R. Kinsley,

Tobacco Press,

No. 16,389, Patented Jan. 13, 1857.

Fig. 2.

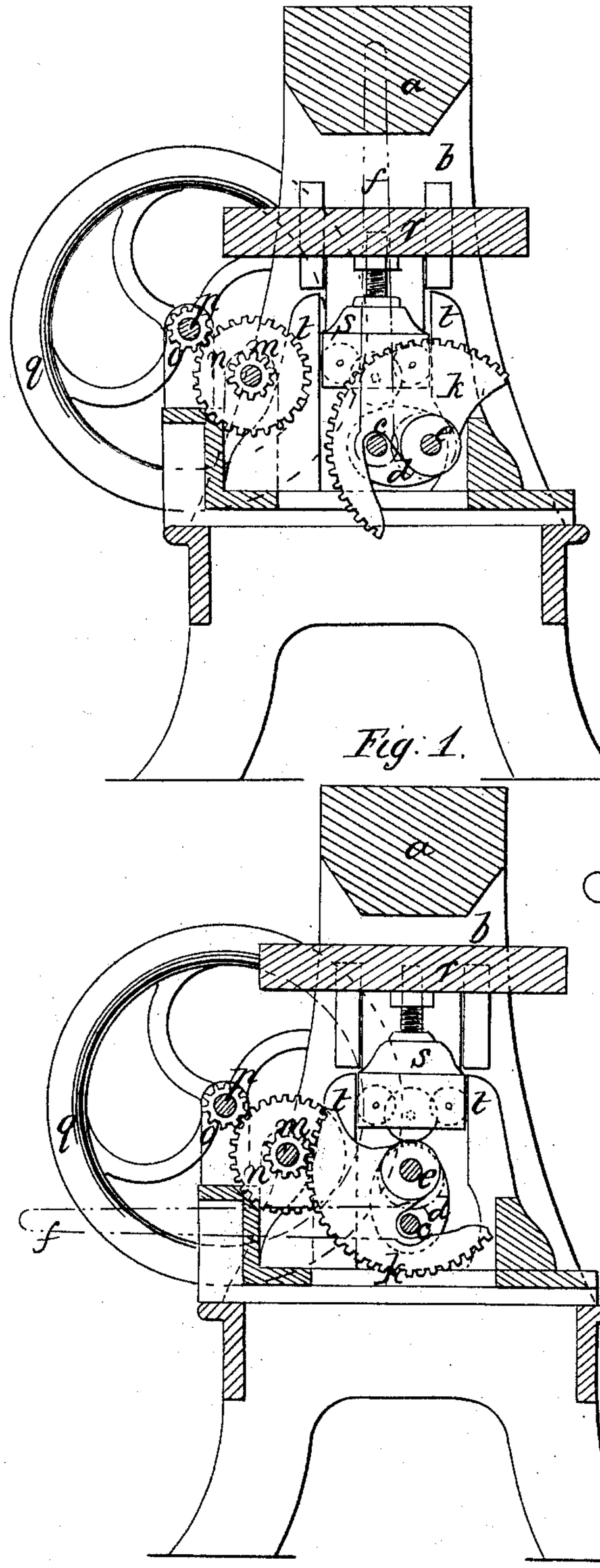

Fig. 1.

Fig. 3.

Inventor;

R. Kinsley

UNITED STATES PATENT OFFICE.

RHODOLPHUS KINSLEY, OF SPRINGFIELD, MASSACHUSETTS.

IMPROVEMENT IN PRESSES.

Specification forming part of Letters Patent No. **16,389,** dated January 13, 1857.

To all whom it may concern:

Be it known that I, RHODOLPHUS KINSLEY, of Springfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful improvements in presses particularly applicable to pressing lump tobacco and other analogous articles, but which will serve for some other purposes, the invention being hereinafter described and ascertained as follows, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical cross-section of the press run up in the act of pressing; Fig. 2, a similar section with the platen run down so as to receive the article to be pressed. Fig. 3 is a front view.

My invention is for the purpose of accomplishing the following objects: First, a rapid condensation of the article, which is loose and requires little pressure, by quickly throwing up the platen till it is compacted, and then finishing the compression by a slow movement of great power, and, lastly, relieving the pressure and throwing down the platen by a quick movement, so as to economize to the utmost the time required in pressing. The advantages of these successive movements are, in pressing tobacco, first, when the roll of which the lump is made is put into the former it is very loose and requires but little power to flatten it for some distance. In this state it can be acted on quickly; but as it becomes more condensed the action must be slow, in order to allow the air to escape. Besides, the power then required to press it into form is very great. I therefore make the press move slow, with greatly-increased power. As soon as it is brought down, the former or mold, for which I already have a patent catches and retains the pressure. Then the platen is thrown down at once and the former removed.

The construction is as follows: I form the press with two cast-iron standards, to which is affixed a cap or cross-head, *a*. The side standards or cheeks, *b*, have bearings in them for a main shaft, *c*, which extends across from side to side. On this shaft *c*, near each bearing, there is a cam, *d*, of suitable form and size to give the proper motion to the platen. An eccentric-shaft, *e*, has its bearings in the cams *d*, and revolves with the cams *d* part way around the center shaft, *c*, as it turns. This center or main shaft, *c*, is turned a quarter of a revolution (more or less) by a lever or levers or arm, *f*, outside of the cheeks, and when it is in a horizontal position it is caught by a spring-catch, *h*, and held there. The second or eccentric shaft *e* bears upon the two ends within recesses in the cams *d*, or otherwise eccentrics *i*, firmly applied to the shaft, so as to turn with it. On the center or other convenient part of this eccentric-shaft *e* there is a segment of a spur-wheel, *k*, as clearly represented in the section, Fig. 2. Opposite to the segment *k* there is in the same plane with it a pinion, *m*. On a short shaft that rests in bearings in the stationary frame, and on the same shaft with *m*, is a spur-wheel, *n*, that gears into a pinion, *o*, on the balance-wheel shaft *p*. This shaft extends across the frame, and has a balance or fly wheel, *q*, on one end, with a crank-handle on it for turning by hand; or this shaft may be driven by power, as its motion may be constant and in one direction.

A platen, *r*, is fitted to slide in a vertical direction up and down between the cheeks, and it rests on two struts, *s*, in which there are adjustable screws, as shown in the figures. These struts, as will be seen, rest in the cams *d*, and are properly guided by guide-pieces *t*, affixed to the frame.

The operation of the machine thus formed is as follows: When the tobacco or other article is placed upon the platen, the lever *f* is brought down from its vertical position to a horizontal, where it is caught by the catch *h* and held. This raises the platen till the struts *s* rest on the highest point of the cams *d*, and the eccentric-shaft is in line over the main shaft *a*. This brings the segment *k* into gear with pinion *m* which by its revolution, turns the eccentric-shaft and eccentrics a quarter turn, which slowly lifts the platen still higher off of the cams *d* and gives the last powerful pressure. The lever *f* is then released and raised to the vertical position, which brings all the parts to their original places, and at once lowers the platen down for removing the article pressed and replacing it with another.

Having thus described my invention, I claim as new therein—

The compound action of the cam and eccentric, or their equivalents, arranged and combined substantially in the manner and for the purposes set forth.

RHODOLPHUS KINSLEY.

Witnesses:

E. Y. CARTER,

WM. S. WOOD.