

(Model.)

S. HOKE.
Seeding Machine.

No. 232,718.

Patented Sept. 28, 1880.

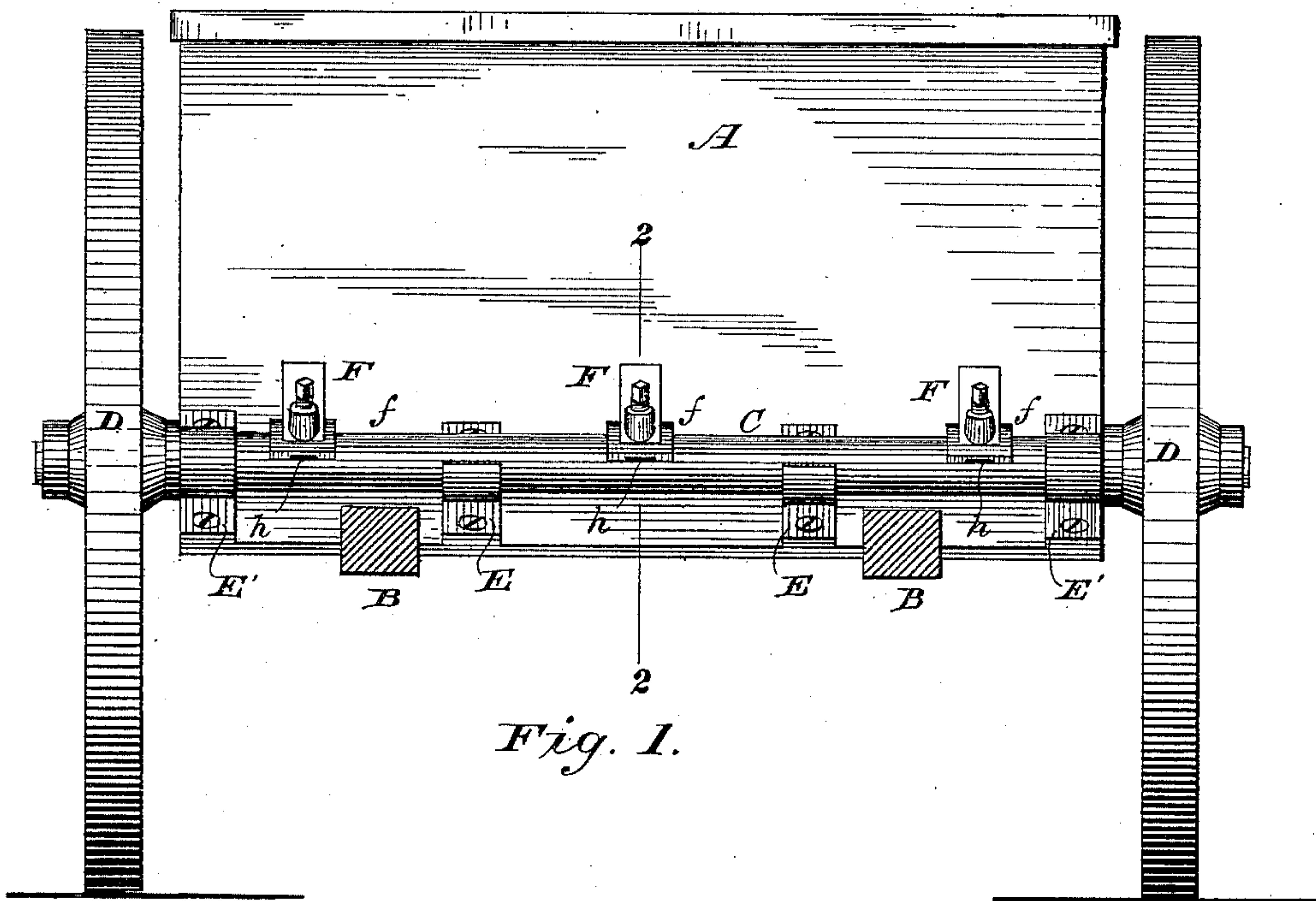


Fig. 1.

Fig. 4.

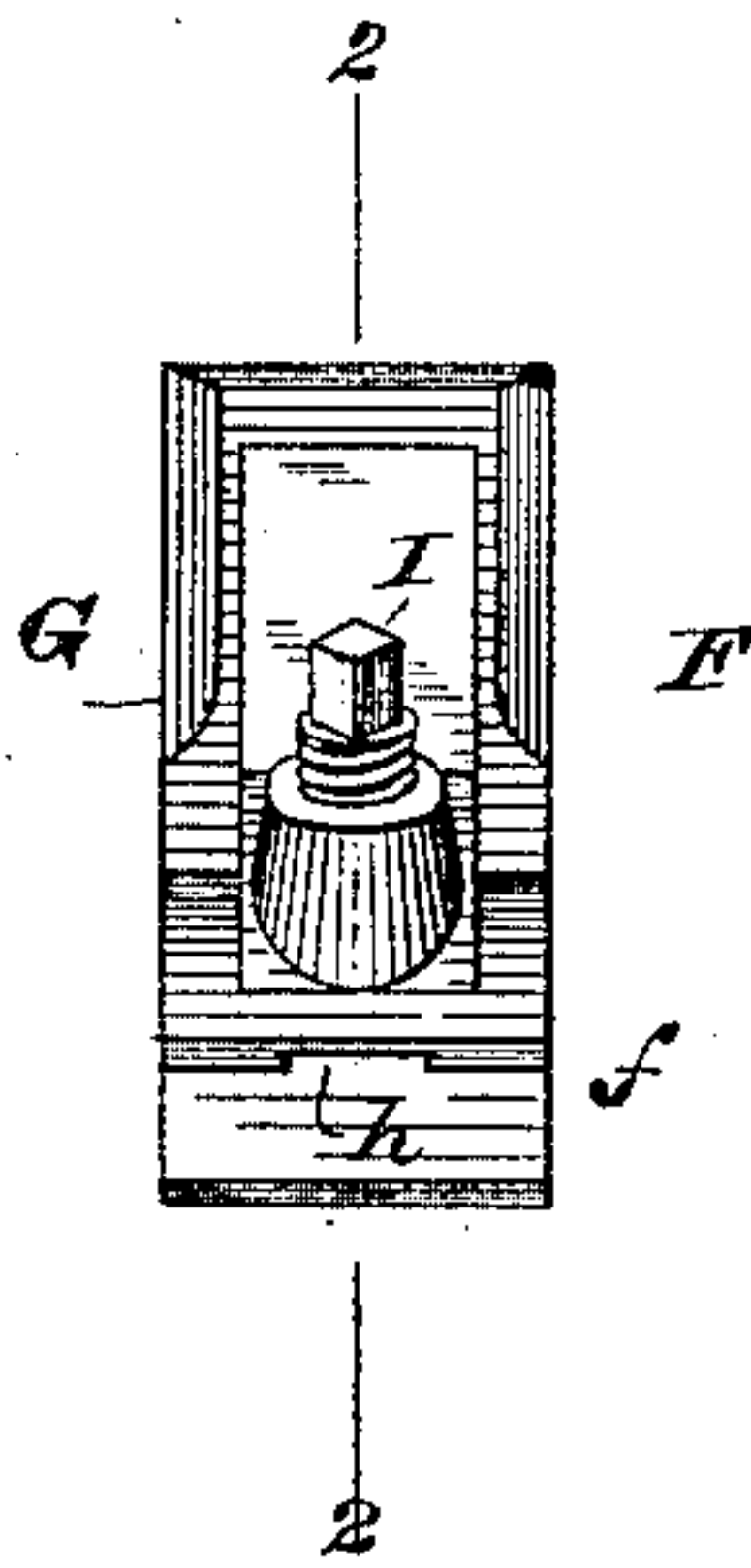


Fig. 3.

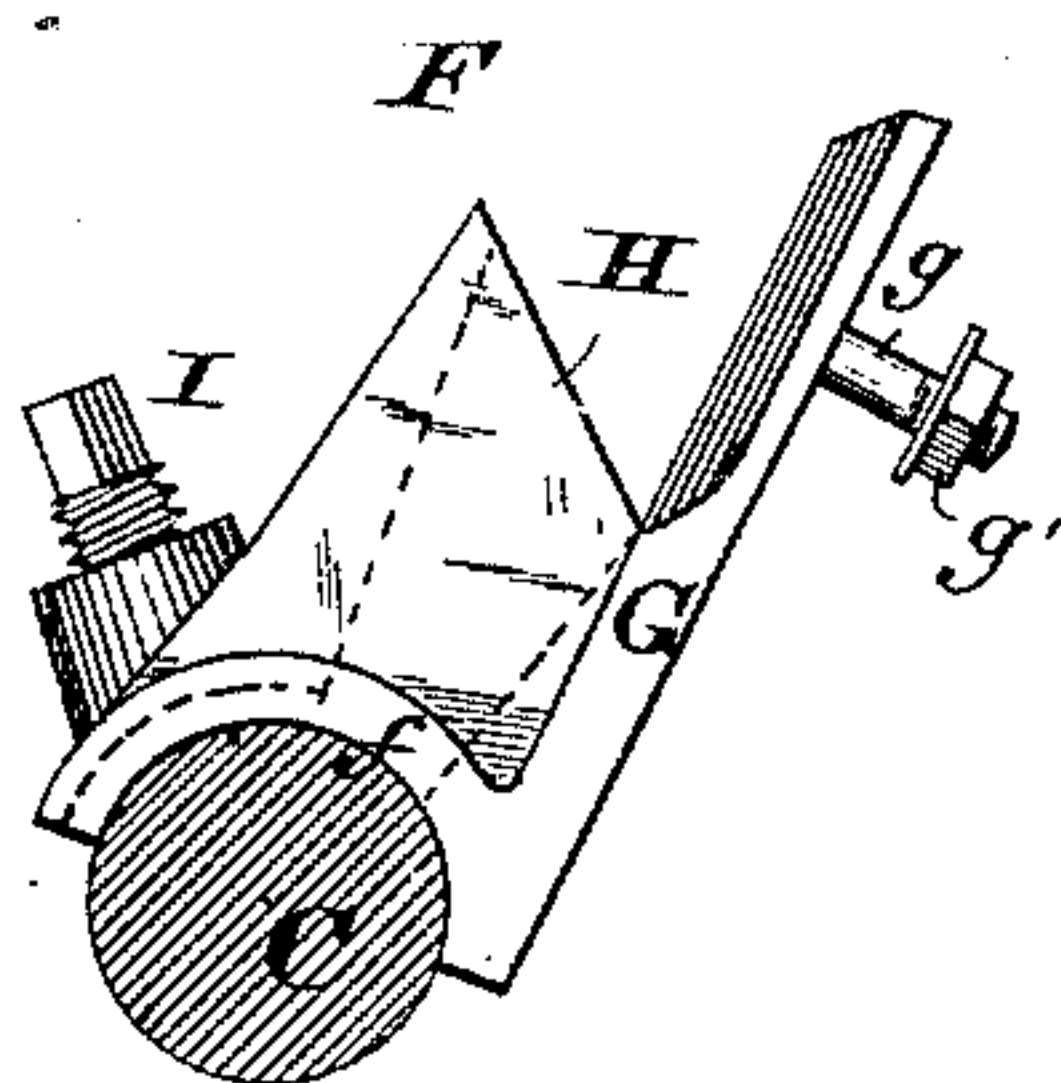


Fig. 2.

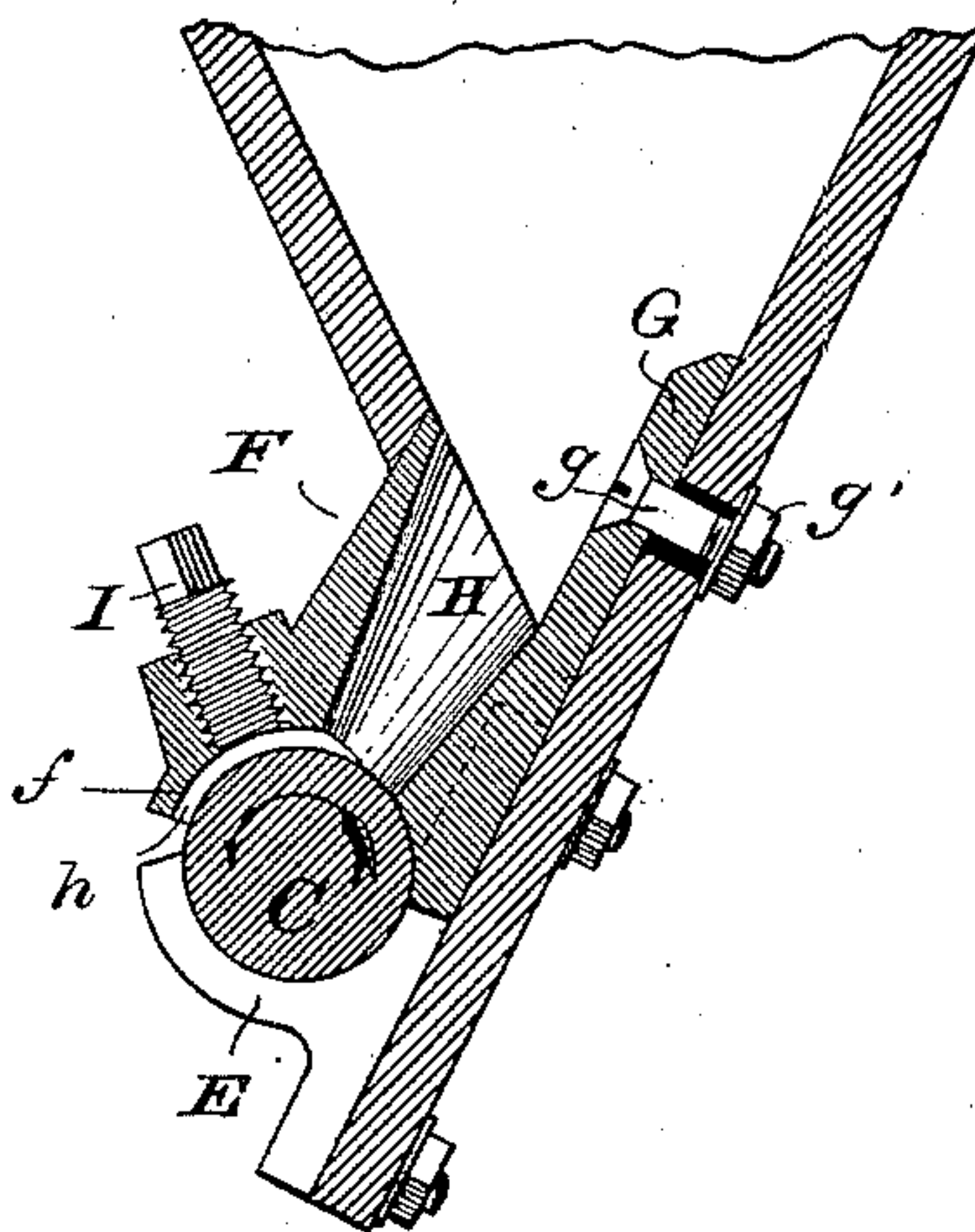
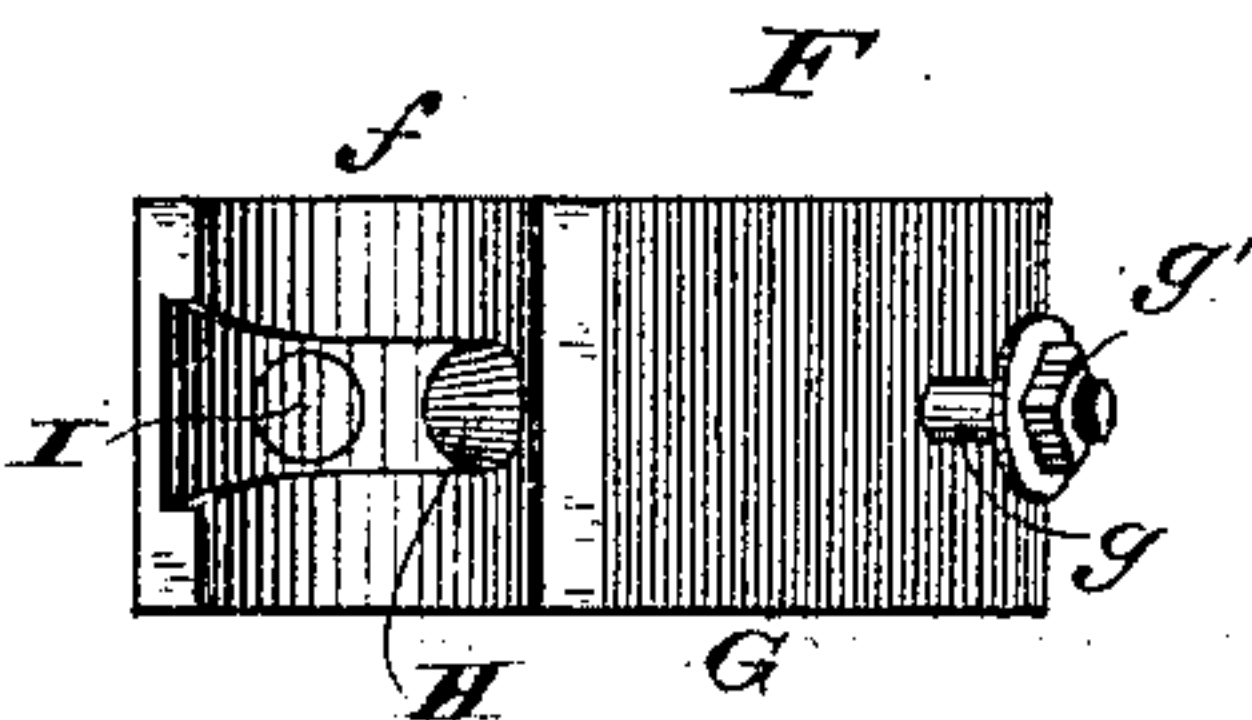


Fig. 5.



WITNESSES

Wm. A. Skinkly,
Chas. H. Baker.

By his Attorneys

INVENTOR

Samuel Hoke.

Baldwin, Hopkins & Taylor.

UNITED STATES PATENT OFFICE.

SAMUEL HOKE, OF FREDERICK, MARYLAND.

SEEDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 232,718, dated September 28, 1880.

Application filed August 25, 1880. (Model.)

To all whom it may concern:

Be it known that I, SAMUEL HOKE, of Frederick, in the county of Frederick and State of Maryland, have invented certain new and useful Improvements in Seeding-Machines, of which the following is a specification.

My invention chiefly relates to improvements in seeders of the class adapted for sowing fine seeds, or machines especially designed for sowing grass-seeds, such as clover and timothy; and the objects of my invention, mainly, are to improve and render less complicated than heretofore the seed supplying or discharging devices of such type of machines, and to provide a strong, cheap, simple seeding-machine.

My improvements relate to certain organizations of parts and to novel combinations of devices, hereinafter first fully described, and then specifically designated by my claims.

In the accompanying drawings my improvements are shown as embodied in a suitable way in a machine in some respects similar to those in ordinary use.

Figure 1 is a front elevation, with the shafts in section. Fig. 2 is a vertical transverse section on the lines 2 2 of Figs. 1 and 4, showing the main features of my improvement. Fig. 3 is a side elevation of one of the adjustable brackets, constituting a seed conveyer and discharger, or supplying-spout and delivering-channel, with the cylindrical axle of the machine in section; and Figs. 4 and 5 respectively represent a front elevation and an inverted plan or bottom view of such seed conveyer and discharger.

A suitable hopper or seed-box, A, having shafts B B rigidly connected with it, is supported on an axle, C, and wheels D D, one of which is fast to the axle. This axle is of cylindrical form and of proper diameter—say an inch and a quarter, more or less—to constitute a feed-roller, as will presently be understood. As the axle turns directly with the wheels, or with one of them, no gearing for working seed-distributing wheels, &c., is employed. Suitable bracket-bearings—such, for instance, as represented at E E and E' E'—secure the combined supporting-axle and feed-cylinder to the hopper. The intermediate bearings, E, are arranged at short intervals—say two feet or less apart—and in a full-sized

machine usually are greater in number than shown by the drawings, so as firmly to support the axle in connection with the end bearings, E' E', and the bracket seed-conveyers F, soon to be described.

By making the axle-bearings adjustable by means of the screws or bolts which secure them to the hopper, as shown, the axle may be “lined” or readily adjusted in proper position. Only three of the peculiar feed-spouts and dischargers F are shown in this instance; but in practice a greater number are usually provided—say five or more—for each broadcast-sowing machine.

A single bracket or casting (clearly shown by the drawings) constitutes the feed-spout and discharger. The series of brackets fit in openings in the hopper-bottom, and at its lower or shoe end, *f*, each bracket is curved concentrically with the feed-cylinder and axle C, or arched to correspond in curvature with said axle and form a half-bearing at the top thereof. The inclined shank or back plate, G, of each bracket F fits against the inside of the inclined back of the seed-box, and is held by a screw-bolt, *g*, and nut *g'*. A slot in the hopper-back, as shown, admits of all necessary adjustment of the bracket to locate its shoe or bearing *f* properly relatively to the cylindrical axle in bedding or lining the axle. Wear may also be compensated by means of the adjusting bolt and nut.

A large flaring-mouthed feed spout or channel, H, is formed in the bracket F, and in this way the employment of seed-stirrers or distributing-wheels is rendered unnecessary. This inclined spout (the same in each bracket) at bottom terminates at front in a seed-discharge groove or channel, *h*, in the shoe or bearing *f*, and at the sides of the groove and in rear of the spout the shoe fits closely against the axle and feed-cylinder, the discharge-groove terminating in the spout, as clearly shown by the drawings. (See Fig. 2.) The axle is in front of the hopper-bottom or back piece, and revolves with the supporting-wheel to which it is fastened, or in the direction indicated by the arrow. Backing-ratchets may connect the wheels and axle.

Any suitable feed-regulators and cut-offs adapted to be simultaneously operated in

proper well-known way, or independently adjustable, are employed. Screw-plugs I are shown in this instance, and each of such feed-regulators is made of proper size at its lower
 5 end to close or partially close the discharge-groove when desired; or such groove may be left entirely unobstructed by turning the regulator in its threaded seat.

The discharging-passage or shoe-groove *h* is
 10 best made of flaring form at and near its mouth, the side walls diverging from rear to front, as shown by Fig. 5, to prevent clogging and to spread or diffuse, and thus aid in scattering, the seed.

15 From the above description it will be understood that when the machine is in motion the seed running down the spouts and bearing against the axle-cylinder will be fed out by the revolution of the axle, and that when the
 20 machine is stopped or backed the discharge of seed will cease. The seed-spouts, it should be noticed, conduct the seed to the cylindrical axle back of its extreme top or in rear of its longitudinal central vertical plane. Hence it
 25 follows that the seed cannot run out when the machine is at rest, much less when being backed, as to escape by the groove *h* at such times the seed resting on the axle would necessarily have to move against the pressure
 30 of the seed in the spout and in the hopper, and this they, of course, cannot do.

The cylindrical axle obviously need not be of regular or uniform diameter throughout, so long as it is properly collared or turned off
 35 truly at the shoes *f* and bearings E and E'.

I am well aware that, broadly considered, it is not new to provide seeding-machines with

feeding-cylinders, inclined feed-spouts, and discharge-channels, and do not therefore unqualifiedly claim such an organization. 40

I claim as of my own invention—

1. The combination of the supporting-wheels, the axle fast to one of said wheels, or turning therewith, and serving to feed the seed, the
 45 hopper, and the brackets, provided with the feed-spouts, the bearings or shoes at the lower ends thereof, and the discharge-grooves, substantially as and for the purpose hereinbefore set forth.

2. The bracket provided with the back
 50 plate or shank, the flaring feed-spout, and the shoe or bearing, having the discharge-groove and the feed-regulator, substantially as and for the purpose hereinbefore set forth.

3. The combination, substantially as hereinbefore set forth, of the hopper, the cylindrical axle, the end and intermediate bearings therefor, and the adjustable brackets provided with the inclined feed-spouts, terminating in
 55 grooved shoes bearing upon and delivering the seed to the axle near its top and in rear of its center, as described. 60

4. The combination of the hopper, the cylindrical or collared axle, the series of feed-spouts leading from the hopper-bottom to the
 65 axle, and provided with the shoes or bearings resting on said axle, and having the flaring discharge-grooves, substantially as and for the purpose hereinbefore set forth.

SAMUEL HOKE.

Witnesses:

WM. H. MILLER,
 R. H. STOKES.