

No. 667,605.

Patented Feb. 5, 1901.

J. STUBBS.  
DRAG SCRAPER.

(Application filed June 15, 1900.)

(No Model.)

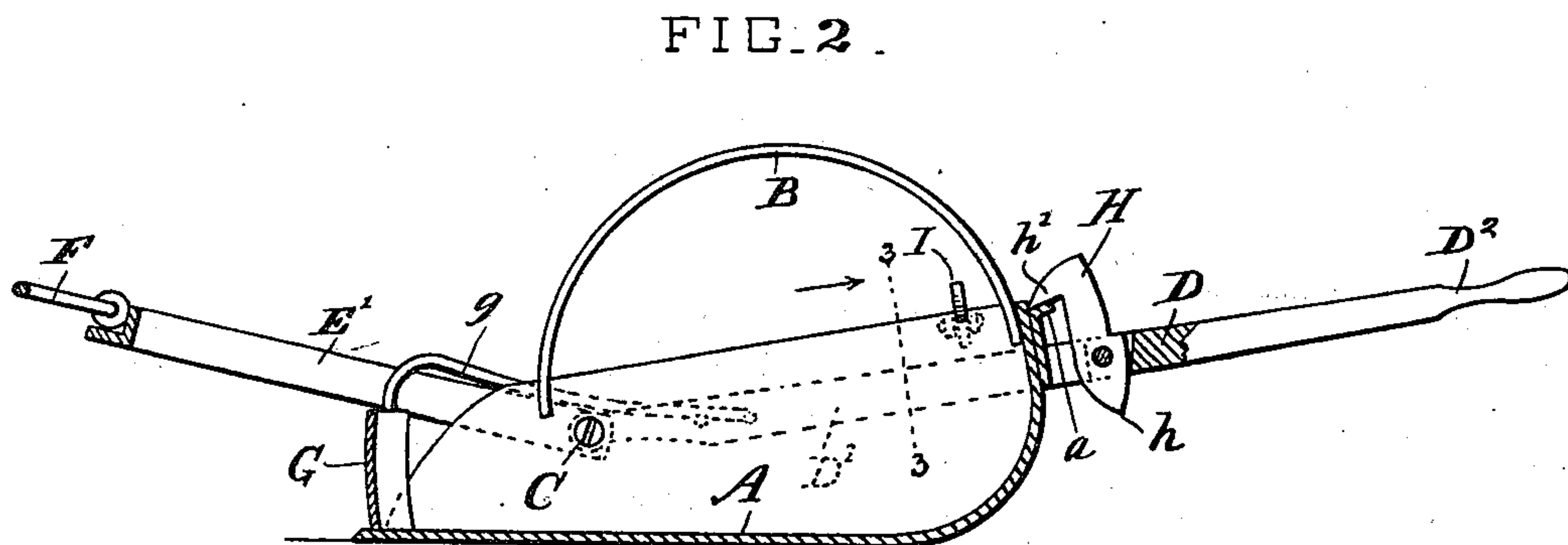
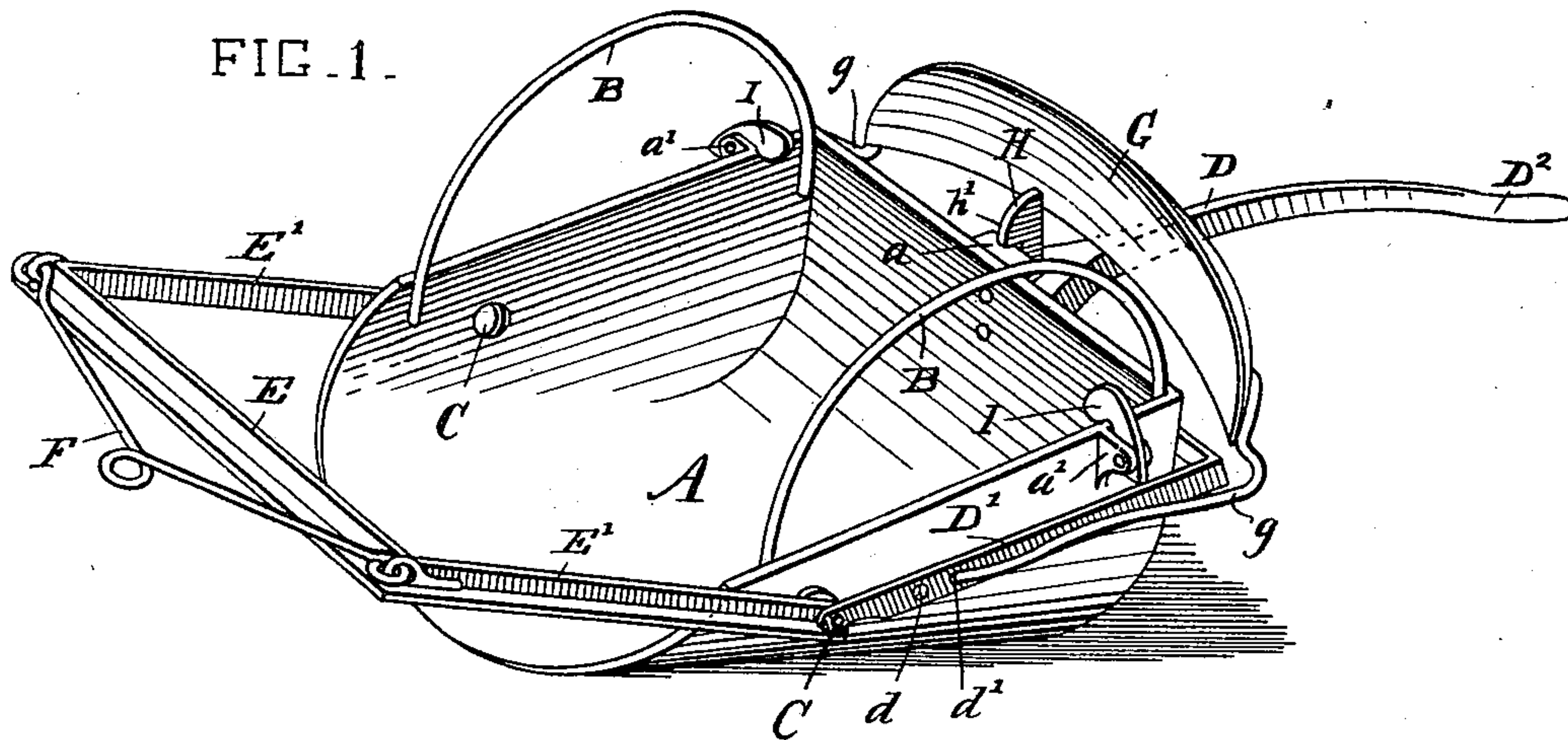


FIG. 3.

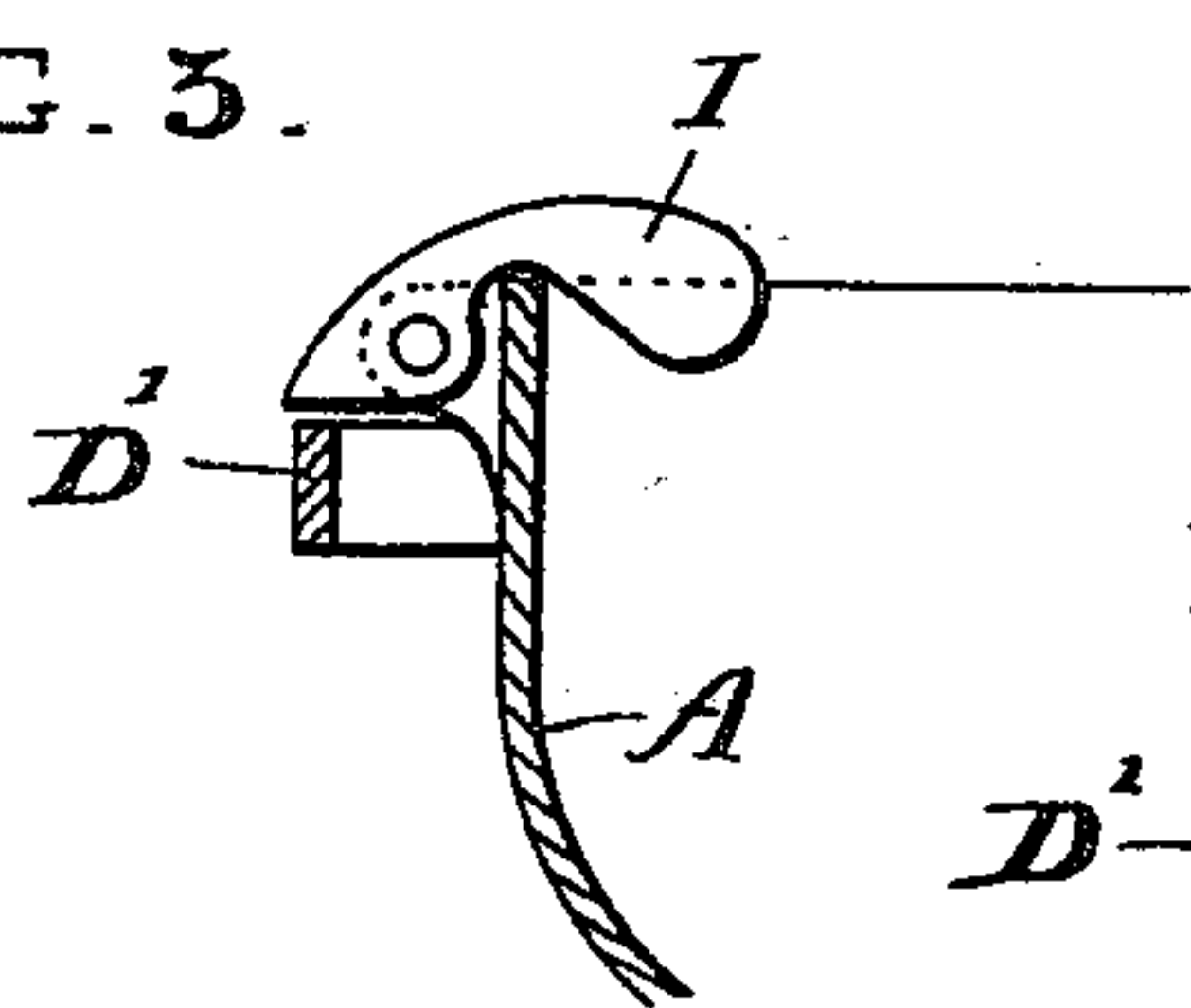


FIG. 4.

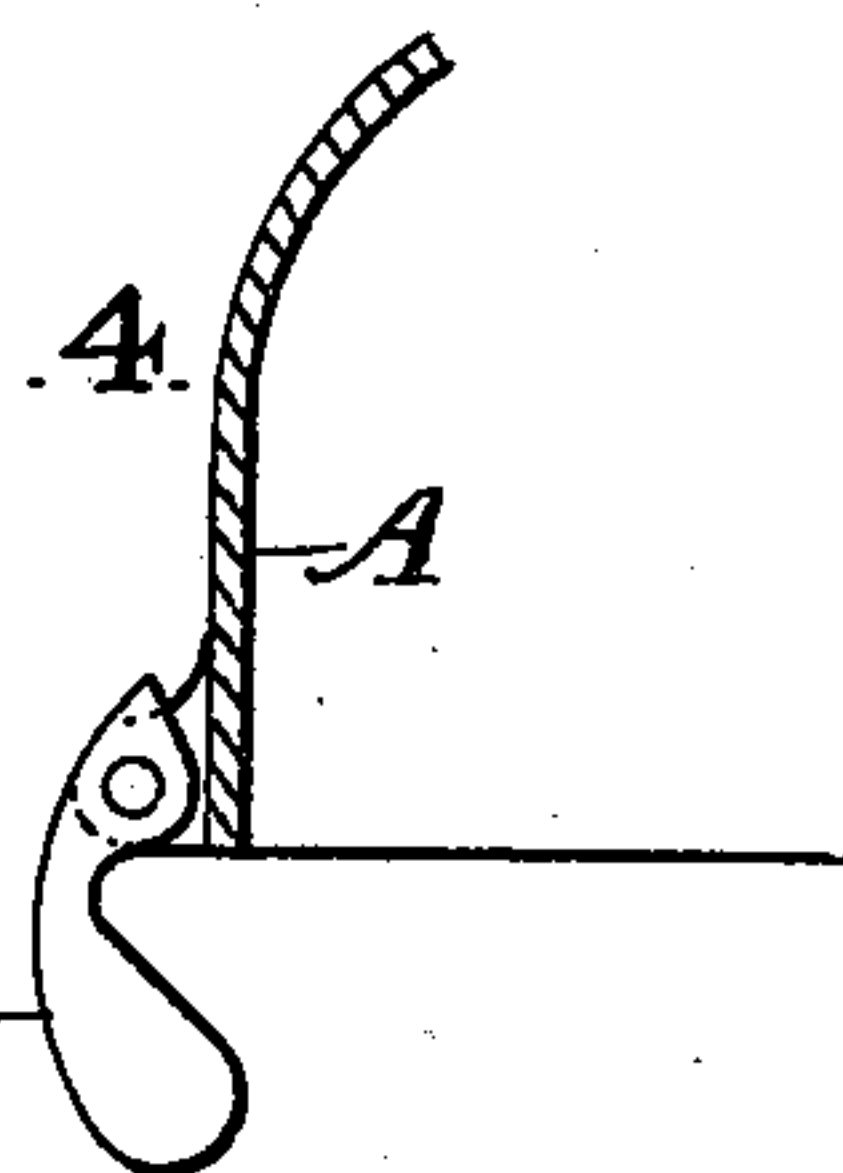
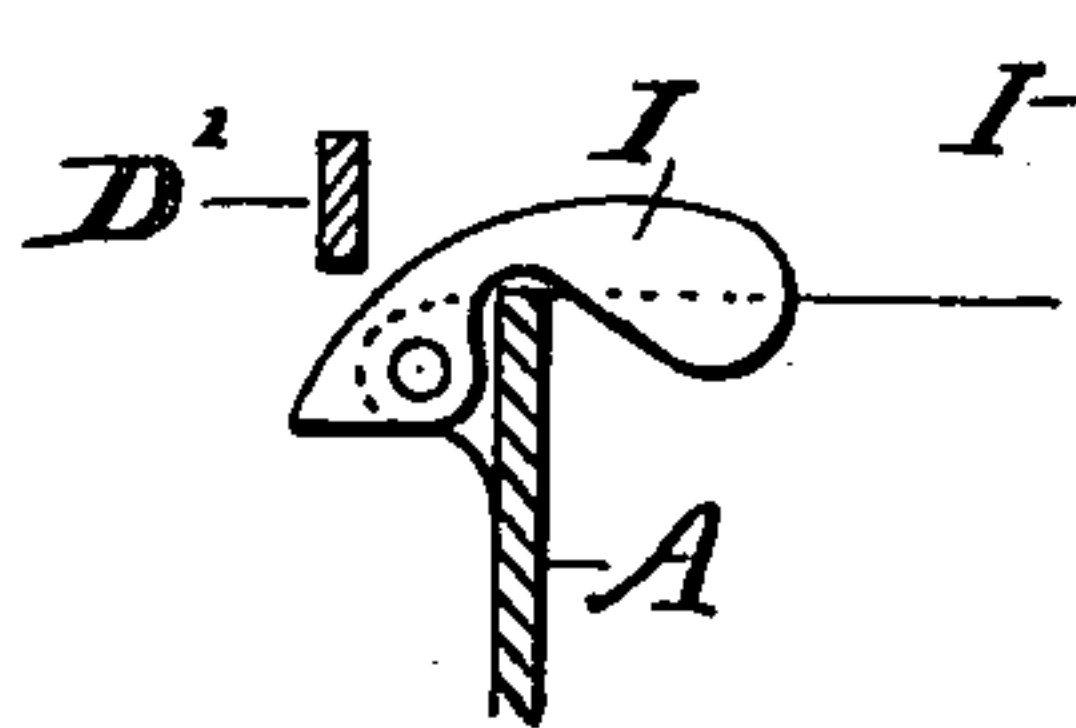


FIG. 5.



WITNESSES:  
F. B. Townsend,  
Robert N. Holt.

INVENTOR.  
Jesse Stubbs  
BY Samuel N. Ford  
his ATTORNEY.



# UNITED STATES PATENT OFFICE.

JESSE STUBBS, OF MOUNT PLEASANT, IOWA.

## DRAG-SCRAPER.

SPECIFICATION forming part of Letters Patent No. 667,605, dated February 5, 1901.

Application filed June 15, 1900. Serial No. 20,409. (No model.)

*To all whom it may concern:*

Be it known that I, JESSE STUBBS, a citizen of the United States, residing at Mount Pleasant, in the county of Henry and State of Iowa, have invented certain new and useful Improvements in Drag-Scrapers, of which the following is a specification.

My invention relates to drag-scrappers such as are commonly employed in the construction of roads and the excavation of ditches, cellars, &c.; and the principal object of my invention is to provide such a scraper with a pivoted front end-gate which may conveniently and easily be thrown into and out of operative position by the operator to guard the contents of the scoop against spilling when the scraper is loaded and to permit the contents to be discharged by revolving the scoop when the scraper is to be unloaded.

Another object of my invention is to provide a novel mechanism whereby the scoop may be held locked to the operating-lever in operative position during the loading operation and may during its discharging or unloading operation be released therefrom, so as to perform a complete revolution on its trunnions.

With these objects in view my invention consists in the parts and combinations of parts in a drag-scraper, all as hereinafter described, and pointed out in the claims.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved scraper. Fig. 2 is a central vertical longitudinal section of the same, and Figs. 3, 4, and 5 are sectional details illustrating the operation of the counterweighted locking-pawls which cooperate with the arms of the operating-lever.

Similar letters of reference refer to similar parts throughout the several views.

A represents the scoop in the usual form.

B B represent a pair of circle-irons secured in or to the upper edges of the opposite sides of the scoop to facilitate the complete revolution of the latter on its trunnions C C during the discharging or unloading operation.

D designates as an entirety the forked operating-lever, the two parallel arms D' D' of which are pivoted at their outer ends to the trunnions C C in the manner plainly shown,

and the handle D<sup>2</sup> of which extends rearwardly centrally of the fork.

E designates as an entirety a rectangular yoke, the two parallel arms E' E' of which are pivotally secured at their outer ends to the trunnions C C, and F is a bail pivoted to the front of said yoke E, as shown, to which the power for operating the scraper is to be applied.

Referring now to those parts in which my present invention more particularly resides, G designates a front end-gate provided with a pair of arms g g, the outer ends of which are pivotally secured in the outer faces of the parallel arms D' D' of the forked operating-lever D in the manner plainly shown in Fig. 1. For convenience in making the end-gate adjustable with relation to the scoop A the arms g g may be made of stiff spring metal, their outer ends being bent inwardly toward each other at right angles to the arms themselves, such inwardly-bent ends being adapted to enter any of a series of holes d d', &c., whereby the position of the end-gate with relation to the scoop may be varied as desired to secure the best results.

In the base of the handle D<sup>2</sup> of the operating-lever D is pivoted a catch or pawl H, the heel h of which, it will be observed, extends below the handle D<sup>2</sup>, while its nose h' engages a lug or projection a, secured to the upper edge of the rear wall of the scoop. In brackets a' a', secured to or formed integral with the opposite parallel sides of the scoop, are pivoted a pair of counterweighted pawls I I, adapted to cooperate with the arms D' D' of the operating-lever, as hereinafter described.

My improved scraper is operated as follows: The parts being in the positions as shown in Fig. 1, the power is applied to the bail F. On elevating the handle D<sup>2</sup> of the operating-lever the arms D' D' are caused to engage the noses of the pawls I I, (see Fig. 3,) and the pawl H at the same time engages the projection a, whereby the operating-lever is locked in substantially rigid relation to the scoop, and by raising or lowering the handle D<sup>2</sup> the scoop may be poised at any desired angle for taking up its load of dirt. As soon as the scoop is loaded, the operator gives the end-gate G a push with his foot or otherwise, thus throwing it over the circle-irons B B and



into the position shown in Fig. 2, where it is operative to guard the load against the spilling and waste that always occurs in drag-scrappers where no front end-gate or equivalent guard is employed. The loaded scraper is then dragged to the place at which the dirt is to be deposited, and the operator kicks the heel *h* of the pawl *H*, thus releasing its nose *h'*, raises the handle *D*<sup>2</sup>, and by it the rear portion of the loaded scoop until the latter turns over on its front edge as a fulcrum, depositing its contents and continuing its rotation on its circle-irons. When the scoop has been completely inverted, the counterweighted pawls *I I* drop into a position as shown in Fig. 4, (which is a sectional detail of the inverted scoop at right angles to the view in Fig. 2,) thus allowing said pawls to readily clear in passing the arms *E' E'* of the yoke *E*. The continued dragging of the scraper continues the rotation or revolution of the scoop until the latter is once more right side up, the pawls *I I* as they pass from below to above the arms *D' D'* (Figs. 5 and 1, respectively,) simply idly tripping the noses of the pawls *I I* in an obvious manner. The end-gate *G* is then thrown back into its rear position, (or it may be returned to such position before the dumping operation,) and the scraper is then ready to take up another load and repeat the above-described operation.

By the improvements as hereinabove described it will be seen that I have combined with a drag-scraper having a revolving scoop the conveniences and advantages of a front end-gate pivoted directly and adjustably to the arms of the operating-lever, thus producing a scraper which is at once simple and economical in construction and effective in operation.

I am aware that end-gates on scrapers, particularly the wheeled variety, for the purpose of guarding the load against spilling are broadly old; but so far as I am aware I am the first to combine a pivoted front end-gate with a revolving-scoop drag-scraper in the manner herein shown and described by me.

Without limiting myself, therefore, to the precise details of construction shown and de-

scribed, what I claim as new, and desire to secure by Letters Patent, is—

1. A drag-scraper having a revolving scoop, and provided with a front end-gate so pivoted as to be capable of swinging in the arc of a circle between a position closing the front or cutting end of the scoop to a position in rear of the scoop, substantially as described.

2. A drag-scraper provided with a front end-gate pivoted directly to the arms of the operating-lever, substantially as described.

3. A drag-scraper provided with a front end-gate pivoted directly and adjustably to the arms of the operating-lever, substantially as described.

4. In a scraper, a revolving scoop provided at its sides with counterweighted locking-pawls combined with a forked operating-lever, the parallel arms of which are adapted to engage said pawls, substantially as described.

5. In a scraper, in combination a revolving scoop provided at its sides with counterweighted locking-pawls, a forked operating-lever pivoted to the sides of said scoop, the parallel arms of which lever are adapted to engage said pawls, and a third locking-pawl pivoted in said operating-lever and adapted to engage the rear end of the scoop, substantially as described.

6. In a scraper, a revolving scoop provided at its sides with locking-pawls, a forked operating-lever pivoted to the sides of said scoop, the parallel arms of which lever are adapted to engage said pawls, and a third locking-pawl pivoted in said operating-lever and adapted to engage the rear end of the scoop, in combination with a front end-gate directly and adjustably pivoted to the arms of the operating-lever, substantially as described.

In testimony that I claim the foregoing as my invention I have hereunto subscribed my name in the presence of two witnesses.

JESSE STUBBS.

Witnesses:

W. F. KOPP,  
LE ROY A. PALMER.