figure 5 is an enlarged detail view showing the manner in which the end members are secured to the horizontally arranged members.

I have used the reference numeral 10 to indicate a wagon bed of the ordinary construction, having sides 11, a bottom 12 and a front end gate 13. The rear end gate is removed when my improved body portion is attached.

My improved body member comprises end members 14 and 15 and seat members 16. The end member 14 is formed of a series of preferably vertically arranged boards, secured together by means of cross pieces 17 and 18. The cross piece 17 is secured near the top end on the inside, and the cross piece 18 is secured to the bottom edge of the boards and is of the length substantially equal to the distance between the side members 11.

The said end member 14 is provided with a door 19 which is for the purpose of permitting the children to enter the compartment within. This door is provided with hinges 20. The member 15 is designed for the front end of the body and is formed of preferably vertically arranged boards 21 held in position by means of cross pieces 22 and 23. The lower edge of the boards 21 are designed to rest on the upper edge of the front end gate 13. The said end is provided with a window 24 which is for the purpose of lighting the interior of the body portion when covered, and also to permit the driver within to see through. A slot 25 is provided for the purpose of receiving the reins by which the horses are driven.

Mounted on the top of each of the side members 11, I have provided a seat board 26 which is placed horizontally in such a manner that its inner edge overhangs the inner side of the box, while the outer edge extends beyond the sides of the members 11 in such a manner that the said members 11 are sub-
stantially beneath the central portion of said seat member. Each of said seat members are of a length substantially equal to the length of the wagon box to which the body portion is applied. Each seat member 26 is provided with a vertical back member 27 which is of the same length as the seat member, and arranged vertically adjacent to the outer edge of said seat member 26.

These members 26 and 27 are held rigidly in position relative to each other by means of a series of strap irons 28 extending up and down on the outside of said members 27, and thence transversely beneath the members 26 to the inner edges thereof, thence downward to the bottom 12 of the wagon box, thence transversely across the wagon box to the center which continues in a like manner to secure the opposite back and seat members, as clearly shown in Figure 3. The seat and back members are secured to said straps by means of bolts 29 in such a manner that the seat and back members may be easily and quickly detached.

For the purpose of locking the device down the central portion of the straps may be secured to the wagon box by means of bolts 30, thus preventing the cover portion from dancing on the wagon bed as the sled is advanced over the rough roadway. To prevent the seat members from moving transversely on the top edge of the side portions 11, I have provided blocks 31, held in position by means of one of the boards 29 being of such length that one end will engage the bottom 11 while the opposite end will engage the downwardly extending portions of the bolts 29, as clearly shown in Figure 3.

One of the transverse bars 26 is secured near the forward end of the seat and back members, as clearly shown in Figure 5, in such a manner that an angle iron 32 may be applied to the inside of each of the back members 27 and also secured to the front member 15 by means of a bolt 33.

By this construction, it will be seen that the said end member 15, which is formed in a unit, may be easily and quickly attached to the back members, and when attached will firmly hold the said front members against a forward and backward oscillating movement, due to the fact that the bolts 29 extend through one member of the angle 32 and the upper end of the strap 28, together with the back member 27. A similar angle plate 34 is provided for the back end member 14, as clearly shown in Figure 2.

The end member 14 is so constructed that a portion of the vertical boards 19 extend downwardly into the interior of the box, the outer edges of the downwardly extending portion being arranged to rest between the blocks 35 and 36 of the wagon bed. These blocks are for the purpose of securing the rear end gate in position, and are secured firmly to the side 11 of the wagon bed. By this arrangement, the detachable member 70 may be held against longitudinal movement relative to the wagon bed, while the blocks 31 are secured against lateral or transverse movement.

I have secured a series of bows 37 to the side members 27 which are for the purpose of supporting a canvas top 38. By this arrangement, it will be seen that I have provided a detachable top which may be easily and quickly placed in position on the ordinary wagon bed, especially adapted for conveying school children, and if so desired without the use of bolts. The end members are formed in unitary pieces which may be easily and quickly removed by removing the bolts 33, thence the said members 26 and 27 may be easily and quickly attached and detached from the supporting bars by means of the bolts 29 in such a manner that the whole outfit may be stored in a very small space, when it is not desired to use the detachable portion.

The said members are so arranged that they may be formed of comparatively light material, and at the same time be rigid, as the entire weight of the person sitting on the seat is carried by the upper edge of the side boards 11.

I claim as my invention:

1. In a device of the class described, parallel and oppositely arranged seat members, a series of detachably and transversely arranged bars for connecting said seat members, said seat members being spaced apart in such a manner that each of said seat members will rest centrally above a corresponding side member of a wagon box, said transversely arranged bars having a central downwardly extending portion to engage the bottom of a wagon box, a unitary front end member having a window and designed to rest on the upper end of an end gate of a wagon box, a unitary back-end member being provided with a door having downwardly extending portions designed to enter the grooves formed for the back end gate of a wagon box, means for detachably securing each of said end members to said seat members and means for supporting a cover over said seat member, and a cover for said supporting means.

2. In a device of the class described, spaced parallel seat members, a back member for each of said seat members, a series of transverse bars for detachably securing said back and seat members adjacent to each other and said seat members spaced apart so that their longitudinal central portions will engage the upper edges of the side boards of a wagon box, means for preventing 130
said seat members from moving transversely when in position on the wagon box, a front and back end member, means for detachably supporting said front and back end members to said back members of said seat members, the back member being designed to enter the end gate grooves of a wagon box, a means detachably secured to said seat and back members for supporting a cover; and a cover for said supporting means.

3. In a device of the class described, parallel and oppositely arranged seats comprising seat and back members, a series of transversely arranged bars for detachably securing said seat and back members adjacent to each other and said seats in proper relation to each other, one of said transverse bars being arranged adjacent to the forward end of said seats and another one of said bars arranged adjacent to the back end of said seats, a unitary front and back end members, means for detachably securing said front and back end members to said seat members comprising angle irons and bolts for securing one member of each of the angle irons to the inner face of either of the said end members, and bolts for securing the other member of each of said angle members to an adjacent cross bar, said cross bars being provided with downwardly extending portions at their centers, and means for securing said downwardly extending portions to the bottom of a wagon bed.

4. In a device of the class described, the combination of a wagon bed having sides and a front end gate and rear end gate grooves, a horizontally arranged seat member designed to rest centrally above each of said side boards, a back member for each of said seat members, a series of transverse bars designed to be detachably secured to the outside of said back members and thence detachably secured to the under side of said seat members, thence downwardly from the front edge of said seat members to the bottom of said wagon bed, a unitary front member having a window designed to rest on said front end gate, angle irons for connecting said front members to an adjacent one of said cross bars, a unitary back having a door and a downwardly extending portion designed to enter said end gate grooves, angle irons for connecting said back member to said seat members, bolts for said angle irons, a series of hoops detachably connected to said back members and a cover for said hoops.

Des Moines, Iowa, February 21, 1921.

FRED W. KRUGER.