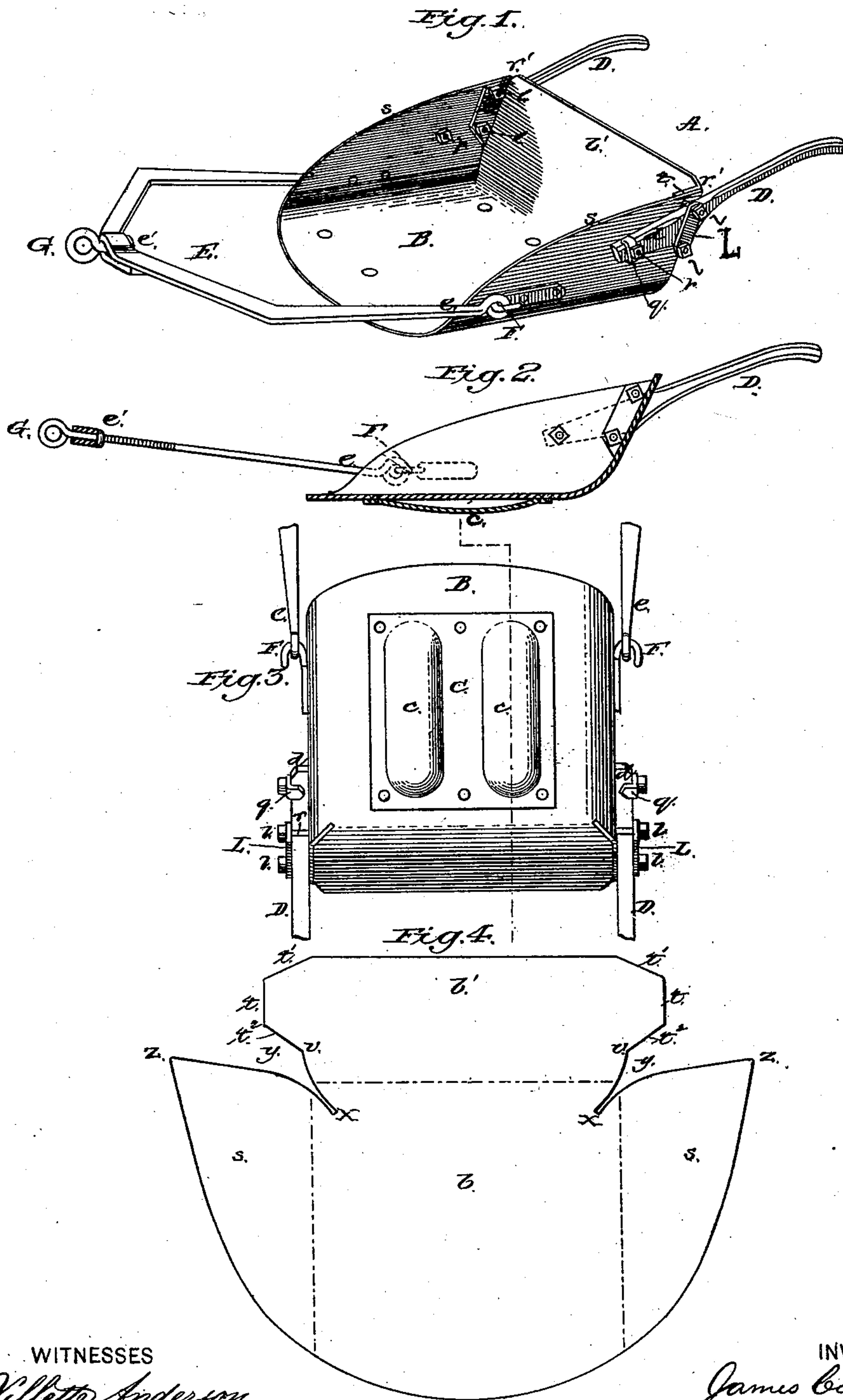


(No Model.)

J. COSGROVE & S. F. WELCH.  
Drag Scraper.

No. 243,515.

Patented June 28, 1881.



WITNESSES

Villette Anderson  
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# UNITED STATES PATENT OFFICE.

JAMES COSGROVE AND S. FRANK WELCH, OF MOUNT PLEASANT, IOWA.

## DRAG-SCRAPER.

SPECIFICATION forming part of Letters Patent No. 243,515, dated June 28, 1881.

Application filed February 5, 1881. (No model.)

*To all whom it may concern:*

Be it known that we, JAMES COSGROVE and S. FRANK WELCH, of Mount Pleasant, in the county of Henry and State of Iowa, have invented a new and valuable Improvement in Drag-Scrapers; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a perspective view of this invention. Fig. 2 is a sectional view of the same. Fig. 3 is a bottom view of the drag. Fig. 4 is a view of the blank.

Our invention relates to road-scraper of that class in which a scraper-box with handles at its rear end is drawn by a draft bail or chain at its forward end to load it, and is adapted to be turned over forward upon the draft-bail, or sidewise, by means of a swivel attached to the forward end of the draft-bail to discharge the load; and the invention consists, first, in a scraper-box formed of a blank of suitable material, which may be bent into shape to form a strong box, with the material which forms the back of the scraper-box bent or lapped over on the outside or inside of the sides of the box, at the rear corners of the same, to join the back to the sides of the scraper in such manner as to give unity and strength to the box, the handles being attached thereto by plates or clips in conjunction with bolts or rivets, the whole being intended to answer the twofold purpose of securing the corners of the box and strengthening the point of attachment of the handles thereto; second, in a scraper-box having a flat bottom with a single plate of pressed metal attached thereto and extending nearly across the scraper-bottom in both a longitudinal and lateral direction, to strengthen and protect it, and having two parallel rockers or runners pressed or stamped into the metal to form a curved protuberance running from front to rear of said plate, and said rockers or runners being curved in a lateral direction to form an undulating surface from side to side of said plate, the whole being intended to facilitate the raising and lowering of the scraper while loading or unloading, and

to allow of an even and steady motion while being hauled with a load, as will be hereinafter fully described, and particularly pointed out in the claims.

Referring by letter to the drawings, A designates the drag-scraper, the scraper-box B of which is formed from a single plate, *b*, of steel or other suitable metal cut into a blank or form, as shown in Fig. 4. Its sides *s s* are bent upward on the vertical dotted lines in Fig. 4 to form a curve with the bottom of the scraper, and the rear part, *b'*, is bent up along the horizontal dotted line in said Fig. 4 to form a curve with the bottom of the scraper, in like manner as the sides thereof. The ends of the rear portion, *b'*, of the blank are bent forward to lap over the outsides or the insides of the rear ends of the sides *s s* of the scraper, to unite and strengthen the box at the corners *r' r'*, to which the handles D D are secured by tie-plates or clips L L *q q*, in conjunction with bolts or rivets *l l r r*. By this construction the corners *r' r'* are secured and the handles D D secured to the corners by the same set of bolts or rivets.

E designates an ordinary draft-bail attached to the outside of the scraper-box, near the front, by ordinary lugs, F F.

C designates a plate, preferably of steel, pressed or stamped into shape so as to form two parallel runners or rockers, *c c*, curved from front to rear of the plate C, said runners or rockers *c c* being also curved from near the center (longitudinally) of the plate to near the sides thereof in an undulating or convex form, as shown in Fig. 3, thus forming an undulating surface from front to rear and from side to side of the plate C, except at the extreme edges, which lie flat and close to the bottom of the scraper-box, for the purpose of preventing earth or other substances from entering and lodging between the plate C and the bottom of the scraper-box. The plate C, by reason of its undulating and curved surfaces, is subject to friction throughout its entire area, thus preventing the clogging of dirt at any portion of the surface thereof and allowing of a free and steady motion while in the process of loading or while being hauled with a load. The plate C extends nearly across from side to side and from front to rear of the bottom of

the scraper-box, and is attached at its front and rear ends to the bottom of the scraper by rivets, thereby strengthening and stiffening the bottom of the scraper-box and preventing the wearing of the same while in use. The plate C, by means of its rockers or runners, facilitates the forcing of the forward end of the scraper into the ground, tipping and turning it, and raising the upper end from the ground after filling.

G designates an eye on a swivel-bolt in the draft-bail, which facilitates the turning of the scraper from side to side.

By reason of the rounding of the bottom with the back in process of loading the scraper the dirt will not be forced squarely against the back, but will follow the curve of the bottom and back, thereby relieving the pressure of the dirt against the back, and thus allowing the scraper to fill with greater ease to the team.

What we claim as new, and desire to secure by Letters Patent, is—

1. A scraper-box formed of a blank cut and the ends of its rear portion, *b'*, and sides bent as described, in combination with the bolts or rivets *l l r r*, plates or clips *L L* and *q q*, and the handles *D D*, substantially as described, and for the purposes specified.

2. In combination with the scraper-box, the plate C, having the runners *c c*, substantially as and for the purposes set forth.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

JAMES COSGROVE.  
S. FRANK WELCH.

Witnesses:

J. R. WILLIAMS,  
F. W. SCHULZ.