

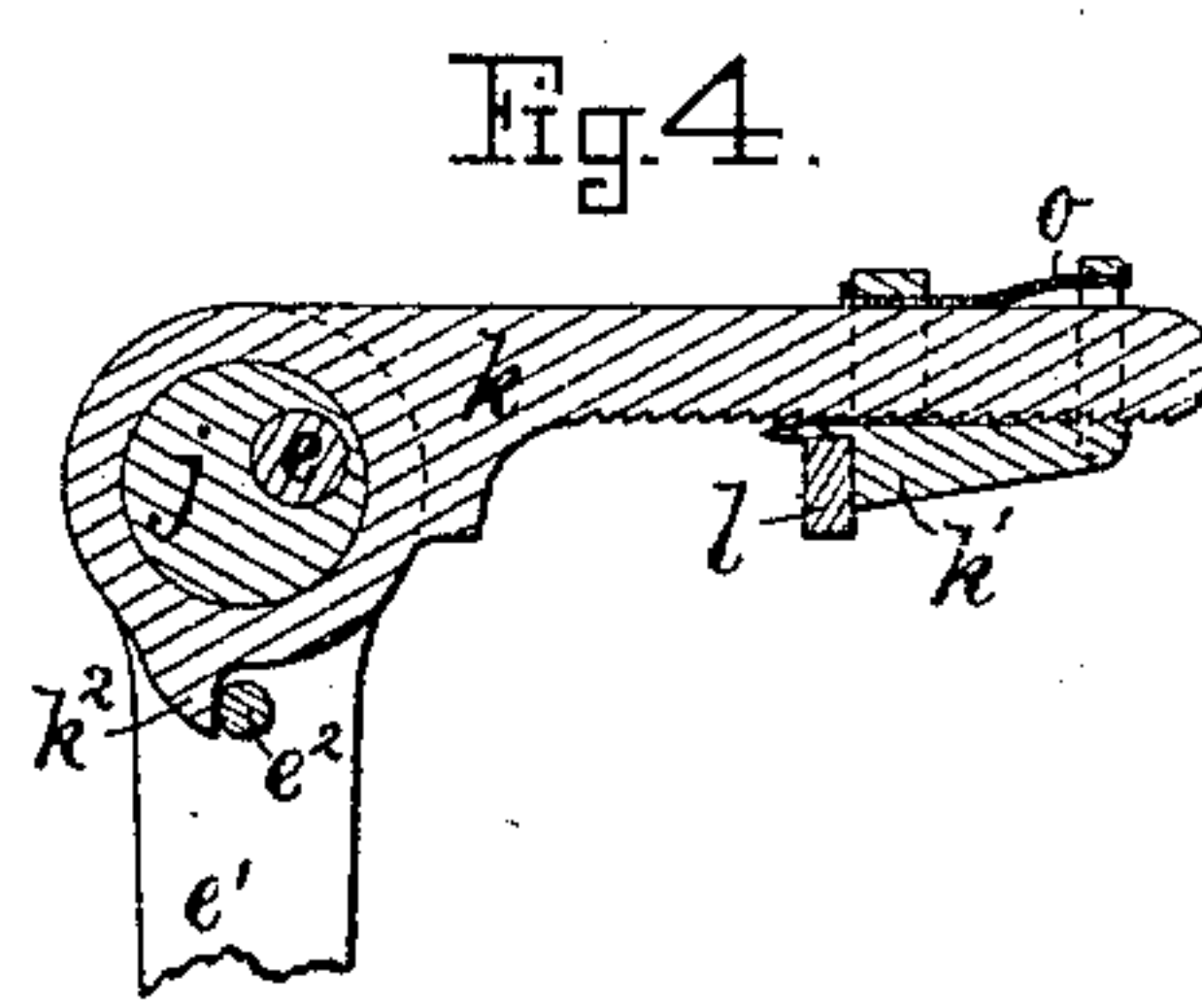
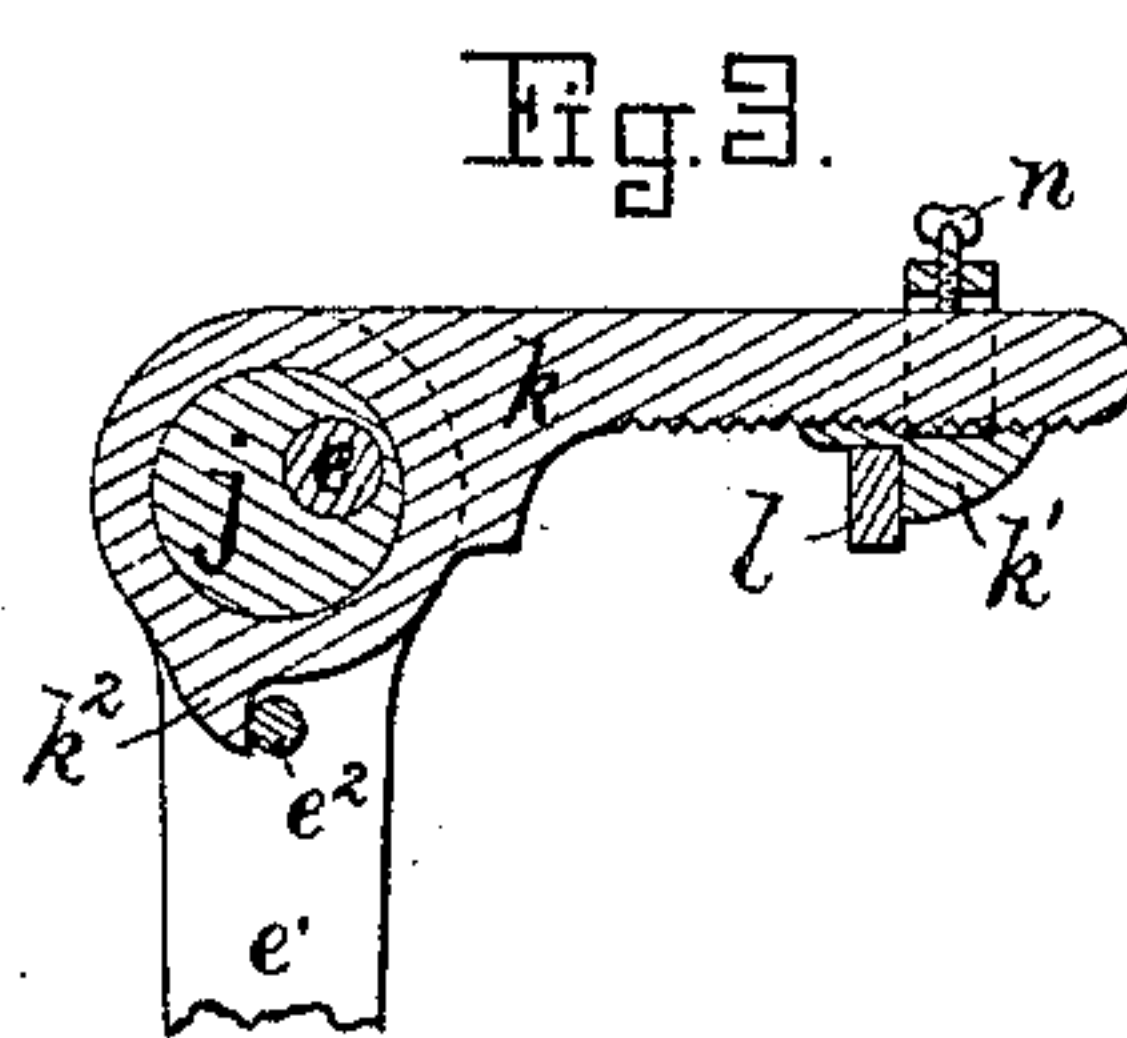
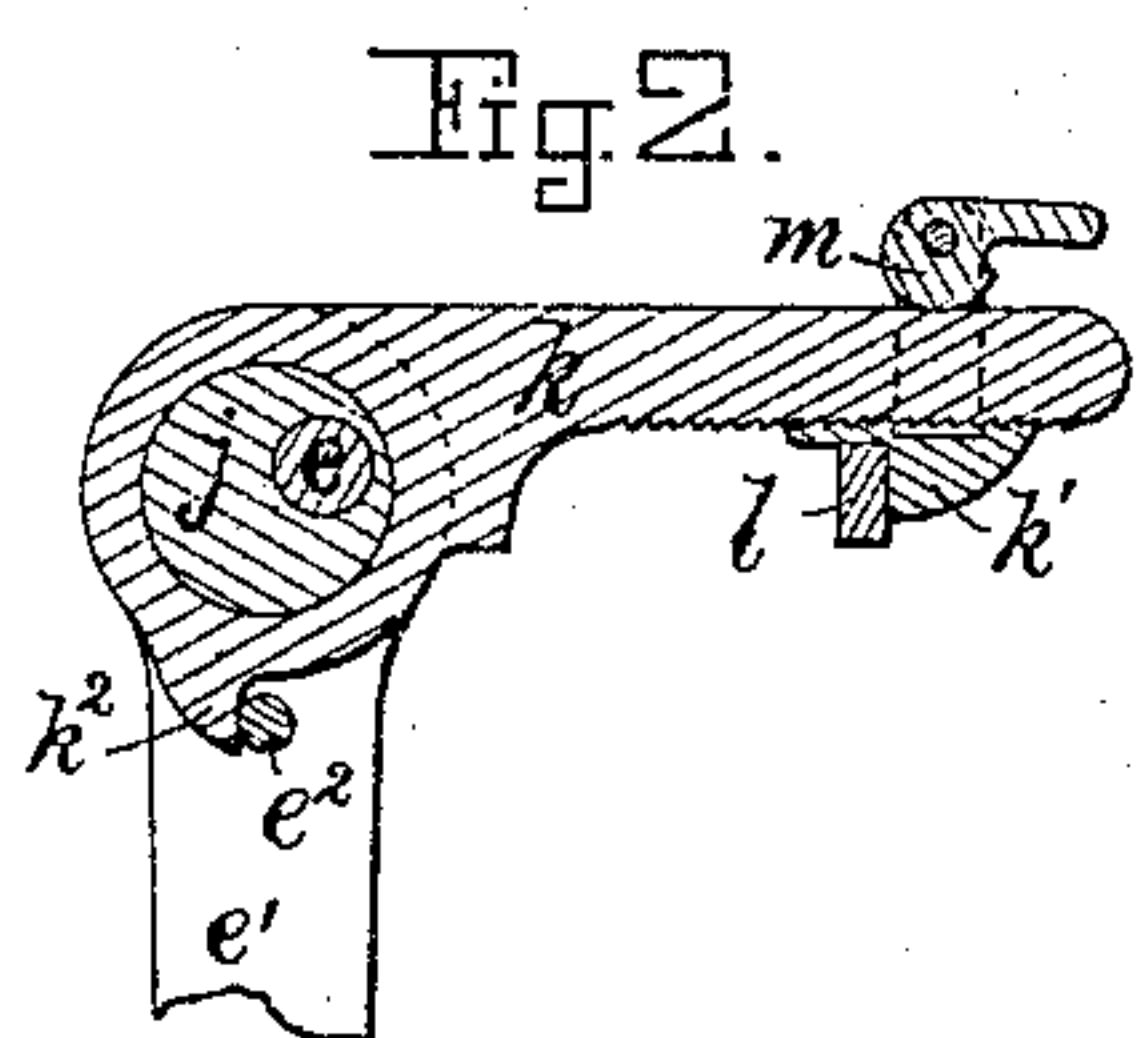
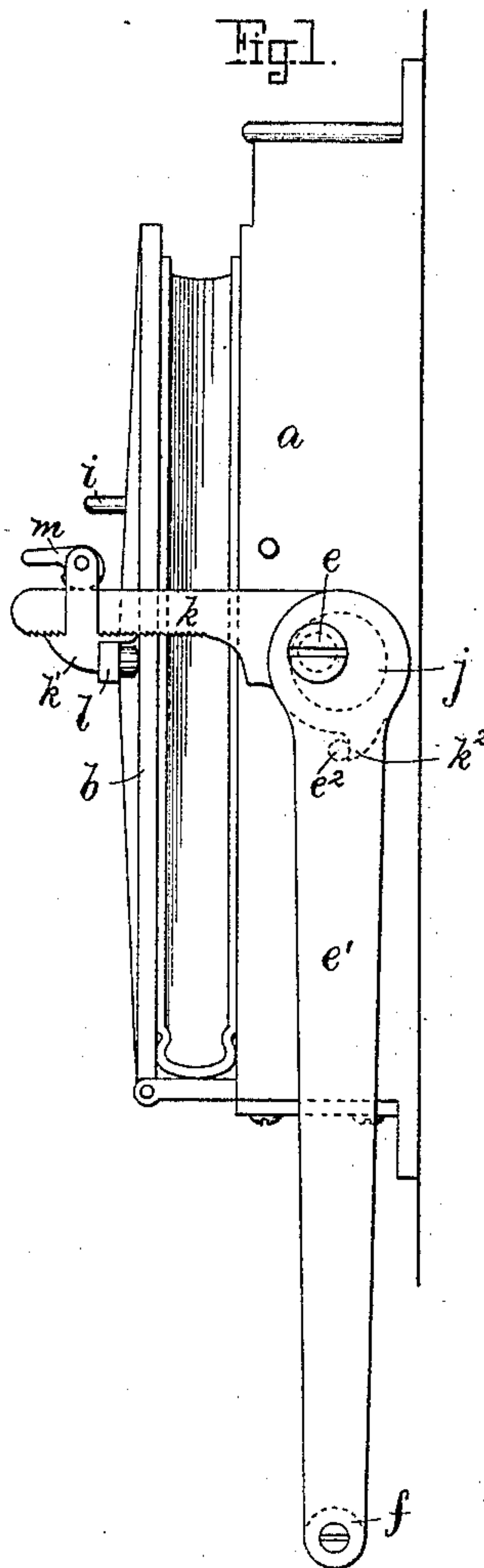
(No Model.)

D. E. KEMPSTER.

COPYING PRESS.

No. 328,039.

Patented Oct. 13, 1885.



Witnesses

Henry Chadbourn.
John H. Foster.

Inventor

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UNITED STATES PATENT OFFICE.

DANIEL E. KEMPSTER, OF BOSTON, MASSACHUSETTS.

COPYING-PRESS.

SPECIFICATION forming part of Letters Patent No. 328,039, dated October 13, 1885.

Application filed October 3, 1884. Serial No. 144,613. (No model.)

To all whom it may concern:

Be it known that I, DANIEL E. KEMPSTER, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Copying-Presses; and I do hereby declare that the same are fully described in the following specification, and illustrated in the accompanying drawings.

My invention relates to improvements in copying-presses of that class shown and described in application No. 134,252, filed June 9, 1884, by W. H. Gilman and myself; and it consists in providing the pressure-arms which clamp the platen against the book with an adjustable tooth, jaw, or projection, and also means for preventing the pressure-arms from flying up when under pressure, all of which will be more fully described hereinafter.

Reference is had to the accompanying drawings, in which Figure 1 is an end elevation of the press closed and clamping a book. Fig. 2 is a longitudinal section of one of the pressure-arms provided with my adjustable tooth or jaw. Figs. 3 and 4 are similar views of modifications of the same.

The same letters of reference indicate the same parts in all the figures on the drawings.

In the drawings, *a* represents the bed of the press adapted to be attached to the wall or other vertical support, and provided with a water-receptacle at its upper edge.

b represents the platen of the same hinged to the bed *a*, so as to have both a pivotal and a sliding or back-and-forth adjustment.

A lever, *e'*, is pivoted at *e* to the bed, one at each side thereof, and connected together at their outer ends by a cross-bar, *f*, which serves as a handle to operate the press, and also in connection with pins *i i* in the platen *b* serves as a rest or support for the platen when it is in a horizontal position, the levers *e' e'* being provided on their inner ends with eccentric bosses *j j*, on which are pivotally mounted the pressure-arms *k k*.

Across the platen *b* is arranged a spring-bar, the ends of which constitute lugs *l l*, with which the arms *k k* engage when applying the pressure to the copy-book by depressing the levers *e' e'*. When it is desired to release the book, the levers *e' e'* are raised by the cross-

bar *f* until the studs *e² e²* on the inner side of the levers *e' e'* strike and raise the pressure-arms *k k* out of engagement with the lugs *l l* on the platen.

The devices thus far described are the same as employed in the above-mentioned application. In said application the arms *k k* are provided with teeth integral therewith for engaging the lugs *l l*. Now, it has been found in practice that these teeth from constant wearing soon become broken or rounded over, so as to cause the arms *k k* to fly up out of engagement with the lugs *l l* when the pressure is applied. This defect has been partially obviated by making the teeth on said arms coarser, and consequently stronger; but by so doing the fine adjustment of the platen to books of different thickness has become impaired, and it is frequently found necessary to use pads to bring the book out to a thickness requisite to receive enough pressure to produce copying. This of course is very objectionable. I overcome all these defects by making the pressure-arms *k k* with a movable jaw or slide having a projection for engagement with the lugs *l l*. Said jaw or slide *k'* may be adjusted on the arm *k* to suit any thickness of book, and held in position thereon by any suitable device, several of such devices being shown. I prefer the construction shown in Figs. 1 and 2, in which I provide the pressure-arms on their under edge with fine serrations. The movable jaws or slides are also provided with corresponding serrations on their upper edge, which permit of a very fine adjustment, and also prevent any change of said adjustment from any strain or pressure on them. The movable projections or jaws have upward-extending ears, one each side of the arm *k*, and between which and pivoted thereto just above the arm *k* is a cam or button, *m*, which locks the arm *k* and movable projection *k'* securely together, but yet permits of an easy and quick adjustment. Fig. 3 shows the movable jaw or projection held by a set-screw, *n*, instead of a cam. Fig. 4 shows the same held by a spring, *o*, which admits of a very quick adjustment, as by simply pressing down on the spring *o* the jaw or projection may be slid along and set at any point on the pressure-arm desired, and it is automatic-

ally held on releasing the pressure on the spring.

The serrations on the pressure-arms and also on the movable jaws or projections might be dispensed with, if desirable, and depend wholly on the cam *m* for holding them together.

As is shown, I am able to construct the tooth or projection *k'* with a broad surface or bearing for engagement with the lug *l*, thus insuring its durability; and, furthermore, I provide means for effectually preventing the arms *k* from ever flying up when under pressure, as I provide a projection, *k²*, on the arms *k k*, which the studs *e²* on the levers *e' e'* come against when the levers are brought into a vertical or pressure-applying position, thus holding down in place the pressure-arms until said levers are removed, as shown in dotted lines in Fig. 1.

Now, having provided a remedy for the several defects existing in the former copying-press referred to, I desire to claim—

1. For application to a copying-press of the kind described, the pivoted pressure-arm *k*, having adjustably attached thereon by mechanism substantially as described, the slide or projection *k'*, as and for the purpose set forth.

2. In a copying-press, the platen *b*, with lugs *l l*, bed *a*, pressure-arms *k k*, pivotally attached to said bed and provided with projections *k² k²*, combined with the operating-levers *e' e'*, pivotally attached to the bed *a* and having the studs *e² e²*, said projections and studs being arranged for conjoint operation, whereby the pressure-arms *k k* are prevented from flying up or disengaging from the lugs *l l* when the operating-lever is in a pressure-applying position, substantially as set forth.

3. In a copying-press, the bed *a*, the pressure-arms *k k*, pivotally attached to said bed, and the jaws or projections *k' k'*, adjustably attached to said arms, in combination with the platen *b*, the lugs *l l* on said platen, and mechanism, substantially as described, for exerting a pressure between the platen and the bed, for the purpose set forth and described.

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

DANIEL E. KEMPSTER.

Witnesses:

HENRY CHADBURN,
JAS. W. WATSON.