

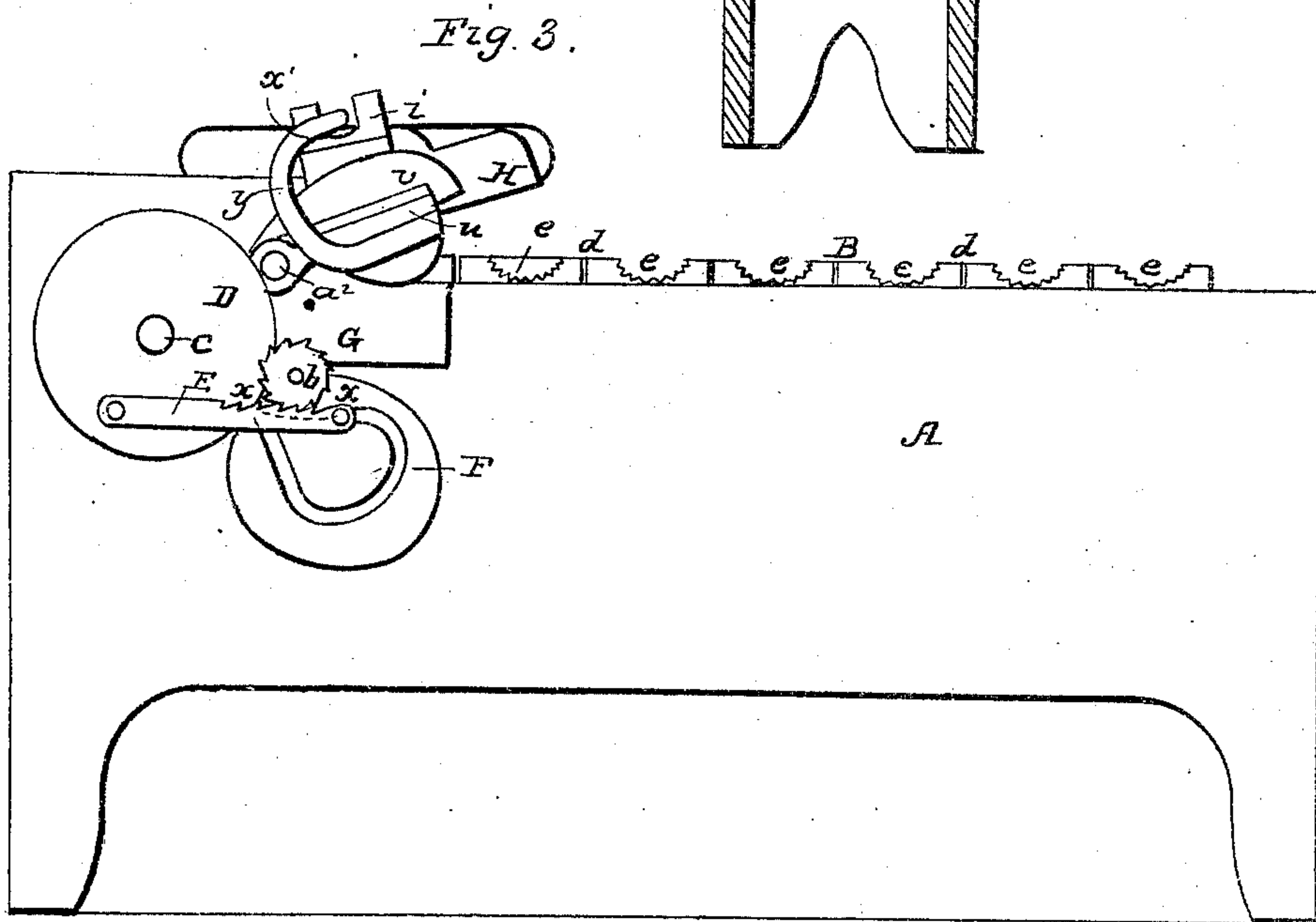
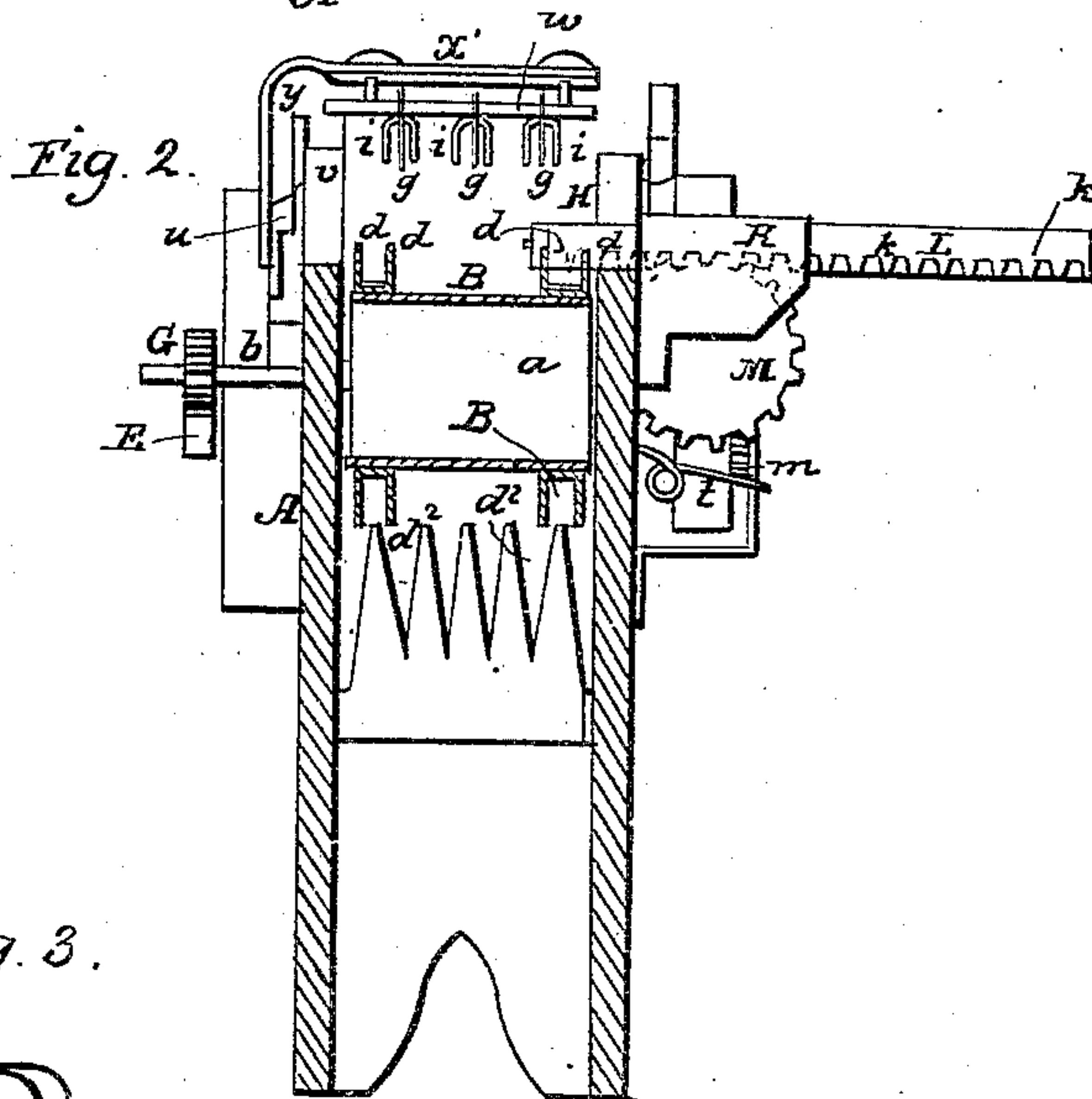
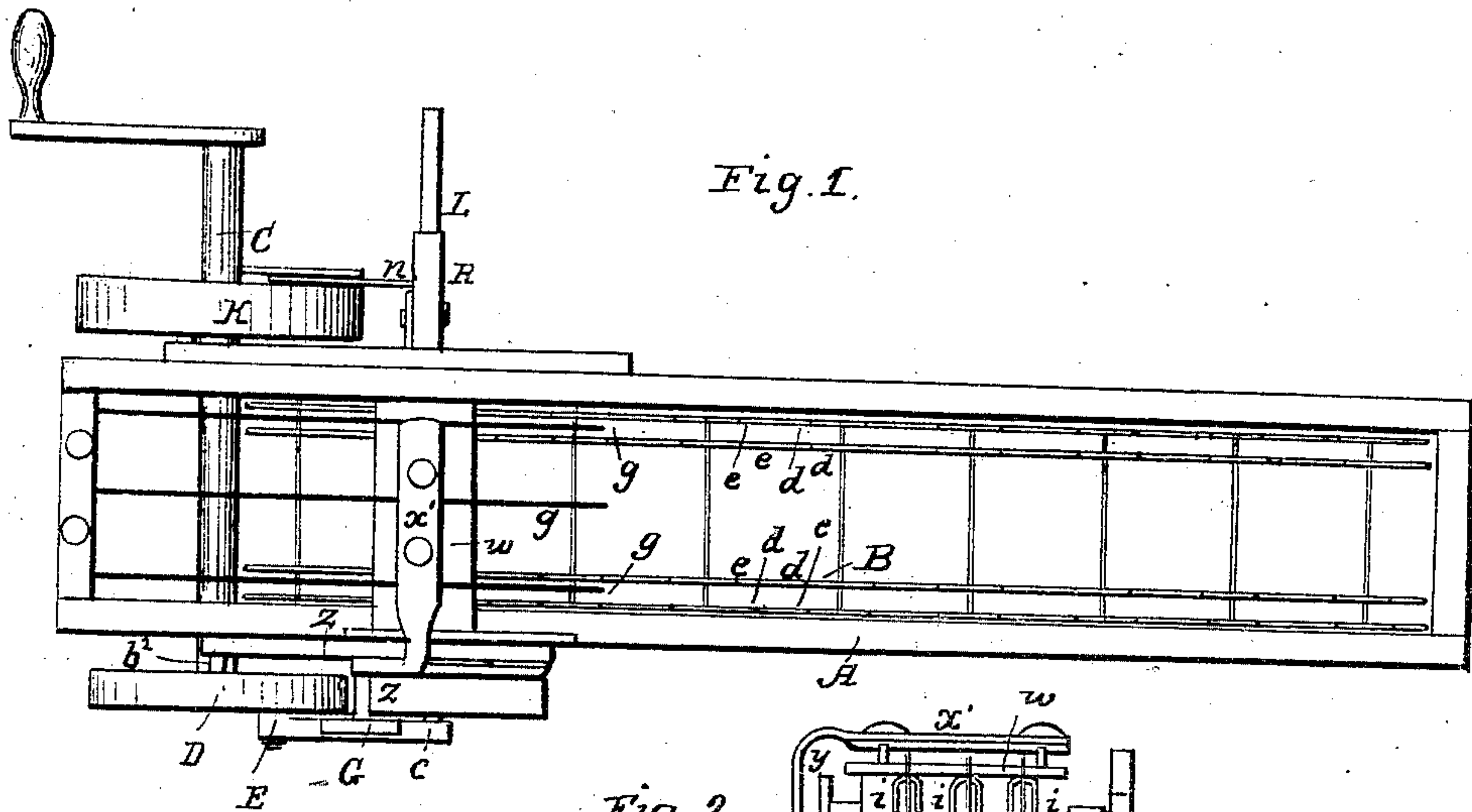
STEVENS & KINSLEY,

2 Sheets—Sheet 1.

Corn Husker.

No. 18,473.

Patented Oct. 20, 1857.



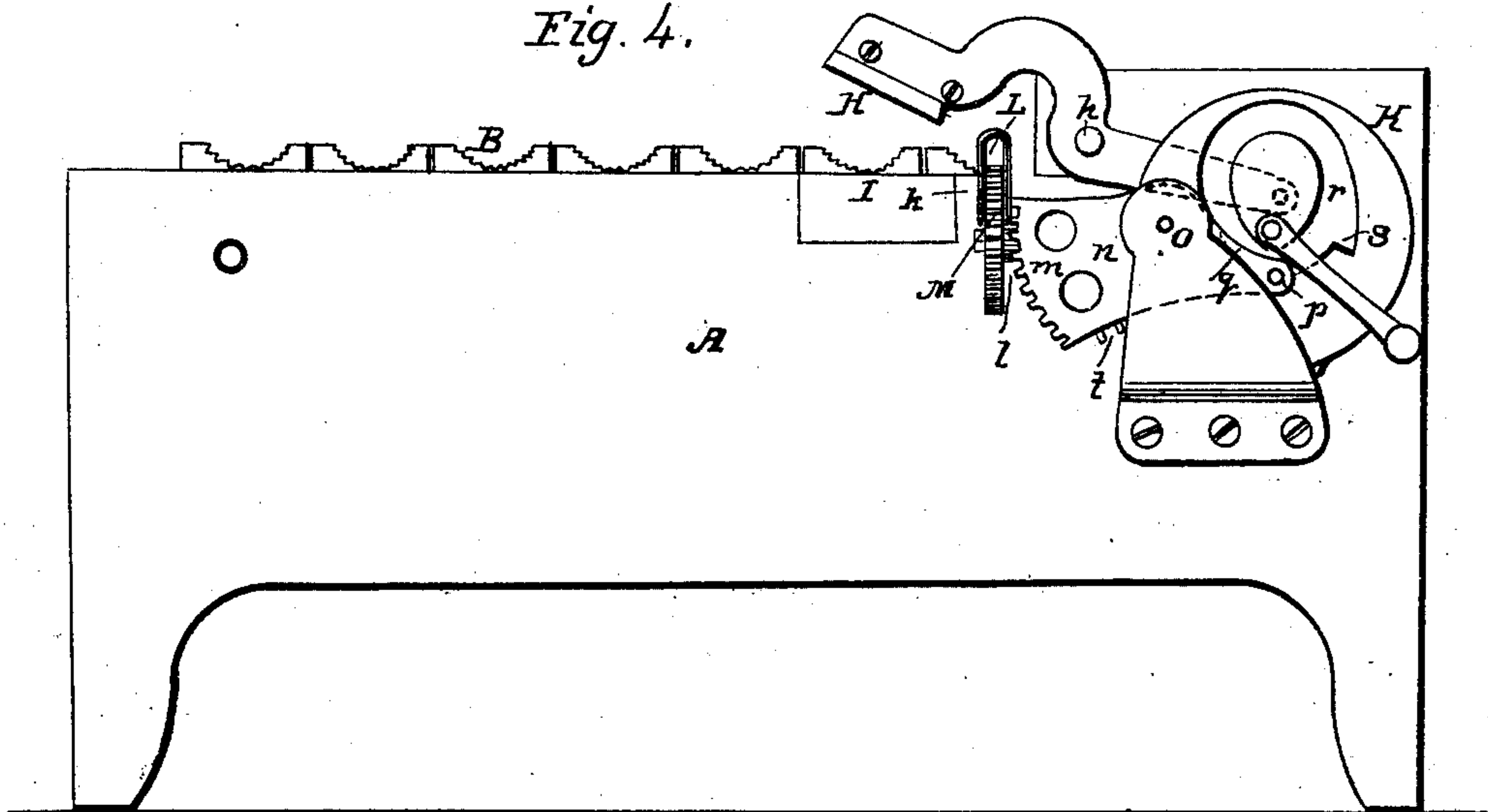
**STEVENS & KINSLEY.**

## Corn Husker.

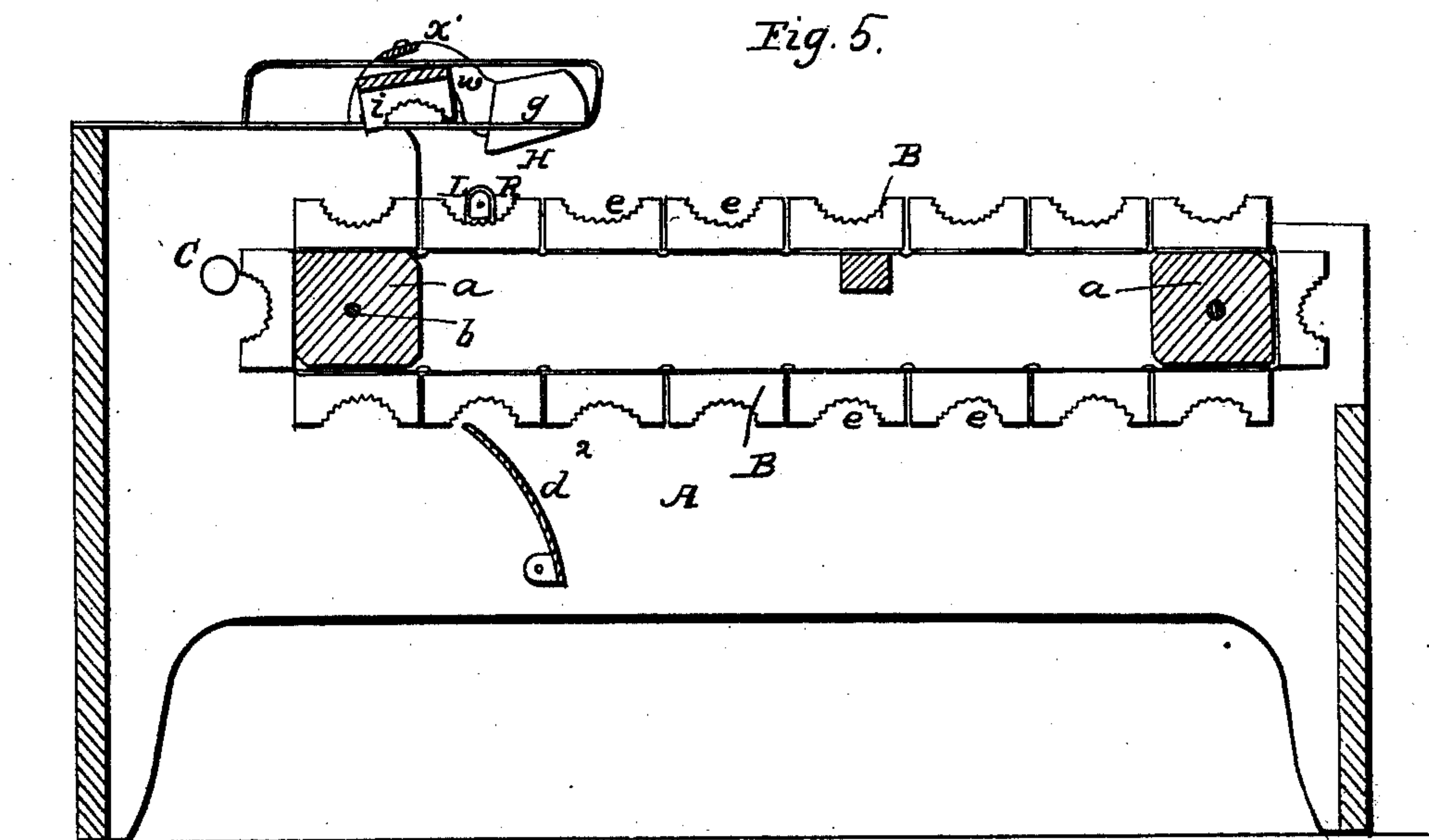
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Patented Oct. 20, 1857.

*Fig. 4.*



*Fig. 5.*





# UNITED STATES PATENT OFFICE.

MARTIN W. STEVENS AND EDWARD G. KINSLEY, OF STOUGHTON, MASSACHUSETTS.

## CORN-HUSKING MACHINE.

Specification of Letters Patent No. 18,473, dated October 20, 1857.

*To all whom it may concern:*

Be it known that we, MARTIN W. STEVENS and EDWARD G. KINSLEY, of Stoughton, in the county of Norfolk and State of Massachusetts, have invented a new and useful or Improved Husking-Machine; and we hereby declare that the nature and operation of the said machine is fully set forth in the following specification and shown in the accompanying drawings, to which the specification and letters refer.

Figure 1, of the drawings represents a top view of the machine. Fig. 2, a cross section of it taken through the husking piston. Fig. 3, a view of one side of the machine. Fig. 4, a view of the other side thereof. Fig. 5, a vertical, central, and longitudinal section of it.

A, in said drawings denotes the frame of the machine. B, an endless belt of ear holders. This belt extends around two drums or pulleys, *a, a*, at the opposite ends of the machine and has an intermittent longitudinal motion imparted to it, so as to carry each ear of corn laid upon or over its surface, up to the action of the knife for cutting off the stalk, and the husking piston or rod, and cause the ear to stop when brought under the knife, and again when against the husking piston. This intermittent motion is produced as follows: A crank shaft C extends through the front end of the frame A, and has upon its rear end a cam wheel D. One end of a pawl rod E, is jointed to this wheel, at a short distance from its center as seen in Fig. 3, its other end having a pin *c*, projecting from it, into a stationary cam or cam groove F, placed, or made on the side of the frame. The shaft *b*, of the forward drum or pulley *a*, projects through the side of the frame A and has a ratchet wheel G, placed on its end, (said ratchet being impelled or rotated,) and its drum turned so as to move the endless belt, by the pawl *x*, of the rod E.

When an ear has been husked, and the belt is ready to be impelled forward, the rod E, lies nearly horizontal, with its pawl teeth against the teeth of the ratchet as seen in Fig. 4. As the crank is turned, the rod being jointed to the cam, as seen in Fig. 4, will be pushed forward, and its other end being kept by its pin *c*, and cam F, nearly horizontal, or against the teeth of the ratchet, said ratchet will be turned thereby, until the belt has been propelled the proper dis-

tance, when the rod will be set free from contact with the ratchet by the formation of the cam F, and the movement of the wheel D, and the apron will not again move forward, until the crank has rotated far enough to carry the cam pin around, and bring the pawl rod and pawl up again into action with the ratchet—during which time, one ear will have its stalk cut off from its head, and another have its husks or shucks removed from it, when the apron is again ready to be impelled forward.

Each set of troughs or ear holders is composed of four or any other suitable number of vertical plates *d, d, d, d*, having depressions *e, e*, in which the ear is placed and rests, each depression is serrated or provided with points at its bottom and sides, which together with similar serrated plates, placed over the husking piston G, serve to press into, and hold the husks, while the ear is being pushed away from them. The ears of corn with their stalks and husks are placed in the depressions, before they reach the severing knife. When the ear is moving forward on the apron, the knife H, is at rest, and when the apron stops, the knife begins to descend, and with it a series of wire springs *g, g*. The ear is placed so that the stalk projects beyond the knife bed I, and as the knife descends, it severs the stalk, and attached portions of husk, the springs *g, g*, serving to press upon, and keep down the ear, while being so severed from the stalk. The knife is jointed to, or turned upon a pin *h*, and is moved up and down at proper times by a pin projecting from one end of the knife bar, into a cam groove, cut in the rear face of a cam wheel K, or by any other proper mechanism.

The piston or bar L, which in connection with the serrated plates *d, d*, and *i, i*, separates the ear from the husks after the knife has severed the stalk therefrom, is constructed and operates as follows. The piston slides horizontally through a guide R, and has a rack of teeth *k k*, upon its under side, as seen in Fig. 2. Into these teeth the teeth of a cogged wheel or sector M work, said wheel having a cogged pinion or sector *l*, on its front face, which is operated upon by the teeth of another cogged sector *m* placed on the end of a vertical rocking plate *n*. This plate is turned or vibrated on a pin or fulcrum *o*, by having a pin *p* projected from an arm *q* thereof, into a cam groove *r*, made



in the face of the cam wheel K. The cam groove is so made and arranged that the plate is not actuated while the apron is being propelled forward, but as soon as the  
 5 apron stops, (at which time the ear is opposite the end of the piston bar) the pin  $p$ , on the arm  $q$  reaches a vertical depression  $s$ , in the cam groove  $r$  which allows the pin to descend, and the sector plate  $n$ , to be  
 10 borne upward by a spring  $t$ . The effect of this is to rotate the sector or pinion  $l$ , and the sector or wheel  $M$ , and thereby impel the piston bar  $L$ , forward, and with it the ear which lies opposite or against its end, until  
 15 its small end shall abut against a stop plate  $u$ , and project under a knife  $v$ . This knife is for the purpose of severing or cutting off the ends of the husk at the small end of the ear, which are otherwise apt to cling to-  
 20 gether and impede the stripping. As the ears are of different lengths, and it is requisite or desirable to cut off about the same length from each of them, the mechanism is so constructed that just as each ear comes op-  
 25 posite to it, it is impelled forward, so as to carry it against the stop plate  $u$ . After being so pushed forward the piston again stops until the knife  $v$ , descends and cuts off its small end, and the serrated plates  $i, i$ , over  
 30 the ear also descend and so press the ear upon, or in contact with the serrated depressions under it, as to hold the husks firmly, while the ear is pushed from them. These plates  $i, i$ , are attached to a weighted plate  
 35  $w$ , which depends loosely from a horizontal bar  $x'$  attached to an arm  $y$ , said arm being fastened to the knife bar  $z$ , so as to rise and descend with the knife  $v$ . See Figs. 2 and  
 40 4. This knife bar, carrying the knife  $v$ , stop plate  $u$ , and bar  $x'$ , turns on a fulcrum  $a^2$ , and has a pin  $b^2$ , projecting from the end opposite to where the knife is fastened to it, into a cam groove of the cam wheel D, so that the knife  $v$ , stop plate  $u$ , and bar  $x'$ ,  
 45 shall be made to descend at the proper time, by the revolution of the crank shaft, and this cam wheel. By the descent of the stop plate  $u$ , the ear of corn is left free at its end, so that it can be pushed forward, and as  
 50 soon as the stop plate has so descended, the groove of the cam wheel K, again operates the sector plate  $m$ , and through it, and the sectors, or wheels  $l, M$ , communicates a horizontal forward motion to the bar or piston

$L$ , against the ear. The pressure of the 55 weighted plate  $w$ , confines or impales the husks of the ear between or upon the teeth of the serrated depressions of the plates  $d, d$ , and  $i, i$ , and holds the husks, while the ear is being pushed forward, and freed from them, 60 drops from the side of the frame A. The springs are borne up by the pressure of the plates  $i, i$ , upon the ear of corn when passing through, but when the ear is pushed off, the springs bear down upon the impaled 65 husks, and free the plates from them, so that they shall not clog the plates, when the next ear comes under their action. Thus the springs serve at the same time two purposes, namely holding down one ear, while the 70 knife is cutting off its stalk, and pressing upon and discharging the husks of the preceding ear from the plates  $i, i$ .

To clear the husks that may cling to the teeth on the endless apron plates  $d, d$ , clearing springs  $d^2, d^2$ , are placed under the apron, and project into the path of the serrated plates in such manner as to catch upon, and release any husks, which may adhere to the teeth of the plate. 80

Having thus described the construction and operation of our machine, we would remark that we are aware that an endless apron with troughs has been used in a husking machine, for feeding the ears of corn. 85 We are also aware that an intermittent motion has been applied to a feeding cylinder, so that it shall stop, at each time an ear is presented to the action of a husking cylinder, or to that of a cutting off knife. We 90 therefore do not claim such as our invention, but

What we do claim, is,

The plates  $d, d$ , and  $i, i$ , provided with teeth or points for holding the husks in combination with the piston or bar  $L$ , knives 95  $v$  and  $H$ , springs  $g, g$ , and stop plate  $u$ , the whole being arranged for operation, substantially in the manner, and for the purposes herein set forth. 100

In testimony whereof we have hereto set our signatures this first day of May, A. D. 1857.

MARTIN W. STEVENS.  
EDWARD G. KINSLEY.

Witnesses:

JAMES W. RICHARDSON,  
A. DICKERMAN.