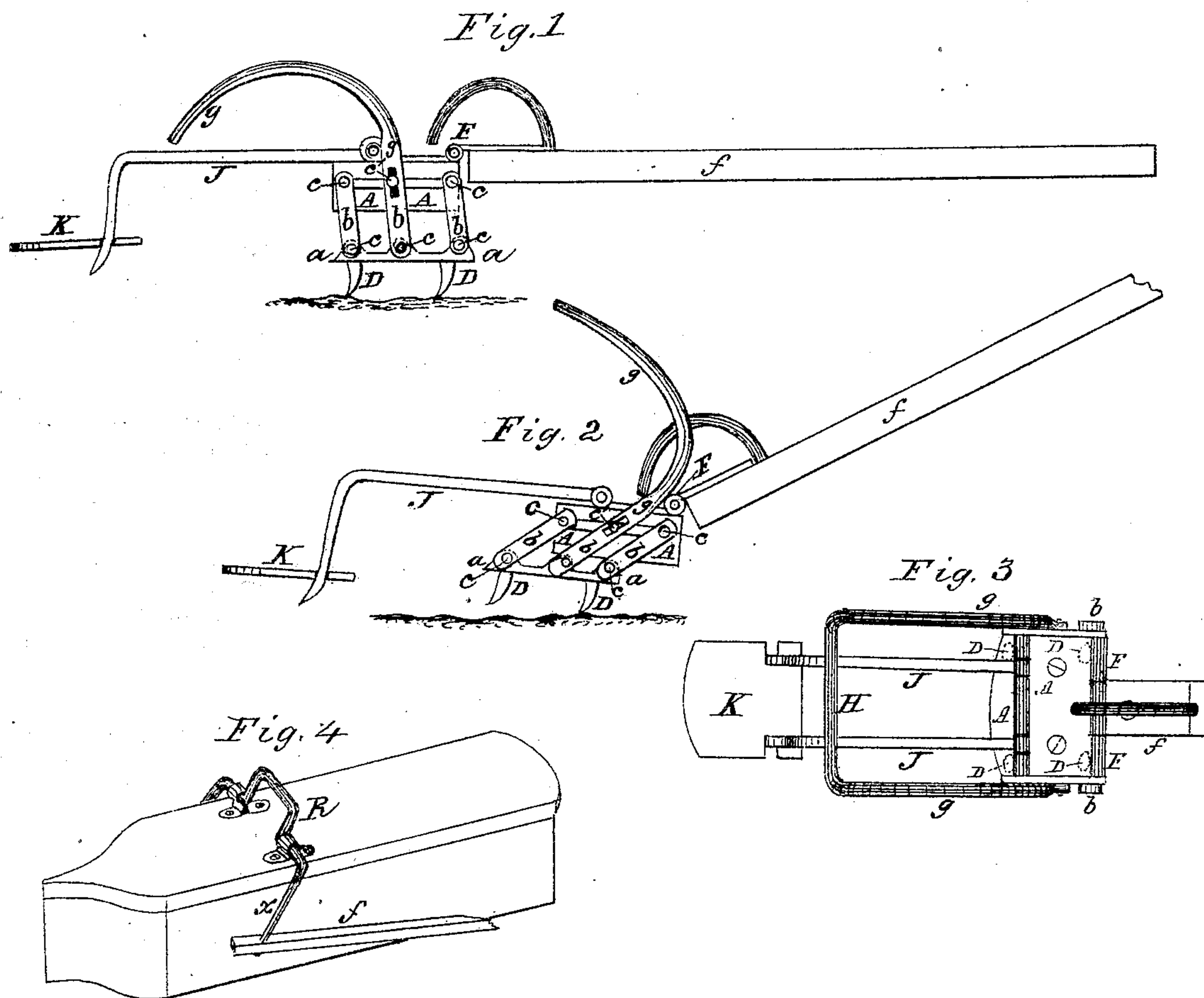


Improvement in Propulsion of Canal Boats.

No. 121,713.

Patented Dec. 12, 1871



Witnesses
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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN PROPULSION OF CANAL-BOATS.

Specification forming part of Letters Patent No. 121,713, dated December 12, 1871.

To all whom it may concern:

Be it known that I, HARVEY FOWLER, of the city of Washington, in the District of Columbia, have invented certain Improvements in Devices for Propelling Boats, of which the following is a specification:

The object of this invention is to provide an adjustable foot to be attached to the lower end of a rod, bar, stilt, or setting-pole, operated by the crank or oscillating bar running transversely across the boat or barge; and also to operate the stilt or setting-pole by means of a flexible swinging bar attached to the oscillating crank or bar, as hereinafter described.

In the accompanying drawing, Figure 1 is a side elevation of the foot attached to the setting-pole or stilt; Fig. 2, the same in another position. Fig. 3 is a plan of the foot as shown in Fig. 1. Fig. 4 is a perspective view, showing the oscillating shaft with the swinging bar attached to the stilt or setting-pole.

A A and a a are two flat pieces of wood or metal loosely jointed together, one above the other, by means of straps b b, with pins c c or other similar fastenings, in such manner that they may swing apart or be drawn close together, the lower flat being armed with teeth D D on the lower side thereof and the upper one A A connected, by a hinge-joint, F, with the stilt or setting-pole f. Jointed or pivoted upon the edges of the lower plate are straps g g, one on each side thereof, which pass upward alongside of the upper flat and curve backward, bearing a transverse rod or bar H. Said straps are slotted where they pass the sides of the upper flat and receive each a pin,

c' c', protruding from said flat. Said rod or bar H, when pressed downward, bears upon the arms J J of another flat or foot or claw, K, said arms being hinged or jointed upon the upper flat A A and bearing at their extremities said flat K. The above apparatus constitutes a foot to be used (more especially for the propulsion of canal-boats and barges) in connection with the rod, bar, stilt, or setting-pole f, which extends along the sides of the boat, one on each side thereof, and is hinged or pivoted at its forward and upper end to a swinging or oscillating bar, x, which bar is composed of spring-steel or other flexible material, (or else so braced by spiral or other springs as to be flexible in its action,) and united to the end of a shaft or roller, R, which crosses the boat or passes through the same above the water-level. The said shaft or roller R is crank-shaped in the center, or else is provided with an arm, with the extremity of which a driving-shaft may be connected, to be driven by steam-power or otherwise.

I claim as my invention—

1. The foot, composed of its several parts substantially as described, in combination with the stilt or setting-pole f, for the propulsion of boats or land vehicles.

2. The flexible swinging or oscillating bar x in connection with said stilt or setting-pole, substantially as and for the purpose set forth.

HARVEY FOWLER.

Witnesses:

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