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A. LENTZ

DRIVER'S SEAT ESPECIALLY FOR TRACTORS AND AGRICULTURAL MACHINES

Filed Feb. 8, 1941

Serial No.
378,045

3 Sheets-Sheet 1

Fig. 1

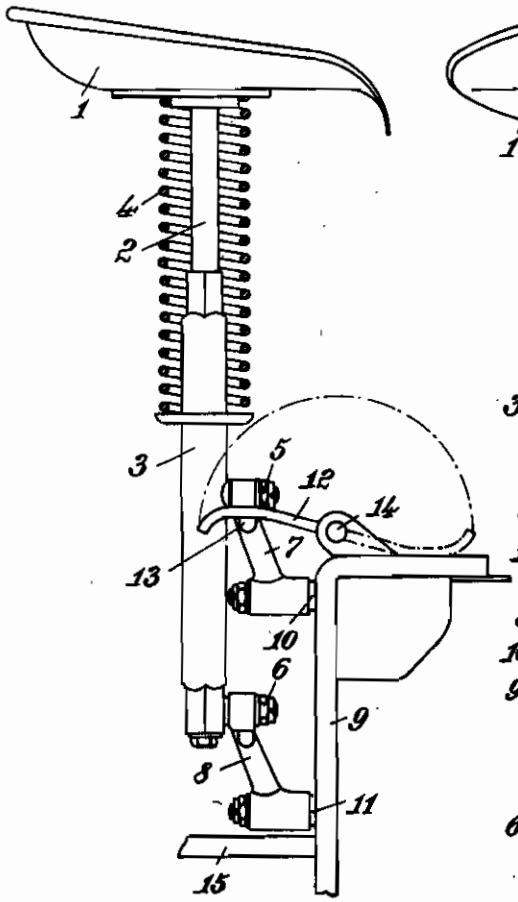

Fig. 2

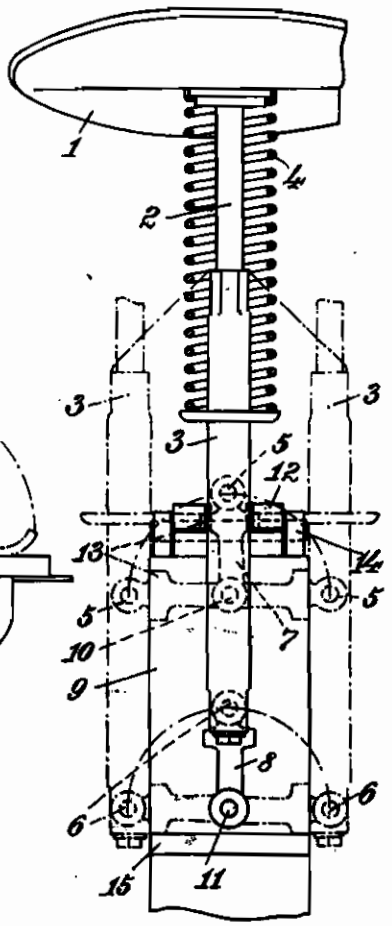

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Fig. 3

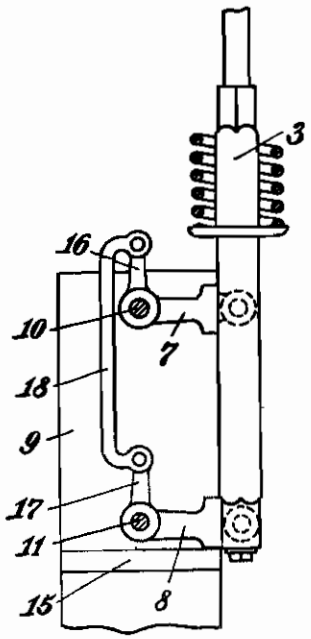

Fig. 4

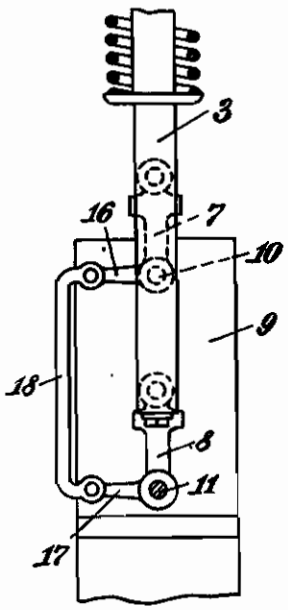

Fig. 5

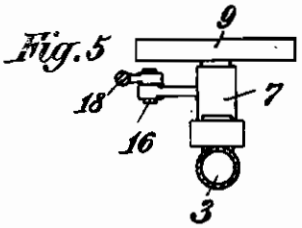

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Fig. 6

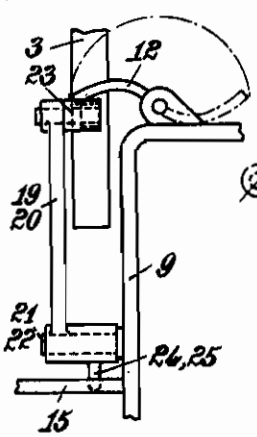
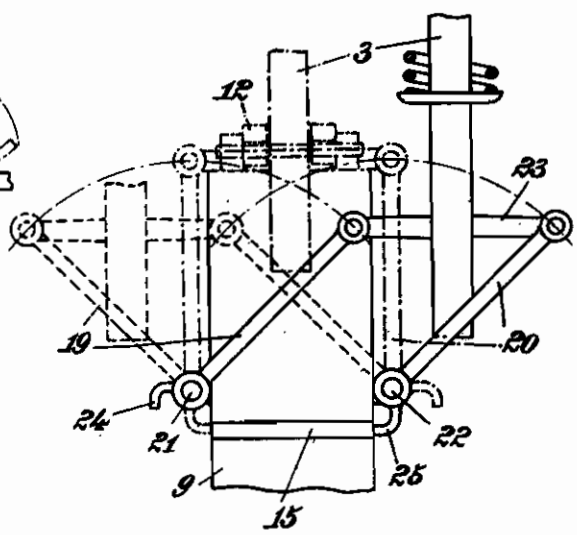


Fig. 7



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ALIEN PROPERTY CUSTODIAN

DRIVER'S SEAT ESPECIALLY FOR TRACTORS AND AGRICULTURAL MACHINES

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This invention relates to a driver's seat, especially for tractors and agricultural machines. The object of the invention is to arrange the seat on the vehicle so that it is possible to alter its position in a simple manner.

If a tractor is employed for cultivating of fields or of plants, that is for drillage and hoeing work, when it is material to conduct the implements accurately in the rows to be worked, the driver must alternately observe the course of both front wheels of the tractor. As, however, the driver's seat is, as a rule, arranged on the right hand side of the tractor and the position of the seat cannot be altered during the service, it is impossible for the driver to also observe from the seat the course of the left hand front wheel. The same is evidently valid also for the agricultural machines destined for the drillage of fields and the cultivation of plants when these machines are equipped with a driver's seat from which they are steered.

According to the invention the driver's seat is arranged on the tractor or on the agricultural machine so that it can be moved in lateral direction parallel to itself and be secured in its different positions, preferably however in the middle position and in the end positions. In this manner the position of the seat can be selected as required on the left hand side or on the right hand side or in the middle of the tractor, so that the driver during the work on the field can easily observe the course of both front wheels and conduct the tractor or the agricultural machine correctly in the rows to be worked. The seat is then preferably connected with the vehicle by means of a parallelogram-guide which is mounted so that it can oscillate about turning axles situated in the direction of movement of the tractor. This arrangement can be carried out so that the support for the seat is hingedly connected with two parallel links fixed the one below the other on the vehicle and oscillatable in lateral direction. By oscillating the links, which then form the parallelogram-guide together with the seat support, the position of the seat can be altered parallel to itself. The links are preferably oscillatable by 180°. In the middle position the seat is preferably secured by a foldable bolt mounted on the vehicle, and in the extreme positions by a stop provided on the vehicle and limiting the oscillating movements of the links. The construction of the links and of the bearings of the same and of the seat and of the seat support may be different.

In order to hold the links in the parallel position in any position of the seat, these links may be constructed as elbow levers according to the invention, and their bent off arms may be hingedly connected by a strap. In this manner two parallelogram-guides are formed mutually displaced at an angle, and the seat support forms with one arm of each of the links the one parallelogram-guide, and the bent off arms of the links with their connecting strap form the second parallelogram-guide. The links are then constructed or arranged so that always only the pair of links of one parallelogram-guide can be oscillated into the stretched position or into the dead point position, whereas the other parallelogram-guide serves for overcoming this stretched position. Hereby is avoided, that in the middle position of the seat, in which the links extend in one line with the support of the seat, one of the links oscillates from the stretched position towards the left and the other link towards the right, whereby an oblique position of the seat support and clamping of the parallel guiding would occur. By the additional parallelogram guiding the links are guided parallel also when the stretched position is exceeded.

The parallel position of the links may, however, be preserved in any position of the seat thereby that the parallel conducted links are fixed on the tractor or agricultural machine the one at the side of the other and connected by a coupling piece on which the seat support is fixed. In this arrangement it is not necessary that the links be oscillated into the stretched position, so that an additional parallelogram guiding of the links is not required. The arrangement is such that the links are in perpendicular position at the middle position of the seat and parallelly oscillated towards the side for altering the position of the seat. In the middle position the seat is secured by a foldable bolt mounted on the vehicle, whereas stops are provided on the links for securing the seat in the extreme positions, said stops limiting the oscillating movements of the links and striking then against abutments on the vehicle.

Three embodiments of the invention are illustrated by way of example in the accompanying drawing, in which Figs. 1 and 2 show the first embodiment, Figs. 3 to 5 the second embodiment, and Figs. 6 and 7 the third embodiment.

Fig. 1 is a side elevation and

Fig. 2 a rear elevation,

Figs. 3 and 4 are rear elevations of the different positions,

Fig. 5 is a top plan view of Fig. 4,

Fig. 6 is a side elevation and

Fig. 7 a rear elevation.

A rod **2** carrying the seat **1** is inserted into a seat support **3** consisting, for instance, of a tube, said rod **2** being supported relative to the seat support by means of a spring **4**. On the seat support **3**, connecting links **5** and **6** are provided, by means of which the seat support is hingedly connected with parallel links **7** and **8**. These links in turn are mounted on pivot pins **10** and **11** situated in the direction of travel and arranged the

one below the other on the body 9 of the tractor or on the frame of the agricultural machine. They form a parallelogram guiding together with the seat support 3, by means of which guiding the seat 1 can be brought by oscillation from the middle position shown in Fig. 2 in full lines into the left hand or right hand extreme position, indicated in Fig. 2 in dash dot lines. In the middle position the seat is secured by a bolt 12, which is foldable for instance, and mounted on the body 9 of the tractor or on the frame of the agricultural machine. The end of bolt 12 is fork-shaped and engages over the seat support 3. The bolt 12 bears then against stops 13 fixed at either side of link 7. By turning bolt 12 about its pivot point 14 into the position indicated in Fig. 1 in dash dot line, the links 7 and 6 can be oscillated towards the left or towards the right, until their stops 13 come to bear against an abutment 15 mounted on the body 8 or on the frame of the agricultural machine, by which abutment the seat is secured in its extreme positions. The longer the links 7 and 8 are, the greater is their oscillation and the farther can the seat be shifted towards the left or towards the right.

According to Figs. 3 to 5, the links 7 and 8 are constructed as elbow levers, and their branched off arms 16 or 17 are hingedly connected by a strap 18. The arms 16, 17 and the strap 18, same as the arms 7 and 8, form a parallelogram-guide with the seat support 3; the arms 16 and 17 and the strap 18 form further an additional-guide for the links 7 and 8. They do not only impart to the links 7 and 8 and to the seat support 3 a greater security against torsional stresses, but also prevent the links from oscillating in the stretched position in opposite direction. Fig. 3 shows the right hand extreme position of the seat, the arm 8 of the lower elbow 8, 17 striking onto the abutment 15 on the body 9. In this position the branched off arms 16 and 17, which in the form of construction shown are at right angles relative to the arms 7, 8, are in the stretched position. Fig. 4 shows the middle position of the seat or of its support 3, the arms 7 and 8 being in the stretched position, and the branched off arms 16 and 17 being correspondingly at right angles relative to the strap 18.

As shown in Figs. 6 and 7, the links 19 and 20 transmitting the lateral movements of the seat are mounted on the pivot pins 21 and 22 extending in the direction of travel and horizontally arranged the one at the side of the other on the body 9 of the tractor or on the frame of the agricultural machine. The pivot pins are connected by a connecting rod 23, on which the seat support 3 is fixed approximately at the middle. In the middle position of the seat or of the seat support 3 the links 19 and 20 are vertically mounted, the seat support being arranged between the pivot pins 21 and 22. The seat is secured in this position by a foldable bolt 12. For securing the seat or the support of the same in the extreme positions, stops 24 or 25 respectively, are provided on the links 19 and 20 and limit the oscillating movements of the links by striking onto the abutment 15 on the body 9 of the tractor. In this form of construction the stretched position of the links is avoided. The full lines in Fig. 7 show the right hand extreme position, the dash lines the left hand extreme position, and the mixed lines the middle position of the seat.

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