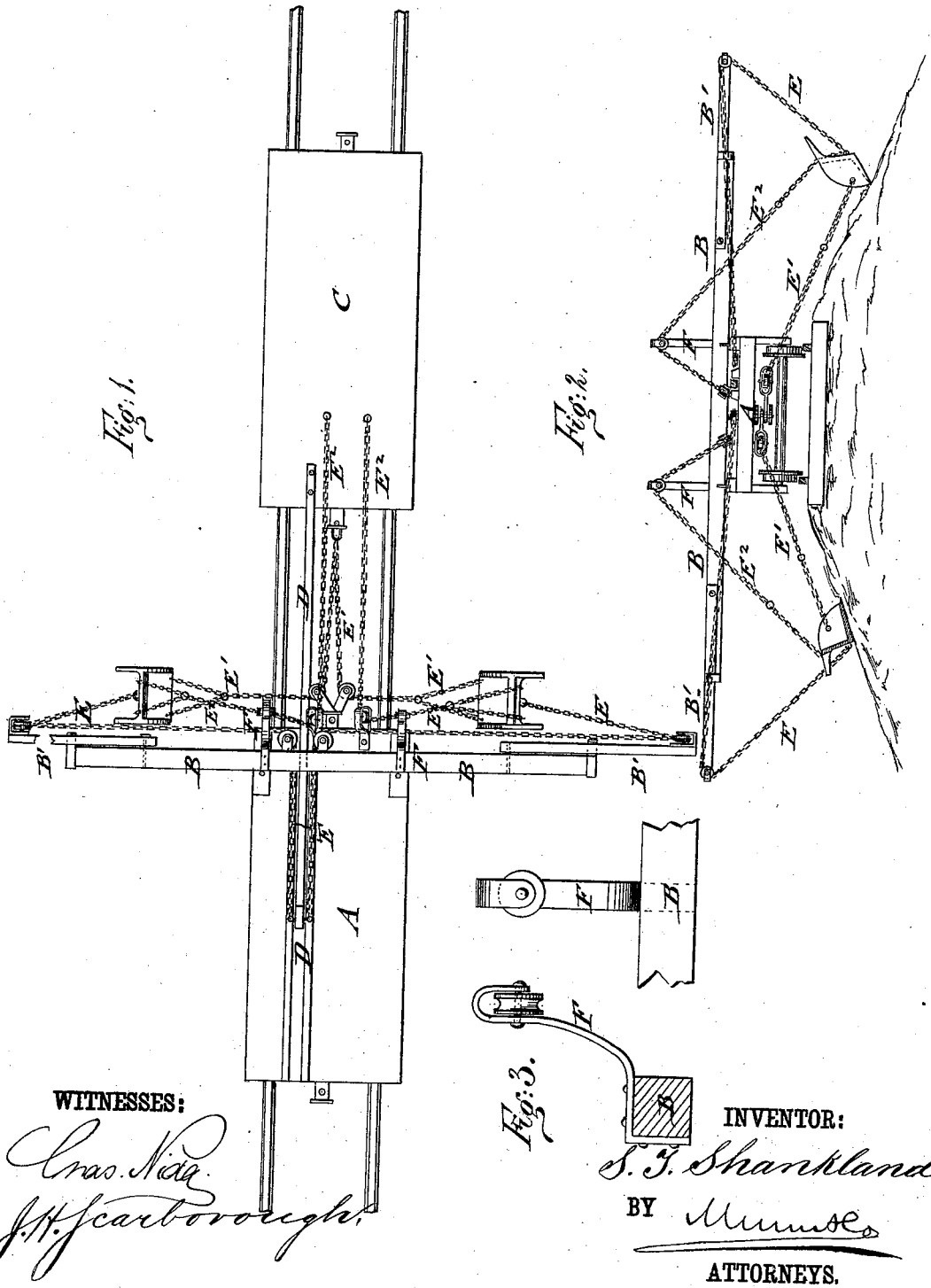
S. T. SHANKLAND.

Steam-Plowing and Scraping Attachment to Cars.

No. 196,836. Patented Nov. 6, 1877.



WITNESSES:

Chas. Nidy.

J. W. Scarborough.

INVENTOR:

S. T. Shankland.

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

SAMUEL T. SHANKLAND, OF LARAMIE, WYOMING TERRITORY.

IMPROVEMENT IN STEAM PLOWING AND SCRAPING ATTACHMENTS TO CARS.

Specification forming part of Letters Patent No. **196,836**, dated November 6, 1877; application filed August 18, 1877.

To all whom it may concern:

Be it known that I, SAMUEL T. SHANKLAND, of Laramie, in the county of Albany and Territory of Wyoming, have invented a new and Improved Steam Plowing and Scraping Attachment to Cars, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a plan view of my improved steam plowing and scraping attachment to cars; Fig. 2, an end view of the attachment, and Fig. 3 shows a detailed side and end view of the crane attachment for dumping the scrapers.

Similar letters of reference indicate corresponding parts.

The object of this invention is to so improve the steam plowing and scraping attachment to cars which is used for the purpose of raising railroad-tracks and widening embankments, and for which Letters Patent have been granted to me heretofore, dated April 24, 1877, and numbered 189,961, that the scrapers may be dumped automatically at any desired distance from the track, and that thereby the men attending the scrapers have merely to fill the same, which facilitates the work, and produces a great saving of time and labor.

The invention consists of the combination, with the scrapers which are used for railroad-grading, and which receive a forward and backward motion by a slide-connection of a movable car with a fixed back car, of a dumping mechanism, consisting of chains attached to the scrapers and passing over cranes of the plow-beam, and over pulleys of the fixed and movable cars, to the end of the movable car, where they are adjustably attached, so as to regulate the distance the scrapers are to be dumped from the track.

In the drawing, A represents a car having a centrally-pivoted plow-beam, B, at one end. C is a second car, which is moved forward and backward by a locomotive, and communicating its motion by means of a slide-beam arrangement, D, along car A, car A being held, by means of the brakes, in stationary position on the track. The plow-beam and car A work directly the plows parallel to the track, while the scrapers are worked transversely to the track by the forward and backward motion of car C and chains E and E′, of which the former pass from the rear of the scrapers over pulleys at the ends of the scraper-beams or extensions B′ of the plow-beam and over pulleys upon car A, to the end of the slide beam or beams, while the chains E^1 pass from the front of the scrapers, over pulleys upon car A, to the draw-head or other point of attachment of car C. One set of chains pulls the empty scrapers away from the track, while the other set pulls the loaded scrapers up toward the track. To the rear parts of the scrapers are attached the chains E^2, which pass from the scrapers to fixed cranes F of the plow-beam B, running over pulleys of said cranes. The chains E^2 pass then from the pulleys of the cranes F over inclined pulleys of car A, and then to car C, to which the chains E^2 are attached in such a manner that they may be lengthened or shortened thereon.

It will be seen that the direction of draft of chains E^3 is more upward than that of chains E^1, and therefore, the said chains being attached to the car C in proper proportionate lengths, as the car C moves forward equal lengths of chain, indeed, will be drawn through the pulleys; but the upward draft of E^2 will cause the rear portion of the scraper to be lifted, as on the right of Fig. 2, sufficiently to empty said scraper. The point on the side of the roadway where this shall take place may be varied by varying the proportionate lengths of the chains E^1 and E^2.

By this dumping attachment my steam plowing and scraping attachment to cars is perfected, and rendered more effective than heretofore.

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

1. The combination, with a scraper for railroad-grading that receives a back and forward motion from a slide-connection of a movable front with a stationary back car, of an automatic dumping attachment, substantially as and for the purpose described.

2. The combination, with a scraper for railroad-grading that receives a backward and forward motion transversely to track by a slide-connection of a movable with a station-

ary car, of an adjustable dumping attachment, that dumps the scraper automatically at any desired distance from the track, substantially as specified.

3. The combination, with a scraper for railroad-grading that receives a back and forward motion transversely to track by a slide-connection of a movable and stationary car, of an adjustable dumping-chain, extending from back of scraper over a crane of stationary car, and over suitable pulleys to movable car, substantially as and for the purpose set forth.

SAMUEL T. SHANKLAND.

Witnesses:
S. L. MILLS,
E. DICKINSON.