

(No Model.)

S. TAYLOR & J. GARDAM,
PLANT PROTECTOR.

No. 585,009.

Patented June 22, 1897.

Fig 1

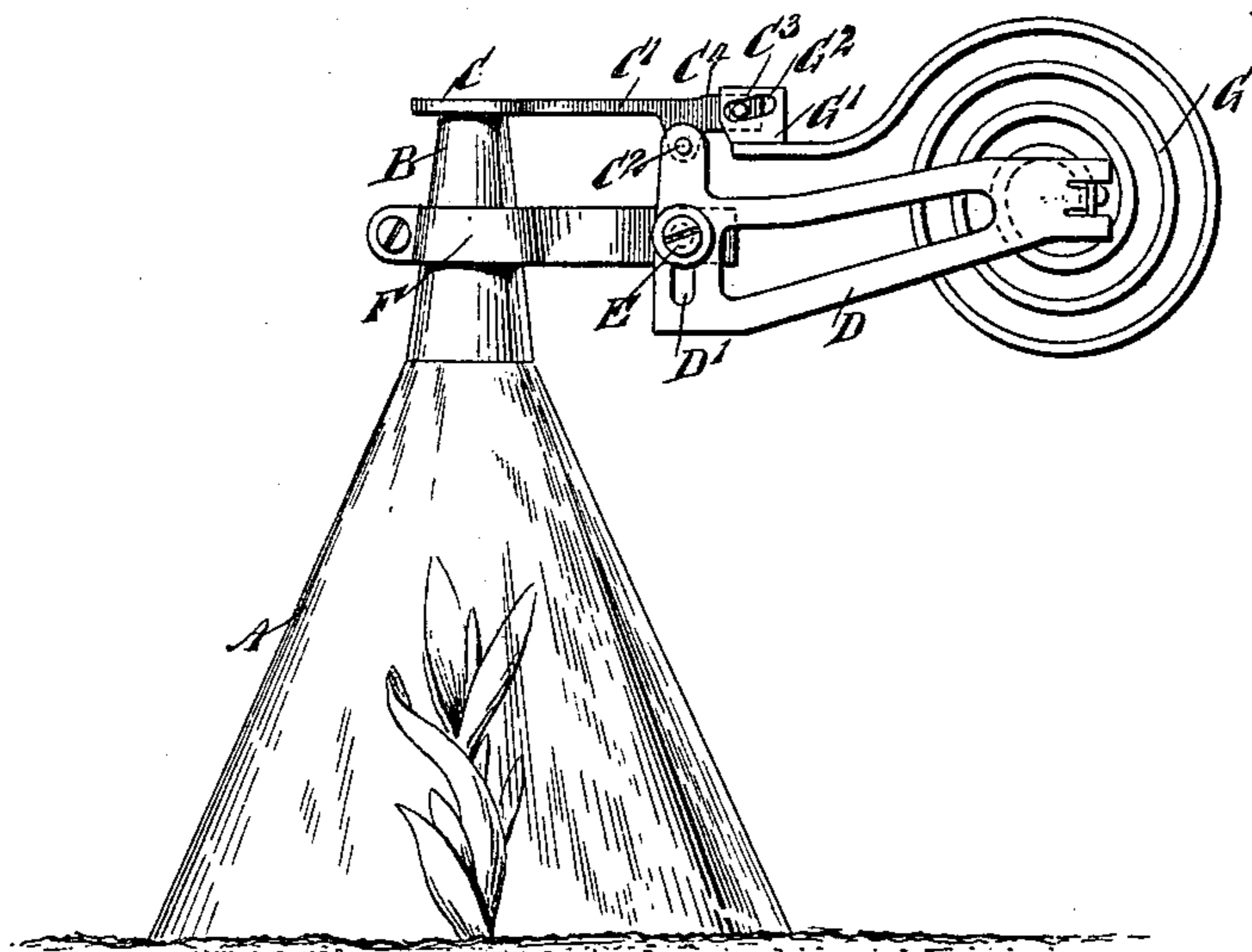


Fig 2

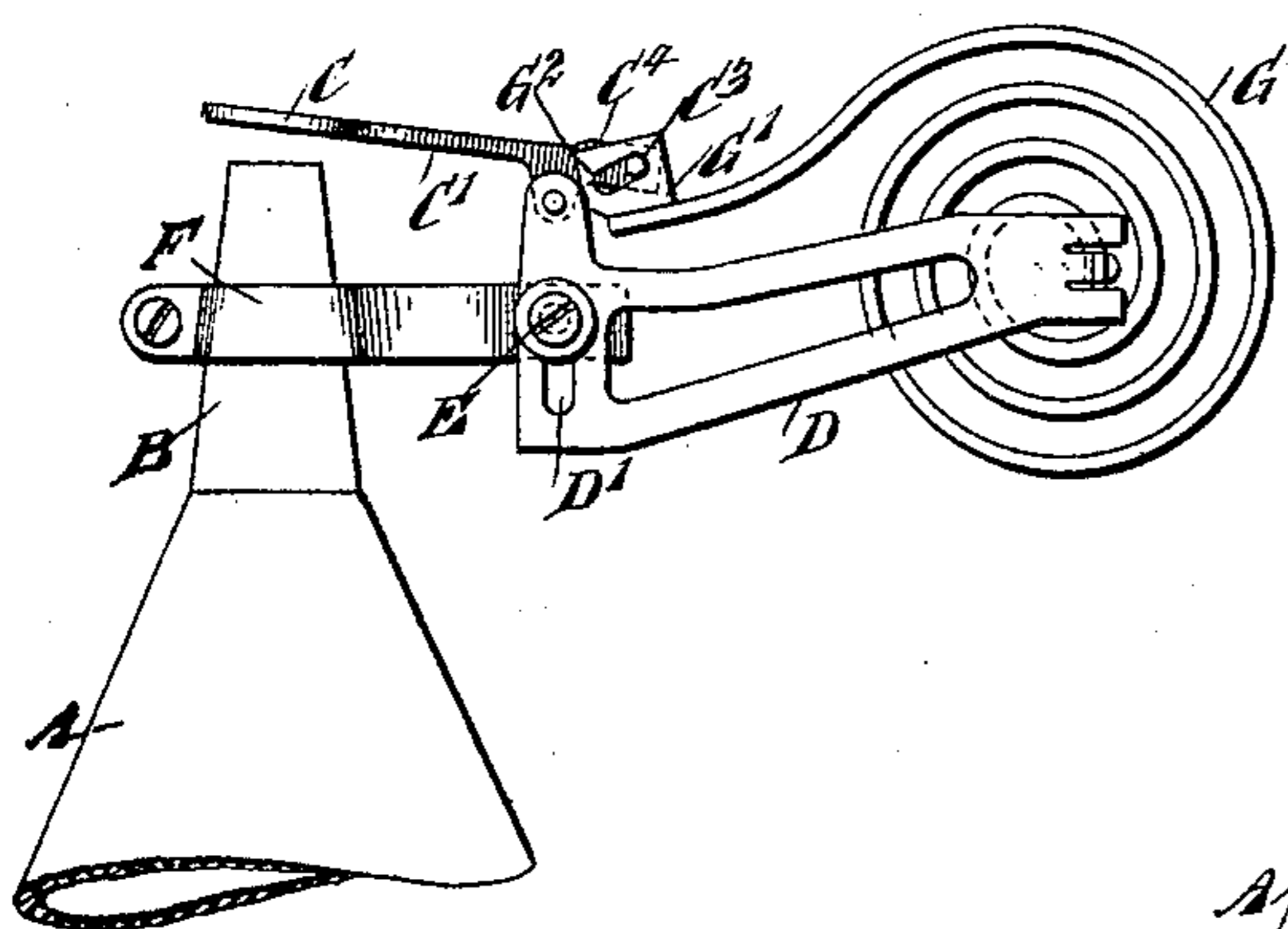
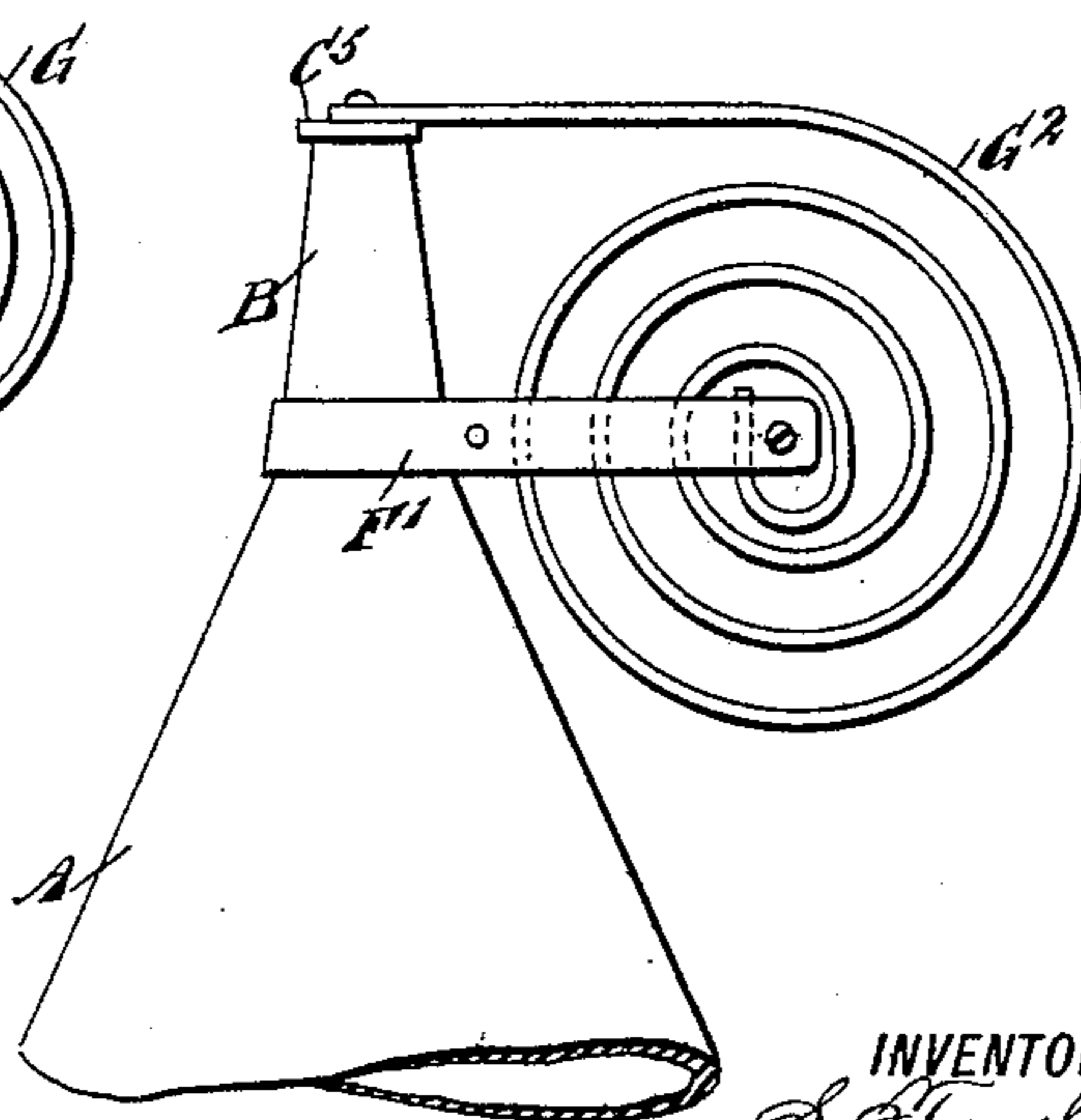


Fig 3



WITNESSES :

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SAMUEL TAYLOR, OF WINTERS, CALIFORNIA, AND JOSEPH GARDAM, OF NEW YORK, N. Y.; SAID GARDAM ASSIGNOR TO SAID TAYLOR.

PLANT-PROTECTOR.

SPECIFICATION forming part of Letters Patent No. 585,009, dated June 22, 1897.

Application filed October 10, 1896. Serial No. 608,458. (No model.)

To all whom it may concern:

Be it known that we, SAMUEL TAYLOR, of Winters, in the county of Solano and State of California, and JOSEPH GARDAM, of New York city, in the county and State of New York, have invented a new and Improved Plant-Protector, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved plant-protector which is simple and durable in construction, cheap to manufacture, and arranged to insure proper outdoor growth of plants very early in the season and without the use of hothouses, hotbeds, or the like, thereby completely avoiding transplanting and the incidental retarding of the growth of the plants.

The invention consists principally of a hood adapted to cover a plant and formed with an opening for the egress and ingress of air and a valve for the said opening actuated by a thermostatic device outside of the said hood and controlled by the heat of the atmosphere.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improvement. Fig. 2 is a similar view of the same with parts in a different position, and Fig. 3 is a side elevation of a modified form of the improvement.

The improved plant-protector is provided with a suitably-constructed hood A, of glass or other material, and formed at its upper end with a funnel B, the opening of which is adapted to be opened and closed by a valve C, controlled by a thermostatic device outside of the hood A and actuated by the heat of the surrounding atmosphere. The valve C is provided with a stem C', fulcrumed at C² on a bracket D, having a vertically-disposed slot D' for the passage of a screw E, engaging an arm F, clamped or otherwise fastened to the funnel B of the hood A. By loosening the screw E the bracket D may be adjusted vertically, so as to bring the valve C in proper

position for the opening of the funnel B. On the outer end of the bracket D is secured the inner end of a thermostatic bar in the form of a helical spring G, carrying at its free end a lug G', formed with a slot G², engaging a pin C³, secured to the extension C⁴ of the valve-stem C'.

The arm F and bracket D form a frame for carrying the valve and the spring G. The spring G expands and contracts according to the temperature of the atmosphere, and the contraction and expansion of the spring cause the lug G' to act on the pin C³, so as to impart an up-and-down swinging motion to the stem C' and the valve C to open and close the opening in the funnel B. By adjusting the bracket D the operator is enabled to set the apparatus to the degree of heat at which the valve C is desired to close the upper end of the opening of the funnel B. When the temperature rises, the thermostatic device will cause the valve C to open, and if the temperature falls the valve C is held tightly closed.

As illustrated in Fig. 3, the valve C⁵ is held directly on the free end of the spring G², secured at its inner end to an arm F', directly attached to the funnel B of the hood A. It is evident that this device operates similarly to the one previously described—that is, a higher degree of heat in the surrounding atmosphere will cause the spring G² to open the valve C⁵ and a fall in the temperature will cause a closing of the said valve C⁵.

It is expressly understood that the valve C controls both the egress and ingress of the air to and from the hood A, and the movement of the valve C is controlled through the thermostatic device arranged outside of the said hood A and by the atmosphere surrounding the said hood.

The device may be readily used for insuring the germination of seed placed in the ground early in the season, and the device also protects the growing plants and insures a proper outdoor growth of the plant without the use of hothouses, hotbeds, or the like.

As is well known, young and tender plants grown in hothouses, hotbeds, or the like are greatly retarded in their growth when transplanted, and this is completely avoided by the use of our device, as no transplanting is

necessary. By the use of the valve a proper aeration of the plants is insured, and consequently the plants will remain in a healthy condition.

5 Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. A plant-protector, comprising a hood adapted to cover a plant and formed with an
10 opening for the egress and ingress of the air, and a valve for the said opening and actuated by a thermostatic device outside of the said hood and controlled by the heat of the atmosphere surrounding the said hood, substan-
15 tially as shown and described.

2. A plant-protector, comprising a support-
ing-frame on the outside of the plant-protector hood, a valve adapted to open and close
20 an opening in the said hood, and an exterior thermostatic device controlled by the surrounding atmosphere and connected with the said valve to open and close the latter, the
25 valve and thermostatic device being supported by the said frame, substantially as shown and described.

3. A plant-protector, comprising a hood adapted to cover a plant and formed with an
opening for the egress and ingress of the air, a valve for opening and closing the said open-
30 ing, and a thermostatic device supported from the said hood, and connected with the said valve, the device being outside of the hood, substantially as shown and described.

4. A plant-protector, comprising a hood
35 adapted to cover a plant and formed with an opening for the egress and ingress of the air, a frame held on the outside of the said hood, a valve for opening and closing the said opening and carried by the said frame, and a
40 thermostatic spring carried by the said frame and connected with the said valve, to open and close the latter, substantially as described.

5. A plant-protector, comprising a hood adapted to cover a plant and having an open- 45
ing for the egress and ingress of the air, a valve adapted to open and close the said opening, a bracket forming the fulcrum for the stem of the said valve, an arm carrying the
50 said bracket and supported from the said hood, and a spring supported on the said bracket and connected with the said valve-stem, substantially as shown and described.

6. A plant-protector, comprising a hood adapted to cover a plant and having an open- 55
ing for the egress and ingress of the air, a valve adapted to open and close the said opening, a bracket forming the fulcrum for the stem of the said valve, an arm carrying the
60 said bracket and supported from the said hood, a spring supported on the said bracket and connected with the said valve-stem, and means, substantially as described, for adjusting the said bracket on the said arm, as set
65 forth.

7. A plant-protector, provided with a valve mounted to swing and adapted to open and
close an opening in the plant-protecting hood, a bracket supported from the hood and carrying the fulcrum for the said valve, a helical 70
spring having its inner end secured on the said bracket, and a lug having a slot secured on the free end of the said spring and engaging a pin on an extension of the stem of the
75 valve, substantially as shown and described.

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Witnesses to the signature of Samuel Taylor:

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