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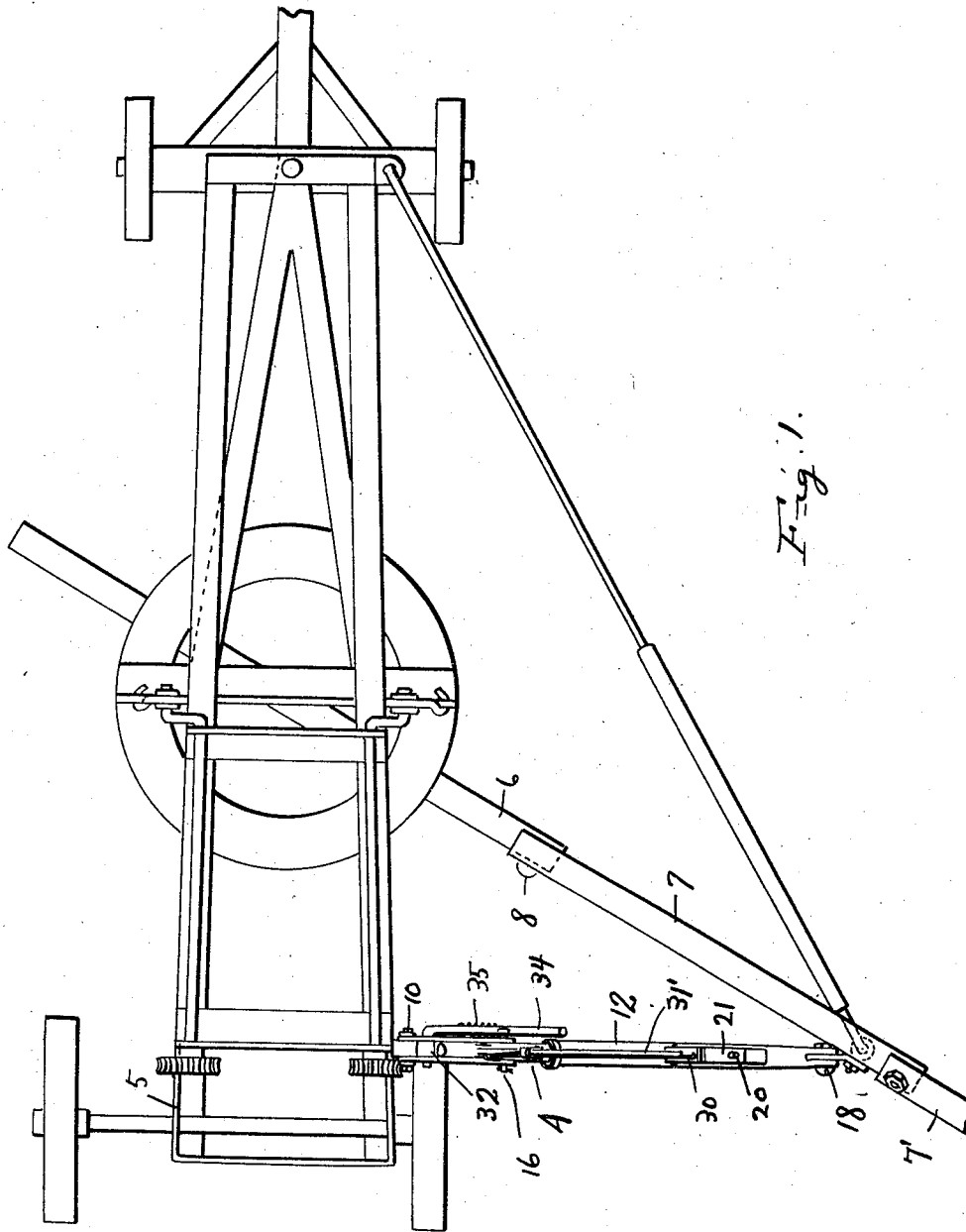
C. B. SCHEFFOLD

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SLOPER ATTACHMENT FOR ROAD GRADING MACHINES

Filed Feb. 24, 1931

4 Sheets-Sheet 1



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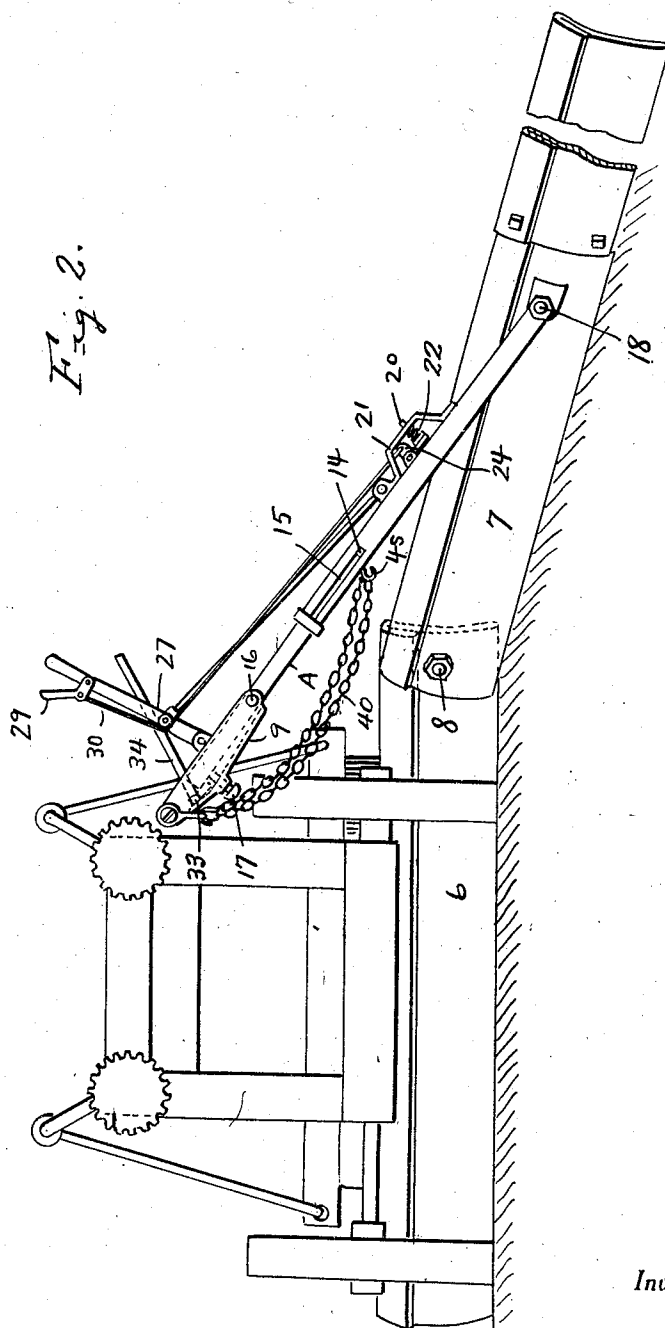
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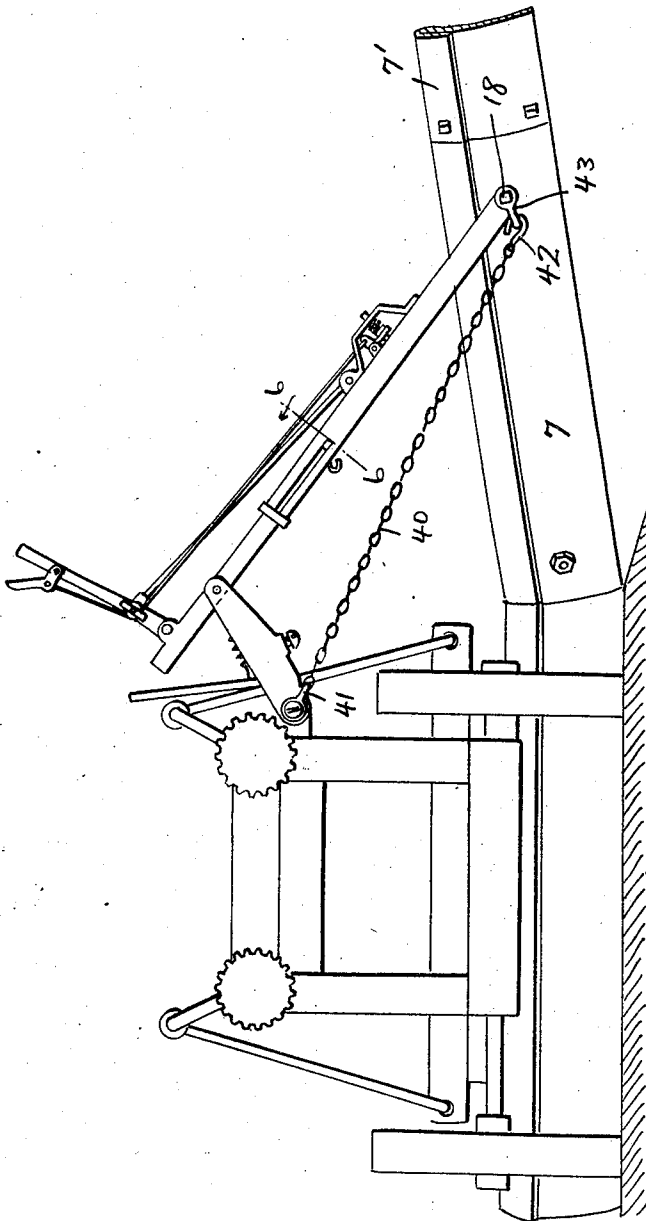


Fig. 3.

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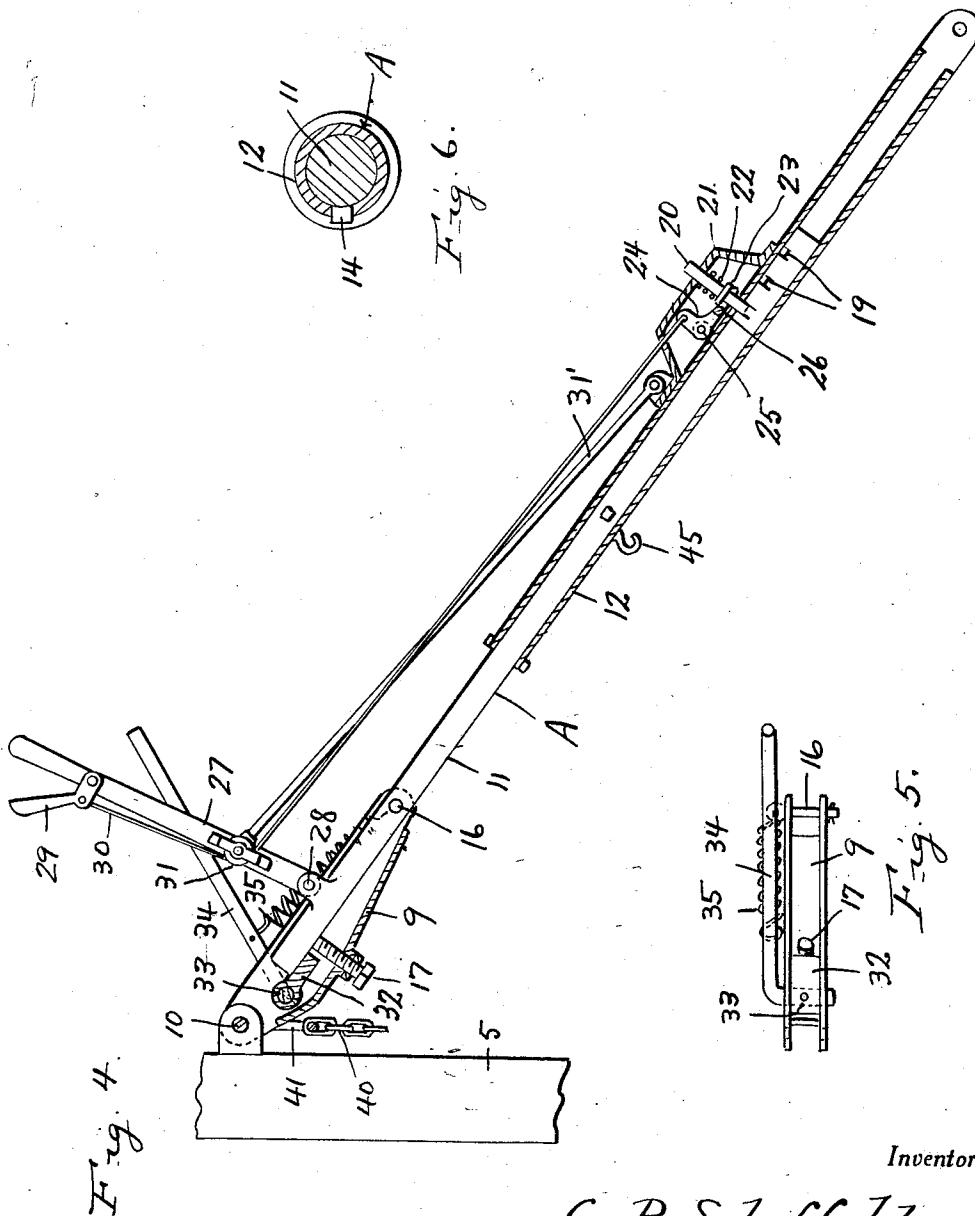
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4 Sheets-Sheet 4



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UNITED STATES PATENT OFFICE

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SLOPER ATTACHMENT FOR ROAD GRADING MACHINES

Application filed February 24, 1931. Serial No. 517,950.

The present invention relates generally to road graders and more particularly to an attachment in the nature of a bank sloping means mounted at one end of the road scraping blade with means to provide vertically, angularly, adjustable blade means capable of cutting surfaces which are angular with reference to the surface cut by the main blade for the purpose of complying with requirement of road construction, particularly the earth shoulders at the sides of the highway.

Another very important object of the invention resides in the provision of an attachment of this nature which is exceedingly simple in construction, easy to manipulate, strong and durable, thoroughly efficient and reliable in use and operation, and otherwise well adapted to the purpose for which it is designed.

With the above and numerous other objects in view as will appear as the description proceeds, the invention resides in certain novel features of construction, and in the combination and arrangement of parts as will be hereinafter more fully described and claimed.

In the drawings:

Figure 1 is a top plan view of a road grader showing my attachment thereon.

Figure 2 is a rear elevation thereof showing the sloping blade in its down position.

Figure 3 is a similar view showing the sloping blade in a raised position.

Figure 4 is a longitudinal sectional view through the adjusting means.

Figure 5 is a plan view of a rocker, and

Figure 6 is a sectional view taken substantially on the line 6—6 of Figure 3.

Referring to the drawings in detail, it will be seen that numeral 5 denotes the frame of a conventional or any desirably constructed road grader and carried by the frame is the main scraping blade 6. Numeral 7 denotes a supplemental scraping blade or sloping device which is pivoted to one end of the blade 6 as at 8.

Numeral 9 denotes a channel rocker pivoted as at 10 on a suitable portion of the frame 5. Letter A denotes generally a bar including two telescopically associated sections 11 and 12, the former slidable into the

latter. A limited movement is provided between the sections by a pin and slot arrangement 14 and 15 respectively. An intermediate portion of the section 11 is pivoted as at 16 in the end of the rocker 9 remote from the pivot 10. An adjustable stop screw 17 is threaded through the bottom of the rocker 9 against which the upper end of the section 11 abuts when the blade 7 is in its lowered position. The end of the section 12 is pivotally engaged as at 18 with an intermediate portion of the blade 7. The end of the section 11 in the section 12 is provided with a series of notches 19 to be engaged by a spring pressed pin 20 extending through an opening in the section 12 and through an opening in a housing 21 thereon. The spring 22 of the pin bears against a shoulder 23 formed on the pin intermediate its ends. A bell crank lever 24 is pivotally mounted as at 25 on the section 12 within the housing 21 and one end has an opening 26 circumjacent the pin 21 and this end is adapted to abut under the shoulder 23 so that by rocking the lever 24, the pin may be released from one of the notches 19. A lever 27 is pivoted as at 28 on the section 11 above the pivot 16 and has a hand lever 29 rockable thereon with which is engaged a flexible element 30 trained over a pulley 31 rotatable on an intermediate portion of the lever 27 and this flexible element extends through an opening in the housing 21 and is attached to the other end of the lever 24 so that by rocking the lever 29, the pin 20 may be released when desired.

A link 31' is pivotally engaged with the lever 27 and with the section 12. Thus after the pin 20 has been moved to released position by rocking the lever 27 the length of the bar A may be adjusted depending upon the slope desired to be graded by the blade 7.

An arm 32 is mounted on a shaft 33 rockable in the rocker 9. A lever 34 is mounted on one end of the rocker shaft 33 outside of the rocker 9 and has a spring 35 attached thereto and also attached to the pivot 16 for urging the lever 34 in one direction. The arm 32 is located under the end of the section 11 in the rocker 9. Now when it is desired to raise the scraper blade 7 from the

position shown in Figure 2 to the position shown in Figure 3, the lever 34 is rocked in a counter clockwise direction as shown in these views thereby forcing the end of the section 11 out of the rocker and then by pulling on the lever 27 without releasing the pin 20, the blade 7 may be swung to a raised position and held in this position by means of a chain 40 which has one end anchored on a clevis 41 carried by the pivot 10. This chain 40 has a hook 42 to engage a clevis 43 on the pivot 18. When the blade 7 is in use as shown in Figure 2, the hook 42 is engaged with the clevis 41 and the intermediate portion of the chain is held up by means of a hook 45 on the section 12.

It is thought that the construction, utility and advantages of this invention will now be quite apparent to those skilled in this art without a more detail description thereof.

It will be noted that additional sections 7' may be attached in extension of the blade 7 if desired. The present embodiment of the invention has been described in considerable detail merely for the purposes of exemplification since in actual practice it attains the features of advantage enumerated as desirable in the statement of the invention and the above description. It will be apparent that changes in the details of construction and in the combination and arrangement of parts may be resorted to without departing from the spirit or scope of the invention as herein-after claimed or sacrificing any of its advantages.

Having thus described my invention, what I claim as new is:

1. In combination with a road grader having a main frame and a road working blade, a supplemental blade pivotally connected to one end of the road working blade for movement in a vertical plane, a rocker on the main frame, a bar pivotally mounted intermediate its ends in the rocker, said blade being pivotally attached to an intermediate portion of the supplemental blade, means for breaking the joint between the rocker and arm to permit the raising of the supplemental blade.

2. In combination with a road grader having a main frame and a road working blade, a supplemental blade pivotally connected to one end of the road working blade for movement in a vertical plane, a rocker on the main frame, a bar pivotally mounted intermediate its ends in the rocker, said blade being pivotally attached to an intermediate portion of the supplemental blade, means for breaking the joint between the rocker and arm to permit the raising of the supplemental blade, said arm being formed in sections adjustably connected together, and means for holding the sections in different adjusted relationship.

3. In combination with a road grader having a main frame and a road working blade,

a supplemental blade pivotally connected to one end of the road working blade for movement in a vertical plane, a rocker on the main frame, a bar pivotally mounted intermediate its ends in the rocker, said blade being pivotally attached to an intermediate portion of the supplemental blade, means for breaking the joint between the rocker and arm to permit the raising of the supplemental blade, said bar being formed in telescopically associated sections having a pin and slot limiting connection, means for adjusting the sections with respect to each other, and means for holding the sections in different adjusted positions with respect to each other for changing the length of the bar.

4. An attachment of the class described including a blade, a bar pivotally engaged with the blade, a rocker adapted to be pivotally engaged on the frame of a road grader, said bar being pivotally engaged in said rocker, means in the rocker for breaking the joint between the rocker and arm to permit swinging of the blade, said bar being formed in telescopically associated sections having a pin and slot limiting connection, a pin and notch arrangement associated with the sections to hold the same in different adjusted positions with respect to each other.

In testimony whereof I affix my signature.
CARL B. SCHEFFOLD.

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