G. E. TUCKER.

SCRAPER ATTACHMENT.

APPLICATION FILED FEB. 23, 1912.

1,040,816. Patented Oct. 8, 1912.

Fig. 1.

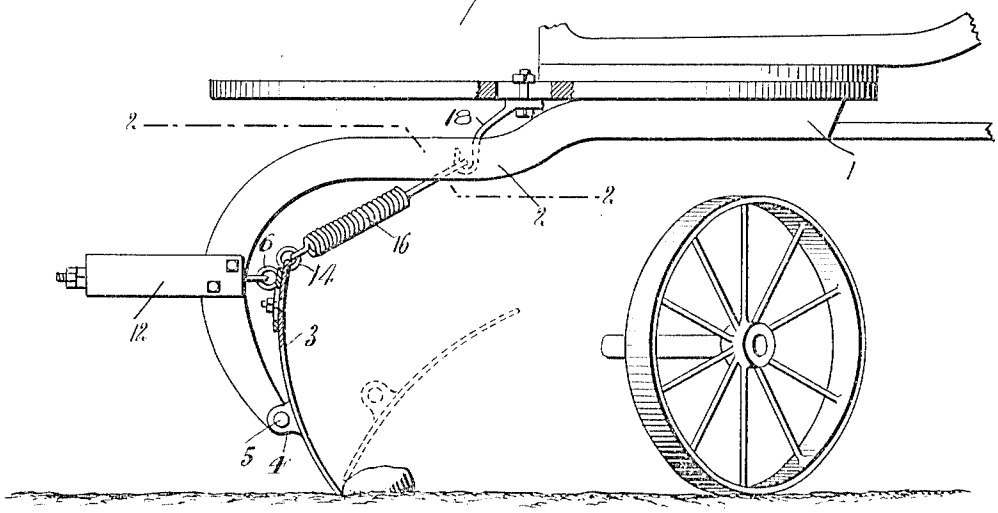
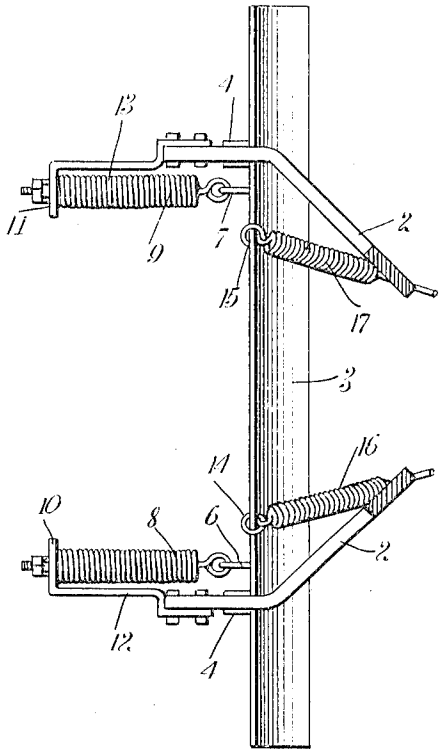


Fig. 2.



WITNESSES

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SCRAPER ATTACHMENT.

1,040,816. Specification of Letters Patent. Patented Oct. 8, 1912.

Application filed February 23, 1912. Serial No. 679,287.

To all whom it may concern:

Be it known that I, GEORGE E. TUCKER, a citizen of the United States, and a resident of Springwater, in the county of Livingston and State of New York, have invented a new and Improved Scraper Attachment, of which the following is a full, clear, and exact description.

This invention relates to improvements in road grading machines, and particularly to attachments for scrapers and has for an object the provision of an improved structure which will permit the scraper to readily pass over obstructions without injury to the scraper or to the machine.

A further object of the invention is to provide a pivotally mounted scraper to which is attached one or more springs for holding the scraper normally in position for properly scraping the earth but permitting a yielding action whereby the scraper may move pivotally and slide in a certain sense over obstructions.

In carrying out the objects of the invention, a grading machine of any desired kind may be used, which is provided with the usual scraper supporting shanks. Pivotally connected to these scraper supporting shanks is a scraper which is normally held in the ordinary position of scrapers by a spring connected to an extension from the supporting shanks which will permit the scraper to move pivotally forwardly when the scraper engages an immovable obstacle. One or more auxiliary springs are provided in front of the scraper for assisting in causing the scraper to properly move to its correct position.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the views.

Figure 1 is a fragmentary side view of a grading machine showing my improved scraper attachment; and Fig. 2 is a top plan view of the scraper attachment taken on the line 2—2 of Fig. 1.

Referring to the accompanying drawings by numerals, 1 indicates a road grading machine of any desired kind which is provided with scraper supporting shanks 2. Associated with the shanks 2 is a scraper 3, formed with lugs 4 which are held pivotally connected with the shanks 2 by pins 5, whereby the scraper 3 may freely move pivotally. Near the upper edge of the scraper 3 are mounted adjustable eyelets 6 and 7, to which are connected springs 8 and 9. The opposite ends of the springs 8 and 9 to that connected with the eyelets 6 and 7, are connected with offsets 10 and 11 projecting from brackets 12 and 13 rigidly secured to the shanks 2. The springs 8 and 9 are of the retractile kind and normally hold the scraper 3 to the position shown in the drawings, but will permit the scraper to move pivotally forward therefrom to any desired extent for allowing the scraper to pass over the obstacles.

Connected to the upper part of the scraper 3 are rings 14 and 15 which have secured thereto springs 16 and 17. The springs 16 and 17 are also connected at their forward ends to eyelets 18 rigidly secured to the shanks 2. The springs 16 and 17 are designed to resiliently resist any rearward movement of the scraper 3 from the position shown in Fig. 1, and also to assist in holding the scraper 3 in its normal position. The springs 16 and 17 are also adapted to relieve the jar from the reaction of the springs 8 and 9 and may be adjusted by shifting the eyelets or hooks 18 back and forth for causing the springs 16 and 17 to exert any desired tension on the scraper. In connection with the tension exerted on the scraper 3, it will be noted that the springs 8 and 9 are connected with eyelets 6 and 7 which are adjusted vertically for providing more or less tension on the scraper as occasion may require so as to give the necessary leverage for different conditions.

In use the machine is moved over the ground drawn by any suitable power, as for instance, draft animals or steam power, and the scraper 3 is adapted to operate in the usual manner until the same strikes an obstacle, whereupon the upper edge of the scraper will continue to move, while the lower edge will remain stationary until the scraper is permitted to slip over the obstacle. If the obstacle is of any considerable size the pivotal movement of the scraper will usually cause a slight upward movement of the shanks 2. By the construction and arrangement of the scraper on pivotal supports and the bracing or holding in place of the scraper by springs, a construction is

presented which will permit the use of the scraper on any kind of ground regardless of the obstacles therein, without any danger of injuring the scraper on the machine.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. In a device of the character described, the combination with a support, of a scraper blade pivotally mounted on said support, a plurality of adjustable plates arranged near the upper edge of the scraper blade, a pair of restraining springs connected with said adjustable plates for normally and resiliently resisting the pivotal movement of the scraper blade, and a plurality of springs acting substantially in opposition to said first named springs for holding the scraper blade in a predetermined position.

2. In a device of the character described, the combination with a supporting vehicle, of a pivotally mounted scraper connected with said supporting vehicle, a plurality of inwardly extending brackets connected with said supporting vehicle, a spring for each of said brackets connected therewith at one end and with the upper part of said scraper at the opposite end, and a pair of substantially oppositely positioned springs connected to the upper edge of the scraper and to said supporting vehicle in front of the scraper.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE E. TUCKER.

Witnesses:
JOHN S. CAPRON,
HENRY SHELTER.