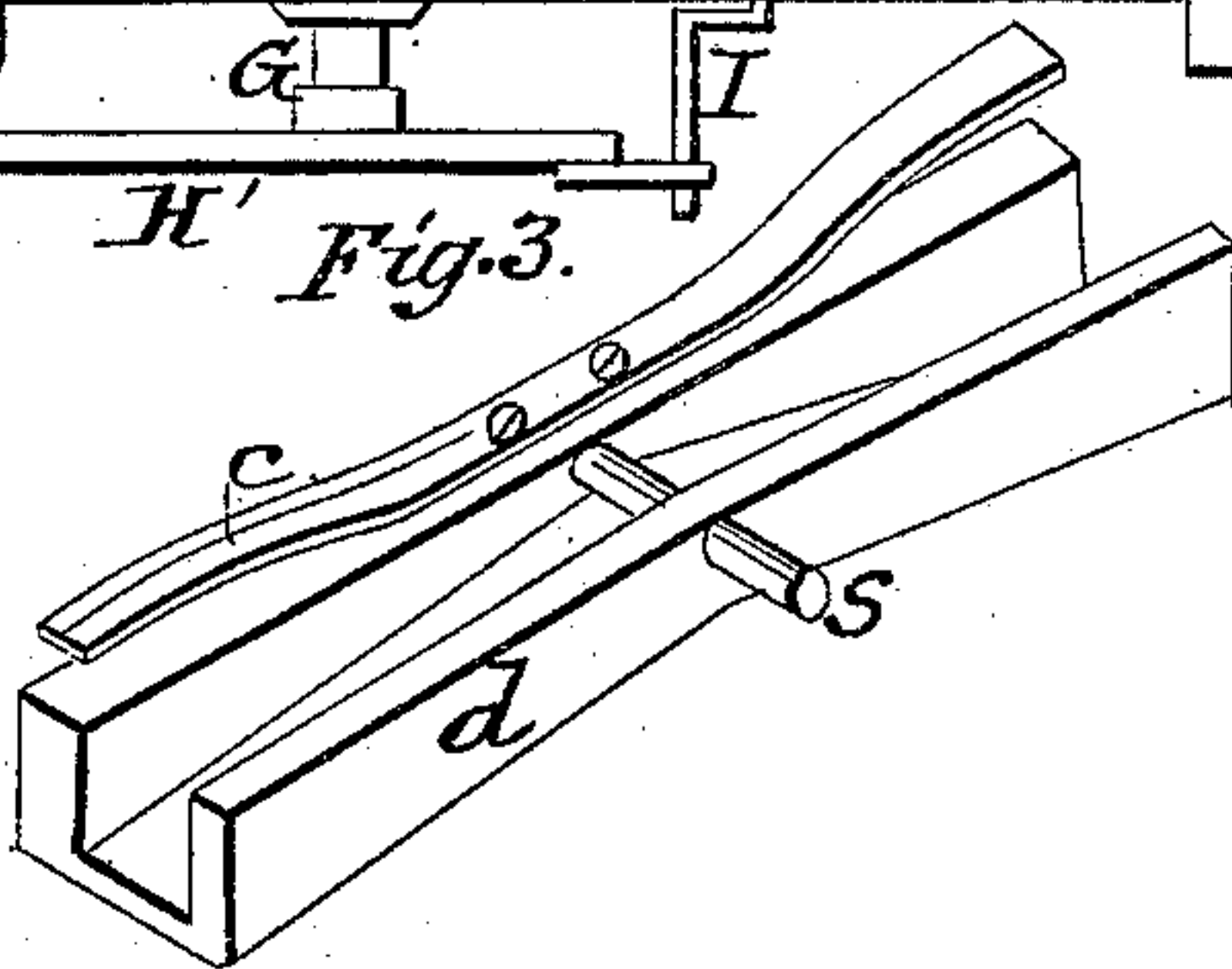
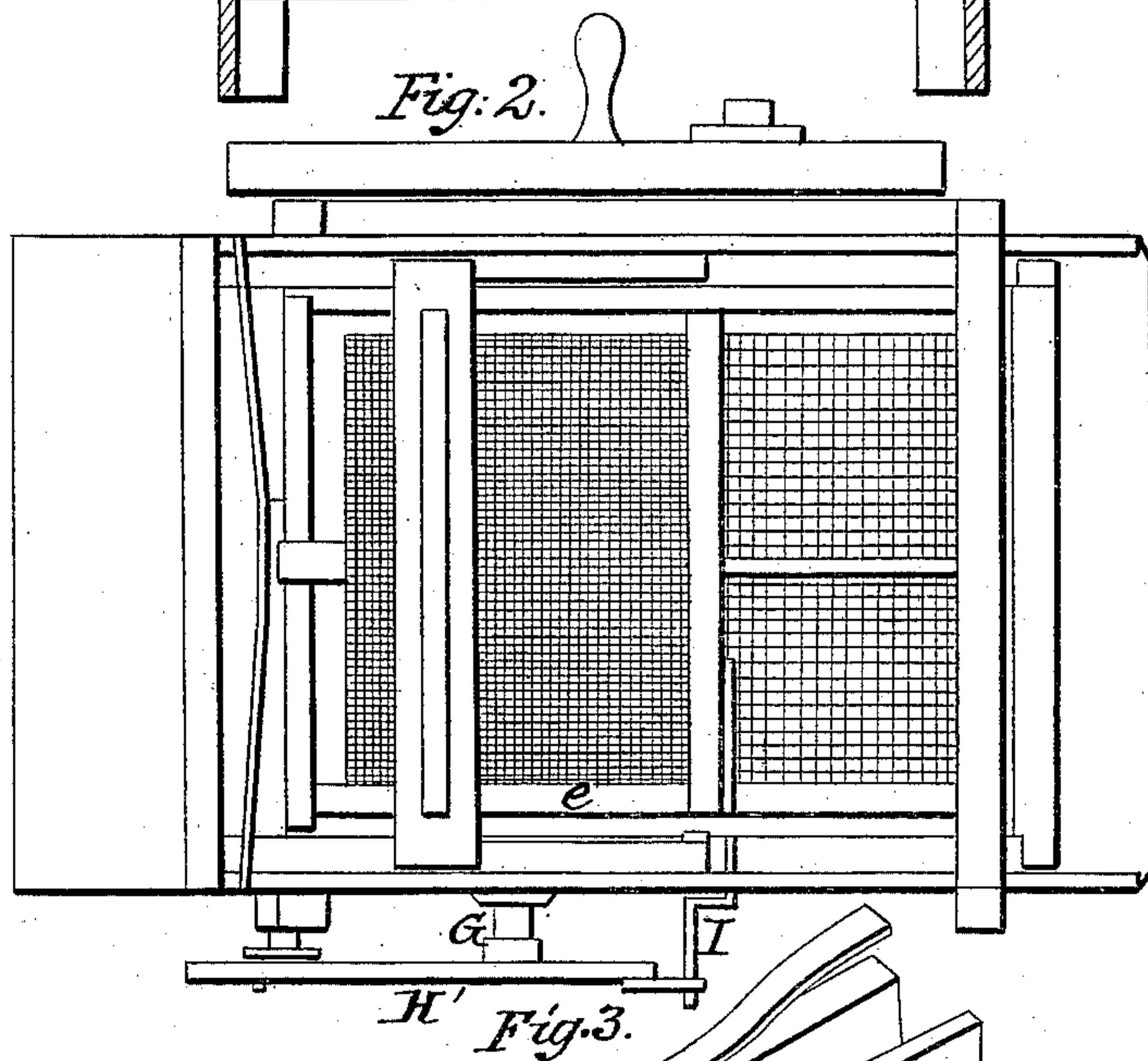
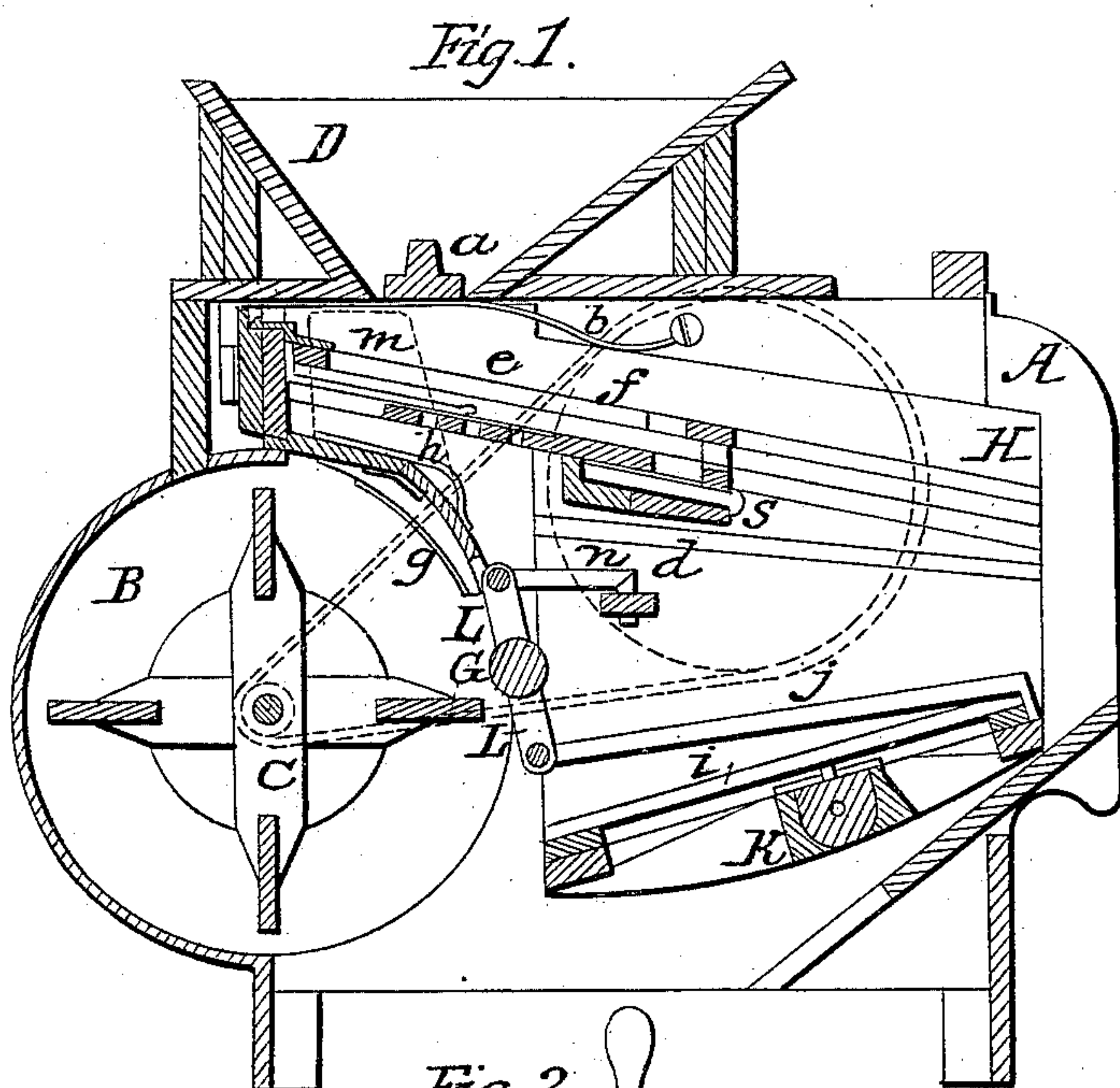


SEELEY & GRISWOLD.

Grain Winnower.

No. 32,723.

Patented July 2, 1861.



Witnesses.
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UNITED STATES PATENT OFFICE.

H. H. SEELEY AND P. GRISWOLD, OF HUDSON, MICHIGAN.

GRAIN-SEPARATOR.

Specification of Letters Patent No. 32,723, dated July 2, 1861.

To all whom it may concern.

Be it known that we, H. H. SEELEY and P. GRISWOLD, of Hudson, in the county of Lenawee and State of Michigan, have invented certain new and useful Improvements in Grain-Separating Machines; and we 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 our invention consists in constructing and arranging the several parts of this machine in the manner hereinafter set forth.

In the annexed drawings making a part of this specification A, represents the case of the machine which is constructed in the usual way and is provided with a fan case B, a fan C and a hopper D, constructed in the ordinary manner. In the bottom of the hopper is provided a shaker *a*, for the purpose of regulating and keeping constant, the flow of grain to the machine. This shaker plays vertically and its ends work in vertical grooves or a sufficient opening for them in the sides of the machine. The shaker rests upon two springs *b*, *b*, which are secured to the sides of the machine and these springs are operated upon by lugs or shoulders upon the shoe. When the shoe vibrates it strikes these springs and they give a vertical vibratory motion to the shaker.

Immediately under the hopper is a screen *e*, which is secured to the shoe and which is situated in a groove in said shoe which is large enough to allow the screen to vibrate. Secured to the shoe and under the end of the screen *e*, is secured a trough *d*. This trough is hung upon a pin *s*, which passes through it about its center, and it vibrates or oscillates upon this pin. Upon top of the trough *d*, is secured a spring *c*, (see in Fig. 3,) the ends of which strike against the screen *e*, on its under side and cause the said screen to vibrate. This takes place when the trough is oscillated. Under the screen *e* is a bottom *f*, which is adjustable being provided with holes through which pins pass, after passing through the metallic strap *m*, for the purpose of securing said bottom in any desired posi-

tion. This bottom may be moved to or from the trough *d*, as may be desirable in the operation of cleaning grain.

Beneath the bottom *f* is a bottom *g*, or perhaps more properly a section of the fan case which is hinged and which is held down by means of a spring *h*, which presses upon it. By raising or lowering this section *g*, the fan blast is regulated as to its direction. This section may be made self-adjusting—being raised by a strong blast from the fan.

i represents the bottom screen of the shoe. This screen is operated longitudinally of the shoe by means of the rod *j*. Beneath the screen *i*, is a rocker K, which is connected to the screen by means of a pin. The top portion of the wheel is cut away and when it rocks the screen *i*, is given a rocking and at the same time a vertical motion by the point of attachment passing from one side of the center of the wheel to the other.

H' is a bar with a slot in one end in which plays a pin which is secured eccentrically upon a wheel attached to the fan shaft. This bar oscillates a shaft G, which has two arms L, L, one of which communicates motion to the shoe through a rod *n*, while the other communicates motion to the screen *i* through the rod *j*.

Motion is given to the fan, and from it to the other parts in the usual way, or in any convenient way.

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

1. The oscillating trough *d*, the spring *c*, and the screen *e*, arranged and operating in the manner and for the purpose set forth.

2. The arrangement of the shaker *a*, springs *b*, *b*, adjustable bottom *f*, hinged bottom *g* and spring *h*, in the manner and for the purpose herein specified.

3. The arrangement of the screen *i*, the rod *j*, the shoe H, and the rocker K, the same being connected and operating as and for the purpose set forth.

H. H. SEELEY.
P. GRISWOLD.

Witnesses:

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A. S. TEED.