

P. BARRY.
FILING MACHINE.
APPLICATION FILED APR. 11, 1910.

991,414.

Patented May 2, 1911.

4 SHEETS—SHEET 1.

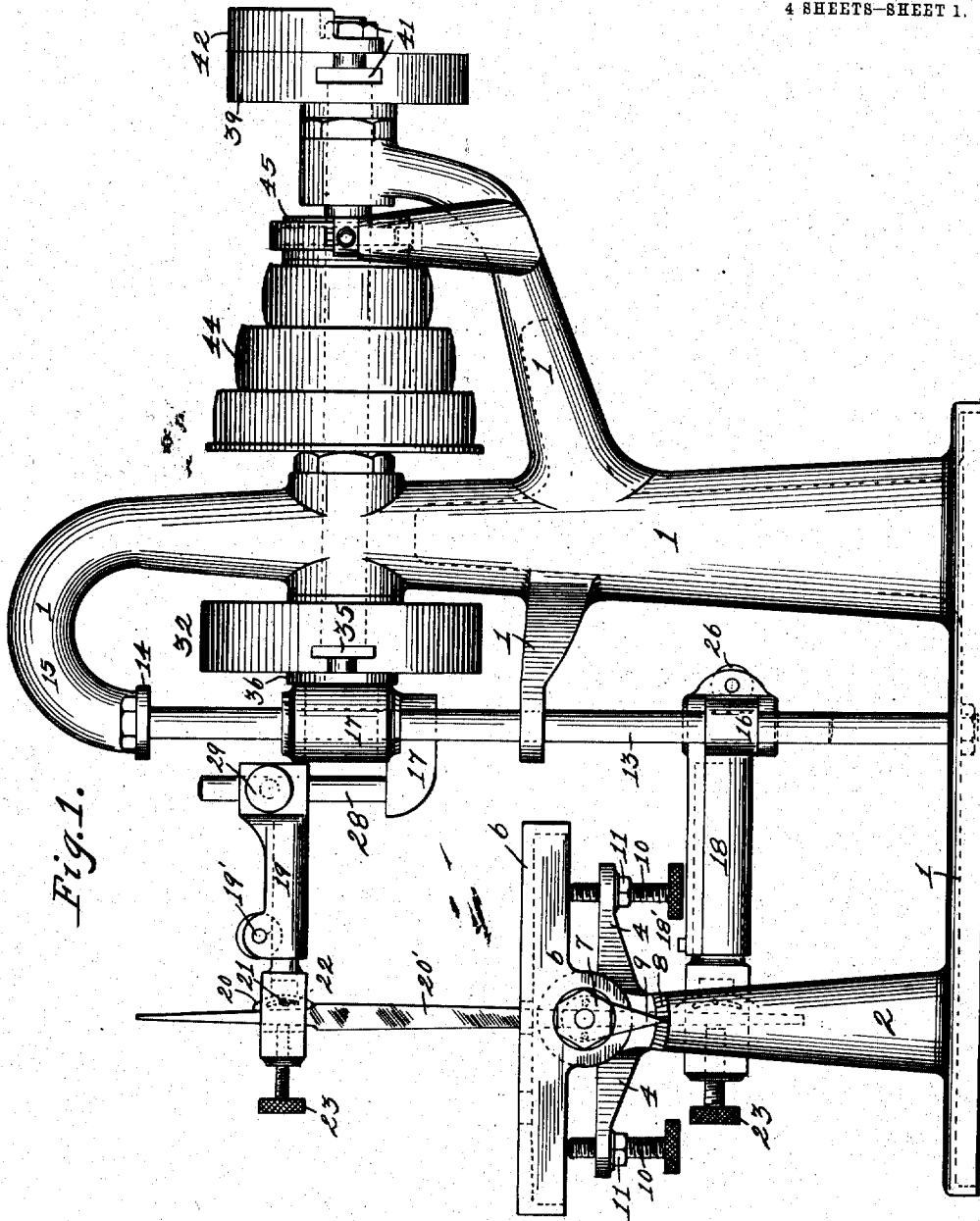


Fig. 1.

Witnesses:

C. E. Wisula

B. G. Richards

Inventor.

Philip Barry

By Joshua R. H. Puse

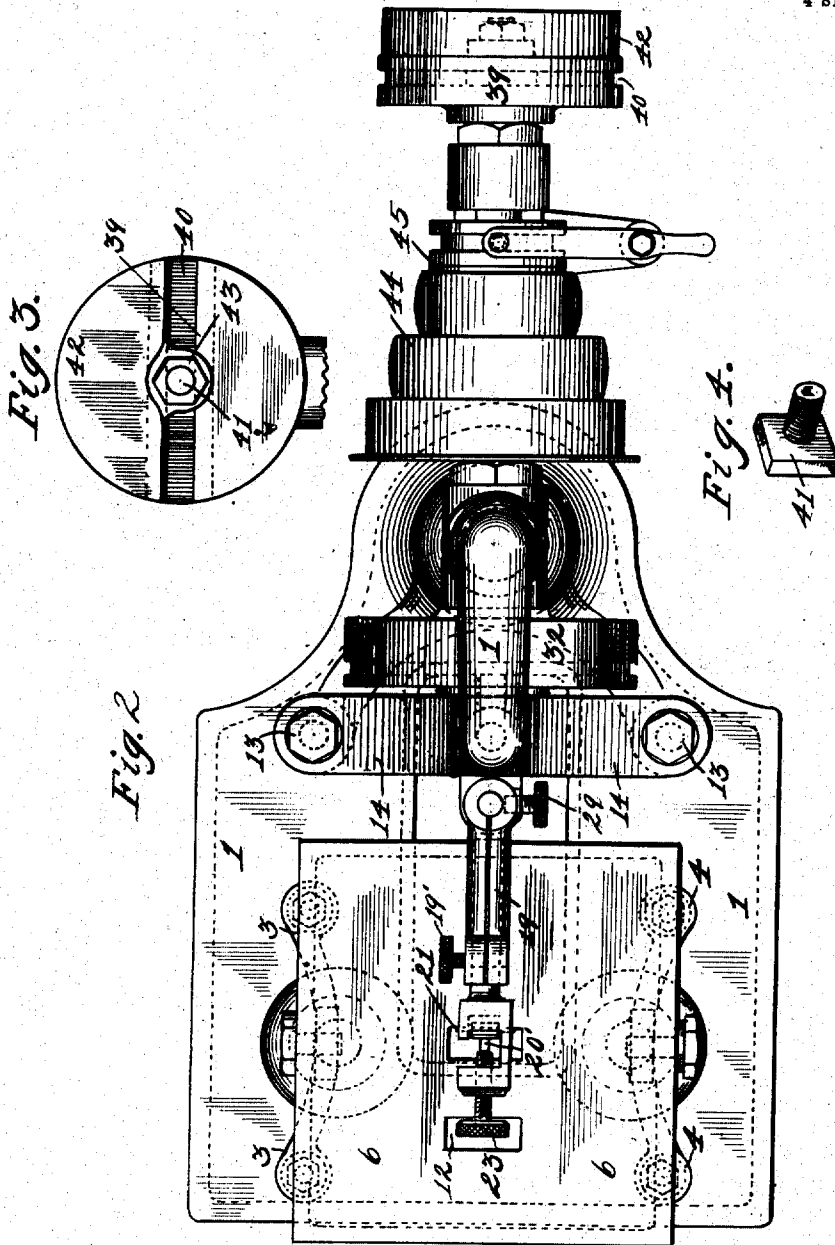
his Attorney.

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4 SHEETS-SHEET 2.



Witnesses:

C. E. Wessels

B. J. Richards

Inventor.

Philip Barry,

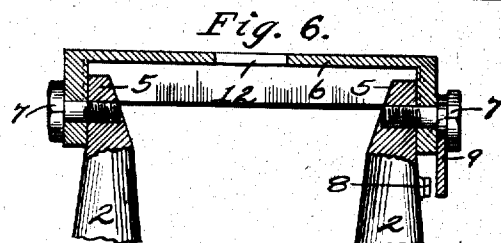
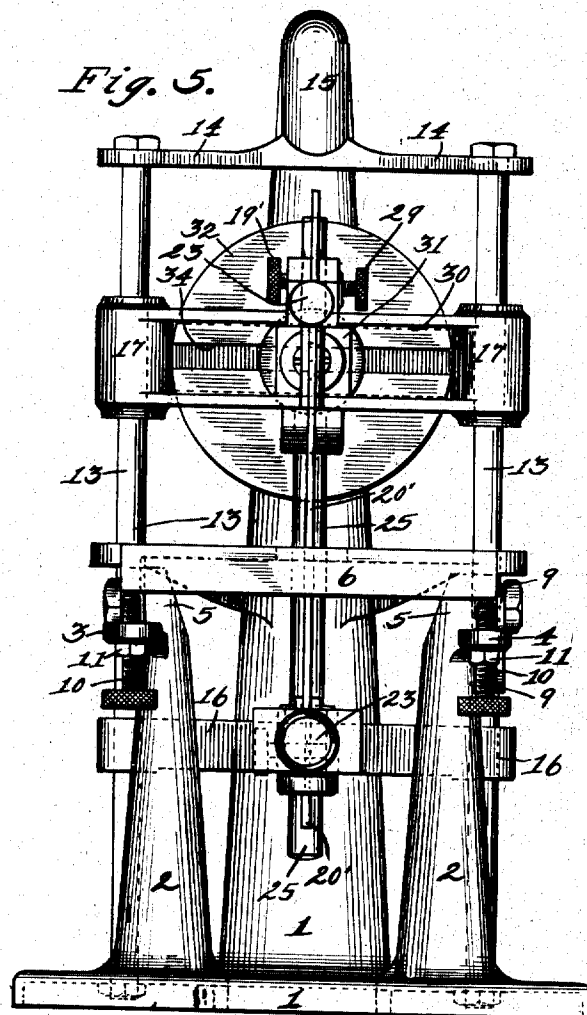
By *Shirley N. Tom*
 his Attorney.

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4 SHEETS-SHEET 3.



Witnesses:
 C. C. Wessels.
 B. G. Richards

Inventor:
 Philip Barry
 By *Charles H. Horn*
 his Attorney.

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4 SHEETS—SHEET 4.

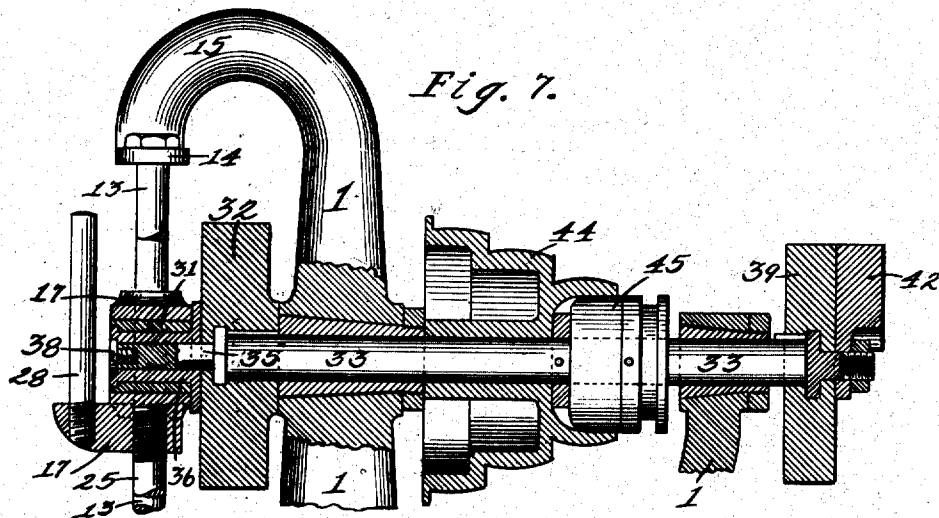


Fig. 7.

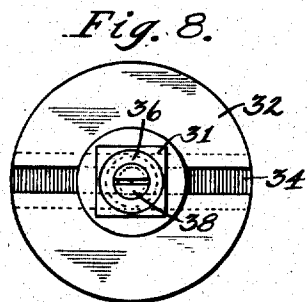


Fig. 8.



Fig. 9.

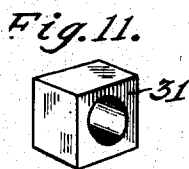


Fig. 11.

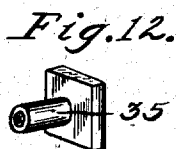


Fig. 12.

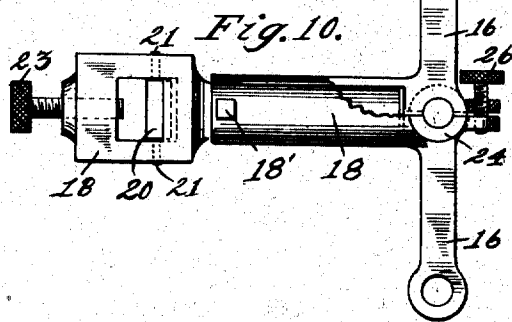


Fig. 10.

Witnesses:
 E. C. Wissels.
 B. G. Richards

Inventor:
 Philip Barry,
 By *John H. Stark*
 his Attorney

UNITED STATES PATENT OFFICE.

PHILIP BARRY, OF CHICAGO, ILLINOIS.

FILING-MACHINE.

991,414.

Specification of Letters Patent.

Patented May 2, 1911.

Application filed April 11, 1910. Serial No. 554,731.

To all whom it may concern:

Be it known that I, PHILIP BARRY, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful improvements in Filing-Machines, of which the following is a specification.

My invention relates to improvements in filing machines and has for its object the production of a filing machine of improved construction and operation.

The invention consists in the combination and arrangement of parts hereinafter described and claimed.

My invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a side elevation of a filing machine embodying my invention, Fig. 2, a top plan view of the same, Fig. 3, an elevation of a balancing weight and the face plate in which it is mounted, Fig. 4, a perspective view of the bolt employed in mounting the adjustable weight, Fig. 5, a front elevation of the machine, Fig. 6, a section through the work table of the machine, Fig. 7, a section showing the drive shaft and its connections, Fig. 8, an elevation of the face plate for transmitting motion to the file, Fig. 9, a top plan view of the upper file supporting arm, Fig. 10, a top plan view of the lower file supporting arm, Fig. 11, a perspective view of the block employed in transmitting motion to the file, and Fig. 12, a perspective view of the bolt for securing said block in position.

The preferred form of construction as illustrated in Fig. 1 comprises a frame 1 as shown. At the front of said frame 1 are arranged two vertically extending standards 2 provided with horizontally and parallelly extending cross arms 3 and 4. The upper ends of standards 2 are flattened as at 5 and the work table 6 is pivoted thereto by means of bolts 7 threaded into portions 5. One of the standards 2 carries a scale 8 and the table 6 carries an indicator finger 9 on said scale. At the outer end of each of the arms 3 and 4 is placed an upwardly extending set screw 10 adapted to contact with the bottom of table 6 so as to adjust the angularity thereof. Jam nuts 11 are provided on set screws 10 for the purpose of firmly securing the table in position. Table 6 is

provided with apertures 12 adapted to permit the passage of a file or similar tool.

Two parallelly arranged guide rods 13 are secured in frame 1 preferably by attaching their upper ends to the cross arms 14 on the lower end of the downwardly turned portion 15 of the main post of frame 1, and their lower ends to the bed plate of the machine as shown. Cross heads 16 and 17 are slidably mounted on guide rods 13 and carry file supporting arms 18 and 19 adapted to operate below and above table 6. Each of the arms 18 and 19 carries a file clamp comprising a rockingly mounted block 20 having a curved rearward surface resting upon similarly curved surfaces on said arm and held in position by means of pins 21 taking into slots 22 in said arms. The block 20 is thus rockingly mounted in one side of notches in said arms, the other side of which is provided with a single set screw 23 adapted to force a file 20' against said block. By this construction it will be observed that a file or similar tool may be readily inserted and secured in said position in said arms, owing to the fact that the block 20 will readily adjust itself to the taper of a file or similar instrument. Lower arm 18 is preferably formed in two telescoping parts secured together by means of set screw 18' which renders said arm adjustable in length. At its central portion cross head 16 is provided with a split sleeve 24 adapted to engage a rod 25 threaded into the upper cross head 17. A set screw 26 serves to draw said sleeve together to tightly clamp said cross head to said rod 25. By this construction it will be observed that the distance between arms 18 and 19 may be readily adjusted to accommodate different lengths of files or similar tools, and that the lower arms may be adjusted to operate close to table 6 for different lengths of stroke. The upper arm 19 is preferably composed of one member telescoping a split member which is rendered capable of clamping thereon by means of set screw 19' whereby the length of said arm may be adjusted. At the inner end arm 19 carries a sleeve 27 adapted to engage over an upwardly extending pin or shaft 28 carried by cross head 17. A set screw 29 serves to clamp said pin. By this construction it will be observed that the upper arm 19 may be readily swung to one side for the removal of work from

table 6 without disturbing a file or similar tool 20'.

The upper cross head 17 is provided with a horizontally disposed slot 30 in which a block 31 is mounted to reciprocate. The block 31 is adjustably secured to face plate 32 on the main drive shaft 33. The connection between block 31 and face plate 32 is preferably made through the medium of a T-shaped slot 34 in said face plate and a square headed bolt 35 adjustable in said slot. Bolt 35 carries a flanged sleeve 36 pivoted in block 31. A screw 38 is threaded into the end of bolt 35 and its head is given a bearing in the outer end of sleeve 36. By this construction it will be seen that the block 31 may be adjusted to any desired radial position on face plate 32, and that when so adjusted will cause vertical reciprocations of the cross head 17 and consequently of the file or similar tool 20'. By adjusting said block to different radial positions the extent of said reciprocation may be adjusted within the limits of slot 34.

At its rear end shaft 33 carries another face plate 39 having a T-slot 40 therein. A square headed bolt 41 is adapted to operate in slot 40 and serve to support a balance weight 42 which may be secured in any desired adjusted position by means of the nut 43 on said bolt. By this construction it will be seen that by adjusting balance weight 42 relatively to block 31 the effect of cross head 17 on shaft 33 may be balanced. The shaft 33 is provided with a cone pulley 44 and suitable clutch 45 for starting and stopping the same. Owing to the fact that the drive shaft 33 is mounted above and to one side of work table 6, filings, emery powder or other abraders falling from the work cannot deposit on the drive shaft or other working parts.

The machine as above set forth is well adapted for use in lapping since the emery powder falling from a tool does not reach the working parts.

While I have illustrated and described the preferred form of construction for carrying my invention into effect this is capable of

variation or modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the exact details of construction set forth but wish to avail myself of such variations and modifications as come within the scope of the appended claims.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a filing machine, the combination with a suitable frame of a pair of vertically disposed guide rods in said frame; a work table; cross heads slidable on said guide rods and connected together so as to operate above and below said table, the upper cross head being provided with a horizontal slot; file supporting arms mounted on said cross heads; file clamps on said arms; a drive shaft mounted in said frame above and to one side of said table; a face plate on said shaft; and a block adjustably secured to said face plate and sliding in the slot in said upper cross head, substantially as described.

2. In a filing machine, the combination with a suitable frame of a pair of vertically disposed guide rods in said frame; a work table; cross heads slidable on said guide rods and connected together so as to operate above and below said table, the upper cross head being provided with a horizontal slot; longitudinally adjustable file supporting arms mounted on said cross heads, the upper of said arms being mounted to swing horizontally on its cross head; file clamps on said arms; a drive shaft mounted in said frame above and to one side of said table; a face plate on said shaft; a block adjustably secured to said face plate and sliding in the slot in said upper cross head; and an adjustable balance weight on said drive shaft, substantially as described.

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

PHILIP BARRY.

Witnesses:

HELEN F. LILLIS,
JOSHUA R. H. POTTS.