J. J. MITCHELL.

PITCH ADJUSTER FOR DRAG LINE EXCAVATOR BUCKETS.

APPLICATION FILED JAN. 4, 1916.

1,183,750.

Patented May 16, 1916.

2 SHEETS—SHEET 1.

Fig. 1.

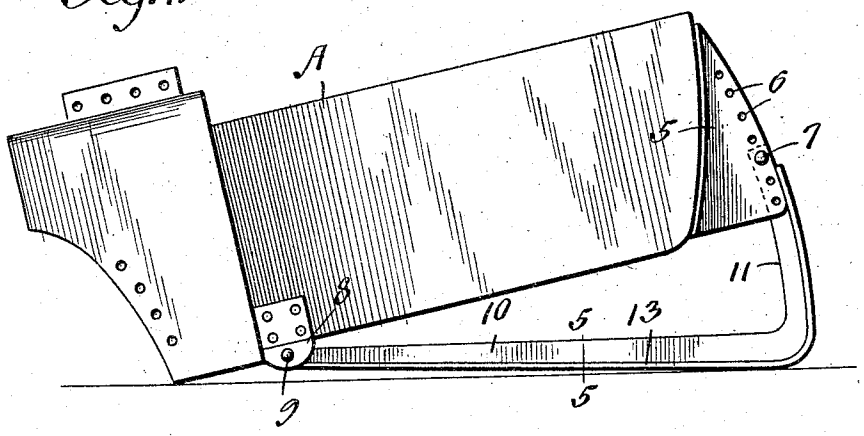


Fig. 6.

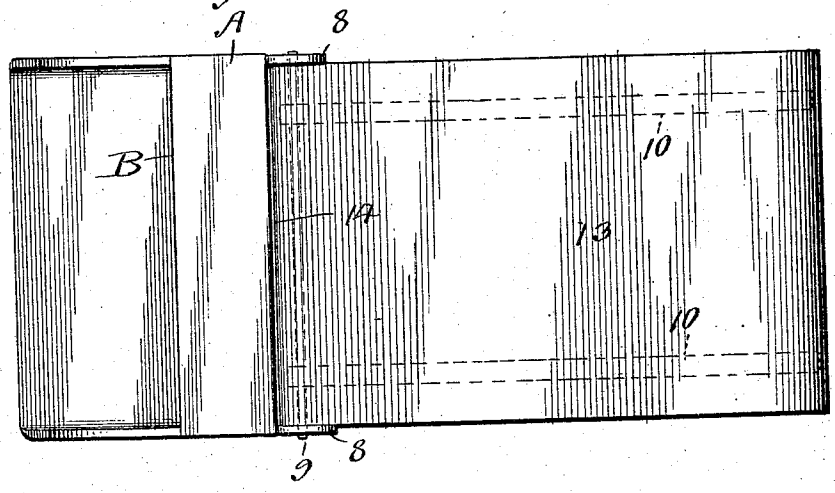
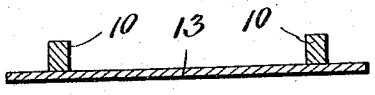


Fig. 5.



Inventor

J. J. Mitchell,

Witnesses

By Victor J. Evans

Attorney

J. J. MITCHELL.

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2 SHEETS—SHEET 2.

Fig. 4.

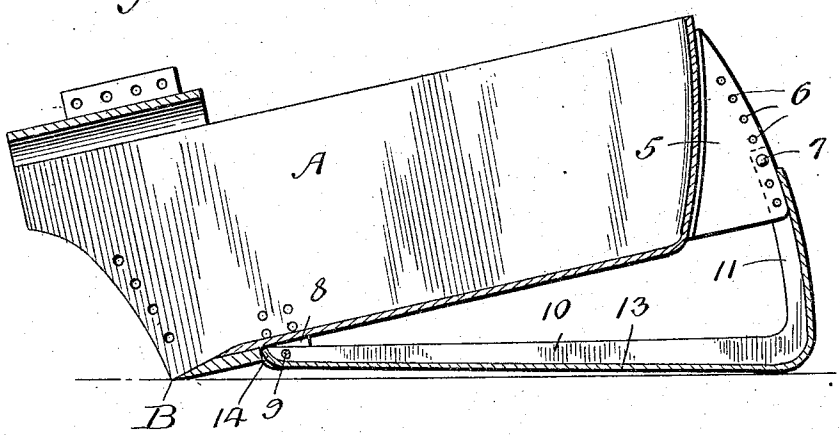


Fig. 2.

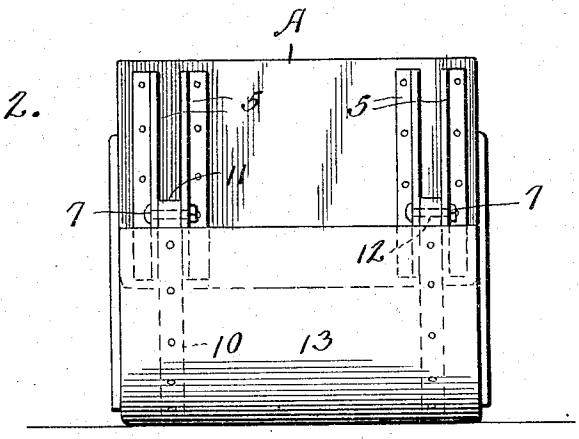
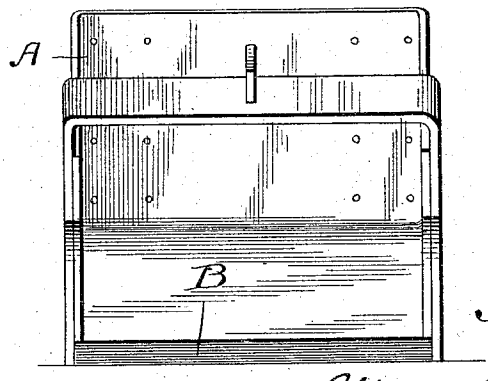


Fig. 3.



Witnesses

E. A. Lucas Jr.

H. C. Fowler

Inventor

J. J. Mitchell,

By Victor J. Evans

Attorney

THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JESSE J. MITCHELL, OF PARKERSBURG, WEST VIRGINIA.

PITCH-ADJUSTER FOR DRAG-LINE EXCAVATOR-BUCKETS.

1,183,750. Specification of Letters Patent. Patented May 16, 1916.

Application filed January 4, 1916. Serial No. 70,089.

To all whom it may concern:

Be it known that I, JESSE J. MITCHELL, a citizen of the United States, residing at Parkersburg, in the county of Wood and State of West Virginia, have invented new and useful Improvements in Pitch-Adjusters for Drag-Line Excavator-Buckets, of which the following is a specification.

The invention relates to drag line excavator buckets, and more particularly to the class of pitch adjusters for drag line excavator buckets.

The primary object of the invention is the provision of a bucket of this character wherein the same can be readily adjusted to vary the pitch thereof so as to permit deep and shallow digging and also for the quick loading of the bucket.

Another object of the invention is the provision of a pitch adjuster of this character wherein the construction thereof permits the same to be mounted upon or removed from the bucket and when on the bucket will adjust the same so as to vary the angular disposition of the bucket when being dragged for excavating purposes.

A further object of the invention is the provision of a pitch adjuster of this character which is novel in construction to assure the proper angular disposition of the bucket when being dragged and permits the quick and convenient adjustment of the bucket to vary the pitch thereof as the occasion may require.

A still further object of the invention is the provision of a pitch adjuster of this character which is extremely simple in construction, thoroughly reliable and efficient in operation, strong, durable and inexpensive to manufacture.

Other objects will be in part obvious and in part hereinafter pointed out.

The invention accordingly consists in the features of construction, combination of elements and arrangement of parts which will be exemplified in the construction hereinafter set forth, and the scope of the application of which will be indicated in the claims hereunto appended.

In the accompanying drawings: Figure 1 is a side elevation of a drag bucket showing the adjuster constructed in accordance with the invention applied thereto; Fig. 2 is a rear elevation; Fig. 3 is a front elevation; Fig. 4 is a vertical longitudinal sectional view; Fig. 5 is a transverse sectional view on the line 5—5 of Fig. 1; and Fig. 6 is a bottom plan view.

Similar reference characters indicate corresponding parts throughout the several views of the drawings.

Referring to the drawings in detail, A designates generally a drag bucket which is of the ordinary well known construction, having at its front end the cutting edge B, while on the rear end are mounted spaced parallel angle eyes 5 having a series of holes 6 for receiving adjustable pins 7 for a purpose hereinafter fully described. Secured to opposite sides of the bucket A are bearing ears 8 supporting a pivot rod 9 for swingingly connecting to the body of the bucket A the arms 10 which are extended rearwardly of the bucket beneath the bottom thereof and are formed with upwardly curved rear ends 11 which work between the parallel angle eyes 5 and have holes 12 adapted to register with the holes 6 for receiving the adjustable pins 7, thereby locking the arms in adjusted position relative to the body of the bucket A for varying the pitch of the latter when dragged by the excavator or machine. Fixed to the arms 10 substantially the length thereof is a plate 13 which is bent in accordance with the contour of the arms 10 and is formed at its forward end with an upstanding upwardly curved lip or flange 14 which serves to prevent the dirt cut by the edge B from working rearwardly between the plate 13 and the bottom of the body of the bucket, while the rear end portion of the said plate 13 will prevent the dirt entering between the latter and the bottom of the bucket when said bucket is dragged backwardly. The plate 13 is adapted to rise over the ground while the arms 10 serve to hold the body of the bucket A at the desired angular pitch for deep or shallow digging and also to aid in the quick loading of the bucket.

From the foregoing description, taken in connection with the accompanying drawings, the construction and manner of operation will be readily apparent and a more extended explanation of the invention has, therefore, been omitted.

Having thus described my invention, I claim:

1. The combination with a drag bucket, of a pair of arms pivotally connected to the forward end portion of the bucket and having upstanding rear ends, guides on the rear

ends of the bucket and between which work the upstanding rear ends of the arms, means passed through the guides and upstanding ends to adjustably connect the arms to the bucket, and a plate secured to the arms and co-extensive in length therewith.

2. The combination with a drag bucket, of a pair of arms pivotally connected to the forward end portion of the bucket and having upstanding rear ends, guides on the rear ends of the bucket and between which work the upstanding rear ends of the arms, means passed through the guides and upstanding ends to adjustably connect the arms to the bucket, a plate secured to the arms and co-extensive in length therewith, and an upstanding lip formed at the front end of the plate and disposed rearwardly of the cutting edge of the bucket to prevent the working of dirt between the plate and the bottom of the bucket.

In testimony whereof I affix my signature in presence of two witnesses.

JESSE J. MITCHELL.

Witnesses:
CLARA B. OLIVER,
JAMES BOOTH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."