

No. 743,729.

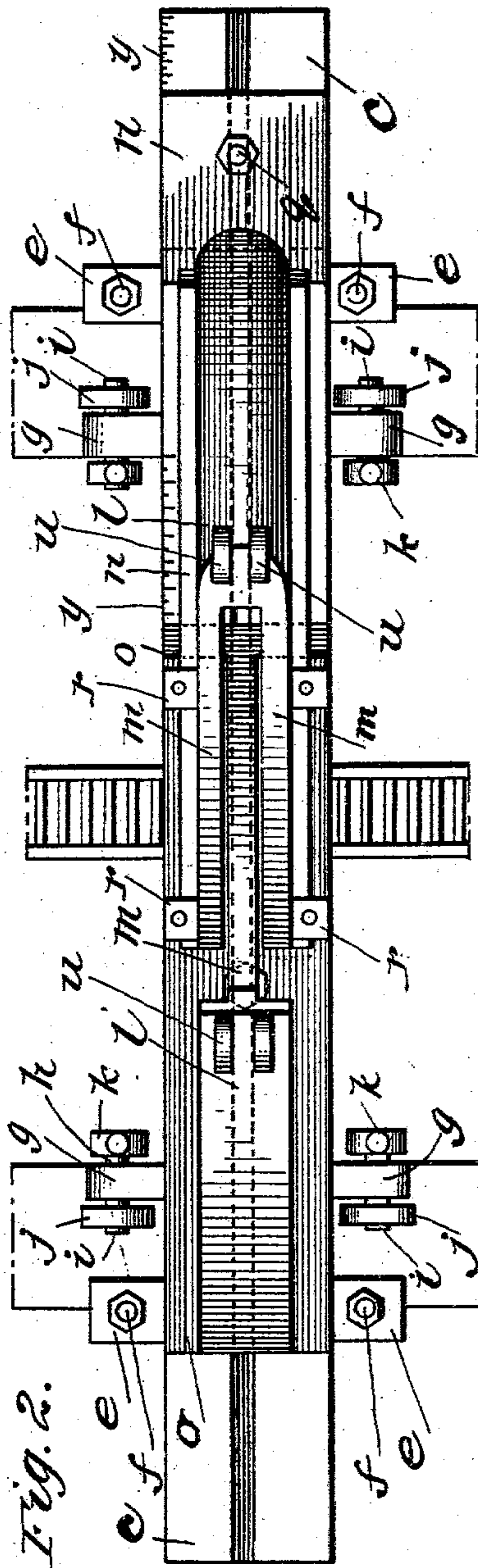
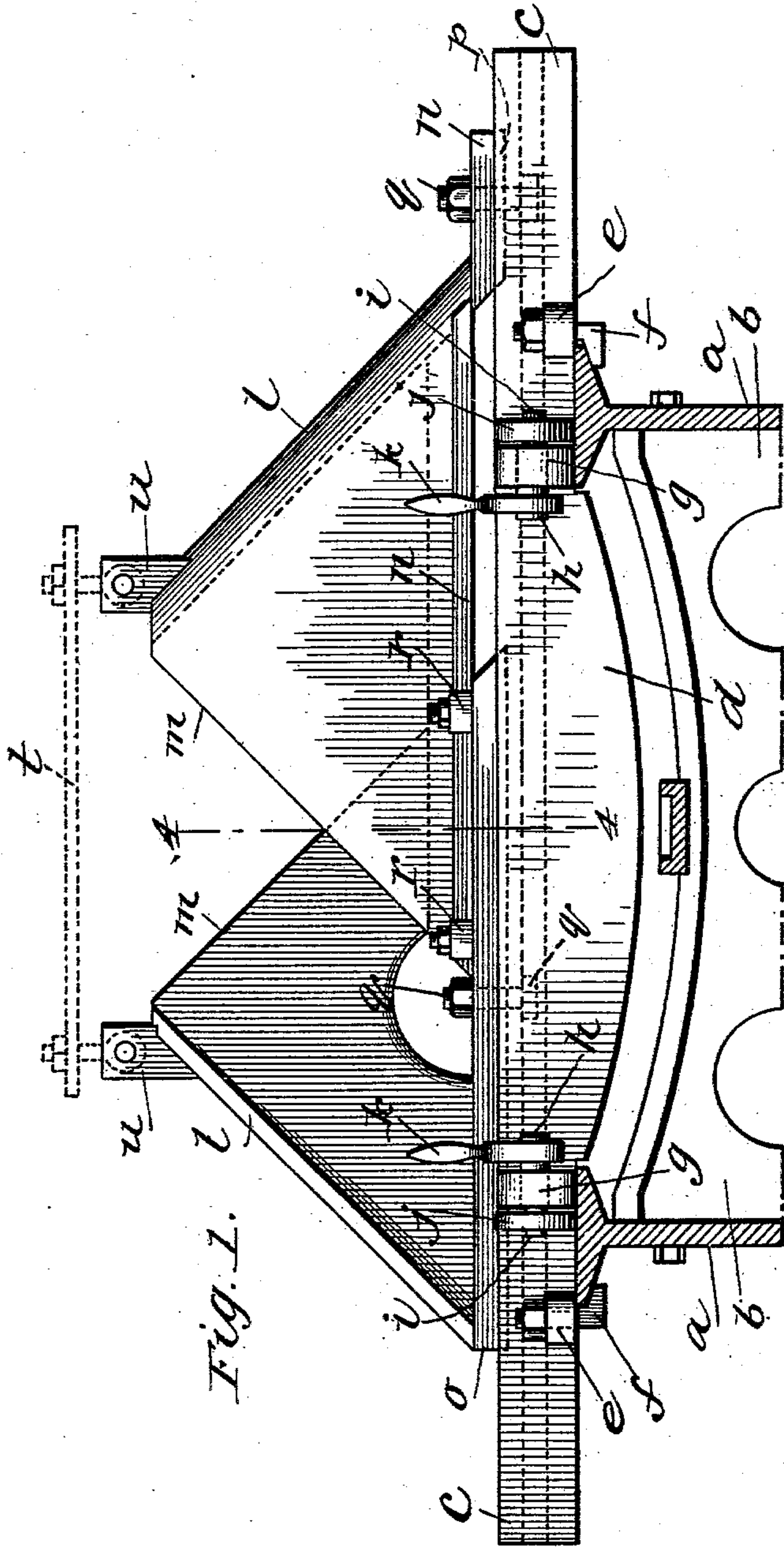
PATENTED NOV. 10, 1903.

W. C. KIRK.  
WORK SUPPORT FOR LATHES.

APPLICATION FILED MAR. 2, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

*R. H. Bishop*  
*Wm H Babcock*

INVENTOR

*William Clark Kirk*

BY *Daniel Davis*

ATTORNEYS

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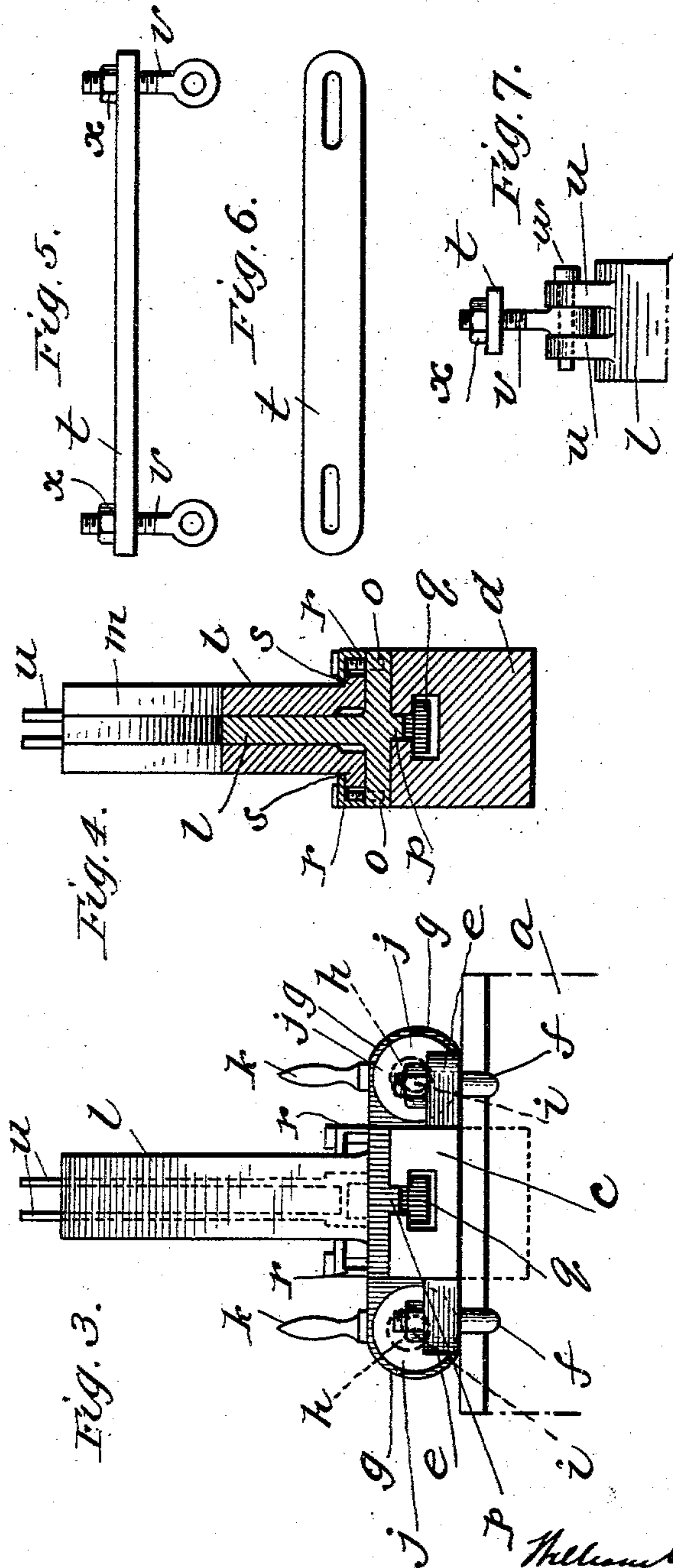
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# UNITED STATES PATENT OFFICE.

WILLIAM CLARK KIRK, OF CHATTANOOGA, TENNESSEE.

## WORK-SUPPORT FOR LATHES.

SPECIFICATION forming part of Letters Patent No. 743,729, dated November 10, 1903.

Application filed March 2, 1903. Serial No. 145,724. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM CLARK KIRK, a citizen of the United States, and a resident of Chattanooga, county of Hamilton, State of Tennessee, have invented certain new and useful Improvements in Work-Supports for Lathes, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 is a side elevation of the work-support, the I-beams forming the bed of the lathe being shown in section; Fig. 2, a plan view thereof; Fig. 3, an end elevation thereof; Fig. 4, a vertical sectional view taken on the line 4 4 of Fig. 1; Fig. 5, a detail side elevation of the cross-bar which connects the opposite parts of the work-support; Fig. 6, a plan view thereof, and Fig. 7 a detail view showing the manner of attaching the bar shown in Figs. 5 and 6 removably to the lugs of the work-support.

The main object of this invention is to provide a work-support for that class of lathes especially adapted for turning or planing off the end faces of columns, pipes, column-bases, I-beams, and like heavy articles and wherein very substantial work-supports are employed.

A further object of the invention is to provide a work-support which may be readily adjusted along the lathe-bed and rigidly locked at the desired point.

Another object of the invention is to provide a work-support in which the work-supporting blocks may be adjusted transversely of the lathe-bed to properly center the articles to be worked upon.

Referring to the various parts by letters, *a* designates the I-beams, which, together with the transverse connecting-brackets *b*, form the bed of the apparatus and on which the work-supports are mounted.

The work-support consists of a bar or plate *c*, extending across and adapted to rest on the I-beams of the bed, this bar being provided with an enlargement *d*, depending between the I-beams and serving to assist in guiding it in its movements along the said beams and in maintaining it centrally thereon. This bar is provided with an inverted-T slot its full length along its upper side and with a series of four lateral lugs *e*, which receive the hook-bolts *f*, which engage under the

flanges of the I-beams. This bar is also provided with a series of lateral ears *g*, in each of which is journaled a short shaft *h*, provided at one end with an eccentric *i*, carrying a roller *j*, adapted to engage the upper surface of the I-beams, and at its other end with a handle or lever *k*. By means of these hook-bolts *f* the work-holder bar *c* may be readily clamped at any point desired along the bed, and by means of the rollers *j* (when the handles *k* are turned upward to raise the bar *c* off the I-beams) the work-holder may be run back and forth along the same without friction.

Upon the bar *c* is mounted a pair of work-supporting blocks *l*, which stand upright and have their inner edges *m* inclining in opposite directions, so as to form a V-shaped crotch for the reception of the column or other work to be operated upon. These blocks *l* are preferably V-shaped in side elevation, as shown; but their shape is not material so long as their inner edges *m* incline inwardly and downwardly in opposite directions and at the same angle. One of these blocks *l* is bifurcated, so as to receive into it the opposite block, this arrangement contributing to stability and strength and tending to hold the work steadily in position. The blocks are so mounted upon the main beam *c* that they may slide longitudinally thereof—that is, transversely of the bed and toward and from each other—so that they may be adjusted to columns and pipes of different diameters. Each of these blocks is attached to a base-plate, the base-plate of the bifurcated block being designated by the letter *n*, and the other one being designated by *o*. These base-plates are approximately the width of the bar *c* and are adapted to be guided along said bar in any suitable way and to be clamped firmly down to said bar in their adjusted positions by suitable means. I prefer to guide these plates by forming a flange *p* centrally along their under sides, which flange shall fit and work in the central slot in the bar *c*, and to clamp the plates in their adjusted positions I prefer to employ bolts *q*, whose heads are adapted to slide in the T-slot in bar *c* and to engage under the shoulders thereof, the threaded parts of these bolts passing up through the plates and being provided with suitable nuts which bear upon the upper



faces of the base-plates and firmly lock the parts to the bar *c*. The plates *o* and *n* overlap each other at their inner ends, and these overlapping parts are clamped together by means of angle-blocks *r*, bolted down on one of the plates and extending over onto the adjacent parts of the other plate. These blocks *r* are preferably carried by the plate *o*, and their inner edges bear upon the side edges *s* of plate *n* at opposite sides of the bifurcated support *l*, thereby assisting in guiding the same in its adjustments and also assisting in rigidly bracing it when the supports *l* are locked in position.

To hold the column or pipe down in the crotch of the supports *l*, I employ a bar *t*, which is detachably connected to suitable upright lugs *u*, rising from the apexes of the supports *l*. Any suitable means may be employed to attach this bar to the lugs. I prefer that the lugs be used in pairs, as shown, and between each bar the eye of an upright bolt *v* is detachably secured by a removable pin *w*, and the bar *t* is held on the upper threaded ends of these bolts by nuts *x*, said bar *t* being longitudinally slotted where the bolts pass through to permit the crotch of the work-supports to be varied in size. When the pipe or other work to be operated on is placed in the crotch of the work-supports, the bar *t* is clamped down upon the same by means of the nuts *x*, and when it is desired to remove the work from the supports it is simply necessary to remove one of the pins *w*, which will release one end of the bar from the lugs and permit it to be turned over out of the way.

On the bar *c* are marked suitable scale-graduations *y*, by means of which the work-supporting blocks may be accurately adjusted on the bar to maintain the center or lowermost point of the crotch directly over the longitudinal center of the lathe-bed.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination, a bed, a bar extending across the same, and means for locking it to the bed, a pair of rigid work-supports mounted on said bar and independently slidable to and from each other, the inner edges of said work-supports being inclined downwardly and inwardly and crossing each other to form a crotch, and means for locking said supports in their adjusted positions.

2. In combination, a bed, a bar extending thereacross, a pair of work-supports provided with base-plates, said base-plates resting upon said bar, means carried by the base-plates and engaging the bar to guide the base-plates longitudinally along said bar, means for locking the base-plates in their adjusted positions, said work-supports having their inner edges inclined downward and inward and arranged to cross each other.

3. In combination, a bed, a bar extending thereacross, a pair of work-supports thereon,

means whereby the supports may be slid toward and from each other, means for locking the work-supports in place to form a supporting-crotch, a removable and adjustable bar connecting the tops of said work-supports and extending across the crotch formed thereby, for the purpose set forth.

4. In a lathe the combination, of a bed, a longitudinally-slotted bar mounted on said bed and extending transversely thereof, means for maintaining said bar perpendicular to the bed, a pair of work-supports slidably mounted on said bar and adapted to be moved toward and from each other each of said work-supports having a part adapted to engage the slot whereby said supports will be guided in their movements toward and from each other the inner edges of said work-supports being inclined downwardly and inwardly and crossing each other to form a crotch, and means for locking said supports in their adjusted positions.

5. A work-support for lathes comprising, a transverse base-plate or bar, a pair of upright rigid work-supports supported thereon and having their inner edges inclined downwardly and inwardly, each of said supports being independently slidable toward and from the other, one of said supports being bifurcated to receive into it the other support, a base-flange formed on one of said work-supports and adapted to rest on the bar, outward-extending flanges formed on the bifurcated work-support and adapted to rest and slide upon the base-flange of the other support whereby the two work-supports will overlap at the center of the bar, and means for locking the work-supports to the bar in their adjusted positions.

6. A work-support for lathes comprising, a transverse base-plate or bar, a pair of upright rigid work-supports supported thereon and having their inner edges inclined downwardly and inwardly, each of said supports being independently slidable toward and from the other, one of said supports being bifurcated to receive into it the other support, a base-flange formed on one of said work-supports and adapted to rest on the bar, outward-extending flanges formed on the bifurcated work-support and adapted to rest and slide upon the base-flange of the other support whereby the two work-supports will overlap at the center of the bar, a base-flange formed on the outer end of the bifurcated support and adapted to rest on the bar, an adjustable locking-bar adapted to connect together the upper ends of the work-supports, and means for locking the work-supports to the bar in their adjusted positions.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 26th day of February, 1903.

WILLIAM CLARK KIRK.

Witnesses:

H. F. GRISCOM,

GEO. H. BECHTEL, Jr.