

(No Model.)

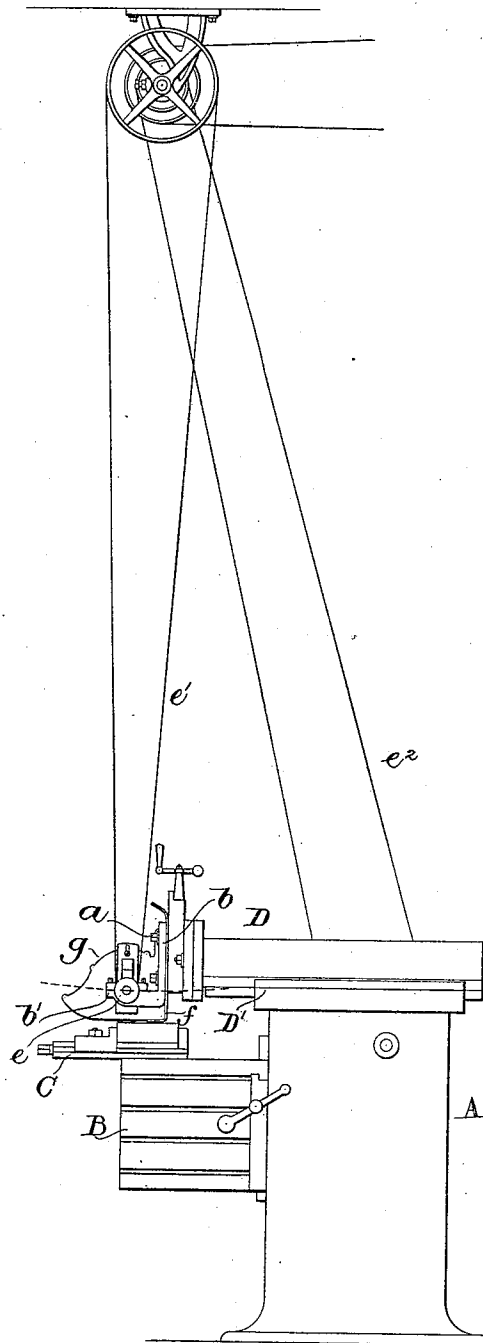
2 Sheets—Sheet 1.

P. FORG.
GRINDING ATTACHMENT.

No. 471,380.

Patented Mar. 22, 1892.

Fig. 1.



Witnesses:
Edward F. Allen
Oscar F. Hill

Inventor:
Peter Forg
by Crosby & Gregory attys.

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Fig:3.

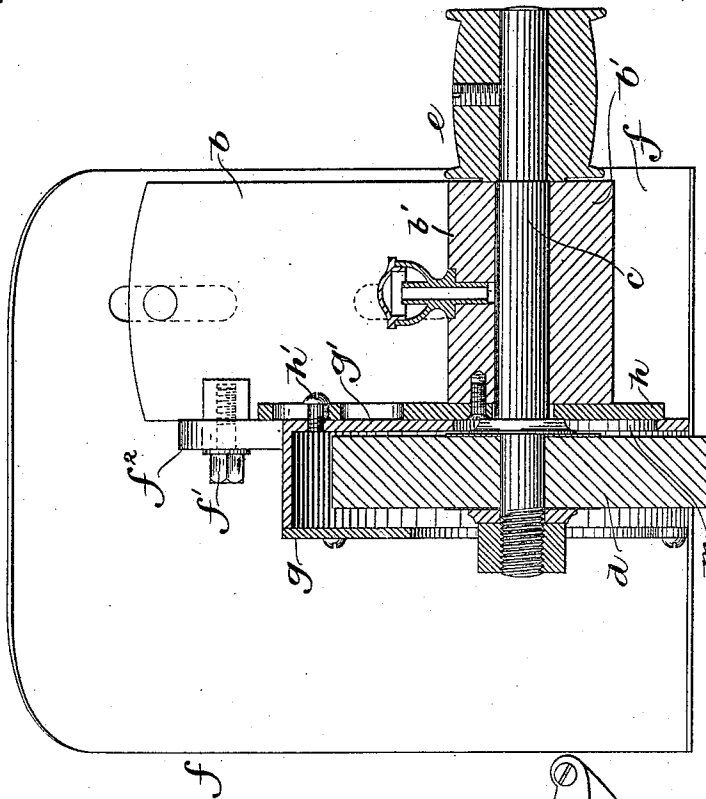
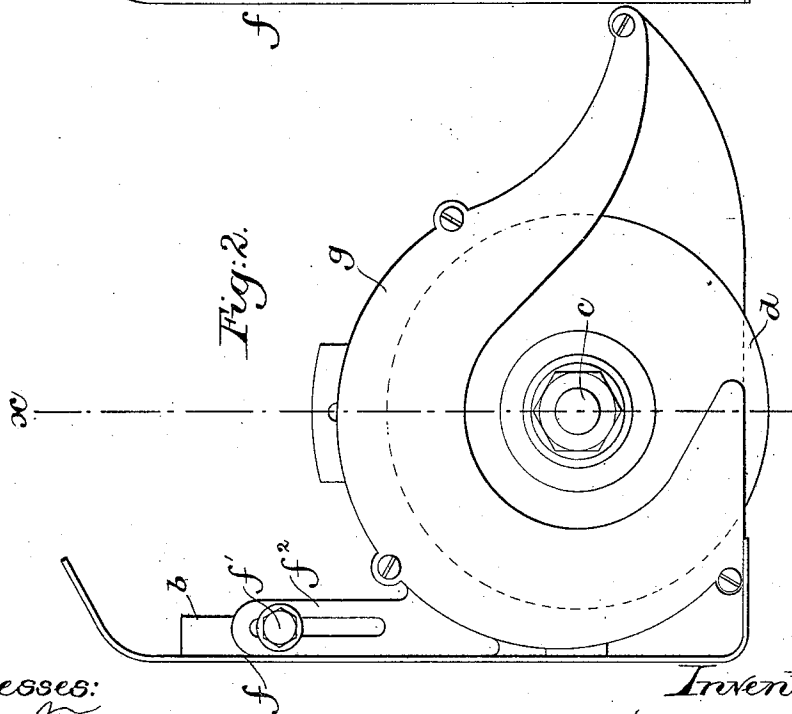


Fig:2.



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UNITED STATES PATENT OFFICE.

PETER FORG, OF SOMERVILLE, MASSACHUSETTS.

GRINDING ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 471,380, dated March 22, 1892.

Application filed June 29, 1891. Serial No. 397,827. (No model.)

To all whom it may concern:

Be it known that I, PETER FORG, of Somerville, county of Middlesex, State of Massachusetts, have invented an Improvement in Grinding Attachments, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

In work in factories very many articles, both of metal and other material, have to have portions thereof ground smooth; and it is the object of this invention to provide means whereby this grinding may be quickly and uniformly done.

In accordance with my invention I provide an attachment which may be readily applied to any usual shaper or grinder or other machine-tool wherein a head or part has a reciprocating or to-and-fro motion over a bed, upon which the work to be ground may be placed and be adjusted at right angles or across the path of movement of the tool-carrying head.

I have illustrated my invention as applied to a well-known form of shaper.

Figure 1 of the drawings represents my attachment as applied to a shaper of well-known construction. Fig. 2, in elevation, shows my attachment: and Fig. 3 is a section on the line *x* of the attachment shown in Fig. 2.

The upright column or frame *A*, the bed *B*, made both horizontally and vertically adjustable on or with relation to the said column, the work-holder *C*, adapted to be secured to said bed, and the longitudinally-reciprocating carriage or tool-holder *D* are and may be all as common in shapers, but instead of applying my invention to this particular form of machine I may apply it upon the tool-holder of a planer or other like machine, wherein the tool-holder has a reciprocating motion.

In accordance with my invention I remove the ordinary tool and the holder, which is bolted to the front end of the reciprocating tool-carrier, and in its place by bolts *a* I clamp a stand *b* to the front end of the tool-carrier, the said stand having bearings *b'* for the reception of the shaft *c*, upon which is fastened in suitable manner an emery or other grinding or polishing wheel *d*, (see Fig. 3,) the said shaft having a belt-pulley *e*, which may receive a belt, as *e'*, driven from any

suitable pulley or any suitable counter-shaft, preferably the same counter-shaft which drives the belt *e'*, instrumental in sliding the tool-carrier, as usually practiced in the class of machines referred to.

To prevent the emery or other dust from getting between the shank of the tool-carrier and the guide *D'* in which it is moved, I have applied between the stand and the head of the tool-carrier a shield *f*, and I have connected the said shield with the stand by a bolt *f'*, the shank of which is extended through a slot in an arm *f''*, connected with the shield, so that the said shield may be adjusted vertically as the wheel wears away in use. I have surrounded the upper portion of the grinding-wheel with a hood *g*, which is secured to the shield. The side plate *g'* of the shield referred to next the bearing *b* is substantially as large as the wheel, so as to preclude the emery or dust from getting into the bearings *b'*, and between the bearing and the side plate *g'* of the hood I have mounted a slide *h* and provided a screw *h'*, extended through the said slide *h* and into the side plate *g'*, so that as the stand *b* is adjusted vertically upon the shield, as required, because of the wearing away of the wheel *d*, the said slide *h* may be adjusted independently, so as to close up the space *m* in the side plate *g'* of the hood, so that emery or other dust cannot pass through the side plate *g'* to the bearing *b'*.

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

1. A reciprocating longitudinally-movable tool-carrier and a bed, combined with a stand attached to the carrier and having a shaft at right angles to the line of reciprocation of the said tool-carrier, the said shaft being provided with a rotating grinding device, and means to rotate the said shaft while the stand having its bearings is being moved longitudinally by the tool-carrier, and a shield interposed between said stand and carrier, substantially as described.

2. A longitudinally-movable tool-carrier, a bed, and a work-holder, combined with a shield, a stand having bearings for a rotating shaft, and a rotating grinding-tool affixed to said shaft, the said shield being interposed be-

tween the said stand and tool on the one side and the reciprocating tool-carrier on the other side, substantially as described.

3. The grinding attachment consisting, essentially, of the stand having a bearing, a rotating shaft therein provided with a circular grinder, a shield attached to the rear of said stand, and a hood, and with means to adjust the said stand vertically with relation to the
10 said shield, substantially as described.

4. The grinding attachment consisting, essentially, of the stand having a bearing, a rotating shaft therein provided with a circular grinder, a shield attached to the rear of said

stand and vertically adjustable with relation thereto, and a hood surrounding the upper part of the grinder, and with a slide-plate to close the side opening in the shield next the bearing for the said hood, substantially as described. 15 20

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

PETER FORG.

Witnesses:

GEO. W. GREGORY,
EMMA J. BENNETT.