(No Model.)

W. L. CAVERLEY.

GRAVEL COLTER ATTACHMENT FOR ROAD GRADERS.

No. 588,554. Patented Aug. 24, 1897.

Fig. 1.

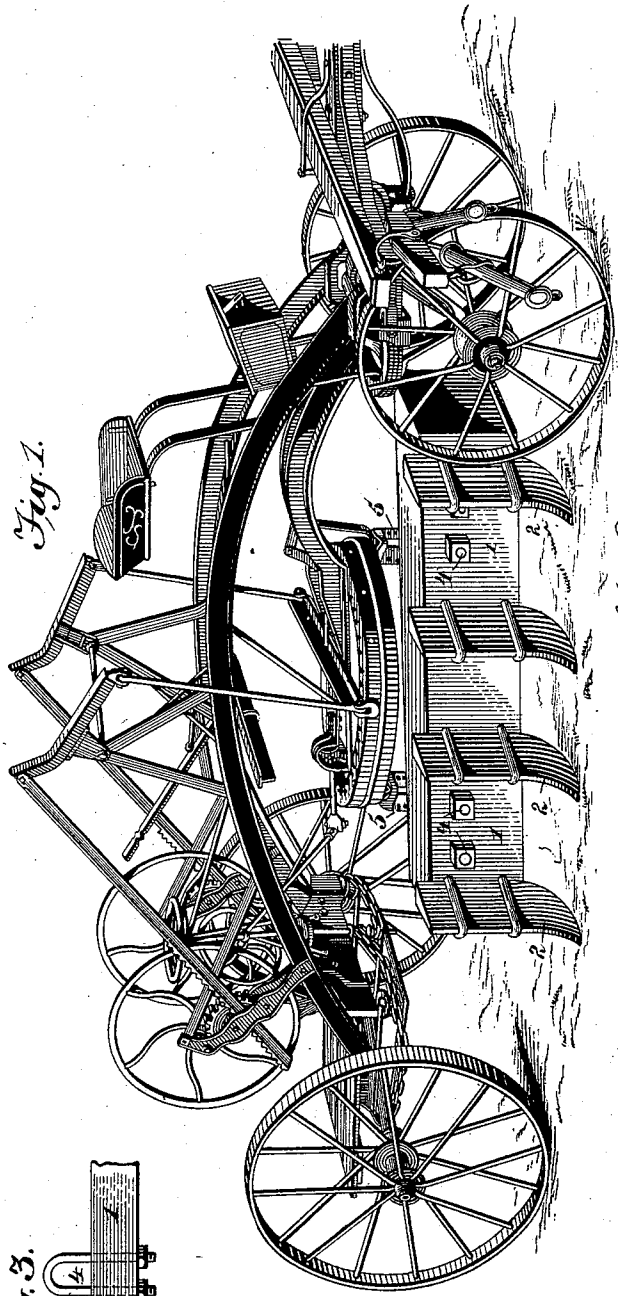


Fig. 2.

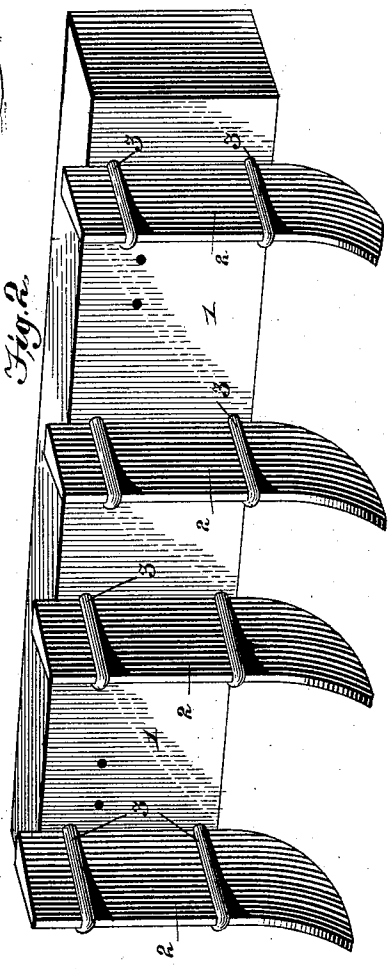


Fig. 3.

Inventor
William L. Caverley.

Witnesses
H. G. Dieterich
V. B. Hillyard.

By his Attorneys,
C. A. Snow & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM L. CAVERLEY, OF HAW CREEK, MISSOURI.

GRAVEL-COLTER ATTACHMENT FOR ROAD-GRADERS.

SPECIFICATION forming part of Letters Patent No. 588,554, dated August 24, 1897.

Application filed June 10, 1896. Serial No. 595,041. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM L. CAVERLEY, a citizen of the United States, residing at Haw Creek, in the county of Pike and State of Missouri, have invented a new and useful Gravel-Colter Attachment for Road-Graders, of which the following is a specification.

In operating road scraping and grading machinery over stony and hard surfaces great difficulty is experienced in causing the share or blade to take hold and perform the required work. This is due to the condition of the road-surface, which resists the penetration of the blade to such an extent as to remove a small portion sufficient to level and provide a smooth and even bed or surface.

The purpose of the present invention is the construction of an attachment which can be applied to a road scraper or grader of ordinary construction and which can be interchangeably used in connection with the ordinary share or blade, said attachment being constructed with especial reference to penetrating hard and stony surfaces and loosening the same, whereby when the ordinary share or blade is placed in position it will level the road and perform the work in a satisfactory manner and as rapidly as if the surface of the road were comparatively soft and susceptible to the action of the share or blade.

The improvement consists, essentially, of a beam or block provided with colters and adapted to replace the usual share or blade when equipping the machine for operation upon stony and hard-surfaced roads.

For a full understanding of the merits and advantages of the invention reference is to be had to the accompanying drawings and the following description.

The improvement is susceptible of various changes in the form, proportion, and the minor details of construction without departing from the principle or sacrificing any of the advantages thereof, and to a full disclosure of the invention an adaptation thereof is shown in the accompanying drawings, in which—

Figure 1 is a detail view of a road-machine, showing the attachment fitted thereto. Fig. 2 is a detail view of the attachment. Fig. 3 is a detail view showing more clearly the means for securing the attachment to a machine and the colters to the beam or block.

As previously intimated, the attachment is designed to be applied to any style or make of road-machine, and the machine illustrated is of ordinary form and is shown simply to designate the relative location of the attachment. Inasmuch as the road-machine shown in the accompanying drawings forms no part of the present invention a description thereof is not deemed necessary. Suffice it to say that the ordinary share or blade is removed and the attachment placed in position.

The improvement consists of a beam or block 1 of proper dimensions, according to the nature of the work to be performed and the character of the machine for which the device is designed. Colters 2 are applied to the beam or block and are reduced and sharpened at their lower ends, so as to penetrate the surface of the road and loosen the same for the subsequent action of the share or blade.

The colters are comparatively thin and wide and increase in thickness from their front to their rear edges, so as to present a wedge-shaped appearance in cross-section. These colters are placed with their wide edges against the beam, so as to obtain sufficient purchase to prevent the turning of the colters when the machine is in operation. By having the colters gradually increasing in thickness from their front to their rear edges a broad bearing is secured against the beam and the colters are strengthened, so as to enable them to resist the strain to which they will be subjected when in service. Moreover, the front edges are narrow, thereby enabling the points of the colters to better penetrate the hard surface of a road-bed. Suitable clips or fastenings 3 are employed for adjustably and removably connecting the colters with the beam or block. These clips, as shown most clearly in Fig. 3, have their side members diverging to correspond with the inclination of the sides of the colters, so as to grip the same by a wedging action when drawn up tightly, thereby preventing the colters from slipping when forced down upon the road to

cause their active ends to penetrate the surface. The number and position of the colters will depend upon the strength of the machine and the draft to be employed for drawing the machine over the road. Appropriate fastenings 4 will be provided and applied to the beam or block 1 for securing the latter to the machine.

When the surface of the road is stony or hard and not capable of readily yielding to the ordinary share or blade, the latter is removed and substituted by the attachment, which is applied to the standards or parts 5, to which the usual blade is fitted. The attachment being in position, as shown in Fig. 1 of the drawings, the machine is drawn over the road in the ordinary manner and the active ends of the colters penetrating the surface will loosen the latter and prepare the same for the subsequent action of the blade. After the stony and hard surface has been prepared and loosened the attachment is replaced by the share or blade and the machine is again drawn over the road, thereby leveling, smoothing, and otherwise preparing it, as may be required.

Having thus described the invention, what is claimed as new is—

In a road-scraper, the combination of a beam, means for adjustably connecting the beam with the operating mechanism of the road-machine, a series of similarly-formed cutting-tools braced against the front side of the beam, and having their lower ends bent forward and their body portions of uniform dimensions throughout their length, and made thin and wide and wedge-shaped in cross-section, with their wider edges placed against the aforesaid beam, and clips having their side members diverging to conform to the inclined sides of the cutting-tools to grip them by a wedging action and admit of each having an independent vertical adjustment, substantially in the manner set forth for the purpose specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM L. CAVERLEY.

Witnesses:
J. G. CASH,
W. S. WORSHAM.