UNITED STATES PATENT OFFICE.

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SLOPER ATTACHMENT FOR ROAD PLANERS OR SCRAPERS.

1,329,858.


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To all whom it may concern:

Be it known that I, Timothy Ryan, a citizen of the United States, residing at Loveland, in the county of Pottawattamie and State of Iowa, have invented certain new and useful Improvements in Sloper Attachments for Road Planers or Scrapers, of which the following is a specification.

This invention relates to an attachment for excavator wagon loaders and scrapers or road planers by which the face of a bank may be sloped or cut off smooth, on an incline, after being plowed down by the plow or excavator.

My object is to provide a simple, inexpensive and improved sloper attachment which has improved means for attaching it to the machine and for bracing the cutting blade that slopes or trims the bank. My invention constitutes an attachment which may be quickly and easily applied to, or removed from, any excavator wagon loader or blade grader or rotary planer, and set so that the cutting blade will be at any desired angle necessary to properly trim or slope the bank. Draft chains or cables are employed for pulling the sloping blade along and taking up the major portion of the strain, although the clamps or attaching means used are of such improved form and arrangement that the device is securely attached to the grading or excavating machine.

The invention is set forth fully hereinafter and the improved and novel features thereof are recited in the appended claims.

In the accompanying drawings,

Figure 1 is a view showing the sloping attachment connected to an excavator wagon loader, so much of the latter being shown as is necessary to a clear understanding of how the attachment is used;

Fig. 2 is a detail front elevation illustrating the position of the parts when they are in use;

Fig. 3 is a plan view thereof; and

Fig. 4 is an end view showing the relationship of the angle bar and the cutting blade.

The invention is shown applied to an excavator wagon loader but it is just as well adapted for application to a blade grader or scraper. One of the side beams of the machine frame appears at 1; the plow beam is shown at 2.

My invention appears in Figs. 2, 3 and 4; it is shown attached to the machine in Fig.

1. The sloper has an angle bar 3 of suitable length; in practice this may be seven feet long, but I do not restrict myself to any particular length. The bar is straight for the major portion of its length, but is preferably somewhat laterally curved or bent at what constitutes its lower end portion 4. The knife or cutting blade 5 may extend the full length of the bar 3 and constitutes a flat piece of metal which is secured to the under side of the angle bar 3 by bolts 6 so as to be detachable for purposes of sharpening or renewal. The effective portion of the blade projects as shown in Figs. 3 and 4. An angle clamp 7 which is secured at 8 to the lower end 4 of the angle bar 3, is provided with a yoke 9 having suitable nuts 10, the legs of the yoke passing through one of the webs of the angle clamp 7. The angle clamp 7 is secured to the plow beam 2 by the yoke 9, which embraces the plow beam. The connection thus provided is very firm and there is little likelihood of slippage. Furthermore, the clamp thus provided enables the attachment to be applied to any point of the length of the plow beam, according to requirements. There is another angle clamp 11 which has a yoke 12 adapted to embrace the side beam 1 of the excavator frame. This clamp can be attached to any point of the length of the beam 1. An adjustable brace 13 connects the angle bar 3 with the clamp 11, said brace comprising sections 14, 15 which telescope within each other and are respectively bolted at 16 and 17 to the upright webs of the clamp 11 and the angle bar 3. The sections 14, 15 have holes 18, 19 through which a locking pin 20 may be passed. By adjusting the brace 13, the angle bar 3 and the cutting blade 5 may be positioned at any desired angle so that the face of the bank will be trimmed or sloped at the angle desired.

Suitable chains 21, 22 connect the lower and upper parts of the cutting blade 5 with the beam 2 at suitable points of the length thereof. The chains 21, 22 constitute draft chains for pulling the sloper along and largely taking the strain off of the clamps 7 and 11.

What I claim is:

1. A bank-sloping attachment for excavators or scrapers comprising a cutting blade, an attaching clamp secured thereto and one or more angle clamps for connection to the beam of the excavator, adapted for application to the excavator or
scraper, an adjustable brace for holding the blade in upwardly inclined position, and a clamp secured by said adjustable brace, also adapted for attachment to the excavator or scraper, said clamps and brace being adapted for securing the cutting blade in outwardly extending and upwardly inclined relation to the excavator or scraper.

2. A bank-sloping attachment for excavator or scrapers comprising an angle bar, a blade connected to one of the webs of the angle bar, an upright clamp secured to the angle bar, an adjustable brace secured to the angle bar, and a second clamp which is carried by the adjustable brace, said brace holding the angle bar and blade in upwardly inclined position, the aforesaid clamps being adapted for the attachment of the device to an excavator or scraper.

3. A bank-sloping attachment for excavators or scrapers comprising an angle bar, a blade detachably secured to one of the webs of said angle bar, an upright angle clamp secured to the angle bar and provided with a yoke, a brace comprising telescope sections and means for fastening them together at different points of contraction or extension, said brace having one of its sections connected to the angle bar, and a second angle clamp to which the other section of the brace is connected and which is also provided with a yoke, said brace holding the angle bar and blade in upwardly inclined position, said angle clamps being adapted for securing the attachment to an excavator or scraper.

4. The combination with an excavator or scraper, of a sloper cutting attachment comprising a cutting blade disposed in outwardly extending and upwardly inclined relation to the excavator or scraper, a clamp for securing said blade to the excavator or scraper, a brace for holding the cutting blade in upwardly inclined position, and another clamp carried by the brace for securing it to the excavator or scraper.

5. The combination with an excavator or scraper, of a sloper attachment comprising a cutting blade disposed in outwardly extending and upwardly inclined relation to the excavator or scraper, draft means connecting the cutting blade to the excavator or scraper, a clamp connecting the cutting blade to the excavator or scraper, an adjustable brace connected to the cutting blade and holding it in upwardly inclined position, and another clamp carried by the adjustable brace which also connects the attachment to the excavator or scraper.

In testimony whereof I affix my signature.

TIMOTHY RYAN.