

(No Model.)

O. HEALY.

## LIGHTING SEWING MACHINES.

No. 294,128.

Patented Feb. 26, 1884.

Fig 1

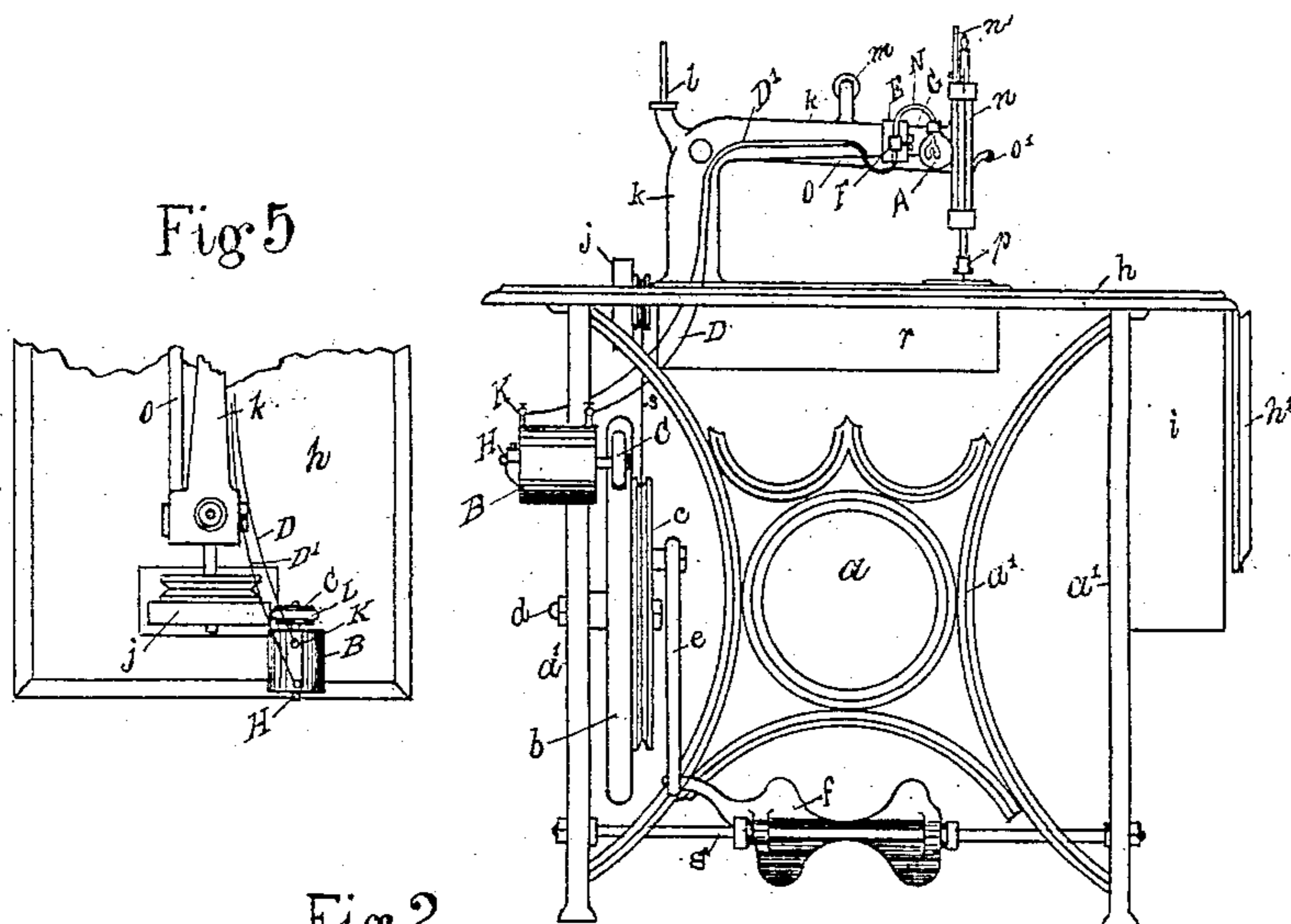


Fig 2

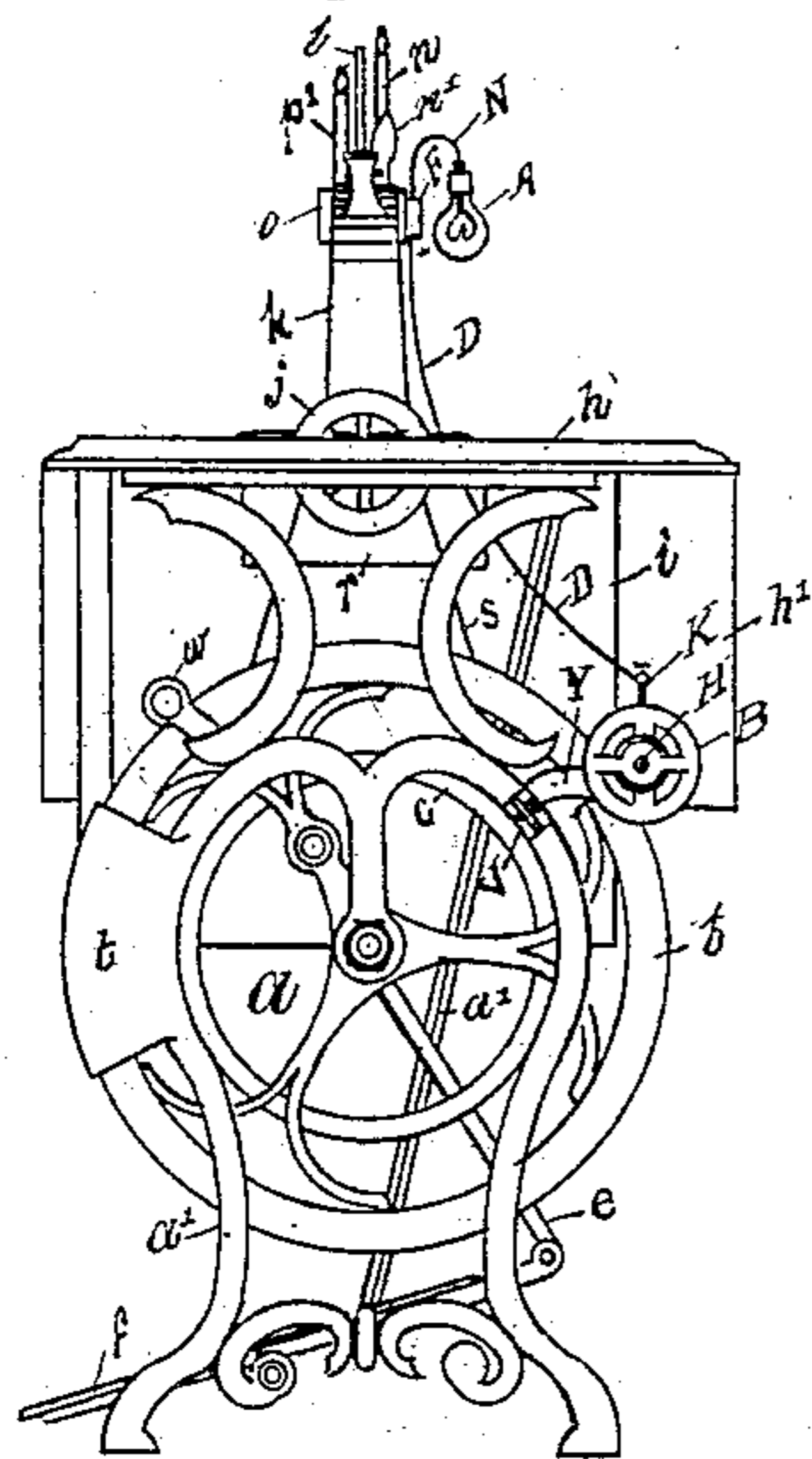


Fig 3

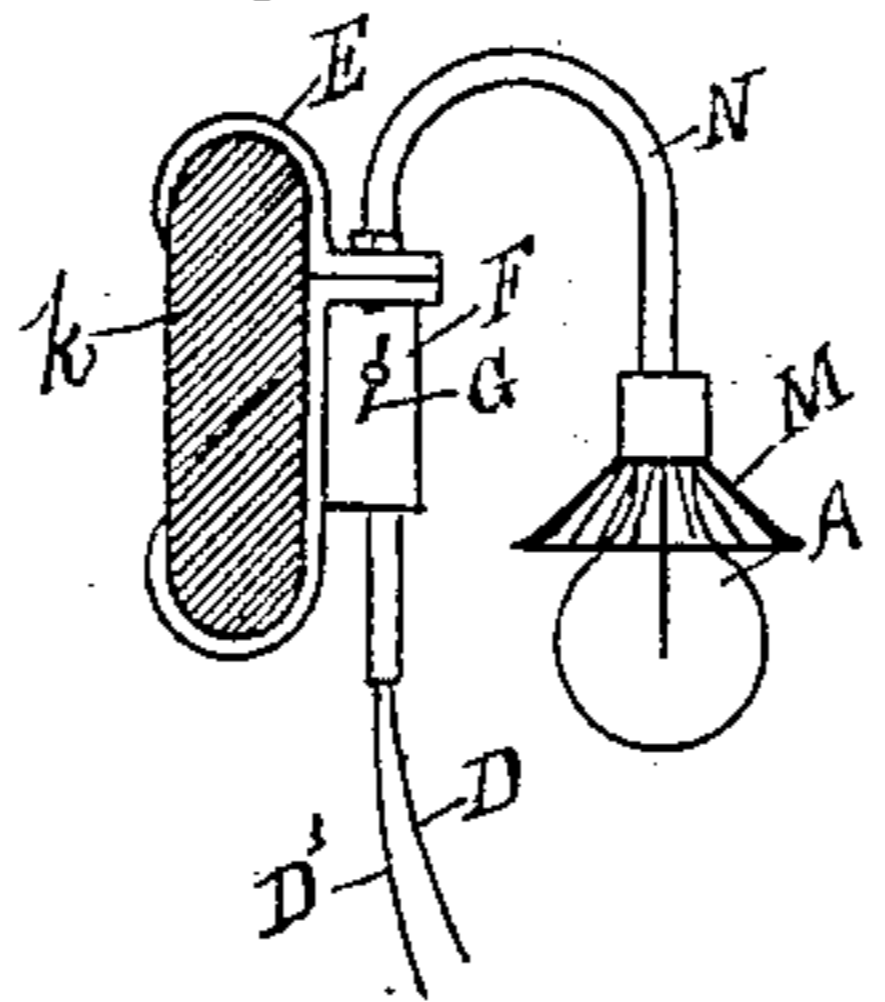
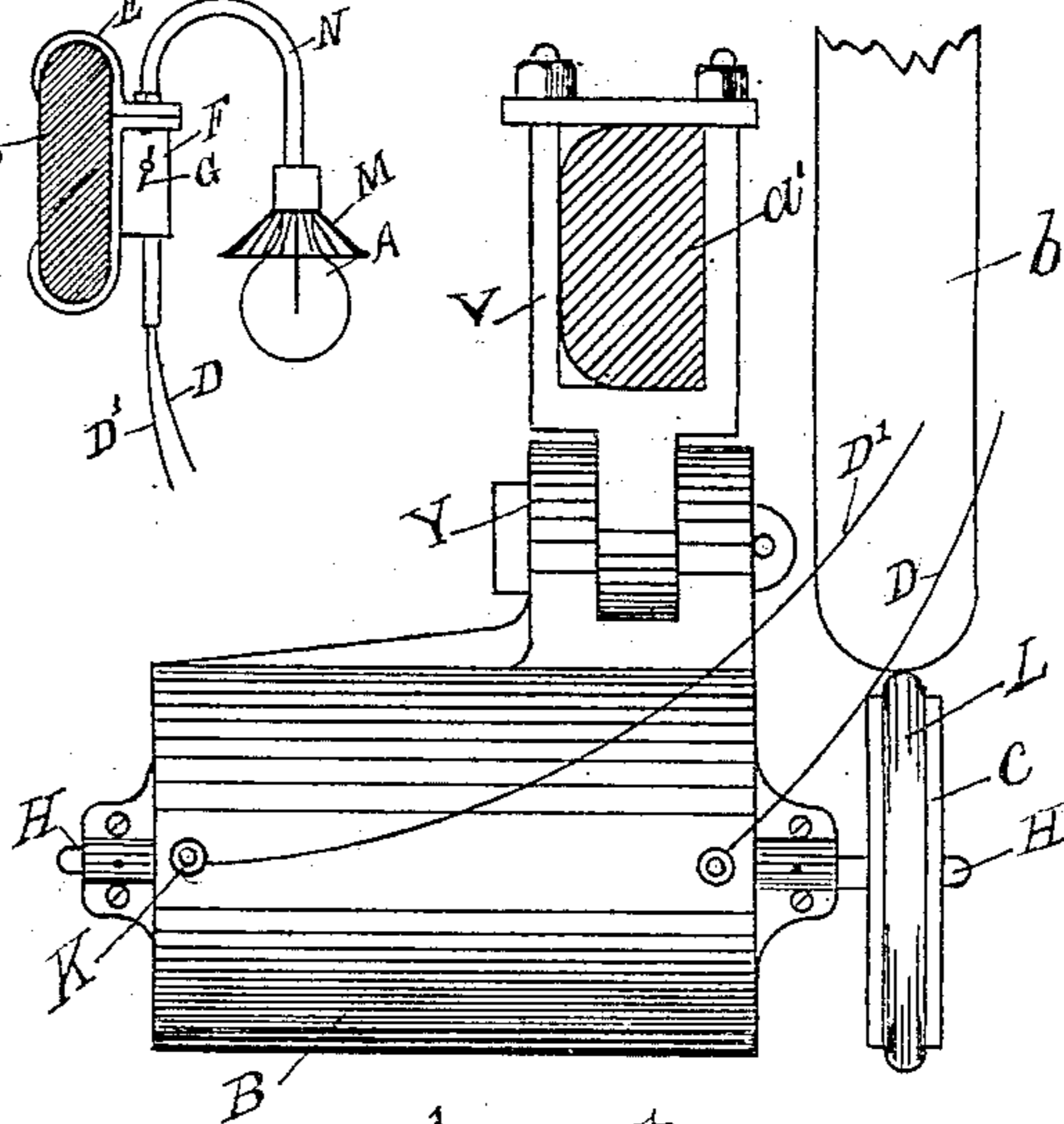


Fig 4



Witnesses

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# UNITED STATES PATENT OFFICE.

OLIVE HEALY, OF PATERSON, NEW JERSEY, ASSIGNOR OF ONE-HALF TO  
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## LIGHTING SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 294,128, dated February 26, 1884.

Application filed March 30, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, OLIVE HEALY, a subject of the Queen of Great Britain, residing at Paterson, Passaic county, State of New Jersey, have invented a new and useful Improvement in Light-  
ing Sewing-Machines, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

The object of my invention is to automatically light sewing-machines by electricity.

The invention consists in a holding device of new construction, and in securing the same to the stationary arm of the machine, and in the construction and adjustable arrangement of a hollow tube in said holding device, and in suitably securing an incandescent lamp provided with a shade to the end of said tube, and in connecting said lamp with a dynamo or producer, novelly secured to the sewing-machine by a knuckle-joint, by insulated wires, and in connecting said dynamo machine or producer with the driving mechanism of said sewing-machine, which will be hereinafter more fully explained.

Figure 1 of the drawings is a rear elevation of an ordinary sewing-machine having my improvements thereon. Fig. 2 is an end elevation of the same. Fig. 3 is a section of the stationary arm, &c. Fig. 4 is a front section of standards, &c.; and Fig. 5 is a modification of some of the parts shown in Fig. 1.

*a* represents a sewing-machine of ordinary construction, having a stationary arm, *K*, to the end of which arm I secure, by means of a clip, *E*, a holder, *F*. The clip is constructed in parts, and is provided with a projecting flange, to which flange is secured, by a suitable bolt, a holder having a corresponding flange, as shown in Fig. 3. The flanges and holder are recessed in front, to accommodate a hollow tube, *N*, of yoke shape, which I adjustably secure in the recess of the holder *F* by thumb-screw *G*. The outer end of the tube *N*, I provide with an incandescent lamp, *A*, having a shade, *M*, which I suitably secure to the end of the tube. I connect the lamp *A* with the dynamo or producer *B* by means of insulated conducting-wires *D* and *D'*. The wires are taken from the lamp *A* through the tube *N* along the arm *K*, and down the same to and through suitable openings formed in the top

or table *h* therefor, to the dynamo or producer *B*, which I secure to the frame *a'*, and suitably secure the wires *D D'* to the studs *k* of the dynamo *B*. The dynamo is secured to the machine *a'* by a clip, *V*, and knuckle *Y*, forming thereby a knuckle-joint. The dynamo-shaft *H* is provided with a friction-wheel, *C*, having an elastic ring, *l*, arranged in a circumferential groove formed therefor in the periphery of the same, which is arranged to be in frictional contact with a balance-wheel, *b*, that is arranged on a stud, *d*, secured to the frame *a'*. A driving-wheel, *c*, attached to the wheel *b* is also arranged on the stud *d*, as shown in Fig. 1.

Suitably secured to a stud in the driving-wheel *c* is a crank-arm, *e*. The opposite end of said arm is secured to the treadle *f*, arranged on shaft *g*. The driving-shaft of the sewing-machine is connected with the driving-wheel *c* by a band, *s*, which connects with a like wheel secured to the wheel *j*.

In practice the treadle *f* is put in motion by the foot in the ordinary way, which, by means of the crank-arm *e*, imparts motion to the balance-wheel *b* and driving-wheel *c* located on the shaft *H*. The accumulated motion imparted to the dynamo or producer *B* by the shaft *H* creates or evolves a current of electricity, which current so produced by the producer *B* is conducted by the wires *D* and *D'* to the lamp *A*, where an incandescent light of one or more candle-power is produced by the producer in its contact with the driving mechanism of the sewing-machine *a*, which light so produced is concentrated on the needle *p* and work on the table *h* by the lamp *A* and shade *M* without obstruction or shadow, owing to the location of the lamp *A* in the holder *F* above the needle, work, &c.

When the devices are used in the modified form, and the dynamo or producer secured to the top or table *h*, and the wheel *C* on the shaft *H* of the dynamo *B* brought into contact with the wheel *j*, and the sewing-machine operated by power, the light-producing means is greatly increased thereby. The motion transmitted from the driving-wheel *c* to the wheel *j* by the band *s* gives motion to the arm *o* and needle *p* by means of the needle mechanism in the ordinary way.

The machine *a* is provided with the ordinary oil-safe, *r*, flap *h'*, drawer *i*, needle-bar *p'*, tension *m*, lever *n'*, tension *o'*, and winder *w*, all of which are used in the usual way.

5 By my invention sewing-machines are automatically lighted when in use, and the light continuous, as the driving mechanism is kept in constant motion when threading the needle, arranging the work, &c., by throwing off  
10 the bands in the usual way, which action stops the needle mechanism while the work under manipulation is being arranged on the table *h* and needle threaded, both of which actions are greatly facilitated by means of ample and  
15 unobstructed light from the lamp *A*.

My invention is adapted for all sewing-machines, and may be applied thereto, and by its use thereon machines in dark rooms and places where insufficient light exists have the  
20 producing means of light at hand.

I do not herein broadly claim either the dynamo or the lamp, they being old.

What I do claim, and desire to secure by Letters Patent, in a sewing-machine, is—

The combination of the holder and station- 25  
ary arm, the holder provided with recess to accommodate the tube, and thumb-screw for holding the tube adjustably therein, the holder secured to the stationary arm by a clip, and clip for securing said holder to the arm, 30  
and hollow tube for holding the lamp, and lamp suitably secured to said tube, the lamp having a shade, and insulated wires suitably secured to said lamp, the wires passing through 35  
said tube and connected with the dynamo, and dynamo, the dynamo arranged in frictional contact with the driving mechanism of said machine, and frame to which the dynamo is secured by a knuckle-joint, and driving mechanism for operating said dynamo and needle, 40  
substantially as set forth.

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Witnesses:

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