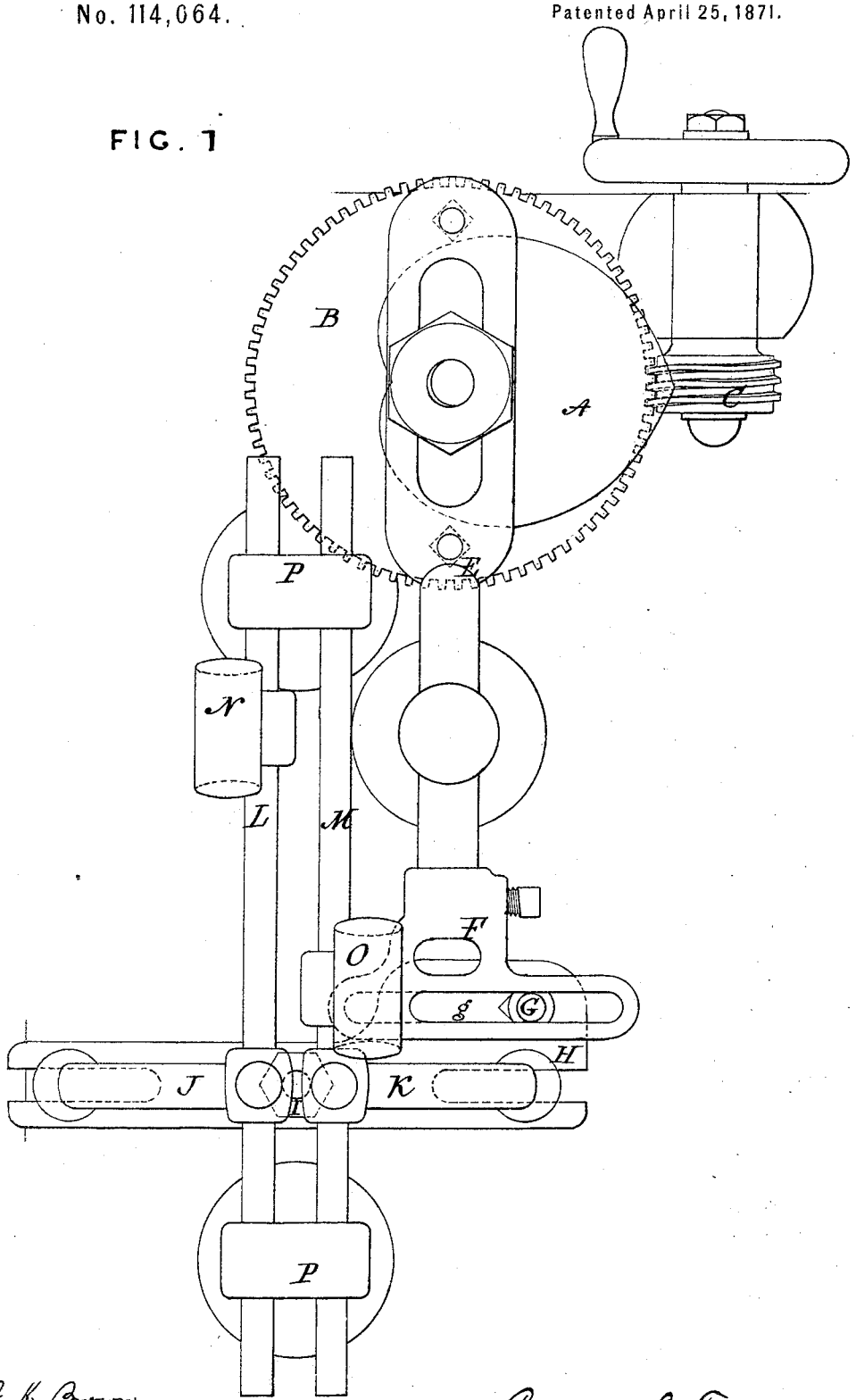
4 Sheets--Sheet 1.

G. E. TAFT.

Improvement in Drawing Frames.

No. 114,064. Patented April 25, 1871.

FIG. 1



R. H. Brown
Henry B. Osgood. } Witnesses

Gustavus E. Taft, Inventor

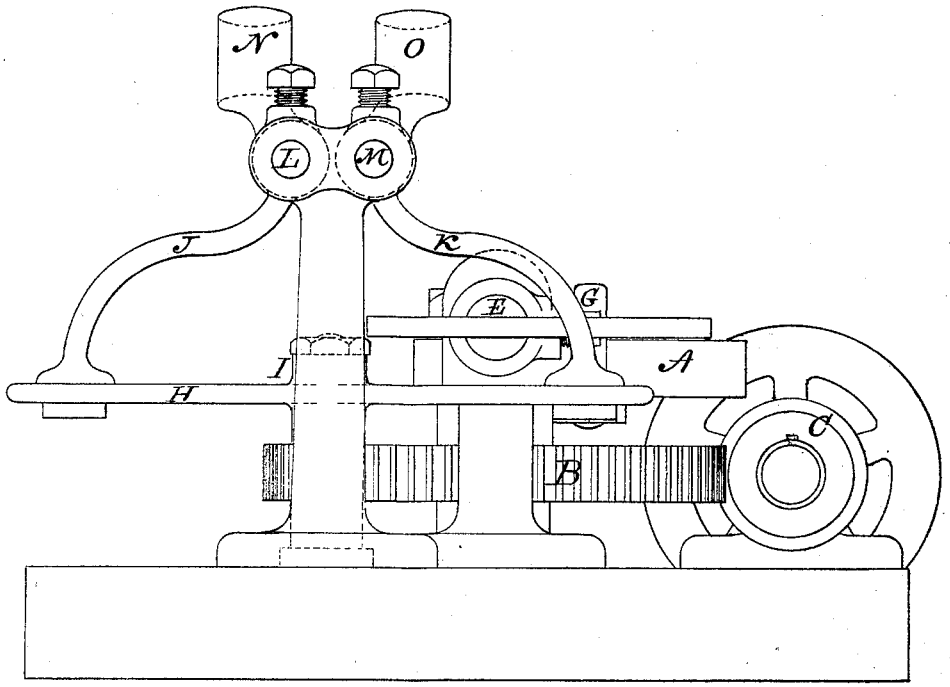
4 Sheets--Sheet 2.

G. E. TAFT.

Improvement in Drawing Frames.

No. 114,064. Patented April 25, 1871.

FIG. 2.



R. K. Brown
Henry B. Osgood } Witnesses.

Gustavus E. Taft, Inventor.

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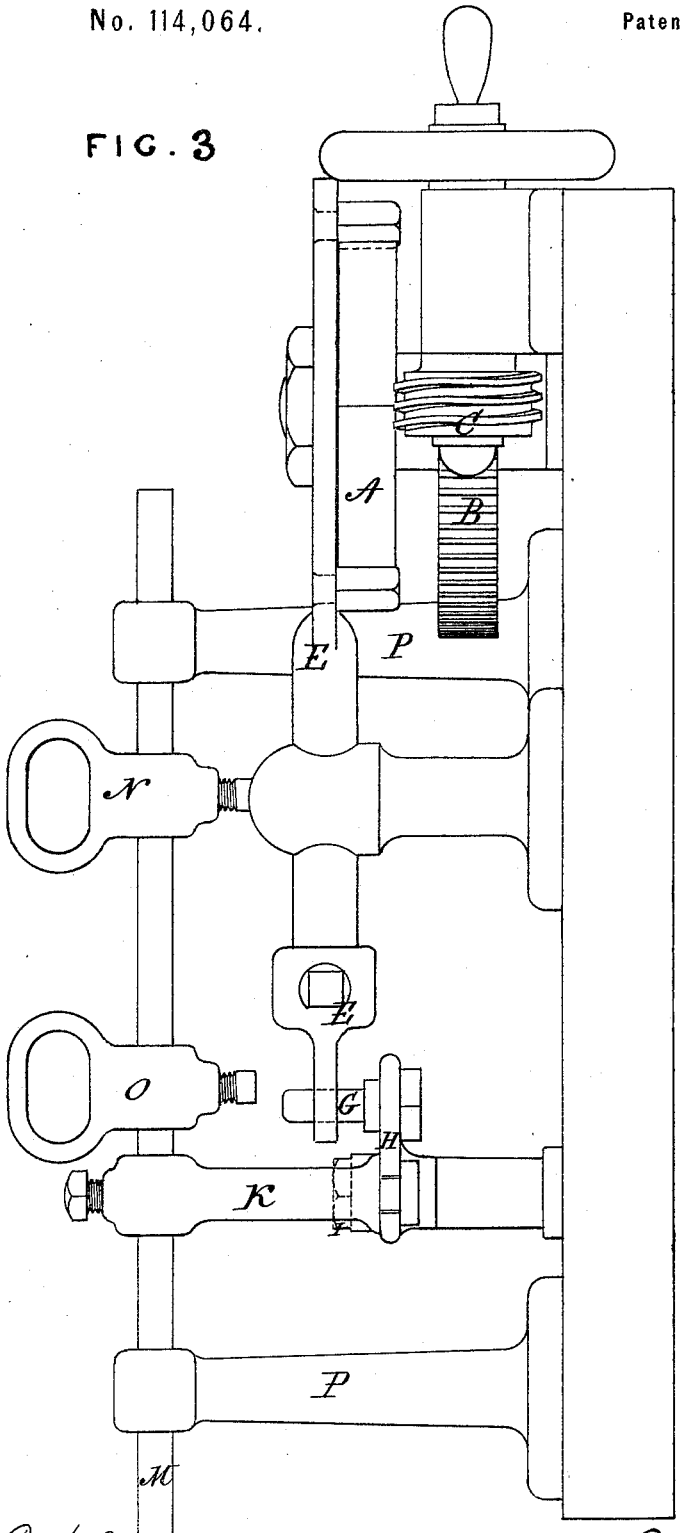
G. E. TAFT.

Improvement in Drawing Frames.

No. 114,064. Patented April 25, 1871.

FIG. 3



R. K. Brown
Henry B. Osgood. } Witnesses.

Gustavus E. Taft, Inventor.

4 Sheets--Sheet 4.

G. E. TAFT.

Improvement in Drawing Frames.

No. 114,064. Patented April 25, 1871.

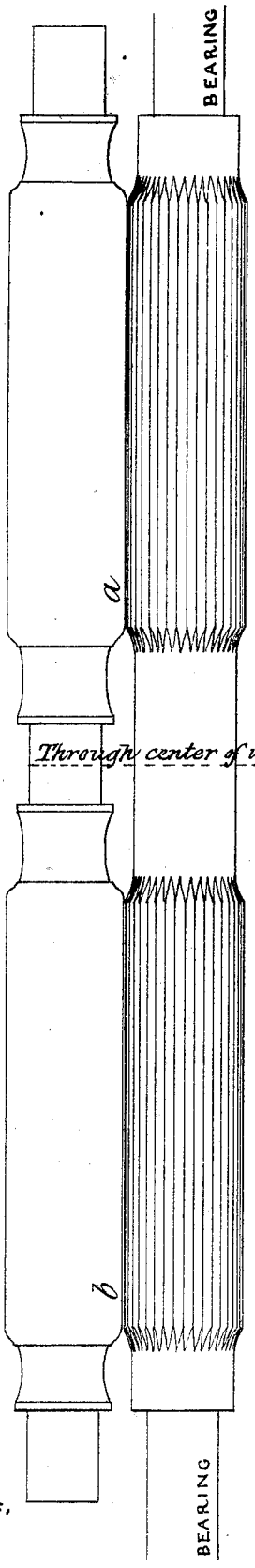


FIG. 4

R. K. Brown
Henry B. Osgood. } Witnesses.

Gustavus E. Taft Inventor.

United States Patent Office.

GUSTAVUS E. TAFT, OF NORTHBRIDGE, MASSACHUSETTS, ASSIGNOR TO "WHITIN MACHINE WORKS," OF SAME PLACE.

Letters Patent No. 114,064, dated April 25, 1871.

IMPROVEMENT IN DRAWING-FRAMES.

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, GUSTAVUS E. TAFT, of Northbridge, in the county of Worcester and State of Massachusetts, have invented a new and useful Arrangement for Guiding Sliver to the Back Rolls of Drawing-Frames and other machines in which the sliver is traversed; and I do hereby declare that the following is a correct description of the same, reference being had to the accompanying drawing making part of this specification, and to the letters of reference marked thereon.

Figure 1 is a plan.

Figure 2 is an end elevation.

Figure 3 is a side elevation.

Figure 4 is a view of top and bottom rolls of a drawing-frame, showing the bosses, where the weight is applied, &c.

In all the drawing-frames with which I am acquainted the sliver-guides are fixed to the traversing-bar, and they are usually upon one rod or bar, in which latter case the weight will not bear equally upon the slivers, for by reference to fig. 4 it will be seen that when one sliver is at *a*, under one boss, it is very near the weight, while the sliver to the other boss is at *b*, or furthest from it, and consequently has the least weight to support, having the longest arm of the lever. Manufacturers have been desirous of obviating this difficulty, and contrivances have been resorted to for effecting this object.

By my invention I produce a combination which is inexpensive, easy-working, operates very perfectly, and takes but little room.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The heart A, which, unlike a crank, gives a uniform motion to the traversing-rods, the worm-wheel B, and worm C are as they are usually made on drawing-frames.

In practice a toothed wheel is placed on the worm-shaft in place of the hand-wheel on the drawing, and gears into another wheel on the back roll of the drawing-frame and is driven by it.

The rod E, which usually is nearly the length of the drawing-frame, or is connected with another single traversing-bar which is so, has fixed guides upon it, but by my arrangement is connected with a short cross-bar, H, which is pivoted in the center by the stud I, and connects with the two traversing-bars or rods L M, which have adjustable sliver-guides N O fastened to them, and which must travel in opposite directions.

The distance traversed by the rods L M is regulated by means of the slotted part F and the pin G.

The part F is secured to the end of the rod E, and its motion is governed by the throw of the heart A; but the pin G is adjustable in the slot *g* in the cross-bar H, and by this means the traverse of the sliver-guides is governed; for when pin G is fixed nearer the center or pivoting-stud I of the cross-bar H the traverse will be increased, and when fastened toward the other end of the slot it will be diminished.

The arms J and K, at their upper parts, are secured to the guide-rods L and M, and at their lower extremities they are constructed so as to play freely in slots in the ends of the cross-bar H, thus accommodating themselves to the arcs which the cross-bar makes as it turns upon its pivoting-stud I.

The sliver-guides are usually made of two pins fixed in a traversing-bar, but by my invention are made adjustable on the rods, and this, I believe, is one of the most useful features of my invention.

The stands P are for supporting the traverse-rods, and are so made that the rods L and M will slide freely through them.

On the drawing-frames the rods L M are extended so as to traverse the guides for all the bosses to the back rolls of the drawing-frame. The distances from center to center of the bosses are greater than from center to center of the guides on the drawing, and such that the sliver-guides can all be in a line between the two rods, each sliver-guide being turned half-way round from the position shown.

I do not claim moving the sliver-guides together to the center of the rolls and afterward receding from it, as that has been patented by Thomas Winn on the 6th of September, 1870; but, not being aware that any mechanism has ever been shown for traversing one-half the sliver-guides in an opposite direction from the other half, with uniform speed, with adjustable sliver-guides, and a governor of the traverse, so as to avail of the wear on the whole length of the bosses, whether long or short,

What I claim as my invention, and desire to secure by Letters Patent, is—

The mechanism herein described, consisting of the combination of the heart A and rod B, the slotted part F, the adjustable pin G, the cross-bar H pivoted in the center, the arms J and K, the rods L and M, the adjustable sliver-guides N and O, substantially as described.

Witnesses:
R. K. BROWN,
H. B. OSGOOD.

GUSTAVUS E. TAFT.