

(Model.)

2 Sheets—Sheet 1.

G. W. KNAPP.  
CHERRY SEEDING MACHINE.

No. 255,874.

Patented Apr. 4, 1882.

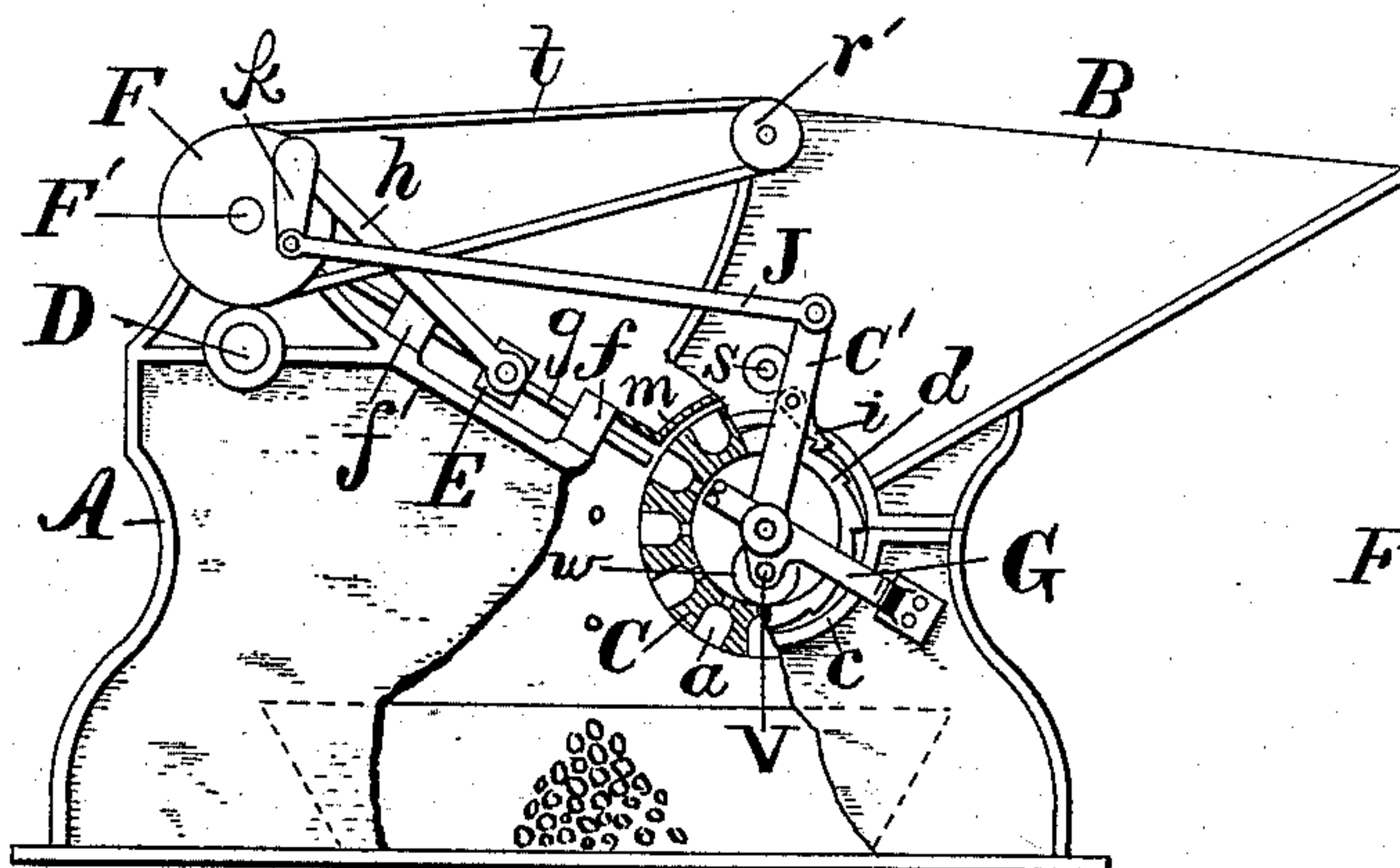


Fig. 1.

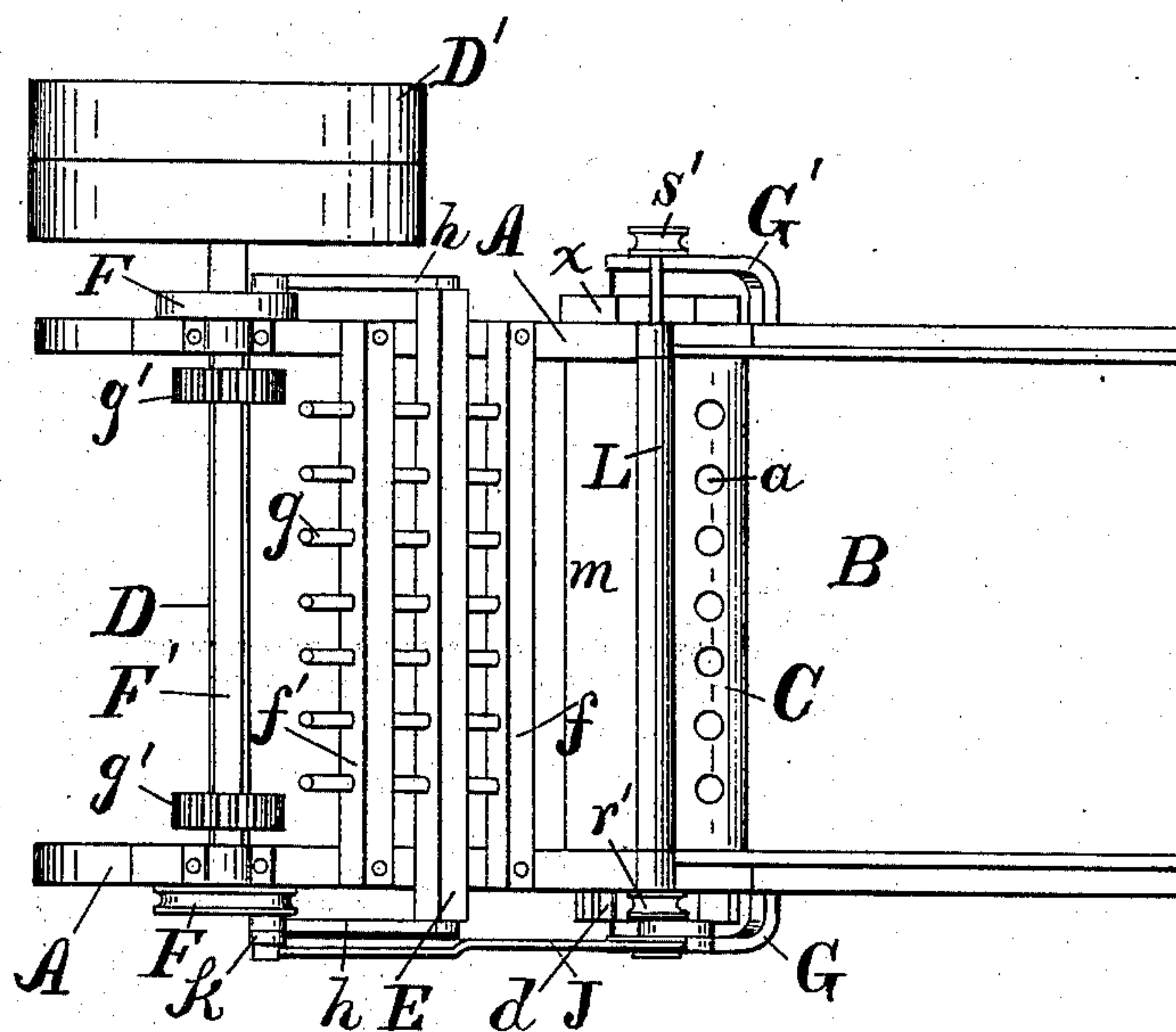


Fig. 2.

Witnesses:

W. L. Langley.  
A. C. Eader

Inventor:

George W. Knapp  
By his Atty  
Chas B. Mann

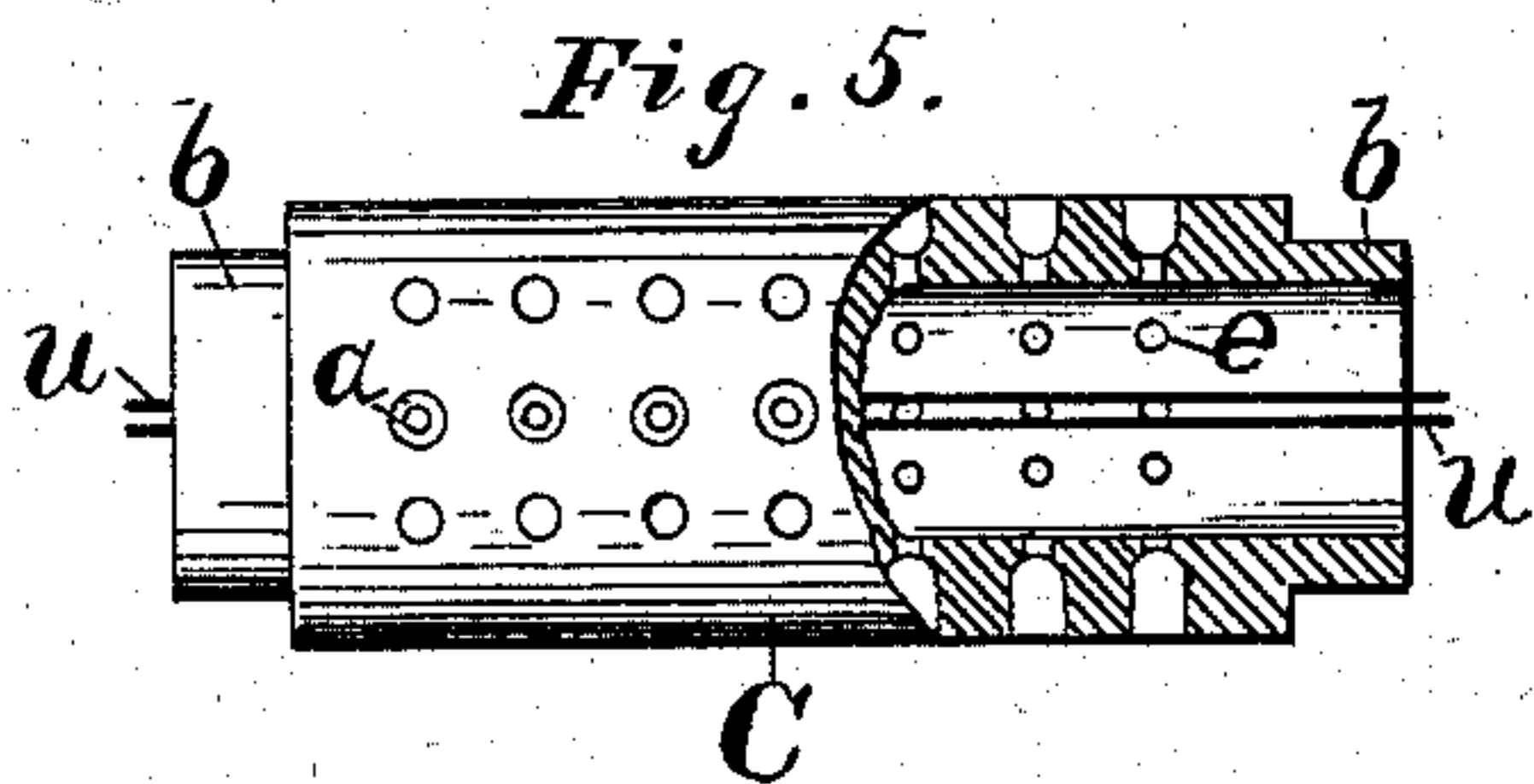
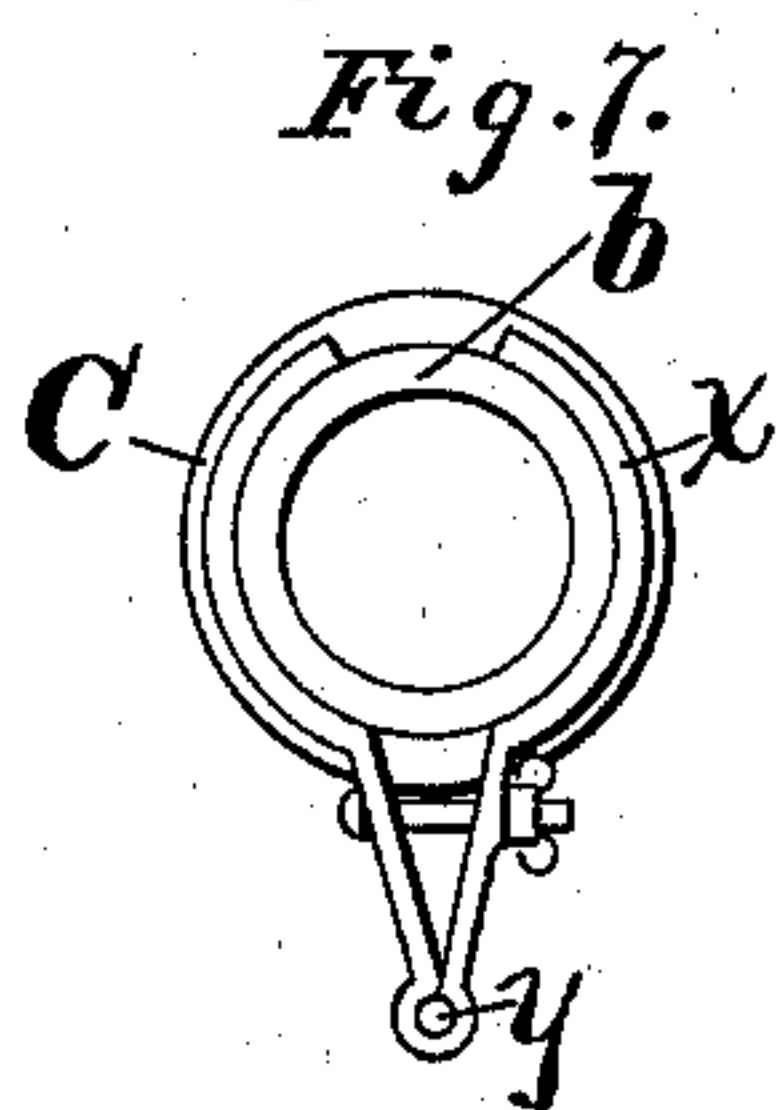
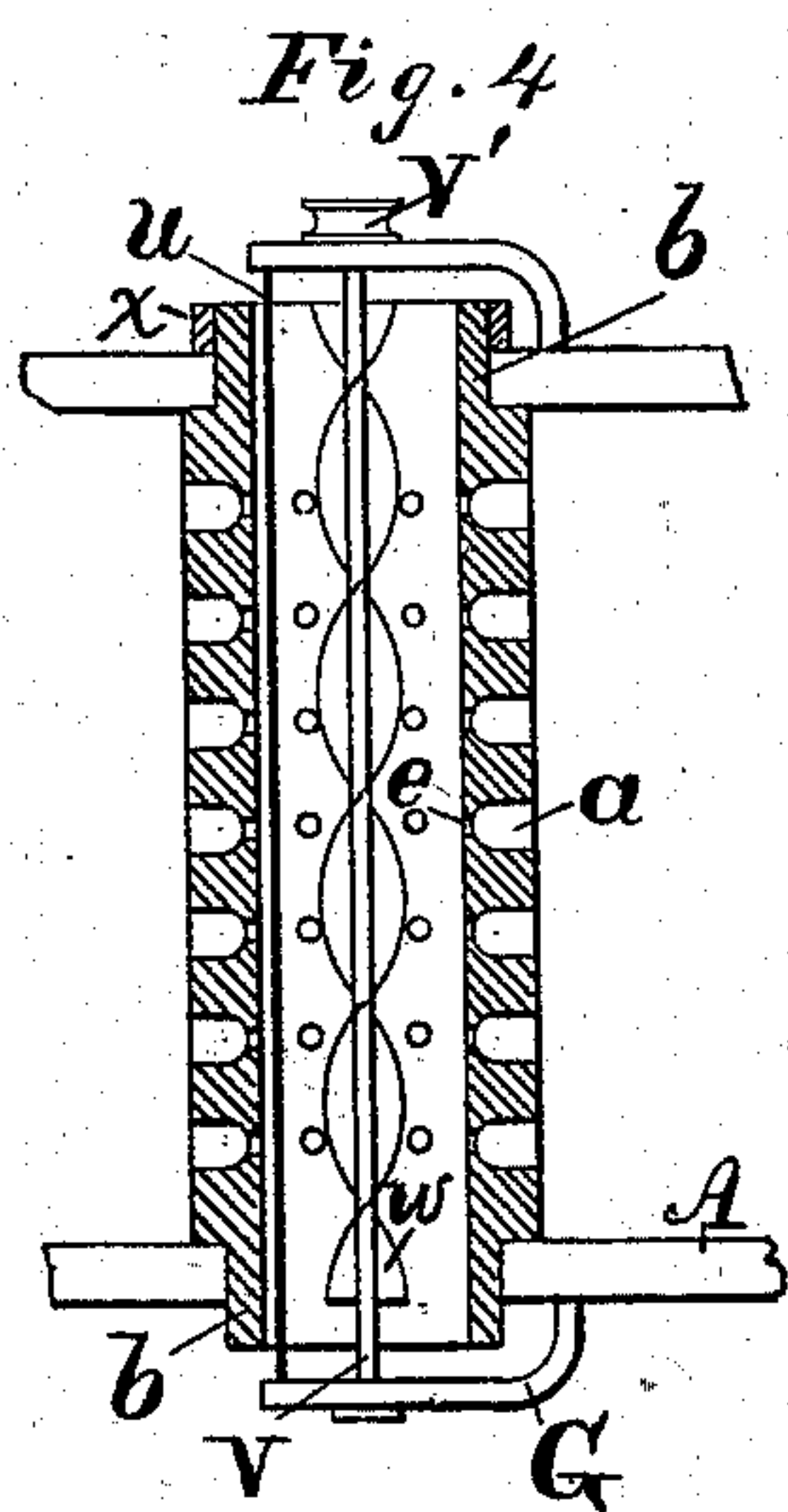
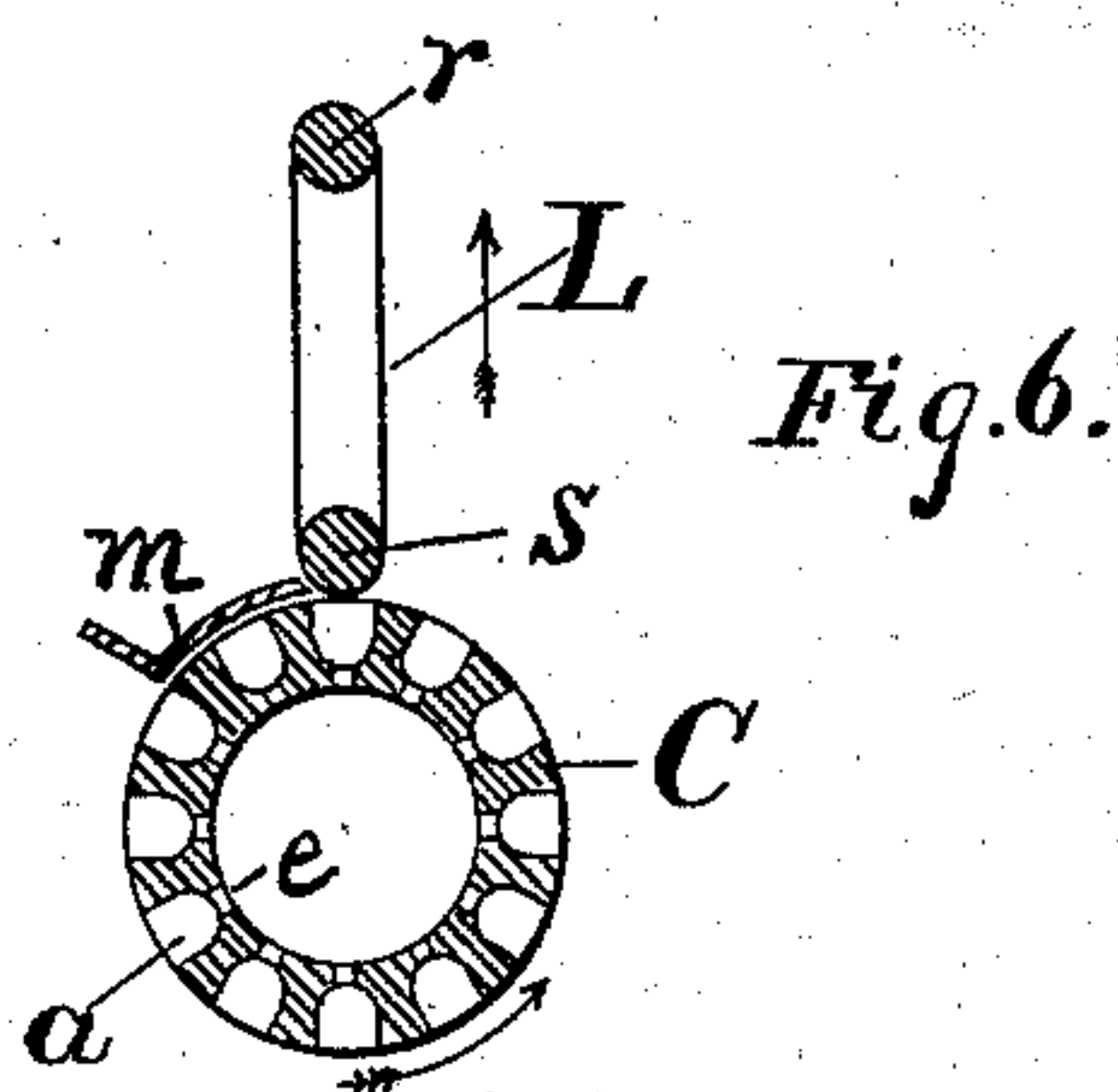
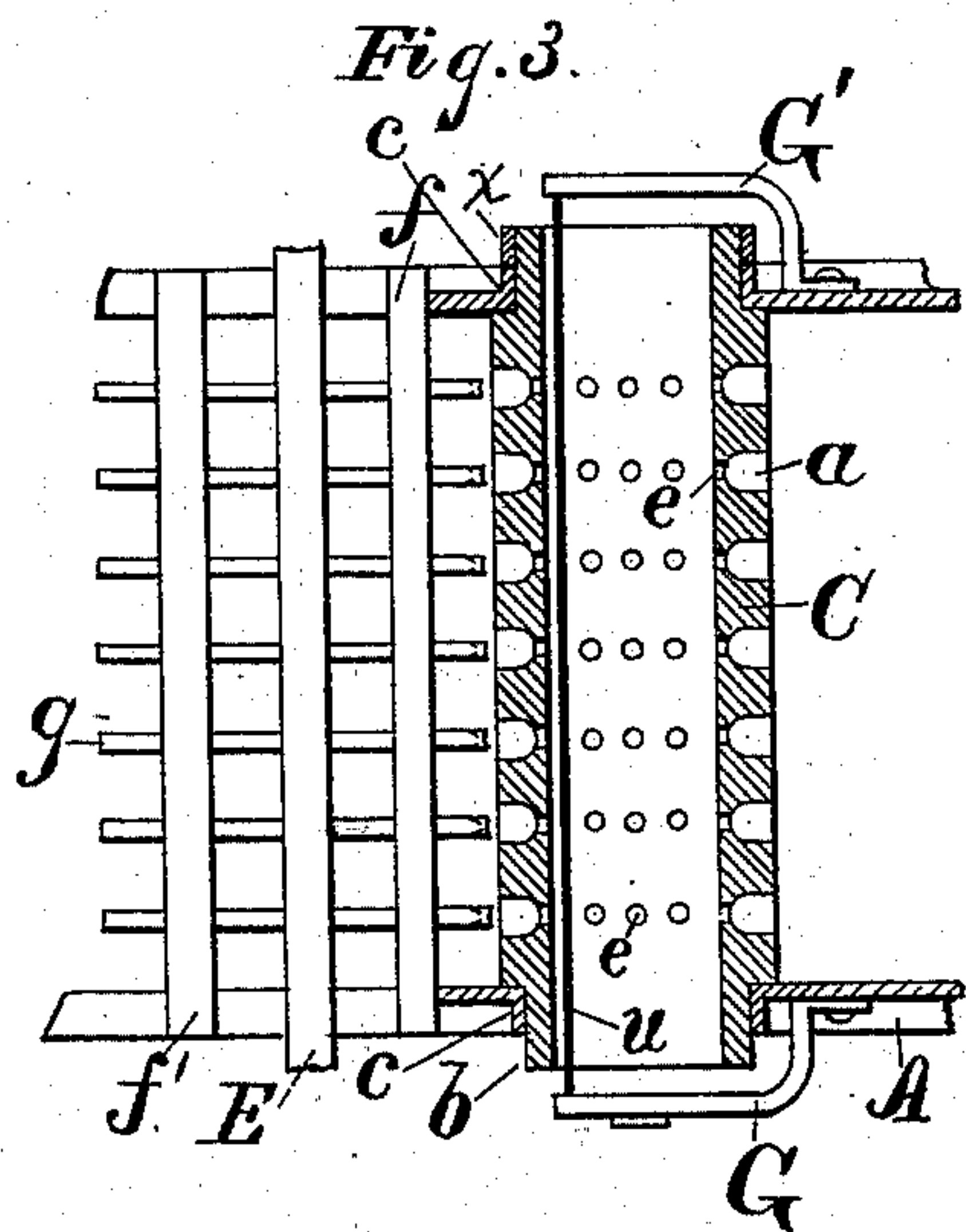
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# UNITED STATES PATENT OFFICE.

GEORGE W. KNAPP, OF BALTIMORE, MARYLAND.

## CHERRY-SEEDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 255,874, dated April 4, 1882.

Application filed November 3, 1881. (Model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. KNAPP, a citizen of the United States, residing at Baltimore, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Cherry-Seeding Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

10 My invention relates to a machine for removing the seeds from cherries.

The construction and operation of a machine embodying my improvements will be first described, and the invention then designated in 15 the claims.

In the drawings hereto annexed, Figure 1 is a side elevation of the machine, showing a portion broken away to expose the cylinder. Fig. 2 is a top view of the machine. Fig. 3 is a 20 view of the cylinder in section, the seed-clearing wires, and the plungers. Fig. 4 is also a sectional view of the cylinder, the wires, and the seed-remover. Fig. 5 is partly a side and partly a sectional view of the cylinder and 25 wires. Fig. 6 is a vertical cross-section of the cylinder and the endless apron. Fig. 7 is an end view of the cylinder and the brake device. Fig. 8 shows two views, enlarged, of the punches.

30 The letter A designates the sides of the frame of the machine; B, the hopper to receive the cherries; C, the hollow cylinder, provided with sockets, each adapted to receive a cherry.

D is the main shaft, and D' the pulley by 35 which it is driven. The sockets *a* on the outside of the cylinder are arranged in rows extending in straight lines lengthwise of the cylinder. Each end of the cylinder is turned down, as shown at *b* in Figs. 3 and 4, to form 40 a journal, which rests and revolves in the bearings *c* in the sides of the frame. The ends of the hollow cylinder are open, and each projects somewhat from its bearings, one end being provided with ratchet-teeth *d*, (seen in Figs. 45 1 and 2,) and the other end serving as a face on which a brake device, *x*, may be applied. The dimensions of the sockets are such as to adapt them to receive a full-sized cherry, and from the bottom of each a hole, *e*, leads into 50 the hollow cylinder, and through this hole the cherry-seed passes.

Two stationary bars, *f f'*, extend across the machine from one side to the other. The bars are perforated to allow the punches *g* to pass and slide through them, and all the punches 55 are carried or moved by a cross-bar, E, which has a reciprocating movement between the two bars *f* and *f'*. This bar is moved by a rod, *h*, at each end, which connects with a wrist-pin on the crank-head F, one crank-head being 60 mounted at each end of the shaft F', which extends across the machine and is driven by gearing *g'* from the main shaft.

A bracket, G, is secured to the side of the frame, and to the bracket an arm, C', is pivoted. 65 This arm carries a pawl, *i*, which engages with the ratchet *d* on the end of the cylinder, and a vibrating motion is imparted to the arm by the rod J, which connects with a wrist-pin on a plate, K, which plate is attached to the wrist-pin on the crank-head F, to which latter wrist-pin the rod *h* is connected. Thus the one 70 crank-head gives motion to two rods, *h* and J. By the arm and pawl mechanism just described intermittent movement is given to the 75 cylinder.

To prevent the cherries in the hopper from being crushed by the revolving cylinder, an endless apron or belt, L, is provided, which constitutes practically one of the walls of the 80 hopper. The belt passes over a roller, *r*, which extends across the hopper near the top and at one side, and over another roller, *s*, which extends across the hopper at the bottom and in close proximity to, if not in contact 85 with, the revolving cylinder. A journal of the roller *r* passes through the side of the hopper, and has attached a pulley, *r'*, which is driven by a belt or cord, *t*, from the crank-head F. Each of the sockets in that portion 90 of the revolving cylinder which is exposed in the bottom of the hopper receives a cherry. The cylinder turns, as shown by the arrow, in a direction from the hopper toward the endless belt. Thus the tendency is for the cylinder 95 to carry the cherries toward the belt. That side of the endless belt against which the cherries are carried by the cylinder, and which constitutes one of the walls of the hopper, has an upward movement, as shown by the arrow. 100 The effect of this movement of the belt is to keep the cherries which lie against the cyl-



inder, and which the latter tends to carry toward the belt, pressed back by such gentle means as not to injure them, and to prevent more than one cherry at a time from entering each of the sockets. The movement of the endless belt also prevents any cherries from being wound between the casing *m* and the cylinder, where they would be crushed. The casing *m* covers that portion of the cylinder between the hopper and the punches. As the hollow cylinder is open from one end to the other and has nothing to obstruct it internally, a stationary device to clear the seeds or stones from the ends of the punches is arranged and extends lengthwise through the cylinder from end to end. This device to knock the seeds which adhere to the ends of the punches consists of two wires, *u*, stretched tight and having their ends secured to the arms *G* and *G'*. When the punches, with a seed on the end of each punch, penetrate the holes *e* to the interior of the cylinder, they enter between the two wires, which are thereby forced or spread apart, and upon the withdrawal of the punches the two wires resume their normal position or come together, and in doing so knock the seeds off.

The two wires to knock off the seeds are not only operative in connection with the mechanism shown—to wit, a hollow cylinder provided with sockets having holes and reciprocating punches to enter the holes—but it is obvious the two wires would also effect the same result with sockets having holes regardless of their being arranged in a hollow cylinder and reciprocating punches to penetrate the holes.

A shaft, *v*, has its bearings in the two arms *G* and *G'* and extends through the hollow cylinder. A spiral flange, *w*, is wound on this shaft and is in contact with the interior bottom of the cylinder. The end of the shaft is provided with a pulley, *v'*, and motion is given to the same by a belt passing over the pulley and also over the pulley *s'*. This spiral device, by its arrangement in contact with the interior bottom of the cylinder, serves, first, to scrape the interior surface of the cylinder, and thereby remove any seeds which may adhere thereto, and, second, to carry the seeds out of the cylinder.

The shape of the punches is shown in Fig. 8. The ends are barbed on two opposite sides. The barbs, being in the horizontal direction, permit the end of the punch to enter between and withdraw from the wires, which are stretched horizontally. The barb on the punch serves to draw the cherry out of its socket after the punch has punched out the seed, and as the barbed end is drawn through the slide-hole in the stationary bar *f* the cherries are stripped from the barbed ends and drop in a pan below, as seen in Fig. 1.

The brake *x* consists of two semicircular jaws, each pivoted by an extension, *y*, to the side of the frame, and serves to hold the cylinder from turning while the arm *C'* and pawl *z* move back.

The operation, briefly stated, is as follows: Assuming the hopper contains cherries and the machine is in motion, each socket in the cylinder which is exposed in the hopper receives a cherry. The endless belt or apron prevents the cherries from being crushed between the casing, which partly covers the cylinder, and the cylinder. The punches drive the seeds through the holes in the sockets. The two wires remove the seed which adheres to the end of each punch. The spiral flange carries the seeds out of the cylinder. The ends of the punches, being barbed, serve to withdraw the cherries from the sockets, and by the barbed part of the punches being drawn through the slide-holes in the bar the cherries are stripped therefrom and drop into a receptacle.

It is not essential, in order to use the several features which constitute my invention, that all the parts shall be constructed as herein shown, nor that all the parts shown shall be used.

Having described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a cherry-seeder, the combination of a cylinder adapted to revolve and having sockets, each of which are to receive a cherry, a hopper from which the cherries are fed to the cylinder, and an endless belt or apron mounted in the hopper in proximity to the cylinder and constituting one of the walls of the hopper, as and for the purpose set forth.

2. In a cherry-seeder, the combination of a hollow cylinder adapted to revolve and provided with sockets to receive cherries, punches to reciprocate and arranged for the end of each punch to enter a socket, and two wires stretched through the cylinder and arranged to permit the ends of the punches to enter between the wires, as set forth.

3. In a machine for seeding cherries, the construction herein set forth, consisting of a hollow cylinder provided with holes leading into the cylinder for the passage therein of the seeds, and a shaft extending through the cylinder, having a spiral flange arranged to revolve in contact with the interior surface of the cylinder at its bottom, whereby the spiral flange serves both as a scraper and a seed-remover, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE W. KNAPP.

Witnesses:

CHAS. B. MANN,  
W. L. LANGLEY.