(No Model.) 2 Sheets—Sheet 1.

# M. G. NIXON.

## PLANING ATTACHMENT FOR LATHES.

No. 275,693. Patented Apr. 10, 1883.

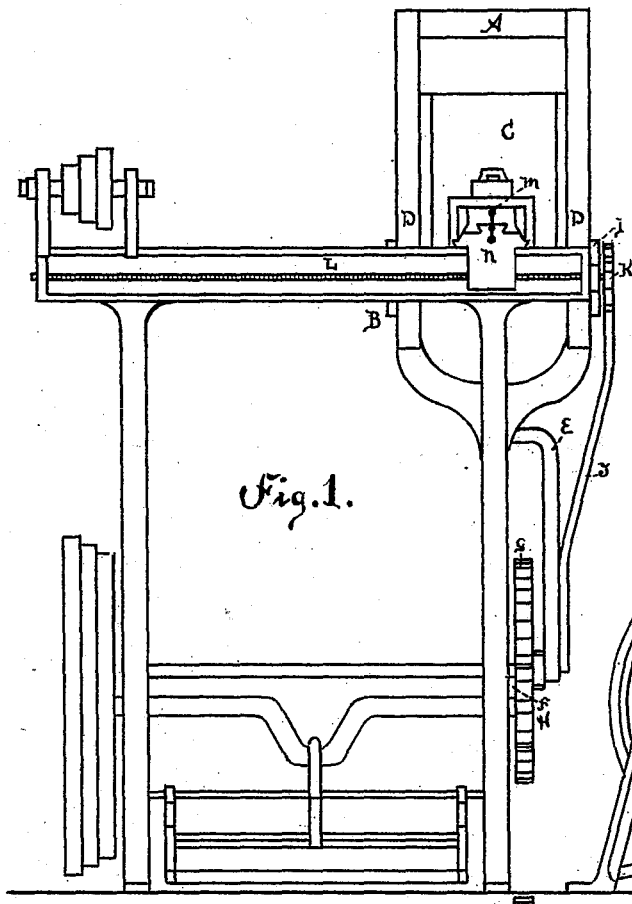

Fig. 1.

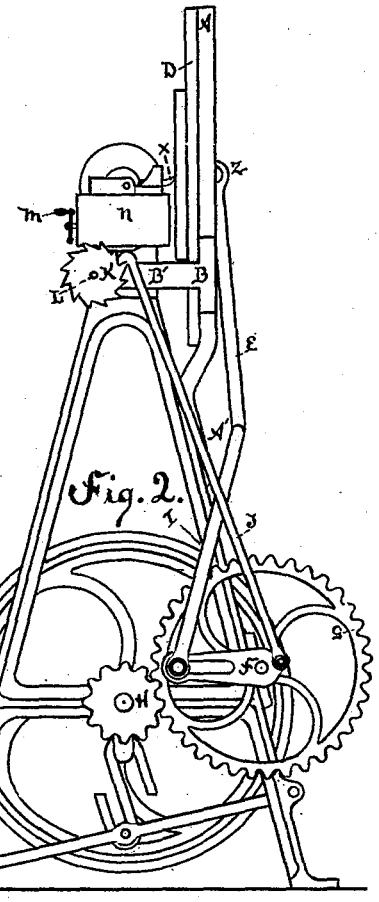

Fig. 2.

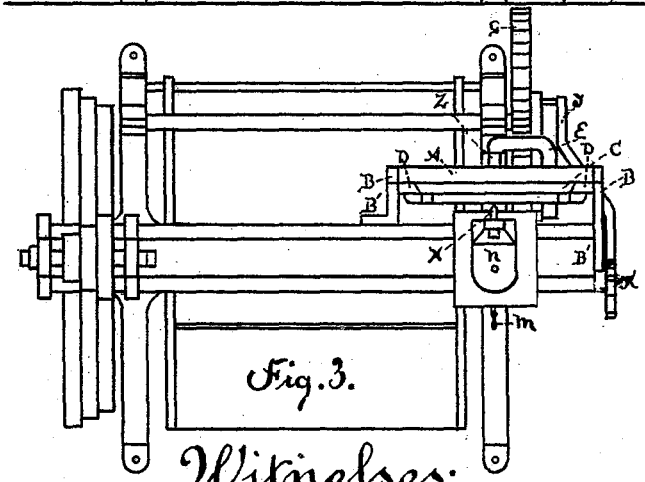

Fig. 3.

Witnesses:

T. Everett Brown

A. Attorney

Inventor.

Miles G. Nixon

(No Model.) 2 Sheets—Sheet 2.

# M. G. NIXON.

## PLANING ATTACHMENT FOR LATHES.

No. 275,693. Patented Apr. 10, 1883.

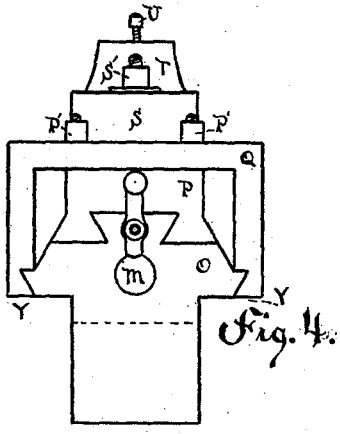

Fig. 4.

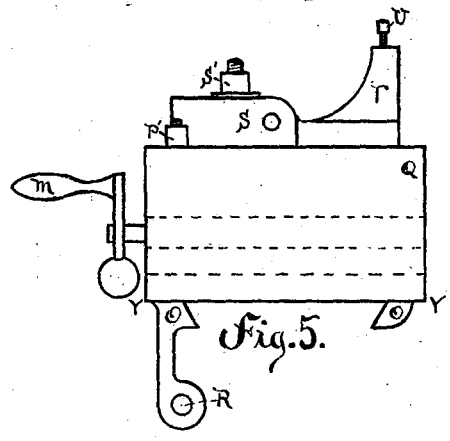

Fig. 5.

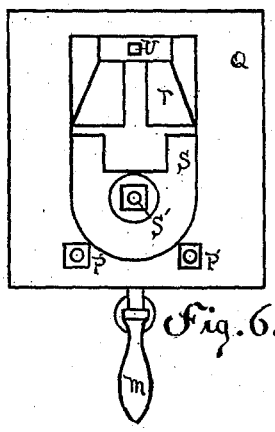

Fig. 6.

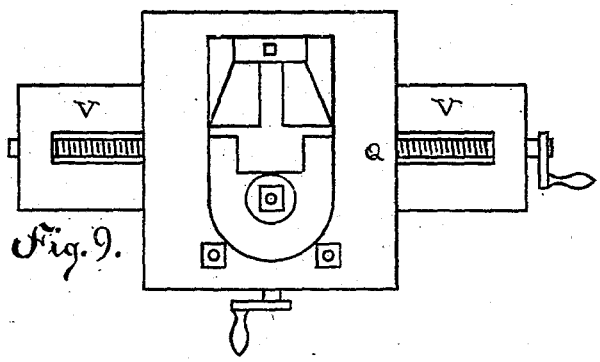

Fig. 9.

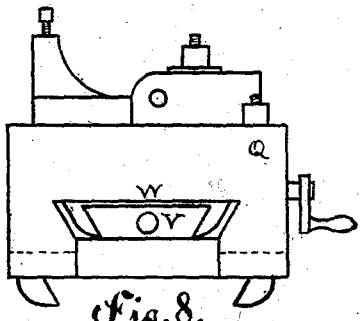

Fig. 8.

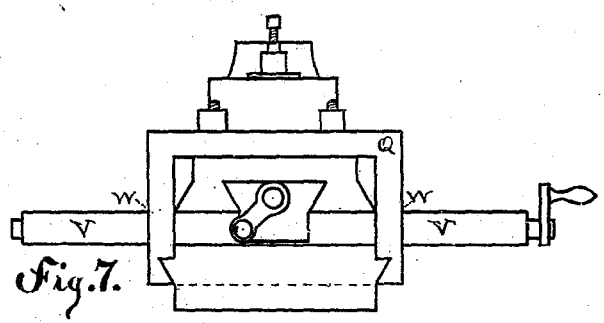

Fig. 7.

Inventor.
Miles G. Nixon.

Witnesses:
J. Everett Brown
A. Mundy

# UNITED STATES PATENT OFFICE.

MILES G. NIXON, OF CHICAGO, ILLINOIS.

## PLANING ATTACHMENT FOR LATHES.

SPECIFICATION forming part of Letters Patent No. 275,693, dated April 10, 1883.

Application filed August 28, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, MILES G. NIXON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Attachment to Foot and Power Lathes for Planing Metal, which attachment, with a lathe, forms a combined lathe and planer, of which the following is a specification.

The object of the present invention is to provide a combined lathe and planer—that is to say, a single apparatus or mechanical tool that may be used either as a lathe or as a planer, as may be desired; and the present invention consists in combining with the ordinary horizontal lathe bed or table a vertical planer-bed, and providing the apparatus with a compound slide-rest adapted to hold and adjust not only the lathe-tools, but also the planer-tools, the planer and lathe both having the same operating mechanism. The planer bed or frame is secured to the main frame of the machine in a vertical position, and to one side of the revolving lathe, so as not to interfere with its operation or the work revolving therein. The compound slide-rest is provided with a box removably secured to its transverse slide, on which box the planer-tools are mounted in suitable holders. The main or longitudinal leading-screw of the compound slide-rest is provided with a ratchet-wheel, and operated by a pawl connected with the driving mechanism, whereby the feed of the planer may be effected automatically. By this means I am enabled to produce a combined lathe and planer at a cost little in excess of that of the ordinary single instrument, whether lathe or planer, and thus save to many machinists, who have occasional use for both lathe and planer, practically the cost of one of said machines; and my combined lathe and planer is so constructed that it may be readily fitted up from any ordinary hand or power lathe.

My invention will be better understood by reference to the accompanying drawings, which form a part of this specification, and in which similar letters of reference indicate like parts.

In said drawings, Figure 1 is a front or side elevation of a device embodying my invention. Fig. 2 is an end elevation; Fig. 3, a plan view. Fig. 4 is a detail side elevation of the compound slide-rest enlarged. Figs. 5 and 6 are end and top views of the same, respectively. Figs. 7, 8, and 9 are similar views of a modification, showing the application of my invention to an ordinary foot-lathe slide-rest having short leading-screw in the slide-rest itself.

A is the planer bed or frame, securely bolted to the leg of the lathe at A′, and by means of the brackets B B to the lathe-bed at B′ B′.

C is the table of the planer, reciprocating vertically in the slides D D by means of the bent connecting-rod E, which is jointed to table C at Z.

F is the planer-crank.

H and G are respectively the driving and driven wheels to reduce the speed.

I is a double bent eccentric-rod, receiving its motion from crank F near its large eye. The other end of eccentric-rod I is a pawl, and works ratchet-wheel K, which, by turning the leading-screw L, to which it is keyed, accomplishes the horizontal feeding by means of a nut situated in slide-rest N. The transverse feeding is performed by the small crank M, belonging to the lathe slide-rest.

N is the compound slide-rest.

Q is what I term the "box." It is bolted to the transverse sliding part P of the slide-rest at P′ P′, and is made to slide across the lathe-slides at Y Y, and is further secured by sliding on the under part, O, of the slide-rest, which has to be fitted to receive it. The leading-screw works in the female thread at R—the lower part of O. The part S of the tool-holder is bolted securely to box Q by means of bolt S′. Part T is the tool-holder proper. It is hinged to part S, so as to flop up when the table C is returning.

The tool is shown at X, Figs. 2 and 3. It is secured by bolt U, Figs. 4, 5, and 6.

When it is desirable to use the lathe as a lathe, the small gear-wheel H is removed, the bolts P′ P′ are taken out, and the box, with its appendages, is slid off. The rest of the planing attachment is allowed to stand, as it will not interfere with the full operation of the lathe.

Figs. 7, 8, and 9 show a modification of the compound slide-rest as fitted up for a planer from an ordinary foot-lathe slide-rest. The construction is similar to that just described, excepting that the box Q is cut out or arched

at W, to allow the long slide V to project either side beyond it. When fitted to a slide-rest of this character it will be entirely hand-feeding.

I am aware that prior to my invention planing attachments to lathes have been made, and therefore I do not claim such attachments, broadly; but

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

1. The combination, with the shears, crank-shaft, and leading-screw of a turning-lathe, of the planer-bed attached to said shears, the planer-table, mechanism for reciprocating said table, and a pawl and ratchet-wheel for operating the feed-screw, substantially as described.

2. The combination, with the shears, leading-screw, and shaft of a turning-lathe, of the interchangeable lathe and planer tool holding devices, substantially as described.

3. The combination, with the vertical planer-bed and planer-table reciprocating therein, of the interchangeable lathe and planer tool holding devices, and the shears for supporting said tool-holding devices, to which the planer-table is attached, substantially as specified.

MILES G. NIXON.

Witnesses:
H. M. MUNDAY,
T. EVERETT BROWN.