(No Model.)

# D. F. CORNELL.

## TOOL CARRIAGE FOR LATHES.

No. 559,482. Patented May 5, 1896.

Fig. 1.

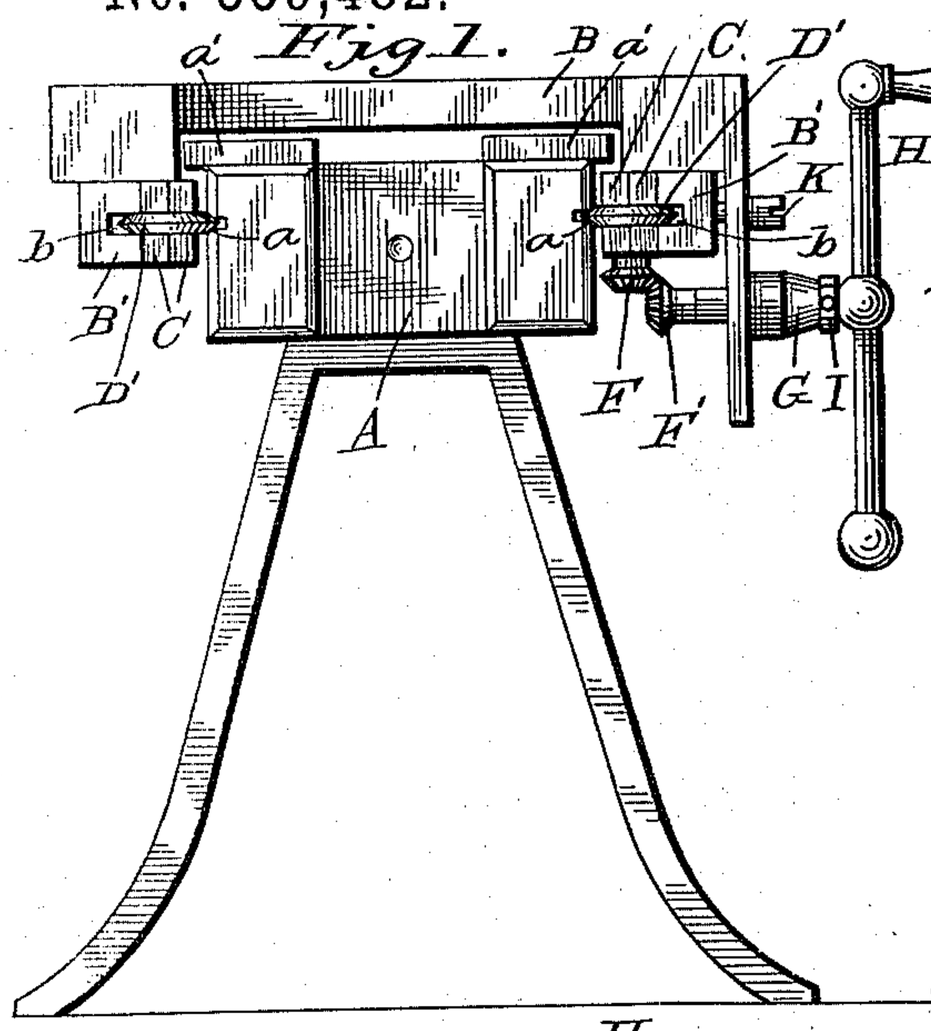



Fig. 2.

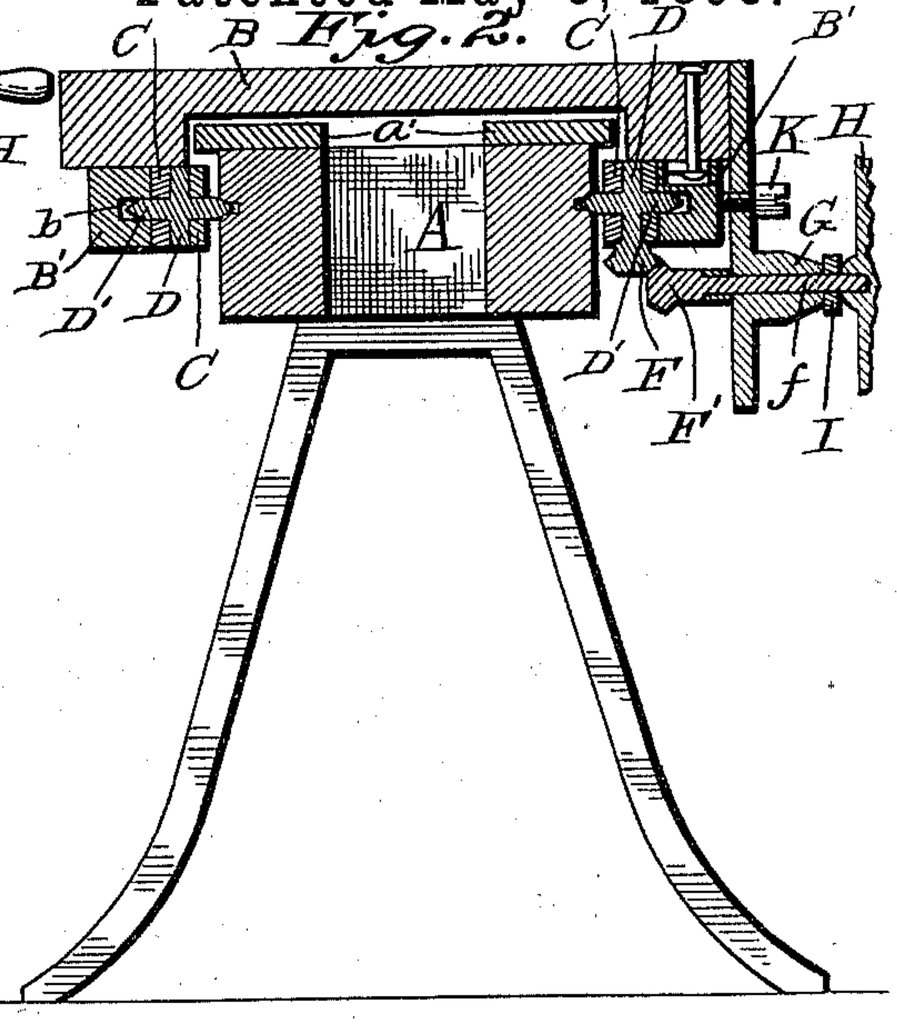



Fig. 3.

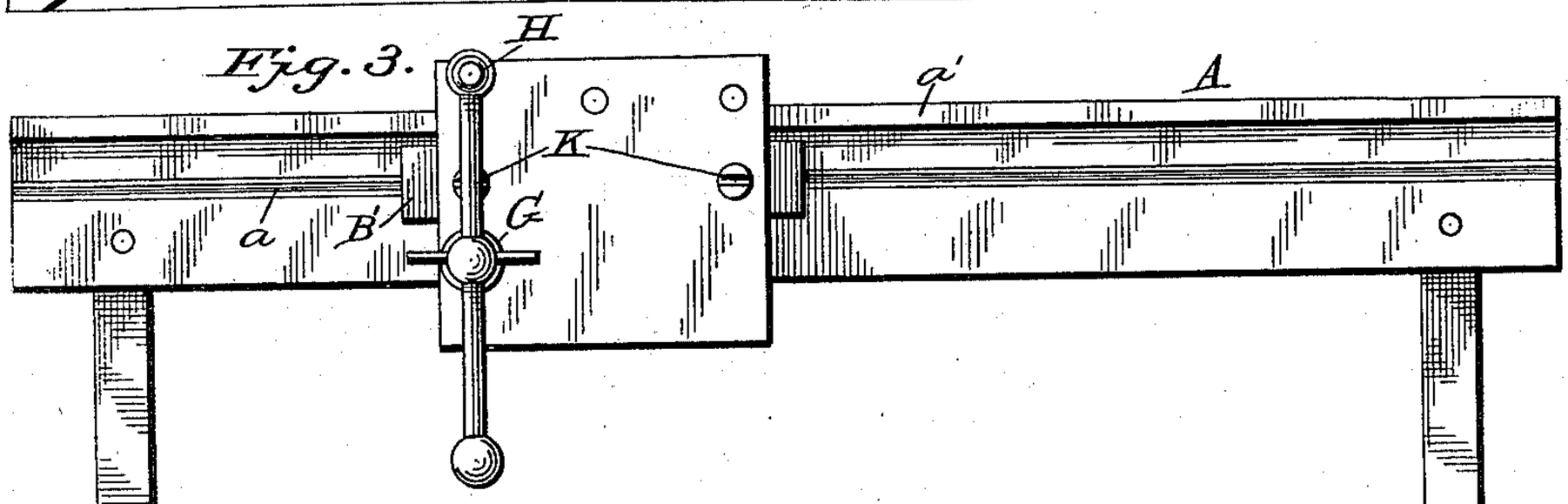
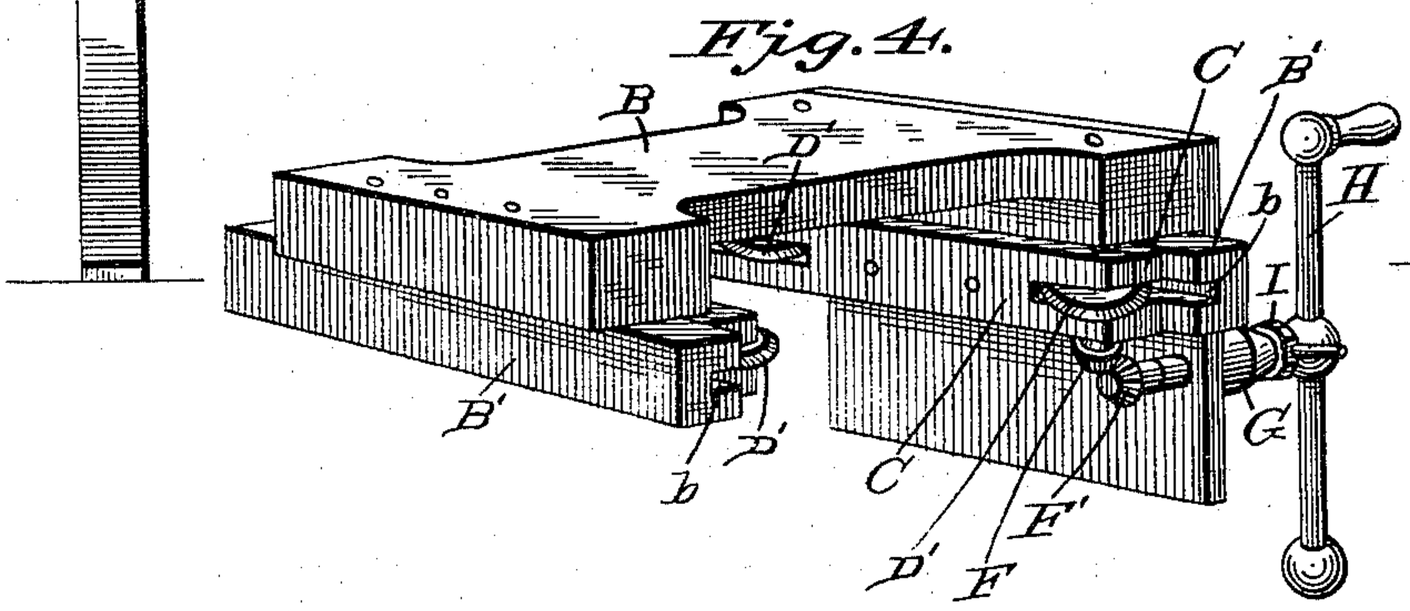



Fig. 4.




Witnesses
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# UNITED STATES PATENT OFFICE.

DAVID F. CORNELL, OF NORTH FORK, PENNSYLVANIA.

## TOOL-CARRIAGE FOR LATHES.

SPECIFICATION forming part of Letters Patent No. 559,482, dated May 5, 1896.

Application filed November 25, 1895. Serial No. 570,084. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID F. CORNELL, a citizen of the United States, residing at North Fork, in the county of Potter and State of Pennsylvania, have invented certain new and useful Improvements in Tool-Carriages for Lathes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain new and useful improvements in lathes, and has reference more particularly to the tool-carriage, having for its object, among others, to provide a simple and cheap means for moving the carriage and for fastening it in any desired position.

It has for a further object to so dispose the rollers upon which the carriage runs and the operating mechanism where they will be out of the way of the dust and chips.

It has for an object, further, to dispense with the segment heretofore employed, substituting therefor beveled gears, one of which is mounted on the shaft of one of the guide-rollers.

Still a further object is to decrease the frictional contact, whereby the carriage can be made to run easier.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be particularly pointed out in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is an end elevation of a lathe-carriage embodying my invention. Fig. 2 is a vertical cross-section through the same. Fig. 3 is a side elevation. Fig. 4 is a perspective of the carriage removed from the bed or table.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates the bed, in the side timbers of which are provided longitudinal V-shaped grooves *a*, in which run the rollers. The table or bed is provided with the flange *a'*, beneath which the overhanging portions of the carriage work.

B is the carriage, upon each side of which are arranged the strips B', secured to the under sides of the ends of the carriage, and the inner faces of which are slotted, as seen at *b*. Attached to these slotted pieces are the metallic bars C, in which are mounted vertical shafts D, carrying the guide-rollers D', having V-shaped peripheries adapted to run in the side grooves on the bed. One of the shafts carrying these rollers is provided at its lower end with a beveled pinion F, which meshes with a beveled pinion F', carried by a shaft *f*, disposed horizontally and mounted in the apron G, the outer end of said shaft being extended and provided with a crank-handle H, so that by the turning of the said crank-handle the shaft and beveled pinion will be rotated, and by reason of this engagement with the beveled pinion on the vertical shaft the carriage may be moved back and forth when free from the lead-screw.

I is a hexagonal nut mounted on the screw-threaded portion of the shaft *f* inside of the crank-handle, and which is designed to be turned up against the long bearing in the apron to lock the carriage when it is desired to do face-plate work.

K are screws in the apron for setting the carriage tight to the bed when desired.

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

The hexagonal nut may be provided with handles, if desired, whereby it may be readily turned without the employment of a wrench. The V-shaped grooves should be by preference planed out at the bottom, so that the point of the rollers will not touch, thus leaving the faces of the rollers to run on the surface of the grooves.

What I claim as new is—

1. The combination with the bed with its longitudinal grooves, of the carriage provided with guide-rollers on vertical shafts, a beveled pinion on one of said shafts and a horizontal shaft carrying a beveled pinion and a crank-handle and a hexagonal nut on said shaft, substantially as and for the purposes specified.

2. The combination with the bed with its longitudinal grooves, of the carriage provided with guide-rollers on vertical shafts, a bev-

eled pinion on one of said shafts and a horizontal shaft carrying a beveled pinion and a crank-handle, the apron in which the horizontal shaft is mounted having a long bearing through which said shaft passes and a hexagonal nut on said shaft adapted to engage said bearing, substantially as and for the purposes specified.

3. The combination with the bed with its longitudinal grooves, of the carriage provided with guide-rollers on vertical shafts, a beveled pinion on one of said shafts and a horizontal shaft carrying a beveled pinion and a crank-handle, and an apron secured to said carriage and provided with means for moving same back and forth and screws carried by said apron constructed and arranged to hold the carriage fast to the bed, substantially as and for the purposes specified.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

DAVID F. CORNELL.

Witnesses:
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F. M. COOK.