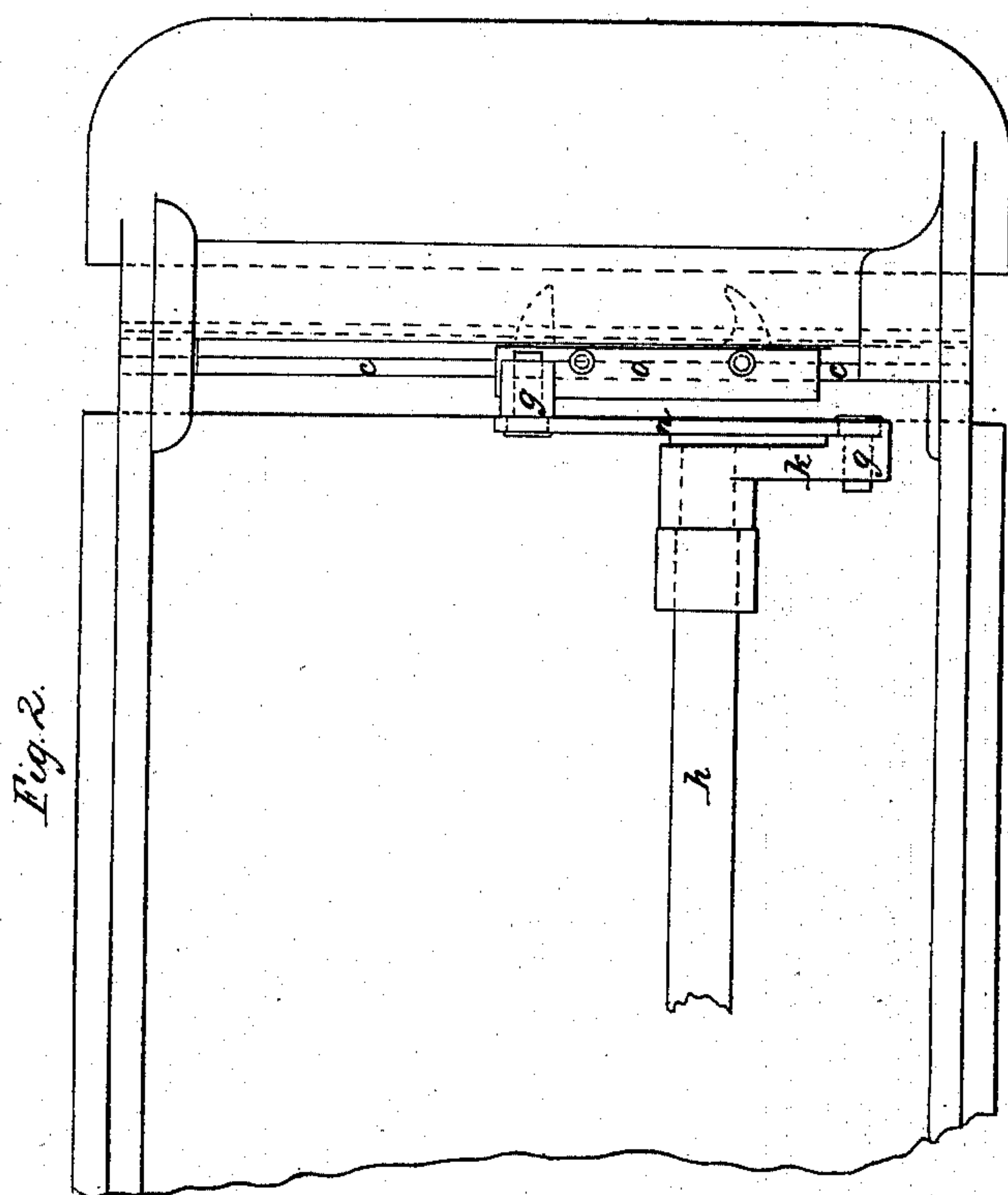
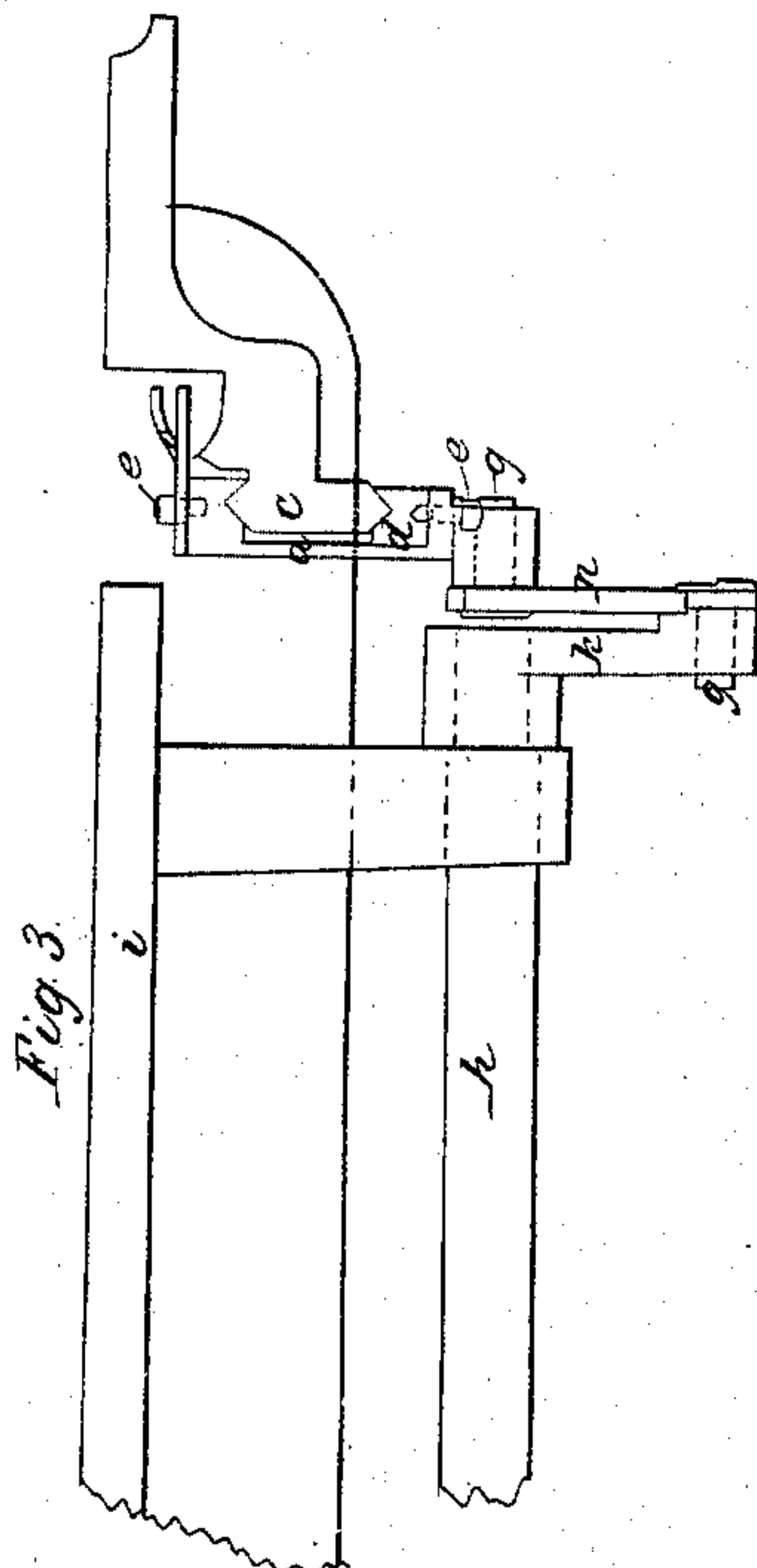
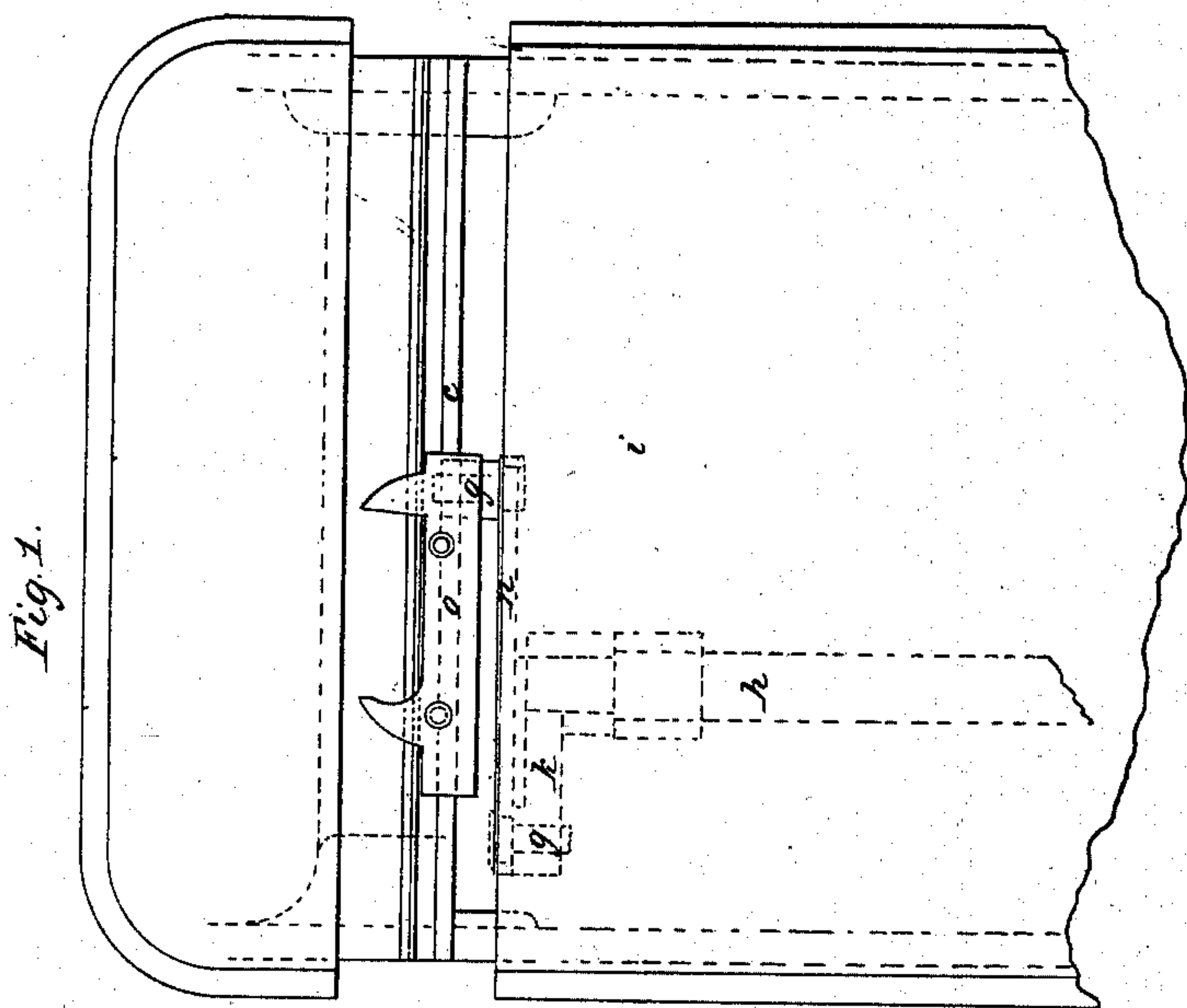
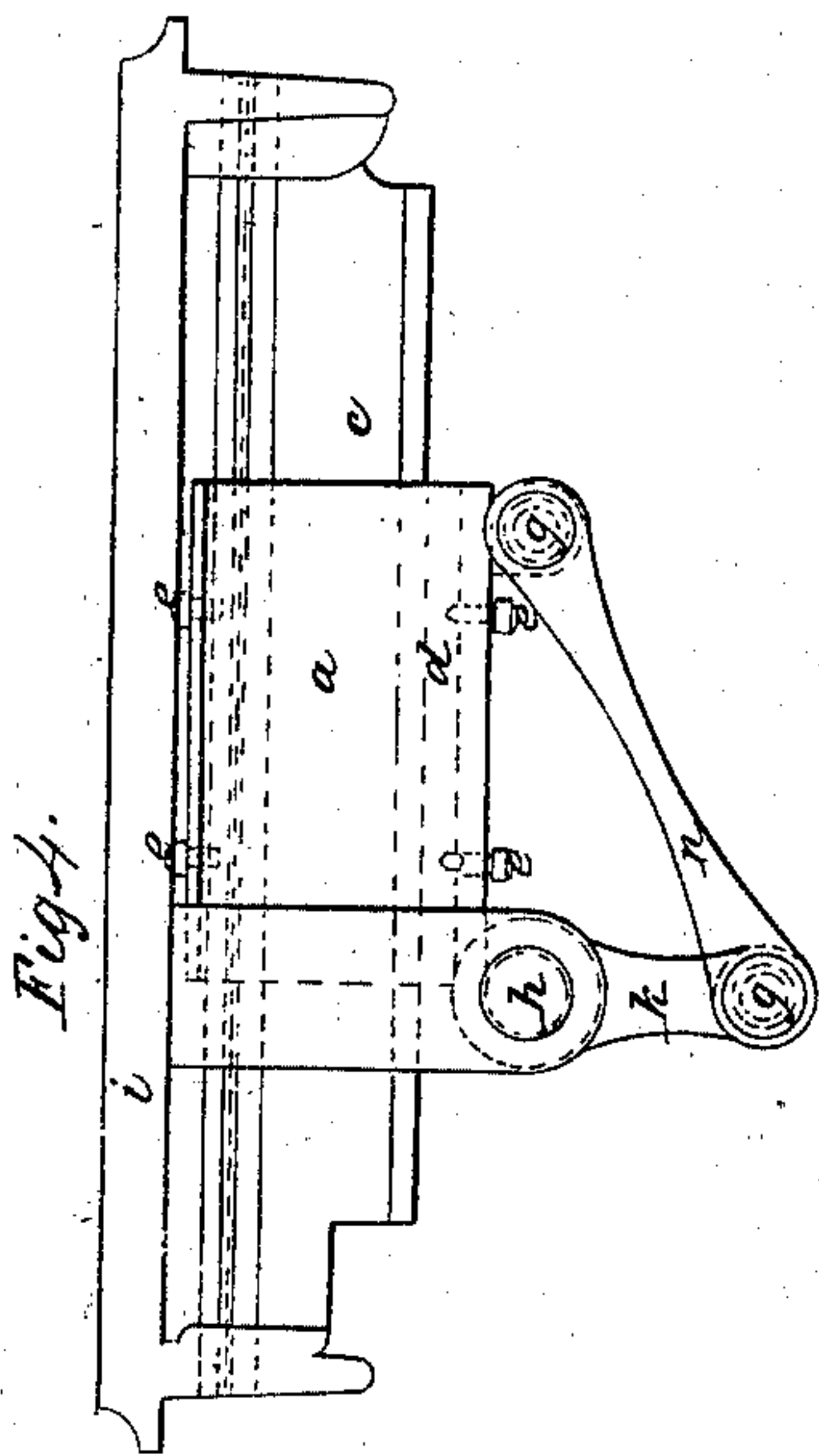


F. A. PRATT.
SEWING MACHINE.

No. 60,418.

Patented Dec. 11, 1866.



Witnesses;
Annie L. Stone
J. W. Phipps

Inventor;
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United States Patent Office.

IMPROVEMENT IN SEWING-MACHINES.

FRANCIS A. PRATT, OF HARTFORD, CONNECTICUT.

Letters Patent No. 60,418, dated December 11, 1866.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, FRANCIS A. PRATT, of the city and county of Hartford, and State of Connecticut, have invented a certain new and useful Improvement in Sewing-Machines; and to enable others skilled to make and use the same I will proceed to describe the same, referring to the drawings, in which the same letters indicate like parts in each of the figures.

The nature of the improvement will be understood from the specification and drawings.

It relates particularly to the mode of constructing and adjusting the cross-head, or shuttle-driver, to the ways, in order to produce and secure a close, continuous, yet free and easy motion to the cross-head upon its ways, relative to its driving-shaft, and to compensate for the wear and tear thereof. Small defects in the working of a delicate machine (as a sewing-machine) creates great discouragement in the mind of inexperienced operators, and not unfrequently a good and perfect machine is for such a cause condemned or laid aside. Ordinarily the ways upon which the shuttle-carrier or cross-head is fitted are quite narrow, rendering it necessary to have an arm extend down from the lower edge of the cross-head some distance, in order to bring the centre of its operating-pin in a line with the centre of driving-shaft, or parallel with the upper surface of the bed-plate, thus rendering it liable to a cramping or binding action or effect; and this tendency naturally will increase with its use and wear. To avoid this tendency, and to furnish simple and effective means whereby the driver may be easily and quickly adjusted to work freely and easily upon the guide-ways when required, (from wear or other causes,) is the object of this invention.

In order to show more clearly how this improvement is effected I will proceed to describe.

Figure 1 is a top or plan view.

Figure 2 is an underside view.

Figure 3 is a section view.

Figure 4 shows a side view of the cross-head and way upon which it is arranged and the position of the shaft, connecting-arm and connecting-pins relative to each other.

a is the cross-head or shuttle-driver; *c* is the way upon which the cross-head is arranged and works; *d* is a gib or shoe arranged within the cross-head *a* for the purpose of adjusting said cross-head to the way, and to render it easy and simple of adjustment when desirable by simply turning one or two set-screws, *e*. This cross-head is made broad, so as to bring the centre of the connecting-pin *g* closer to the line or edge of the way *c*, and at the same time to be in a line through the centre of the shaft *h* and in a parallel line with the face of the bed-plate *i*. *k* is a crank, secured upon the end of the shaft *h*; *n* is a connecting-arm, by means of which motion is transmitted from the shaft through the crank *k* and arm *n* to the cross-head *a*. The bracket or carrier *o*, which holds and actuates the shuttle, is secured upon one edge of the cross-head *a*. Now, if this cross-head be fitted to the way *c* without the use of the gib *d* it will very soon work loose; and if its point of connection with the arm *n* be extended (as is usually the case) from the bearing or edge of the way *c* the tendency to wear, work loose, and rattle, is greatly increased. Now, by increasing the width of the cross-head, and thereby shortening its connecting-arm, and employing the gib *d*, this liability is removed and good facility provided for adjusting, and the perfect working of the cross-head or shuttle-driver secured.

I believe I have thus shown the nature, construction, and advantages of this improvement, so as to enable others skilled to make and use the same therefrom.

What I claim, therefore, and desire to secure by Letters Patent, is—

The employment of the gib or shoe *d* and cross-head *a*, with the way *c*, substantially as and for the purpose described.

FRANCIS A. PRATT. [L. s.]

Witnesses:

ANNIE L. STONE,

JEREMY W. BLISS.