June 25, 1946. F. VAN BUSKIRK 2,402,932

LEVER ATTACHMENT

Filed Jan. 29, 1944 3 Sheets-Sheet 1.

Fig. 1.

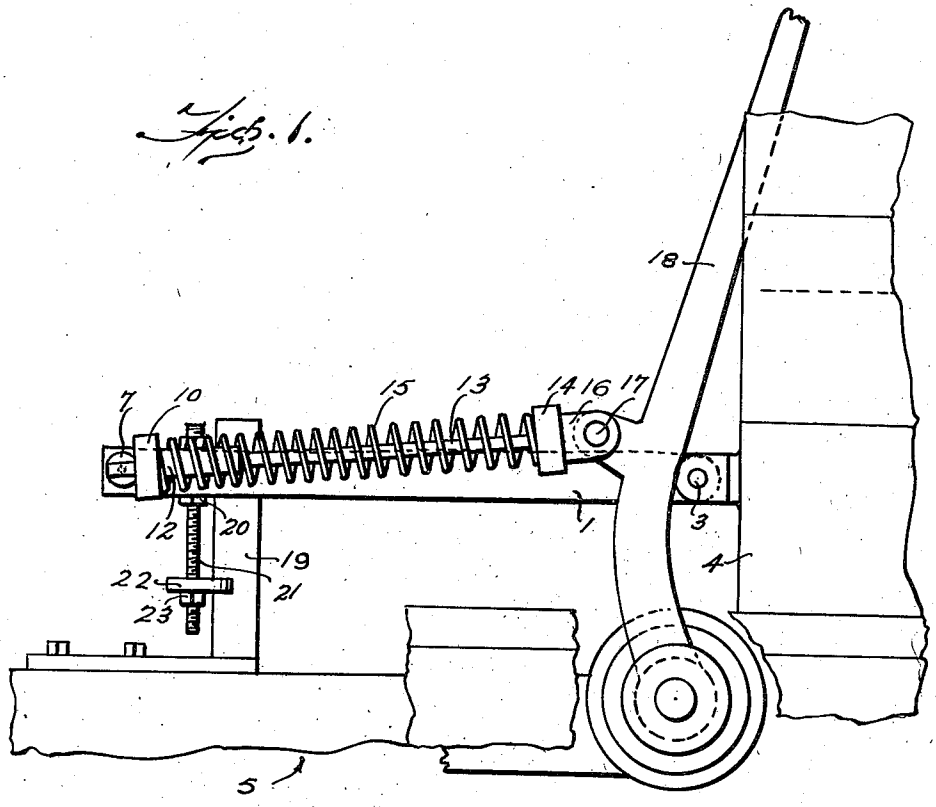
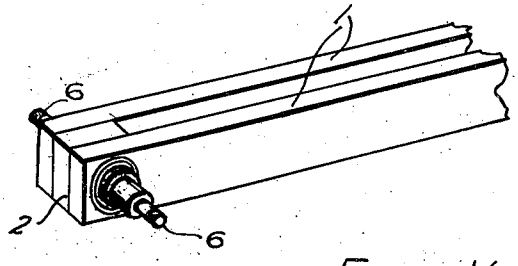


Fig. 6.



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Fig. 2.

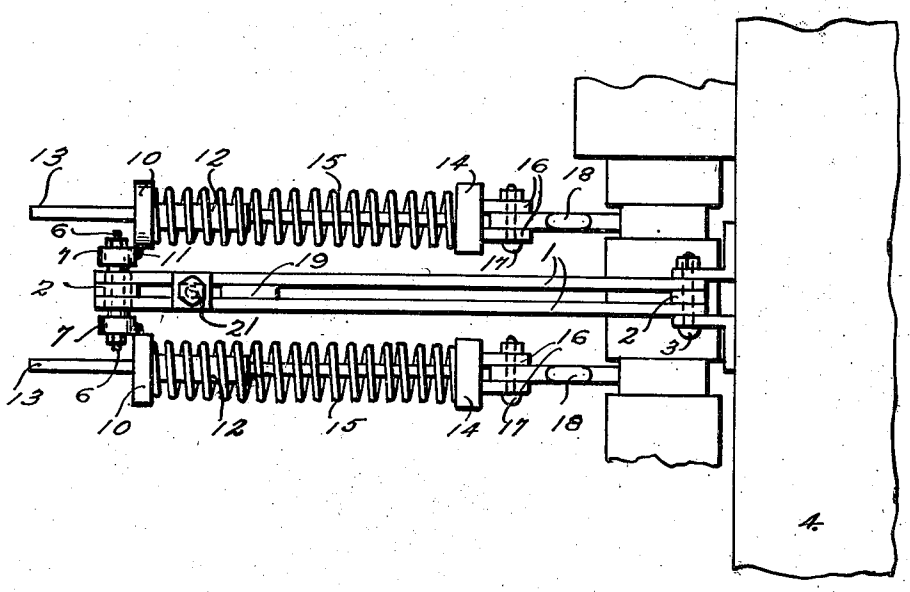
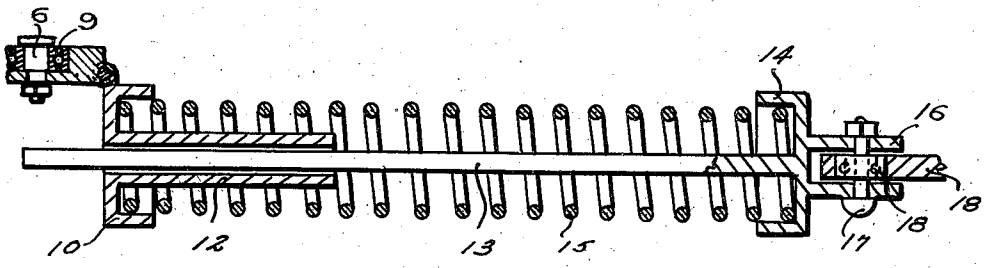


Fig. 4.



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LEVER ATTACHMENT

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Fig. 3.

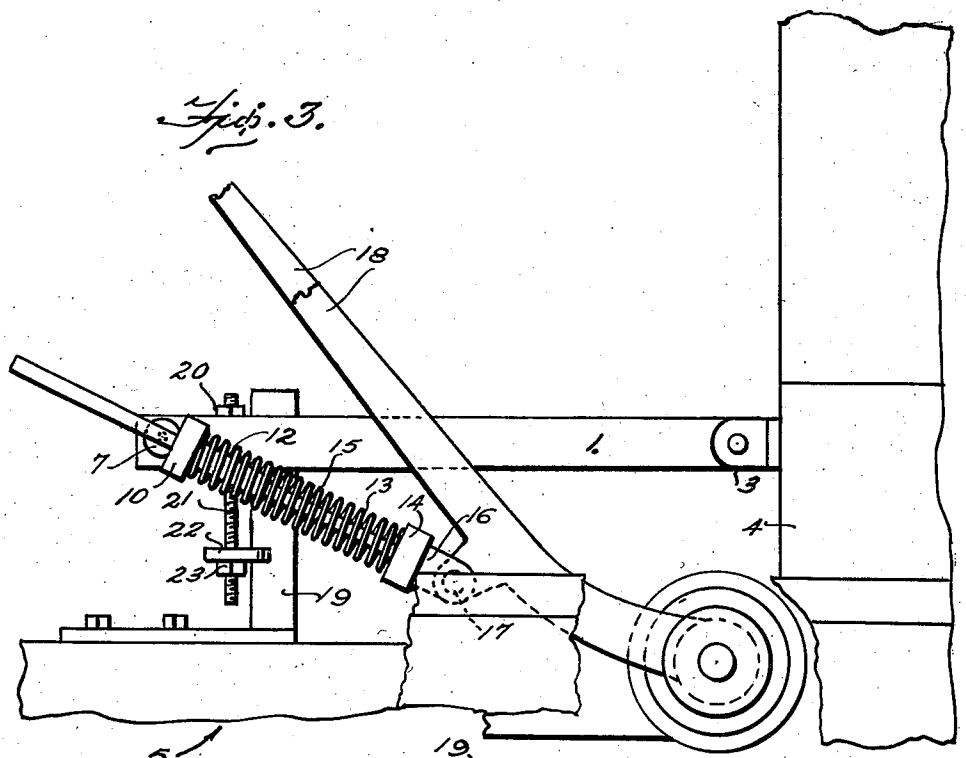
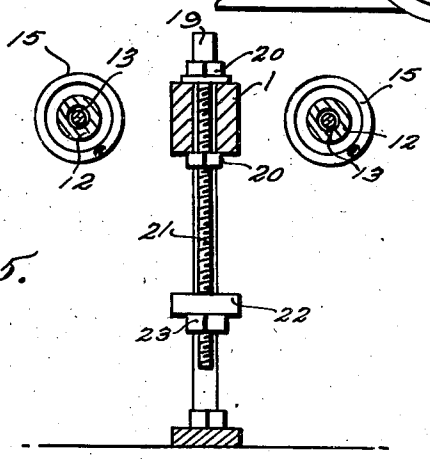


Fig. 5.



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Patented June 25, 1946 2,402,932

UNITED STATES PATENT OFFICE

2,402,932

LEVER ATTACHMENT

Frank Van Buskirk, Cedar Rapids, Iowa

Application January 29, 1944, Serial No. 520,243

1 Claim. (Cl. 74—97)

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The present invention relates generally to new and useful improvements in tractors, particularly of the endless track or track-laying type, and has for its primary object to provide, in a manner as hereinafter set forth, novel means for holding the steering clutch levers of the machine in forward or clutch-releasing position.

Other objects of the invention are to provide a steering clutch lever attachment of the character described which will be simple in construction, strong, durable, reliable in operation and which may be manufactured and installed at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a view in side elevation, showing an attachment constructed in accordance with the present invention installed.

Figure 2 is a top plan view thereof.

Figure 3 is a side elevational view, showing one of the steering clutch levers in forward position.

Figure 4 is a view in horizontal section through one side portion of the device.

Figure 5 is a cross sectional view through the device.

Figure 6 is a perspective view of one end portion of the vertically swinging bars.

Referring now to the drawings in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a pair of spaced, parallel bars 1. Spacers 2 are provided between the bars 1. The rear end portions of the bars 1 are pivotally secured at 3 for vertical swinging movement on the front of the seat frame 4 of a tractor 5.

Mounted transversely in the forward or free end portions of the bars 1 is a shaft 6. Plates 7 are journaled on the projecting end portions of the shaft 6. Suitable bearings 9 are provided on the shaft 6 for the plates 7.

Laterally projecting cups 10 are hingedly mounted at 11 for horizontal swinging movement on the plates 7. Formed integrally with the cups 10 are rearwardly projecting sleeves 12.

The sleeves 12 slidably accommodate rearwardly projecting rods 13. The rods 13 are provided, on their rear end portions, with cups 14 which are opposed to the cups 10. The end portions of coil springs 15 are engaged in the opposed cups 10 and 14 for yieldingly urging the rods 13 rearwardly.

The cups 14 are provided with pairs of ears 16 which are pivotally connected by pins or the like

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17 to the steering clutch levers 18 of the tractor 5. Bearings 18 are provided on the pins 17 between the pairs of ears 16 for the levers 18.

Rising from the floor of the tractor 5, forwardly of the levers 18, is a guide post 19 which is engaged between the bars 1. Secured by nuts 20 between the bars 1, forwardly of the post 19 and depending from said bars is an adjusting bolt 21. The bolt 21 is threaded through an ear or the like 22 which projects from the post 19. A lock nut 23 is provided for securing the bolt 21 in adjusted position.

It is thought that the operation of the device will be readily apparent from a consideration of the foregoing. Briefly, the levers 18 are normally in their rear or neutral position, as seen in Figure 1 of the drawings. The initial forward movement of the levers to operative position is, ordinarily, relatively easy, but the force required progressively increases as the movement continues. During this comparatively easy initial forward movement of the levers 18, the springs 15 are loaded or tensioned and the rear ends of the rods 13 swing downwardly, the assembly turning on the shaft 6. When dead center is passed, the coil springs 15 expand and assist in completing the forward movement of the levers and in retaining said levers in forward or clutch-releasing position. By adjusting the bars 1 through the medium of the bolt 21, the point of dead center may be shifted as desired.

It is believed that the many advantages of a lever attachment constructed in accordance with the present invention will be readily understood, and although a preferred embodiment of the device is as illustrated and described, it is to be understood that changes in the details of construction and in the combination and arrangement of parts may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

A lever attachment of the character described comprising a pair of spaced, parallel rods pivotally secured, at one end, to a support for vertical swinging adjustment, a guide post slidably engaged between the other end portions of the bars, means on the guide post for adjusting the bars, a shaft mounted transversely in said other end portion of the bars, plates journaled on the end portions of said shaft, cups hingedly mounted on the plates, sleeves on said cups, rods slidably engaged in the sleeves and pivotally connected, at one end, to a pair of levers, cups on the rods in opposed relation to the first-named cups, and coil springs engaged in the cups for yieldingly resisting sliding actuation of the rods in one direction by the levers.

FRANK VAN BUSKIRK.