

W. A. LEGGO.  
Art of Electro-typing.

No. 119,622.

Patented Oct. 3, 1871.

FIG. I.

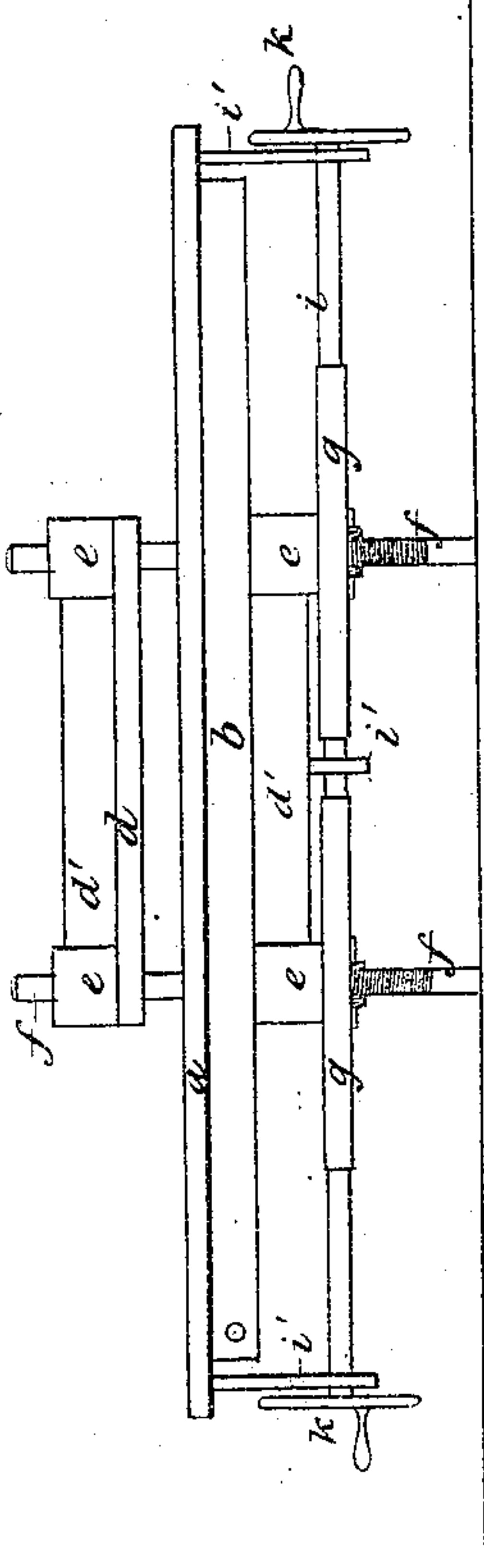


FIG. II

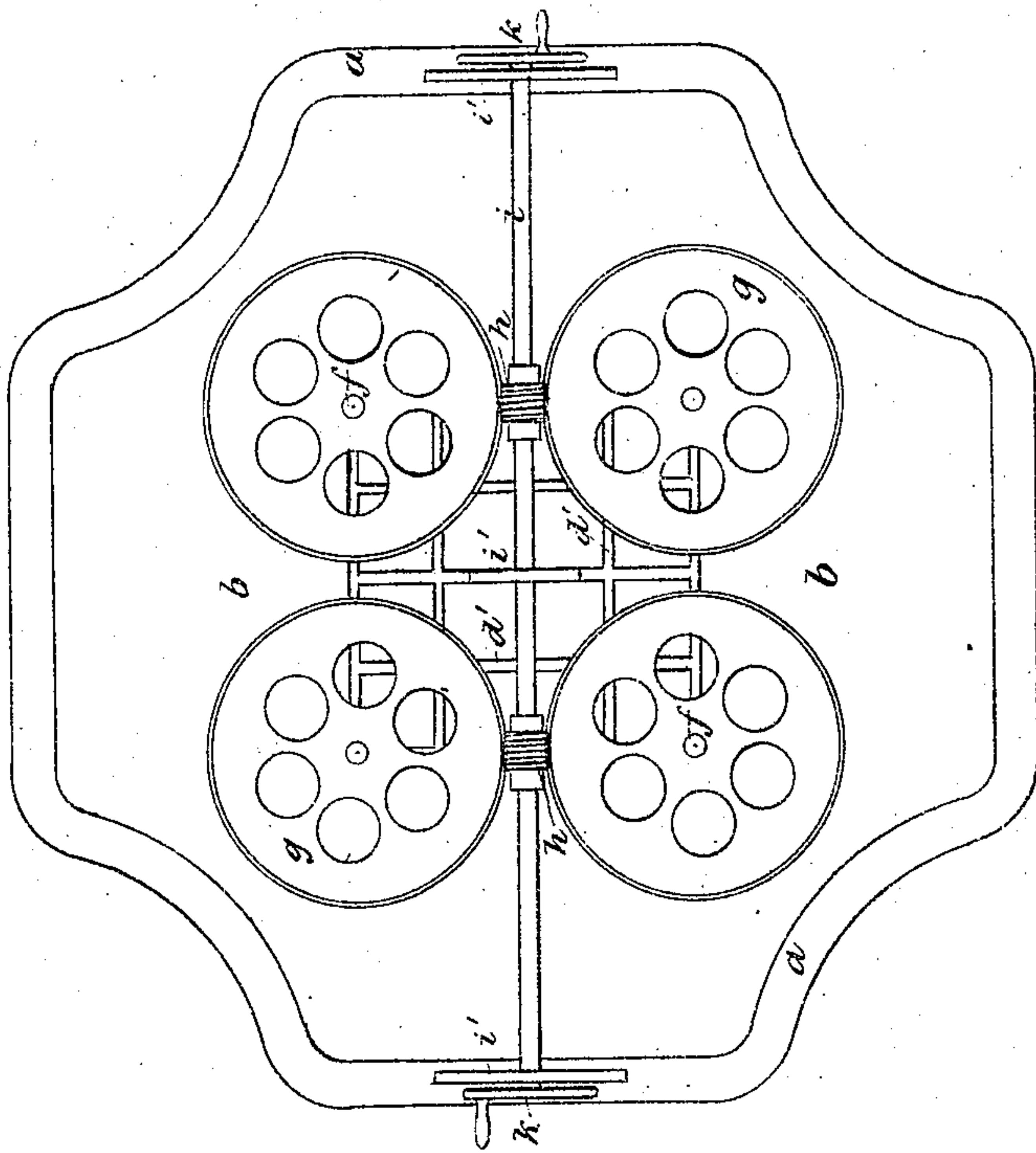
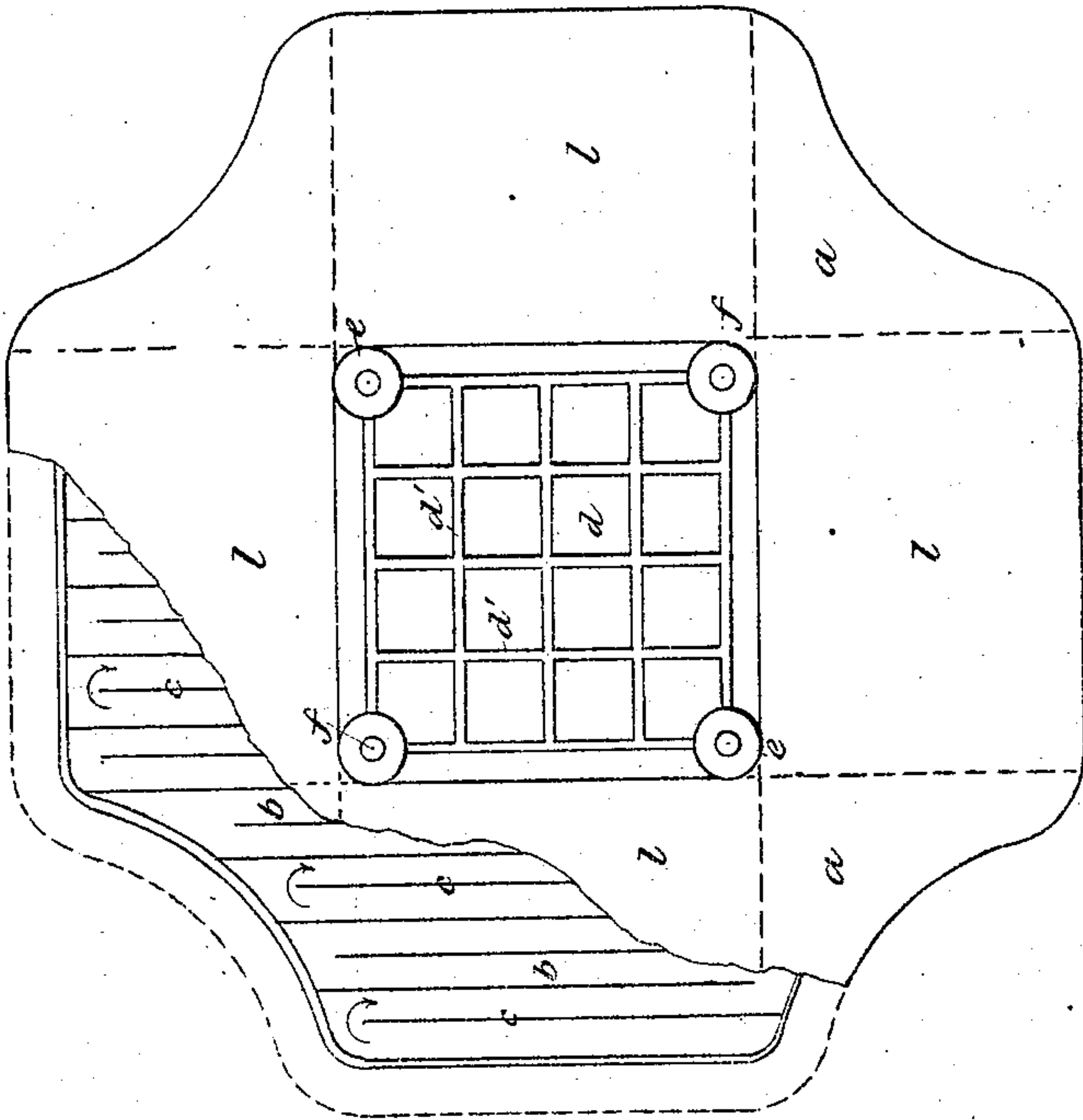


FIG. III



Witnesses

Charles L. Simpson  
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# UNITED STATES PATENT OFFICE.

WILLIAM AUGUSTUS LEGGO, OF MONTREAL, CANADA.

## IMPROVEMENT IN ELECTROTYPING.

Specification forming part of Letters Patent No. 119,622, dated October 3, 1871.

*To all whom it may concern:*

Be it known that I, WILLIAM AUGUSTUS LEGGO, of the city of Montreal, in the district of Montreal, in the Province of Quebec, Canada, have invented new and useful Improvements in the art of Electrotyping, and on the Molding-Press used therefor; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, where—

Figure I represents a side elevation of a molding-press. Fig. II represents a plan of the under side of a molding-press. Fig. III represents a plan of the upper side with bed-plate partly removed.

This invention has reference to improvements on the art of electrotyping, and on the molding-presses used therefor, whereby they are rendered better adapted for general use than the presses now employed for that purpose, in the following particulars: In affording a larger amount of table-room for the accommodation of type-forms, &c., as heretofore presses have been made with but one table placed in front, at which one man alone could work, the press being thus idle during a great portion of the time; but by having two or more tables, as shown in the drawing, two men would be constantly occupied, doing four times the amount of work that could be accomplished with a single table. It also occupies less room in a perpendicular direction, and, therefore, economizes space, as it may be stowed on the top of a cupboard or rack for holding type-forms, and is of such construction as to allow the lower or bed-plate to be heated, a point which is of the greatest importance in obtaining smooth molds, as in the ordinary practice the face of the type, being colder than the wax, chills that portion of the wax which immediately comes in contact with it, rendering it harder than that part which does not meet the face of the type. The softer wax, therefore, yields to the pressure, while that in contact with the type, remaining hard, retains a certain roughness hurtful to the resulting electrotype. To rectify this is one purpose of my invention.

In the drawing, similar letters of reference indicate like parts.

*a* is the bed-plate, which may be of any con-

venient form, or as shown in Figs. II and III. Underneath it is placed a chamber, *b*, for the reception of steam, which is admitted at one corner from any ordinary generator, and passes, as shown by the arrows, between the diaphragms *e*, under the whole surface of the bed-plate *a*. The upper plate *d* is of any convenient size, strengthened, as shown in the drawing, by back strips *d'*, as is also the portion of the bed-plate immediately under the upper plate. At each corner of the upper plate, and in corresponding situations on the under side of the bed-plate *a*, are placed bosses or hubs *e*, through which pass the posts *f*, carrying the plates. On these are formed, as shown, for a portion of their length, screw-threads, two being made for a right-hand screw and two for a left-hand one. On each of these posts is placed a toothed wheel, *g*, having a screw-thread cut within its hub corresponding to and working upon the screw of the posts *f*, and having its periphery toothed to intermesh with a worm, *h*, on the spindle *i*, carried by brackets *i'*, and having on its ends hand driving-wheels or crank-handles *k*. Each rectangular space on the bed-plate *a*, inclosed by the dotted lines, as shown in Fig. III, is a table for the reception of type-forms, &c.

The operation of my invention is as follows: The type-form being placed in the proper position on the bed-plate, steam is admitted into the chamber *b*, raising the temperature of the bed-plate and type-form a few degrees above that of the room in which the press is placed, thus obviating all the evils shown to result from the cold type. Although this is described as one way of heating the bed-plate and type-form, I do not confine myself to this particular manner, as it may be done by means of gas-jets, or in any other convenient way. The bed-plate is then raised by turning the hand driving-wheels *k*, the action of the spindle *i* passing, by means of the screw-threads *h* thereon, to the toothed wheels *g*, which, working on the screw-threads formed on the posts *f*, raise or depress the bed-plate, as may be desired.

I do not limit myself to one size of press, as the size must, of necessity, vary to suit the requirements of different establishments.

Having thus described the construction and operation of my invention, to which I have given

the name of "LEGGO'S Improvements on Electrotyping," what I claim as my invention, and wish to secure by Letters Patent, is—

1. The process described, consisting of heating the type before making the impression in the wax, as and for the purpose set forth.

2. The press described, consisting of the screwed posts *f*, toothed wheels *g*, worm *h*, spindle *i*, bed-plate *a*, and steam-space *b*, or its

equivalent, all combined and arranged as described.

3. The arrangement of two or more tables about the press, as described.

Montreal, 21st day of June, A. D. 1871.

W. A. LEGGO.

Witnesses:

CHARLES G. C. SIMPSON,  
FRAS. HY. REYNOLDS.