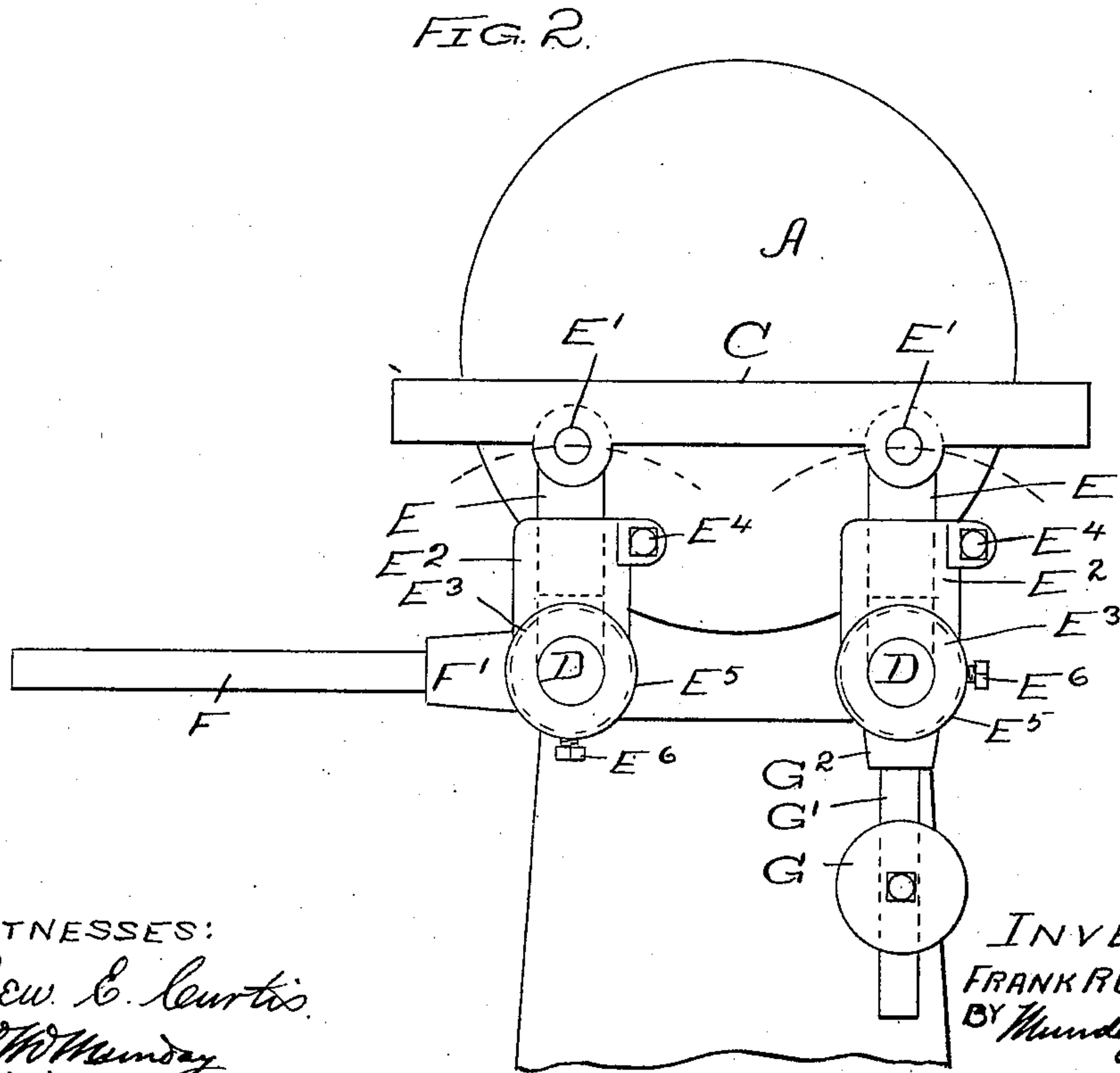
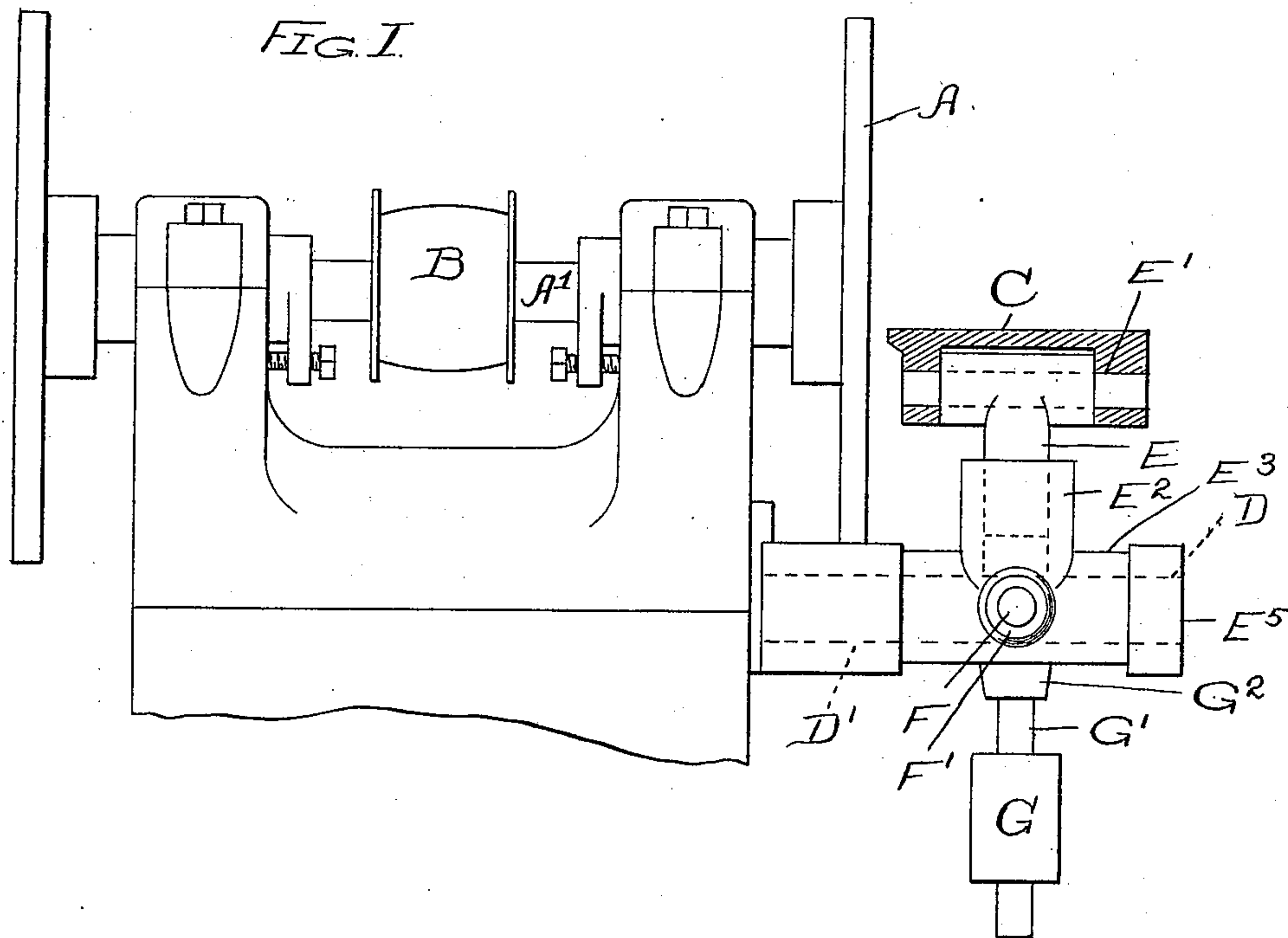


(No Model.)

F. RUDOLPHI.
GRINDING AND POLISHING MACHINE.

No. 589,398.

Patented Aug. 31, 1897.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FRANK RUDOLPHI, OF CHICAGO, ILLINOIS, ASSIGNOR TO HIMSELF AND
LOUIS C. KRUMMEL, OF SAME PLACE.

GRINDING AND POLISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 589,398, dated August 31, 1897.

Application filed December 19, 1896. Serial No. 616,299. (No model.)

To all whom it may concern:

Be it known that I, FRANK RUDOLPHI, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Grinding and Polishing Machines, of which the following is a specification.

This invention relates to improvements in grinding and polishing machines, and has been devised more especially for operating upon metal. As heretofore constructed machines of this class have usually been provided with a table for supporting the work mounted upon an arbor arranged parallel with the axis of the grinding-disk and adapted to be rocked at will upon said arbor to either side while the machine is operating to carry the work across the disk. As the articles operated upon are usually held in position upon the tables by hand it will be seen that when the tables are tipped the exertion imposed upon the operator is greatly increased, especially when the work is heavy, and in any event the operator must use extra care and maintain a constant hold upon the work to prevent it from sliding off the table. I have discovered that it is a great advantage in this class of machines, at least for some classes of work, to make the table permanently horizontal and give it a movement at right angles to the axis of the grinding-disk, so that the work may be moved across the grinder, and to this end I mount the table upon two parallel arms pivoted to the table and one under each end thereof and swinging upon supporting-pivots arranged parallel with the grinder-axis. With this construction the table is movable across the grinder from front to rear and at all times retains its horizontality.

The details of the invention are fully set forth below and also illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of my improved machine, partly in section; and Fig. 2 is an end elevation thereof.

In said drawings, A represents the grinding-disk, driven by pulley B upon the shaft A' of the disk, and C is the table for support-

ing the work. The table is arranged across the face of the disk in the usual manner, and it is mounted upon two parallel arms supported upon the parallel pivots D, inserted in sockets D' upon the end of the machine and projecting in a direction parallel to shaft A'. Each of these arms is composed of a short stud E, pivoted to the under side of the table at E', and a sleeve E², attached to a hub E³, mounted upon one of the pivots D. The sleeves are adapted to receive one of the studs E, and are also split and provided with bolts E⁴ for tightening them upon the studs, so that the length of both the arms E E² may be readily adjusted whenever desired. The sleeve-hubs are held upon the pivots by collars E⁵ and set-screws E⁶.

For shifting the table toward the front or the rear a hand-lever F is provided and is attached to the front hub E³ by inserting it in the socket F', cast upon said hub. I also prefer to employ a counterweight G, adjustably supported upon a depending lever G', having its upper end rigidly held in a socket G², fast upon the rear hub G³, such counterweight acting to the table in its central position, except when overcome by the operator, and also to resist in some measure the tendency exerted by the grinder to force the table in the direction of the grinder's revolution. The supporting-arms are located under the end portions of the table and at opposite sides of the plane of the grinder-axis.

In a machine embodying the features set forth the table is readily moved either way desired across the grinder's axis by the hand-lever and maintains its horizontality both while in motion and at rest.

In speaking of the table as being horizontal or as retaining its horizontality I do not mean to be understood as meaning that the table must be exactly horizontal. As a matter of fact in actual use of the invention no special care is ordinarily taken in adjusting the arms to the same length. The table may have some inclination without affecting its ability to hold the work, and this inclination may be given it purposely, if desired.

I claim—

1. The grinding and polishing machine, the

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work-table whereof is mounted upon parallel swinging arms located one under each of its end portions, substantially as specified.

2. The grinding and polishing machine having a work-table mounted upon parallel swinging arms, such arms being pivoted at their upper ends to the table and at

lower ends to the frame of the machine, substantially as specified.

Witness

FRANK