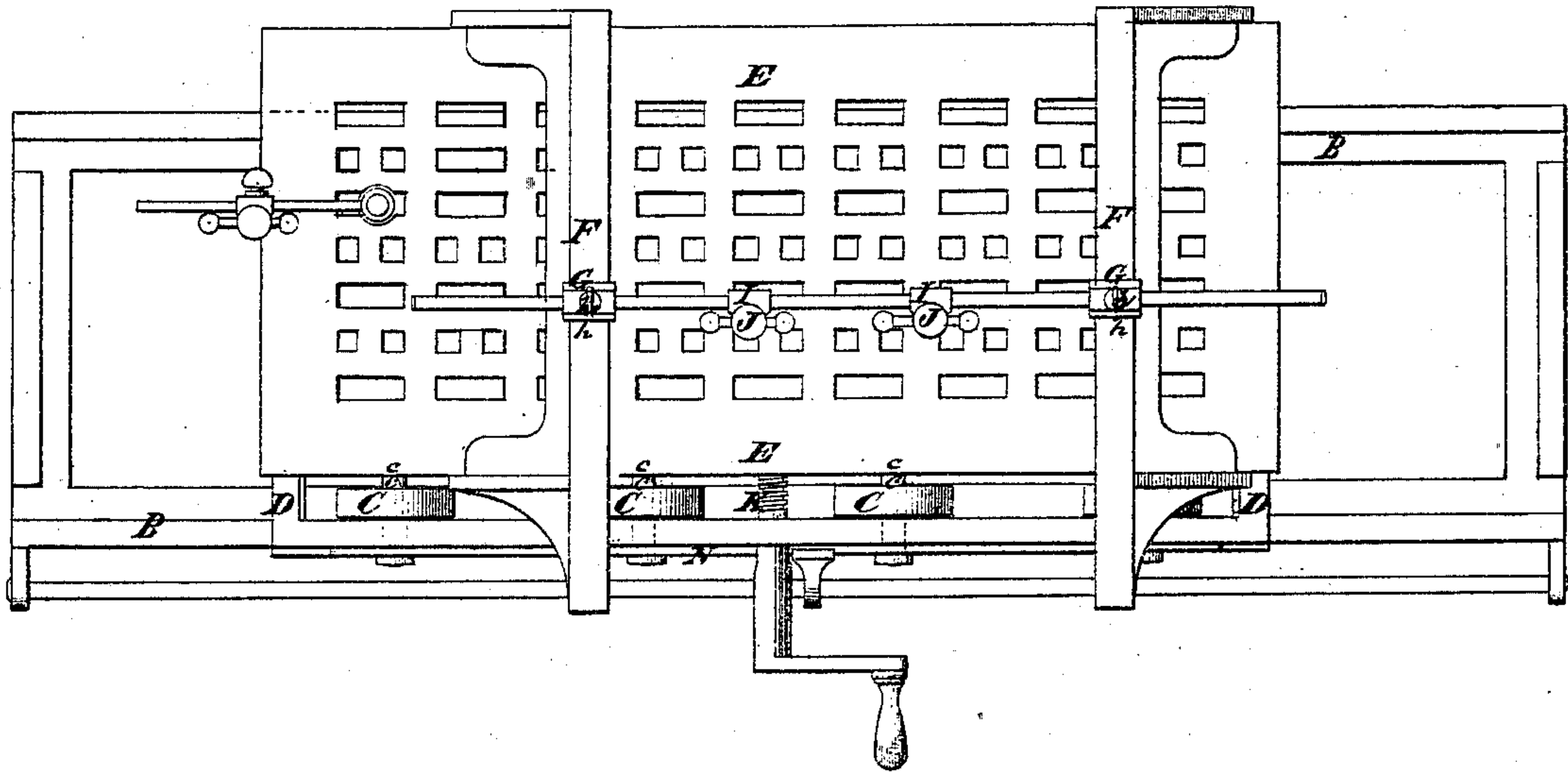
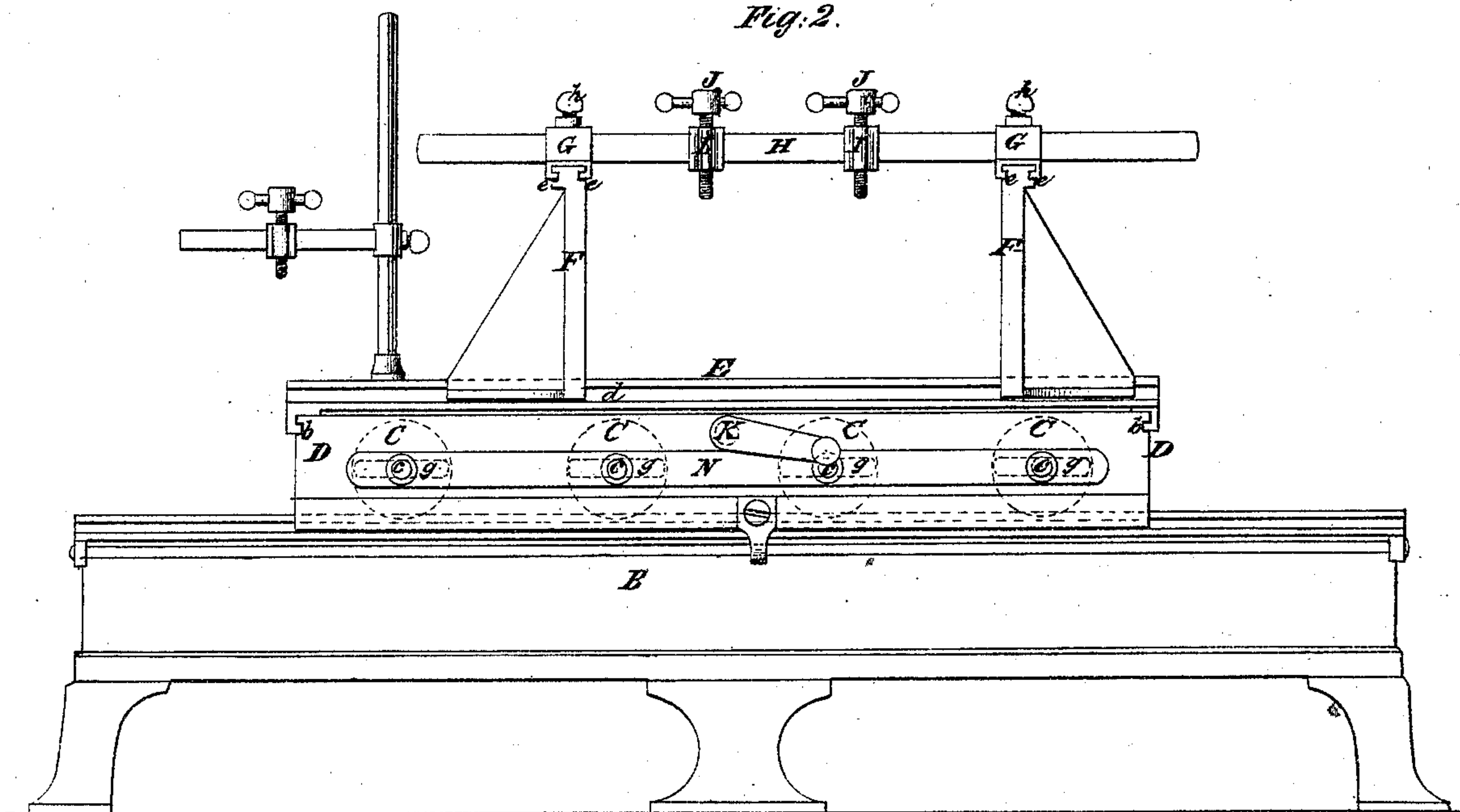


*James L. Jackson's Imp<sup>ts</sup> in Tables for Emery Grinders.*

No. 122,253.

Patented Dec. 26, 1871.

*Fig. 1.**Fig. 2.*

Witnesses:  
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*R. R. Ruben*

Inventor.

*James L. Jackson*

A. (70.)

2 Sheets--Sheet 2.

*James L. Jackson's Imp<sup>ts</sup> in Tables for Emery Grinders.*

Patented Dec. 26, 1871.

No. 122,253.

Fig. 4.

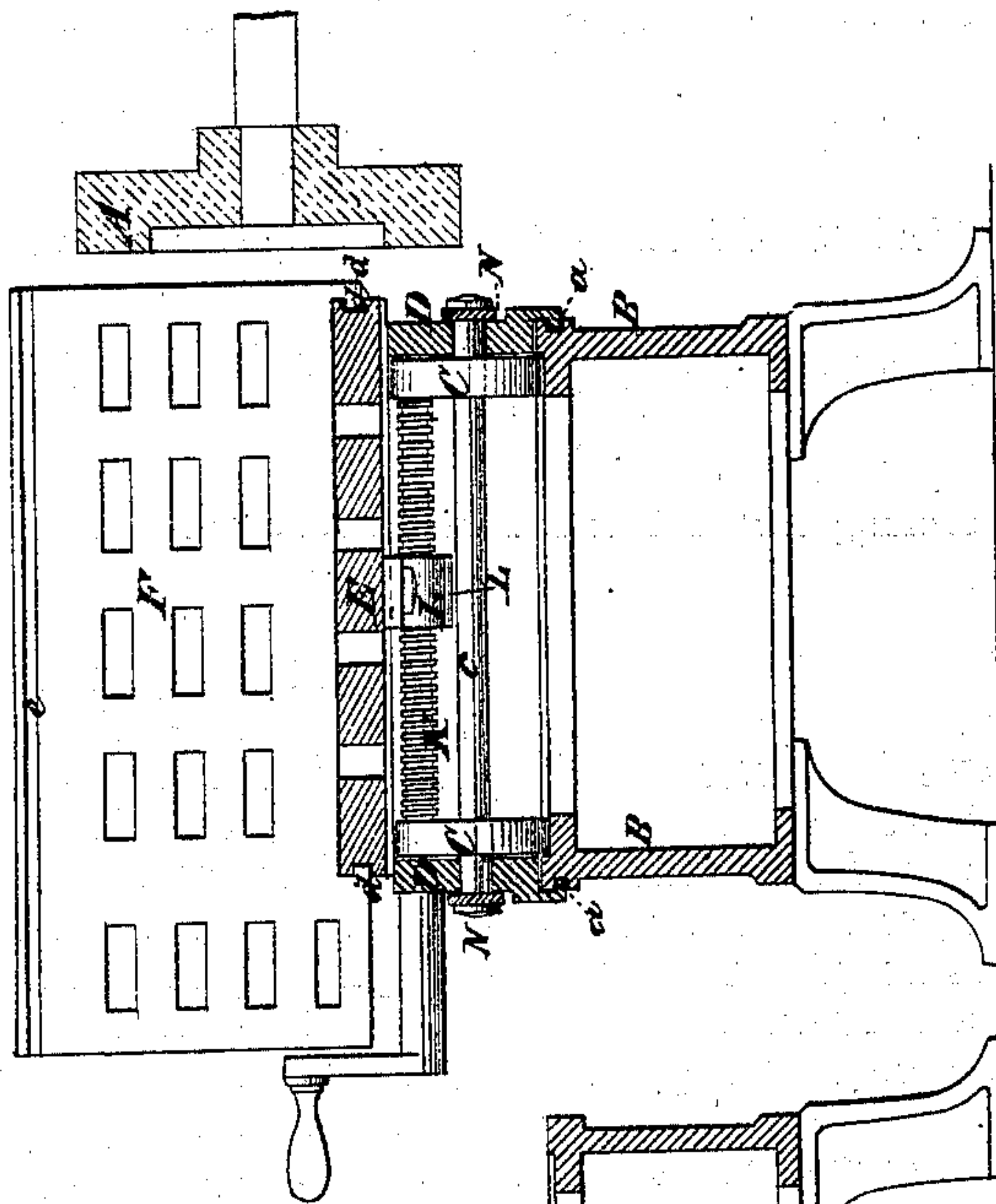
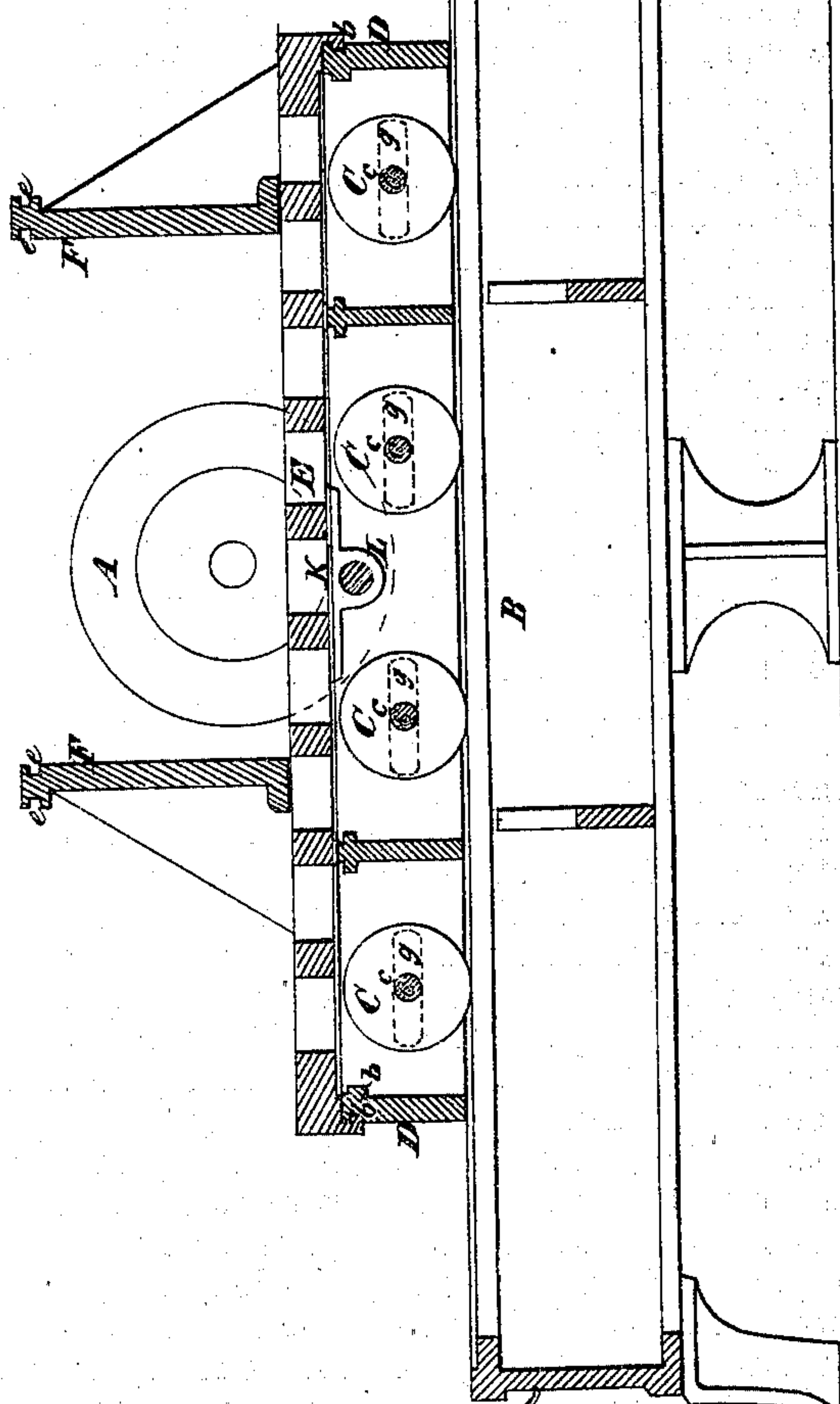


Fig. 3.



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*Fred Haynes*  
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Inventor  
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# UNITED STATES PATENT OFFICE.

JAMES L. JACKSON, OF NEW YORK, N. Y.

## IMPROVEMENT IN TABLES FOR EMERY-GRINDERS.

Specification forming part of Letters Patent No. 122,253, dated December 26, 1871.

A.

*To all whom it may concern:*

Be it known that I, JAMES L. JACKSON, of the city, county, and State of New York, have invented certain new and useful Improvements in Tables for Emery-Grinders; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates more especially to tables for use in connection with what are known as or may be termed "face-grinders," the grinding-faces of which coincide with the planes of revolution, such grinders being used as a substitute for planers in producing flat surfaces on cast-iron or other metal. The purpose of the table is to support and hold the work and present it properly to the revolving face of the grinder. The table is composed mainly of a stationary horizontal shears and a carriage traveling thereon. The invention consists in a novel construction of such carriage and in novel appliances fitted thereto to afford convenience for holding different kinds of work and in a novel system of anti-friction rollers for supporting the carriage on the shears, whereby I am enabled to use a carriage having a considerable amount of motion without making it and the shears of great length, and yet employ rollers of large size.

Figure 1 in the drawing is a plan of a table with my improvements. Fig. 2 is a side elevation of the same. Fig. 3 is a longitudinal vertical section of the same. Fig. 4 is a transverse section of the same.

Similar letters of reference indicate corresponding parts in the several figures.

As the invention relates only to the table, I have not shown any more of the grinder than is necessary to illustrate its position with regard to the table, but have simply shown the emery-wheel A in Figs. 3 and 4, its face being shown in Fig. 3 and its axial section in Fig. 4. B B indicate the shears, having their upper surface planed to form a level track for the anti-friction rollers C C which support the carriage, and having grooves in the upper parts of their sides for the reception of tongues *a a* provided on the overhanging edges of the lower frame D of the carriage, which is arranged to run longitudinally on the shears and parallel with the plane of revolu-

tion of the grinding-wheel. The carriage consists, besides the lower frame D and the rollers C C and their shafts *c c*, of a horizontal bed, E, and two upright face-plates, F F. The bed E is fitted to the frame D with tongues and grooves *b b* at the ends to slide across the said frame at right angles to the movement of the latter upon the shears B B. The face-plates F F have their faces parallel with each other and with the axis of the grinding-wheel, and they are fitted to the bed E with tongues and grooves *d d* to slide lengthwise thereon or at right angles to the movement of the bed upon the frame D, and they are grooved horizontally, as shown at *e e* in Figs. 2 and 4, at or near their upper edges, for the reception of sliding clamps G G, which have inserted through them a bar, H, which straddles the two plates and which is adjustable in the said clamps to suit their varying distance apart as the plates are adjusted toward or from each other on the bed E. The said clamps are fitted with set-screws *h h* to secure them to the face-plates when adjusted thereon. The said bar is also fitted with sliding blocks I I containing upright binding-screws J J. The bed E and face-plates F F have numerous slots in them, like the bed-plates of planing-machines and the face-plates of other machines for the reception of dogs or clamping-bolts by which to secure the work to them. A screw, K, is fitted to bearings on the frame D and to a nut, L, secured under the bed E for the purpose of moving the said bed across the said frame. The face-plates are adjustable upon the bed E by hand, and when adjusted may be secured by clamps or dogs applied through the slots of the bed.

The work to be presented to the emery-wheel may, according to its form or character, be secured to the bed E alone, or to either of the face-plates, or between the latter, or to both the bed or face plates, and with or without the assistance of the binding-screws J J on the bar H; and the bed, face-plates, and bar H will, by means of their several adjustments, provide for securing almost any kind of work. The feeding of the work to the emery-wheel will be performed by a movement of the whole carriage on the shears B B, which may be performed by a screw or rack and pinion applied to the frame D. The depth of cut is adjusted by the screw K. The axles *c c* of the rollers C C, having the said rollers firmly



secured to them, pass through horizontal slots *g* *g* in the sides of the frame D, and are all connected together by coupling-rods N N outside of the said frame. The upper surfaces of these slots rest upon the said shafts, and form the bearings of the carriage. As the carriage moves on the shears the rollers C C roll on the track of the latter and the axles *c c* roll against the upper sides of the slots *g g*.

By thus making the carriage run on the axles instead of on the tops of the rollers, as is customary in the application of anti-friction rollers between the traveling carriages of machines and the ways on which they run, the movement of the carriage relatively to the axles of the rollers is much reduced, and with rollers of a given size and a carriage having a given travel the carriage and bed may be made shorter.

I have used the terms "emery-wheel" and "emery-grinder" in this specification with reference to the grinding-wheel; but the invention would be applicable if a grinding-wheel of any other substance than emery were used, and there-

fore I do not confine myself in carrying out my invention to the use of wheels made of emery.

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

1. The carriage, composed of the lower frame D running on the shears, the bed E movable transversely on the said frame, and the face-plates F F movable lengthwise on the said bed, the whole combined substantially as herein described.

2. The combination, with the two face plates and bed E, of the clamp-bar H connected with the face-plates by screw-clamps G G, and furnished with sliding blocks I I and clamping-screws J J, substantially as and for the purpose herein described.

3. The combination of the shears B, rollers C C, axles *c c*, rods N N, and slots *g* in the lower frame D of the carriage, the whole arranged substantially as described, for the purpose set forth.

Witnesses: JAMES L. JACKSON.

FRED. HAYNES,  
R. E. RABEAU.

(70)