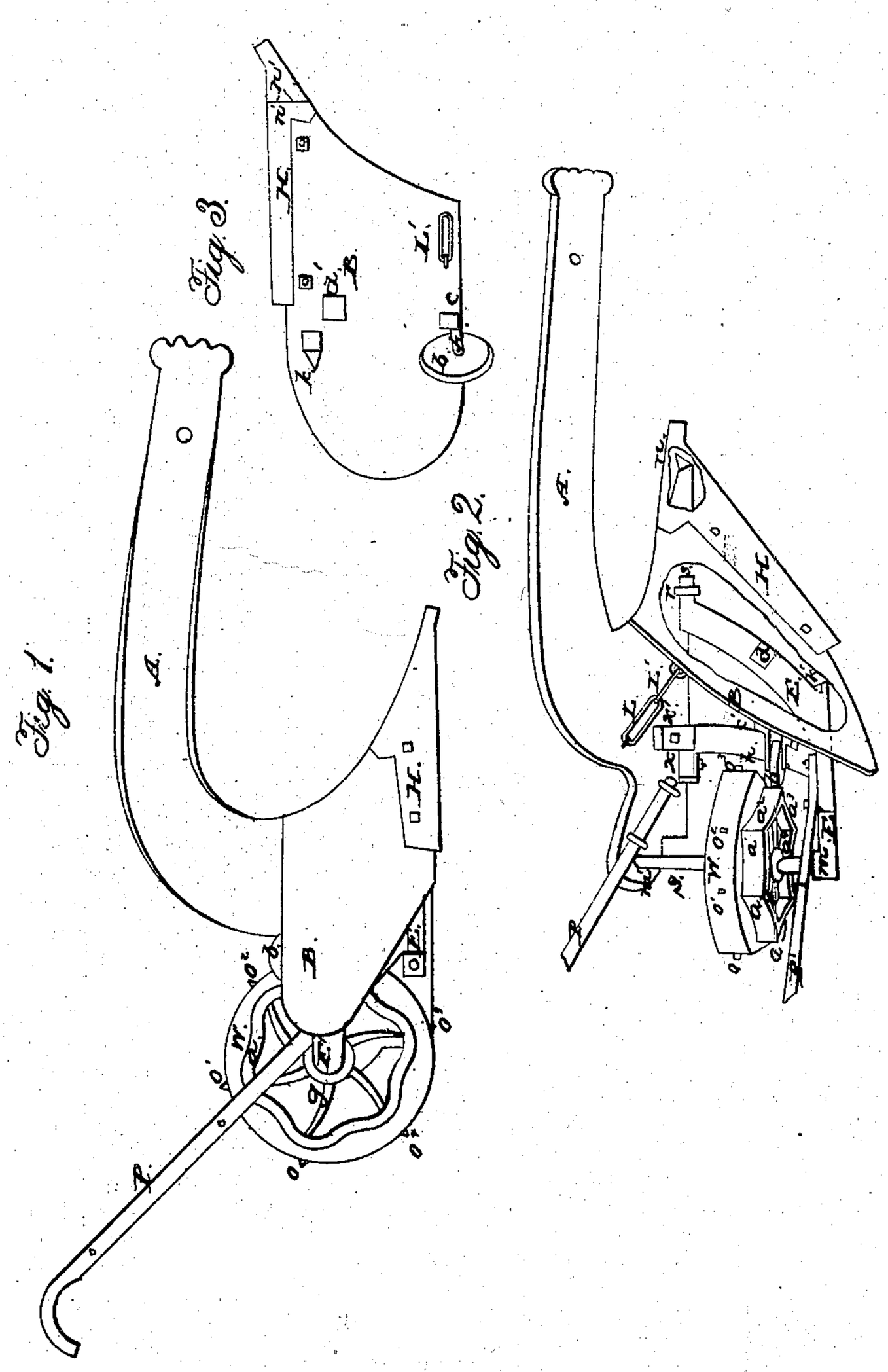
E. ANDRUS.

Plow.

No. 16,901. Patented Mar. 31, 1857.



UNITED STATES PATENT OFFICE.

ELLIOT ANDRUS, OF GENEVA, NEW YORK.

IMPROVEMENT IN PLOWS.

Specification forming part of Letters Patent No. **16,901**, dated March 31, 1857.

To all whom it may concern:

Be it known that I, ELLIOT ANDRUS, of Geneva, in the county of Ontario and State of New York, have invented a new and useful Improvement on Plows; and I 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, in which—

Figure 1 is an elevation. Fig. 2 is a perspective view. Fig. 3 is a sectional view.

Fig. 1, A is a cast-iron beam; B, the mold-board, with the share H bolted thereto in the usual manner. E E′ is a frame to secure the mold-board B to the beam A; also to attach the handle P to; also to form a box for the shaft of the cam-wheel W. *a* is the cams on the side of the wheel W; *g*, the arms of wheel W. *o* *o′* o^2 o^3 o^4 are points in the wheel W to give it adhesive force. *b* is a friction-roller against which the cams *a* revolve, thereby causing the mold-board B to rise as each cam comes in contact with it.

Fig. 2, H is the share with a portion removed, showing the pivot-point *n* of the beam A, which works in the socket *n′* of the point H on Fig. 3. B is the mold-board with a portion removed, showing part of the frame E. *r* is a loop on beam A to receive the arm *s* of frame E. *d* is a projection on frame E, to form a lock by coming in contact with projection *d′* on mold-board B on Fig. 3. *k* is a socket in frame E, in which the point *k*, Fig. 3, works. X X′ are feet for the purpose of bolting the frame E firmly to the beam A. *f* is a projection on the beam A to prevent the frame E from slipping back as the plow is drawn forward. S is the shaft of cam-wheel W, revolving in the sockets *m* *m′* in beam A and frame E′. *a* *a′* a^2 a^3 a^4 a^5 are cams. *c* and *c′* are jaws projecting from the mold-board to hold the friction-roller *b* on the pin *n*. The handle P is inserted in loops in beam A. The handle P′ is bolted to the frame E. The links L L′ are attached to beam A and mold-board B in such a manner as to allow the mold-board to move the distance of the throw of the cams, but to prevent it becoming displaced by moving too far.

Fig. 3 is a section view of the under side of the mold-board and point. *b* is a friction-roller; *c*, one of the jaws for holding the roller *b*; L′, link. The other parts are described in connection with Fig. 2.

Having fully and clearly described the drawings, I will proceed to describe its construction and operation.

I cast the pivot-points *k* and *n*, the sockets *k′* and *n′*, also the ends of shaft *m* and *m′*, and the sockets or boxes in which they run, all on chills, making them very hard and durable. The frame E E′ is made in one piece, and in setting up the arm *s* is inserted in the loop *r* on the beam, then shoved forward, the wheel-shaft S inserted in its sockets, the feet X X′ then bolted to the beam, and the share H bolted to the mold-board B. The mold-board is then held in a vertical position to put on the pivot-points *k* *n*, then let back to the beam. The projection *d′* on the mold-board passes the projection *d* on frame E and forms the lock. The links L L′ are then inserted and the plow is ready for the handles, which are inserted in the usual manner.

The operation of the plow is as follows: As the plow is drawn forward the cam-wheel W will revolve, bringing the cams in contact with the friction-roller *b* in the mold-board, giving it an oscillating motion as each cam comes in contact with the roller, by which means the wedging of the mold-board under the furrow is relieved as often as it vibrates, lessening the draft and working easier through the ground, and also leaving the furrow in a more porous condition than any plow heretofore in use.

I wish it to be understood that I do not claim the invention of the plow, nor the iron beam, mold-board, or share; neither do I claim the cam-wheel; but

I claim—

1. The frame E E′, for the purpose of holding the mold-board B, attaching the handle P′, and supporting the end of the wheel-shaft S.

2. The manner of attaching the mold-board upon pivot-points, in combination with the lock *d* *d′* and links L L′.

3. The combination of the wheel W, cams *a* *a′* a^2 a^3 a^4 a^5, and friction-roller *b*, or their equivalents, to produce the oscillating motion of the mold-board, in the manner and for the purpose substantially as described.

ELLIOT ANDRUS.

Witnesses:
A. FAILING,
R. SCHUYLER.