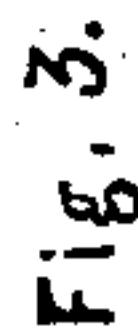
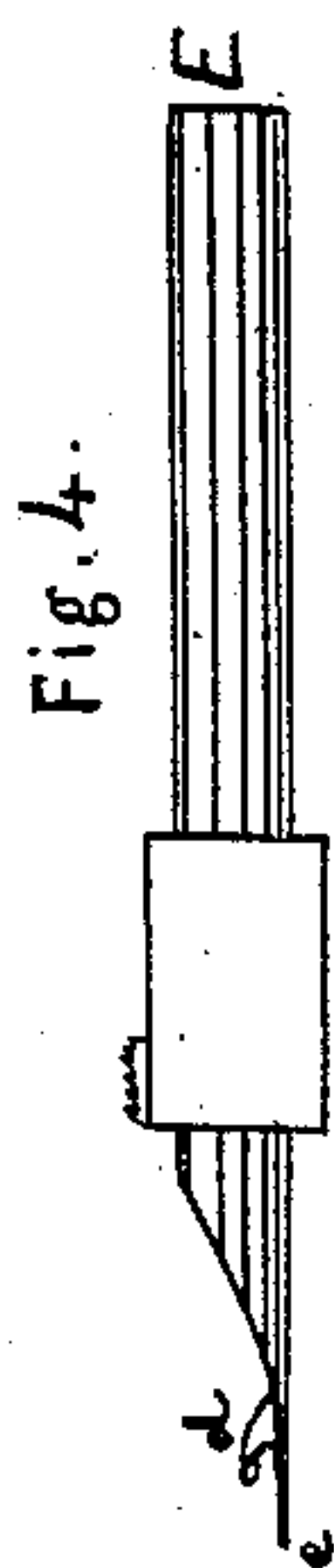
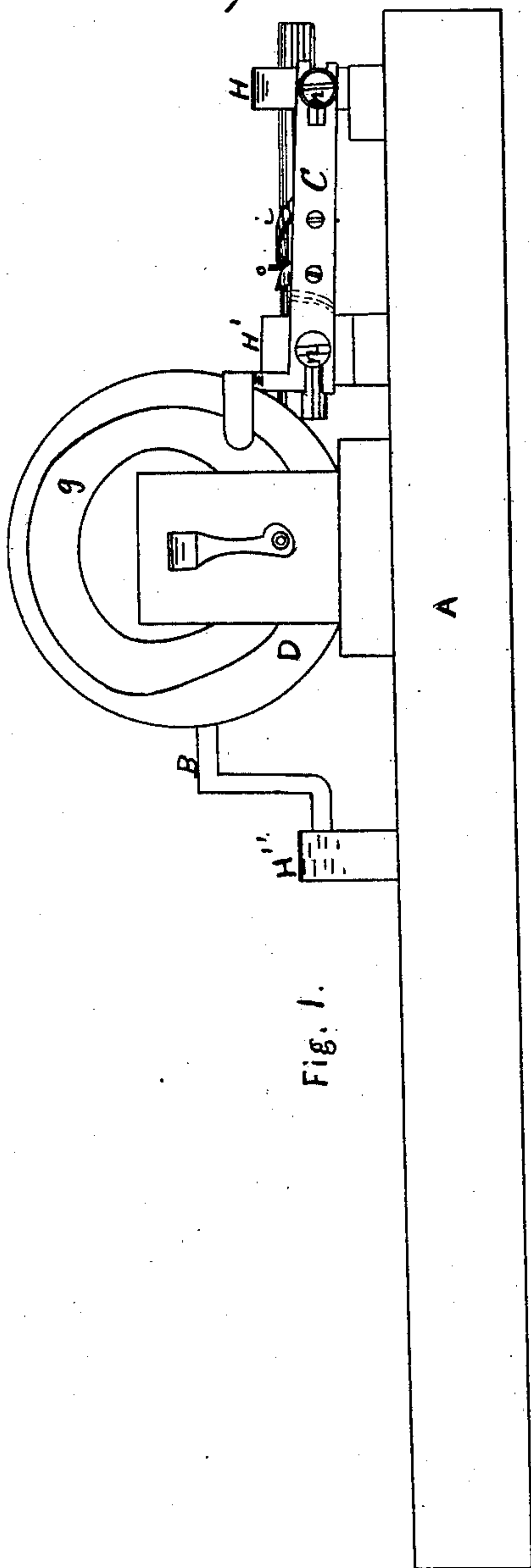


A. H. Boyd,
Sewing Machine,

N^o 22.275

Patented Dec. 14. 1858.



Witnesses.

James Carter
P. J. Gardiner

Inventor.

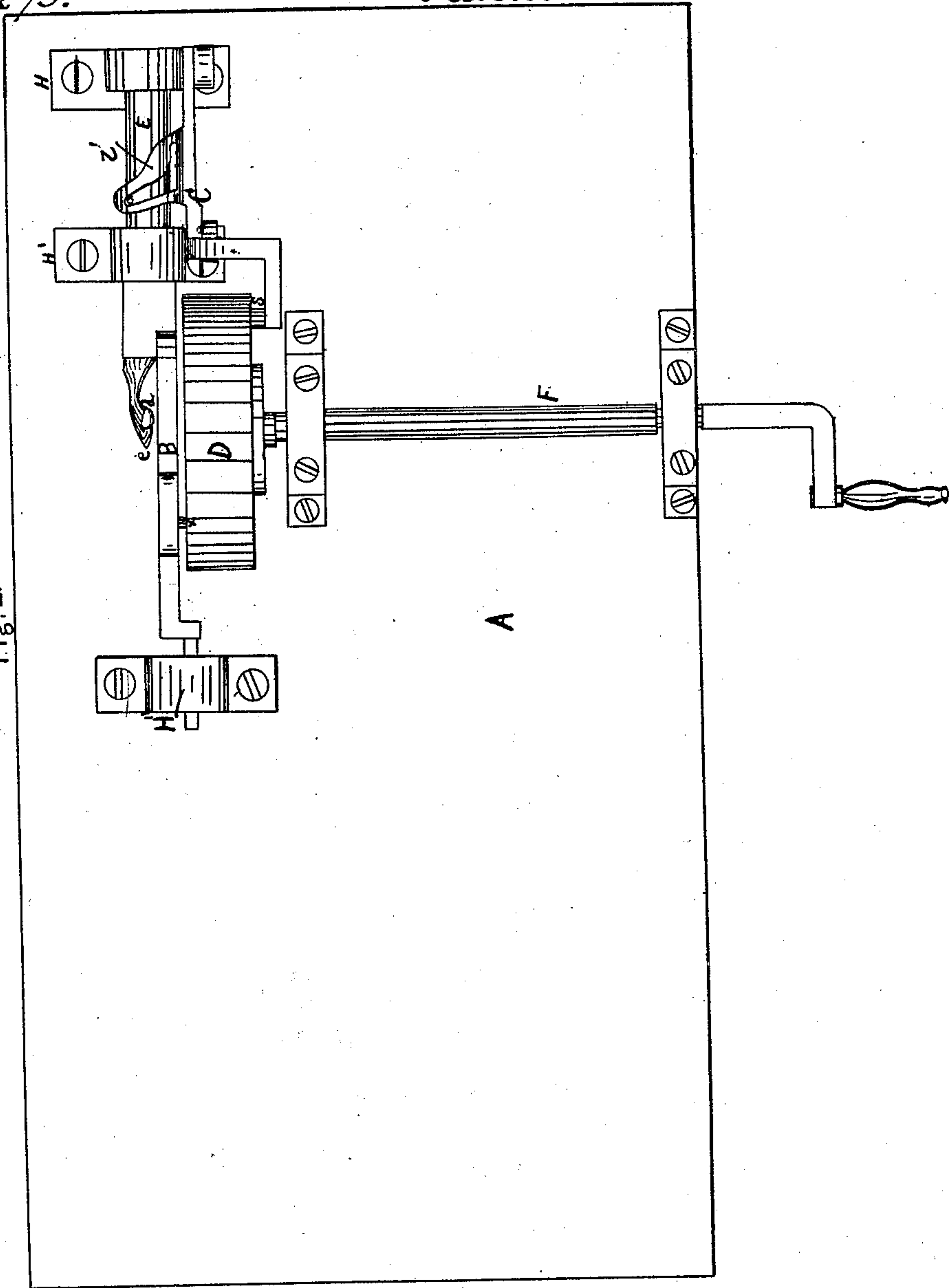
Amos H. Boyd.
per E M Alexander atty

*A. H. Boyd,
Sewing Machine.*

No. 22,275.

Patented Dec. 14. 1858.

Fig. 2.



Witnesses.

James Carter
W. J. Gardner

Inventor.

Amos H. Boyd.
per C. M. Alexander atty

UNITED STATES PATENT OFFICE.

A. H. BOYD, OF SACO, MAINE.

IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. 22,275, dated December 14, 1858.

To all whom it may concern:

Be it known that I, AMOS H. BOYD, of Saco, Maine, have invented certain new and useful Improvements in Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in the arrangement of the several parts, which will be hereinafter particularly described.

In the annexed drawings, Figure 1 is a side elevation. Fig. 2 is a plan view. Fig. 3 is a side elevation. Fig. 4 is a view of the looper-bar.

In the several figures, A represents the bed or table on which the cloth is laid to be sewed.

F is a shaft secured in suitable bearings, and to which is attached at one end the wheel D. This wheel is provided with two eccentric grooves, *e* and *g*, one on each side.

C represents a bar, which is secured to the pieces H H', in which the looper-shaft has its bearings, by means of screws *n n*, which pass through slots in said bar. This bar C is provided with a slotted ear, *i*, and with a pin, *s*. The pin *s* works in the groove *g* of wheel D, which serves to give motion to the bar. The ear *i* has in it an angular slot, in which plays a pin, *o*, on the looper-bar.

B is a bar, which is provided with a pin, *x*, which works in the eccentric *e* in wheel D, giving motion to said bar. Both ends of this bar are made square. One end is solid and passes through and has its bearing in the piece H". The other end is hollow, or rather has a round hole through it, into which passes one end of the looper-shaft. This end of said bar has its bearing in piece H'.

E is the looper-shaft, which is made round and has its bearings in the pieces H H'. On this looper-shaft is a pin, *o*, which plays in the ear *i* of bar C. The shaft E tapers to a point at its looping end *e*. Near its point is a small projection in the form shown in the drawings. The point of the shaft and the projection form a fork into which the thread is received when

the machine is in operation. The shaft E is so secured in the end of bar B that it may turn, but not move in it longitudinally.

In using this machine the wheel D is set in motion and the needle descends, and as it ascends the eccentric groove *e* is so constructed that the bar B will move, bringing the looper forward, so that the projection *d* will catch the thread between it and the point *e* of the looper-bar. By the time the thread is fairly caught on the projection, the eccentric groove *g* operates upon bar C, moving it backward, and thus, by means of the ear *i* and pin *o*, the looper-shaft is made to revolve partially, thus holding the loop open until the needle descends. When the needle descends, the bar C moves forward, revolving the looper-shaft back again, and almost instantly the bar B moves the looper-bar back, so as to disengage it entirely from the thread. As the needle ascends again the looper-bar is again made to move forward, receive the loop, revolve, and hold it until the needle descends; then it turns and moves back, and thus each stitch is made.

The advantage of this machine is its precision and simplicity, no springs being used, and the parts being secured in firm bearings it is impossible for it to drop stitches or to get out of order.

I am aware that the looper has been revolved partially around and then back, and also that a reciprocating movement has been given to it without the employment of springs; hence I do not claim to be the first who has effected this; but,

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of the looper E, the bars B and C, and cam-wheel D, when constructed, arranged, and operated in the manner substantially as described, and for the purpose specified.

AMOS H. BOYD.

Witnesses:

ALBERT A. GOULD,
LEVI LORING, Jr.