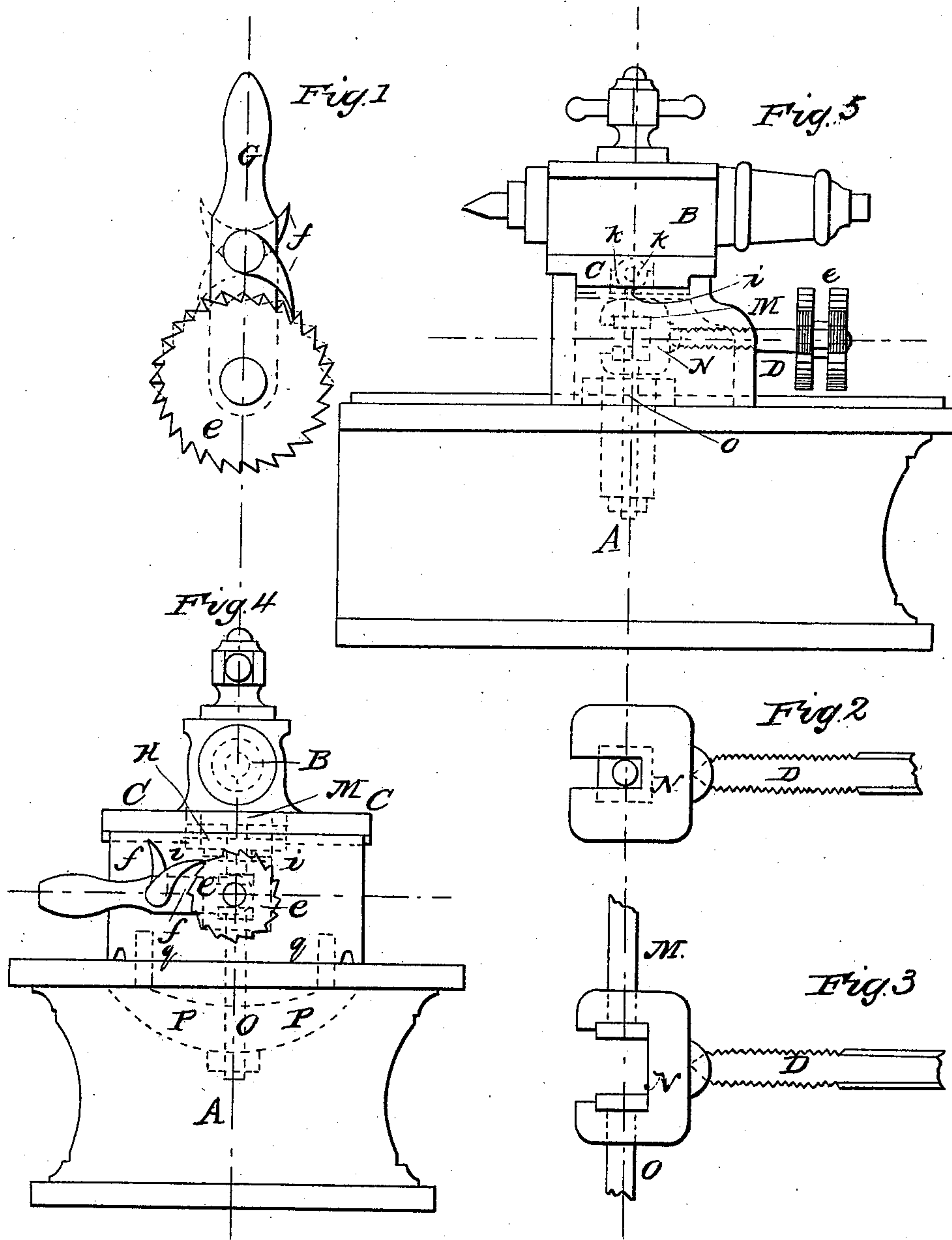


A. THOMAS.

Device for Securing Tail Stocks of Lathes.

No. 53,058.

Patented March 6, 1866.



WITNESSES
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ALFRED THOMAS, OF WORCESTER, MASSACHUSETTS.

IMPROVED DEVICE FOR SECURING THE TAIL-STOCKS OF LATHES.

Specification forming part of Letters Patent No. 53,058, dated March 6, 1866.

To all whom it may concern:

Be it known that I, ALFRED THOMAS, of Worcester, in the county of Worcester, in the State of Massachusetts, have invented a new and Improved Mode of Fastening Tail-Stocks to Engine and Turning Lathes; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in fastening tail-stocks to engine and turning lathes, to their ways or beds, by means of a compound bolt or mechanism so constructed as to admit of its being forced out of a perpendicular line, thereby shortening the distance between the bed or ways of the engine and the support of the tail-stock of the turning-lathe by means of a forcing-screw or its equivalent, thereby fastening the tail-stock firmly to its bed.

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

I construct my improvement to fasten tail-stocks to engine and turning lathes in the following manner, substantially, reference being had to the inclosed drawings, and the letters thereon, delineating the separate parts of the same.

A is the bed or ways; B, tail-stock; C, the upper part of the lateral sliding portion of the tail-stock B, to which the spindle and center is attached, with all the usual and necessary parts to operate the same. D is the tightening-screw, to force the compound bolt or mechanism out of a perpendicular line, thereby fastening the tail-stock B to the bed firmly. *e e* are two ratchet-wheels, which are made fast to tightening-screw D. *f f* are the pawls of the ratchet-wheels *e e*; G, the lever to which the pawls *f f* are attached by means of a common axis through the lever G, and by reversing the pawls *f f*, so as to throw them into the teeth of the ratchet-wheels *e e*, a forward and backward movement of the screw D can be obtained, thereby loosening or tightening the tail-stock B at pleasure with great ease and very little motion, although I do not confine myself to use of pawls *f f* and ratchets *e e*, as a common wheel, wrench, or handle can be used to turn tightening-screw D. H is a suspension bar or rod, to which the compound bolt or mechanism for connecting the shoe or cross-head to the under part of the bed or ways A, so

that when screw D is forced against the compound bolt or mechanism it will throw it out of a perpendicular line and will draw all the parts firmly together. *i i* are the lugs on which the suspension-rod H rests. *j j* are two cross-bars for the purpose of keeping the compound bolt or mechanism in a central position on suspension-bar H. *k k* are adjusting-screws for the lateral motion of the upper part of the tail-stock B. *l l* are the lugs for receiving the ends of the screws *k k*; M, upper arm of the compound bolt or mechanism, made with an eye, through which suspension-rod H is passed, and the lower end is made with a head rounded on the under side, so as to allow of a direct and even strain without injury to the bolt or head; N, a union-grasp, to hold and connect all the federal parts of the compound bolt in peaceful harmony with each other. It is made with recesses at the top and bottom to receive the heads of the upper and lower arms of the compound bolt, and is made with apertures ample to be removed at pleasure; also, is made on the side next to tightening-screw D with a V-shaped recess to receive the taper-shaped end of the said screw D, to accommodate the deflection of the compound bolt or mechanism; O, the lower arm of the compound bolt, with head on the upper end made the same as the upper arm, M, and the lower end is passed through the shoe P, with a screw and nut on the same to adjust the length of compound bolt or mechanism; P, the shoe with upward projecting guides, which pass through guides *q q*, and made on and a part of the lower half of tail-stock B for the purpose of preventing it from catching on the under side of the bed or way A when the tail-stock is moved on the ways, as the guides will keep the shoe perpendicular and free from friction.

Having thus fully described my invention, what I claim as new, and desire Letters Patent for, is—

1. The mechanism called the compound bolt, constructed as described, in combination with lugs *i i*, suspension-bar H, substantially the same, and for the purpose set forth.

2. In combination with the compound bolt, the tightening-screw D, ratchet-wheels *e e*, pawls *f f*, and lever G, or their equivalents, substantially in the manner and for the purpose set forth.

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