

G. D. BELCHER.
Boat Detaching Apparatus.

No. 155,409.

Patented Sept. 29, 1874.

Fig. I.

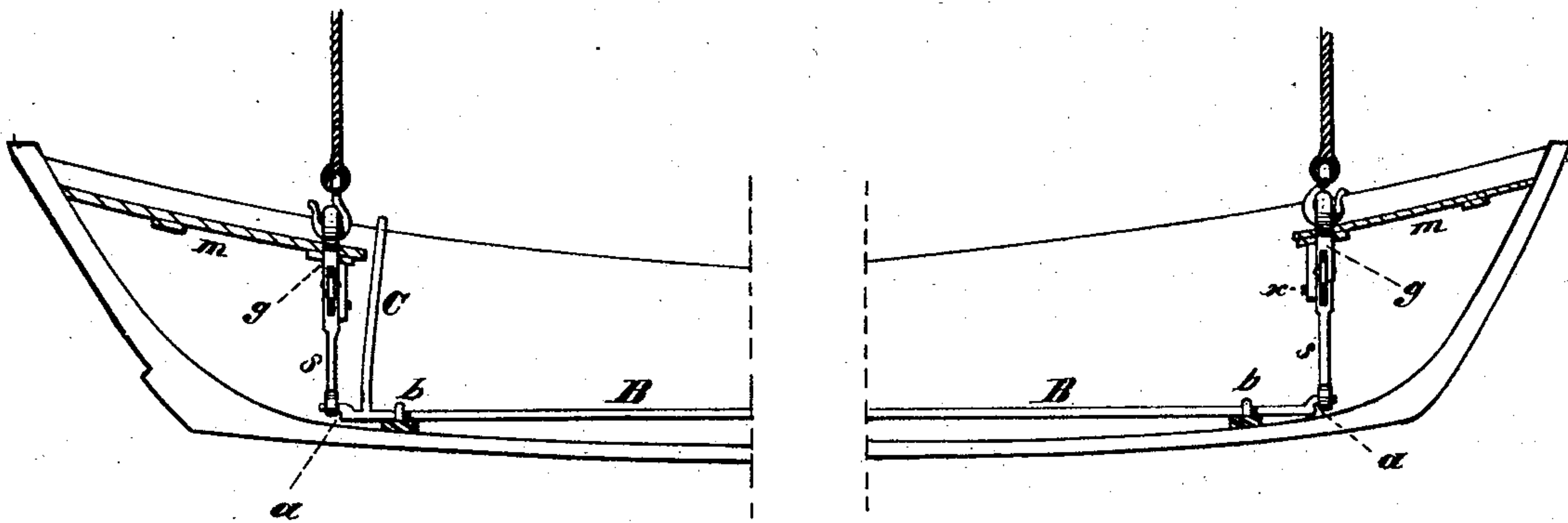


Fig. II.

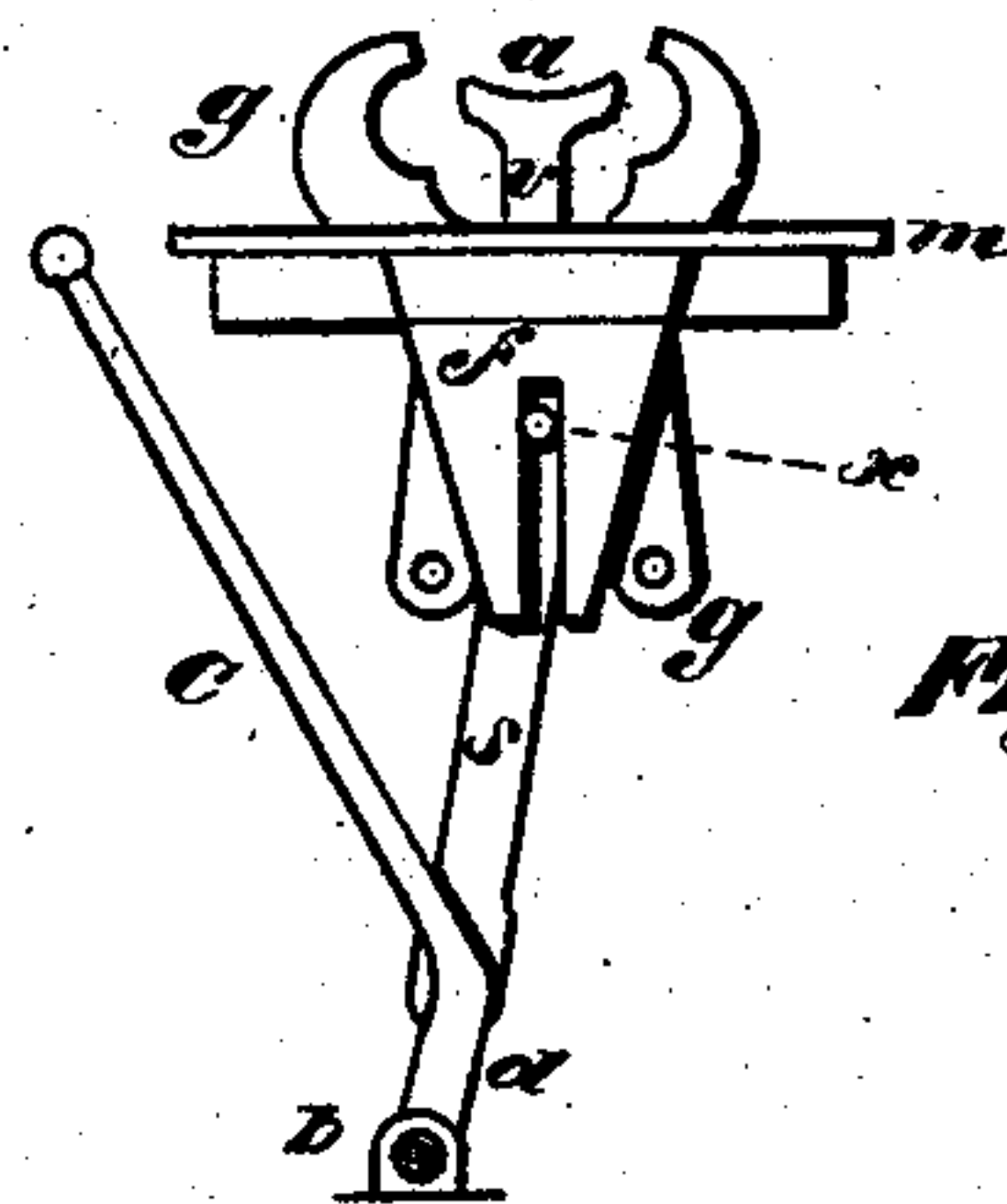
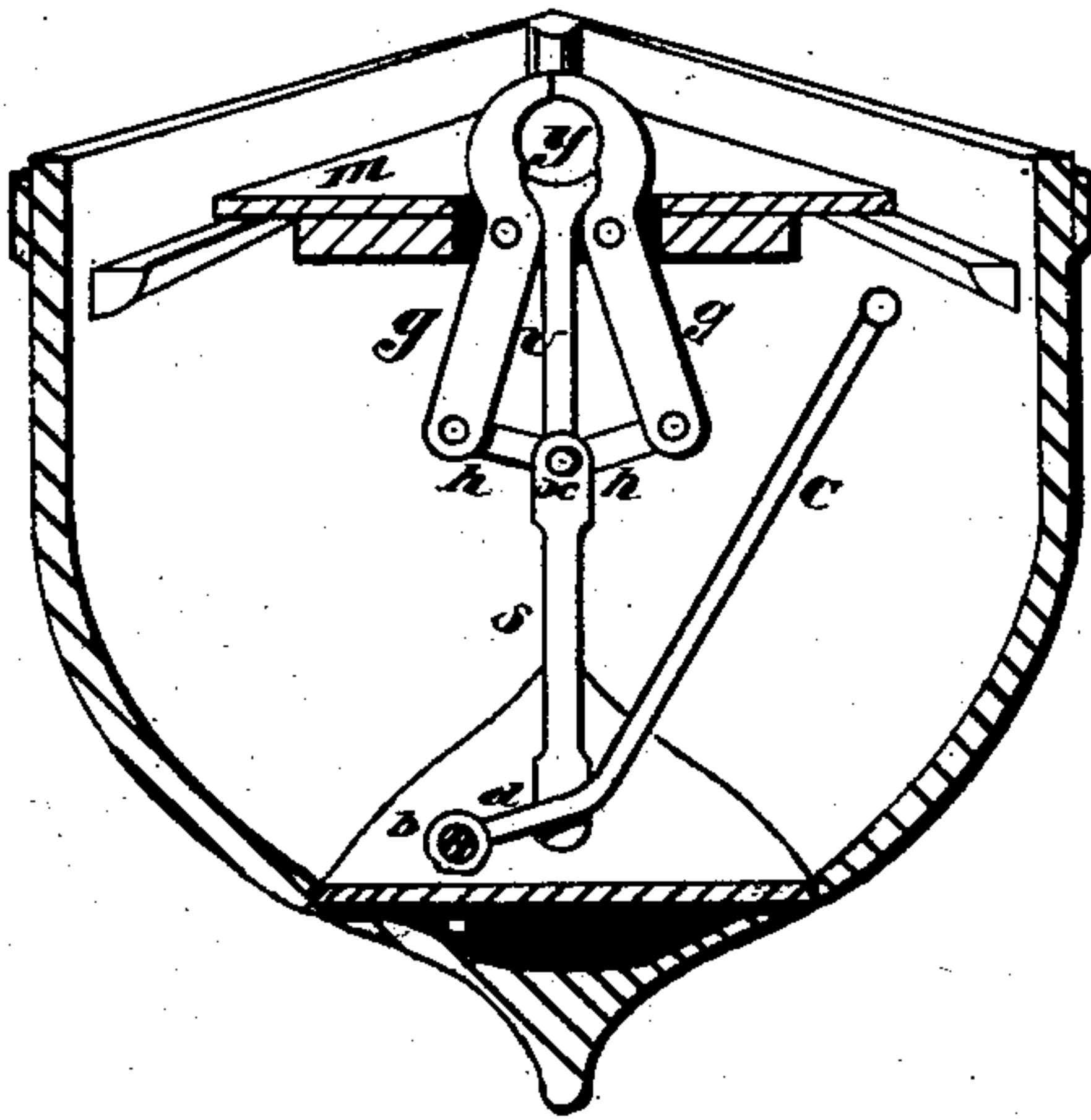


Fig. III.

Witnesses.

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by his attorneys
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UNITED STATES PATENT OFFICE.

GEORGE D. BELCHER, OF SPRINGFIELD, MASSACHUSETTS, ASSIGNOR OF
ONE-HALF HIS RIGHT TO JAMES A. STACY, OF SAME PLACE.

IMPROVEMENT IN BOAT-DETACHING APPARATUS.

Specification forming part of Letters Patent No. **155,409**, dated September 29, 1874; application filed
May 12, 1874.

To all whom it may concern:

Be it known that I, GEORGE D. BELCHER, of Springfield, Hampden county, State of Massachusetts, have invented an Improved Mechanism for Detaching Small Boats, of which the following is a specification:

My invention consists in a device for instantaneously releasing whale, life, and other small boats, when lowered from the cat-heads or davits, while securely holding the boat to enable it to be hoisted horizontally or by the end.

Figure I represents a side section of a boat having my improvements. Figs. II and III are partial views of the same mechanism in different position.

At the bottom of the boat, and extending in the direction of its length, is the rod B, which rotates, in suitable bearings *b b*, from the boat, when turned by the handle C, which may be attached to the rod B at any convenient place at either end, or at an intermediate point. Upon both ends of rod B are the cranks *d d*, which connect with the mechanism for holding and releasing the tackle-hooks, and which operates simultaneously and in the same way, when the rod B is swung by its handle C, to close or open the eyes holding the tackle-hooks, and, as the mechanism at either bow or stern of the boat is a duplicate of that at the other, it will be sufficient to describe the construction and operation of one grapple.

The eye in which catches the tackle-hook is formed by the levers *g g*, hung beneath the small deck *m*, or in a suitable cross-piece, so that the hook ends of these levers, coming together, form the eye *y* above the deck *m*. The lower ends of the levers *g g* are connected,

by toggles *h h*, to the connection *s* from the crank *d*, and it will be seen that the swing of the crank will, by the rise of connection *s*, cause the lower ends of levers *g g* to approach each other, and, consequently, their upper ends or levers to be distended, to open the eye *y*, and release the tackle.

When the levers are closed, as shown in Fig. II, to prevent any possibility of their being forced apart by the weight of the boat upon the tackle-hook, I hinge the toggles *h h* to the connection *s* at a point below their attachment to the levers *g g*, and prolong a piece, *v*, hinged to the top of connection *s*, between the levers *g g*, and provide it with a head, *a*, too large to pass between them, the shoulders of which, coming against the levers *g g*, lock the lower ends of levers *g g* with their toggles *h h*. This piece *v* forms, with its head, a plunger, to insure the instantaneous release of the tackle with the opening at the eye *y*.

To guide the connection *s* and plunger *v*, and strengthen the toggles *h h*, I provide the connection *s* with a pin, *x*, which plays in a slot in the guide-plate *f*, secured to the cross-brace or deck of the boat.

What I claim is—

1. The combination of levers *g g* with connection *s*, plunger *v*, and crank *d* with suitable operating-handle, in the manner and for the purpose set forth.

2. In combination with jaws *g g*, the plunger *v*, operating to clear the tackle from the open levers.

GEORGE D. BELCHER.

Witnesses:

EDWARD MORRIS,
R. F. HYDE.