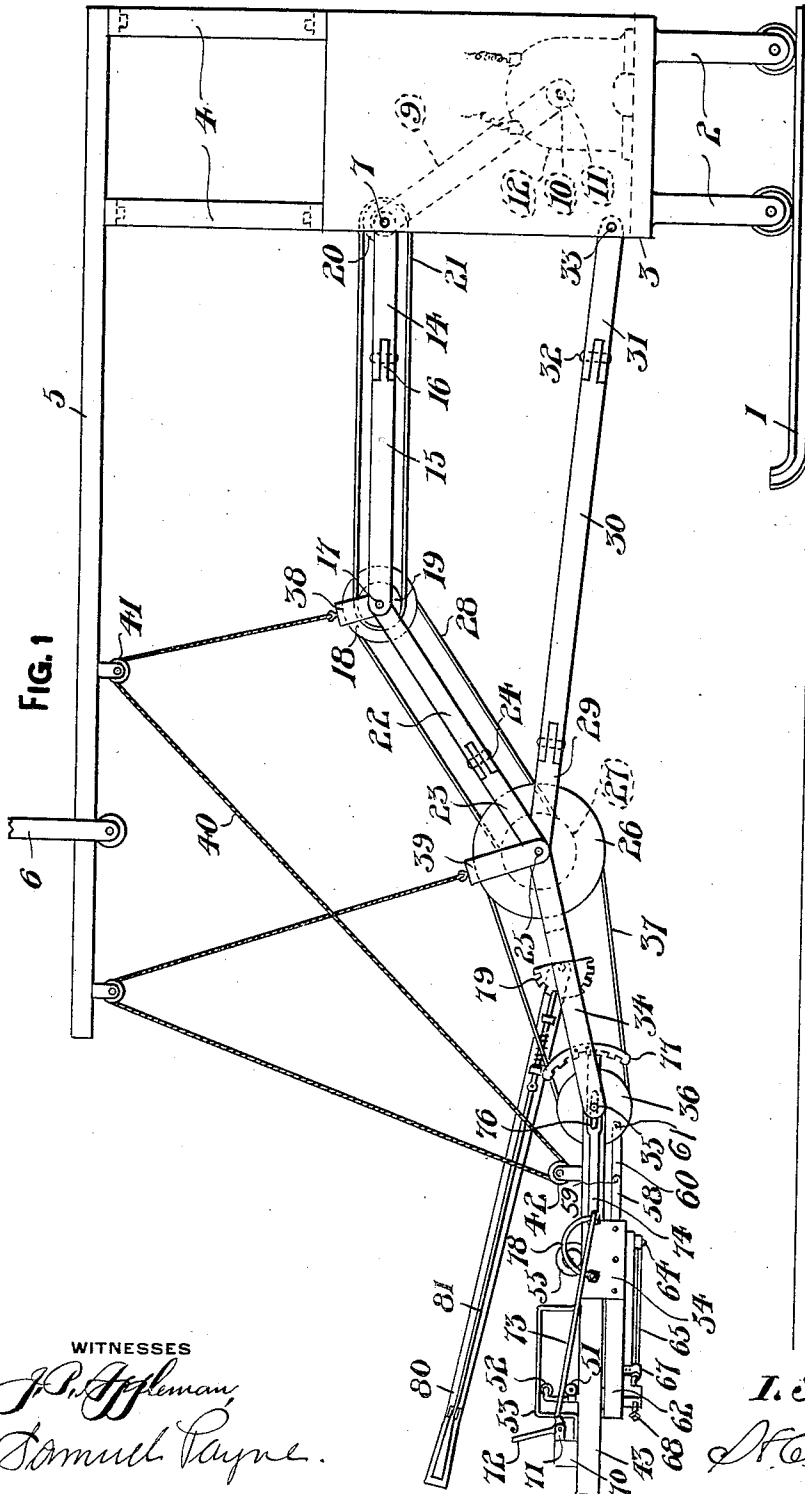


I. SEWERYN.
 FILING MACHINE.
 APPLICATION FILED JUNE 28, 1912.

1,060,951.

Patented May 6, 1913.

4 SHEETS—SHEET 1.



WITNESSES
J. P. Appleman
Samuel Payne.

INVENTOR
I. Seweryn
W. C. ...
 Att'y's

I. SEWERYN.
FILING MACHINE.

APPLICATION FILED JUNE 28, 1912.

1,060,951.

Patented May 6, 1913.

4 SHEETS—SHEET 2.

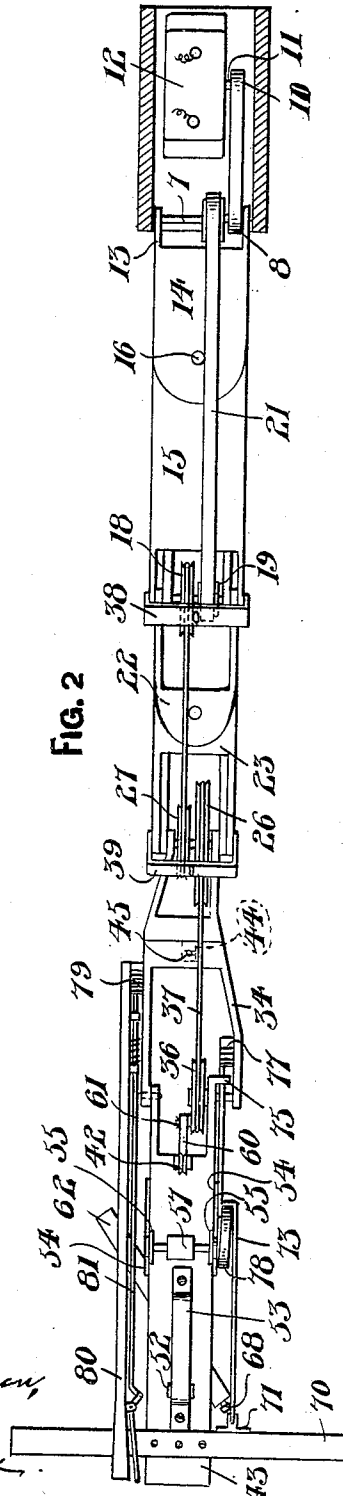


FIG. 2

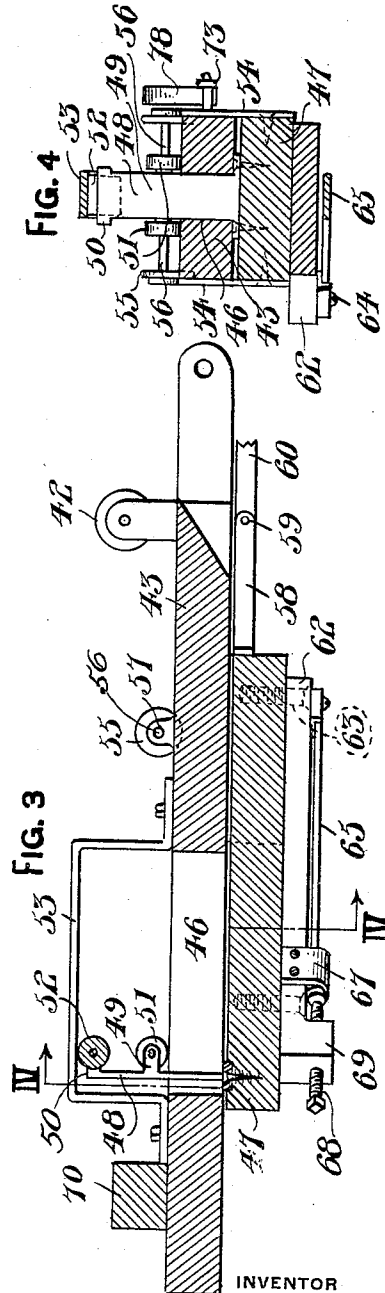


FIG. 4

FIG. 3

WITNESSES
J. C. Hefleman,
S. V. Payne.

INVENTOR
I. Seweryn
W. C. Hefleman

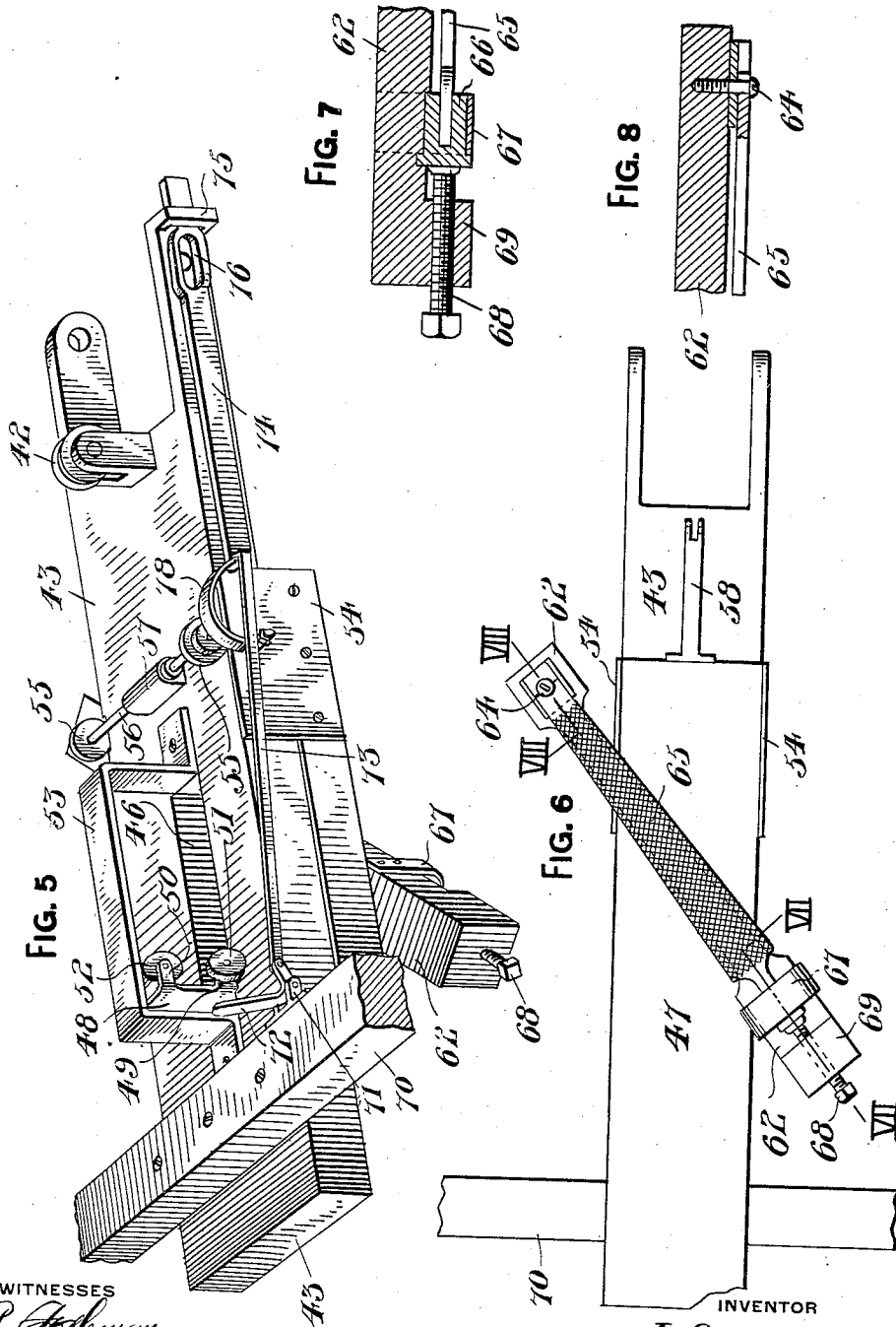
Att'y.

I. SEWERYN.
 FILING MACHINE.
 APPLICATION FILED JUNE 28, 1912.

1,060,951.

Patented May 6, 1913.

4 SHEETS—SHEET 3.



WITNESSES
P. J. H. H. H.
Samuel Payne

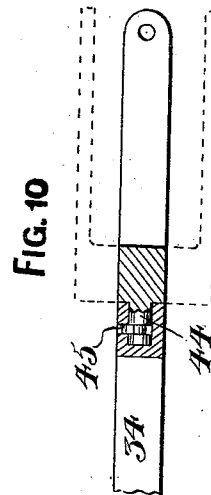
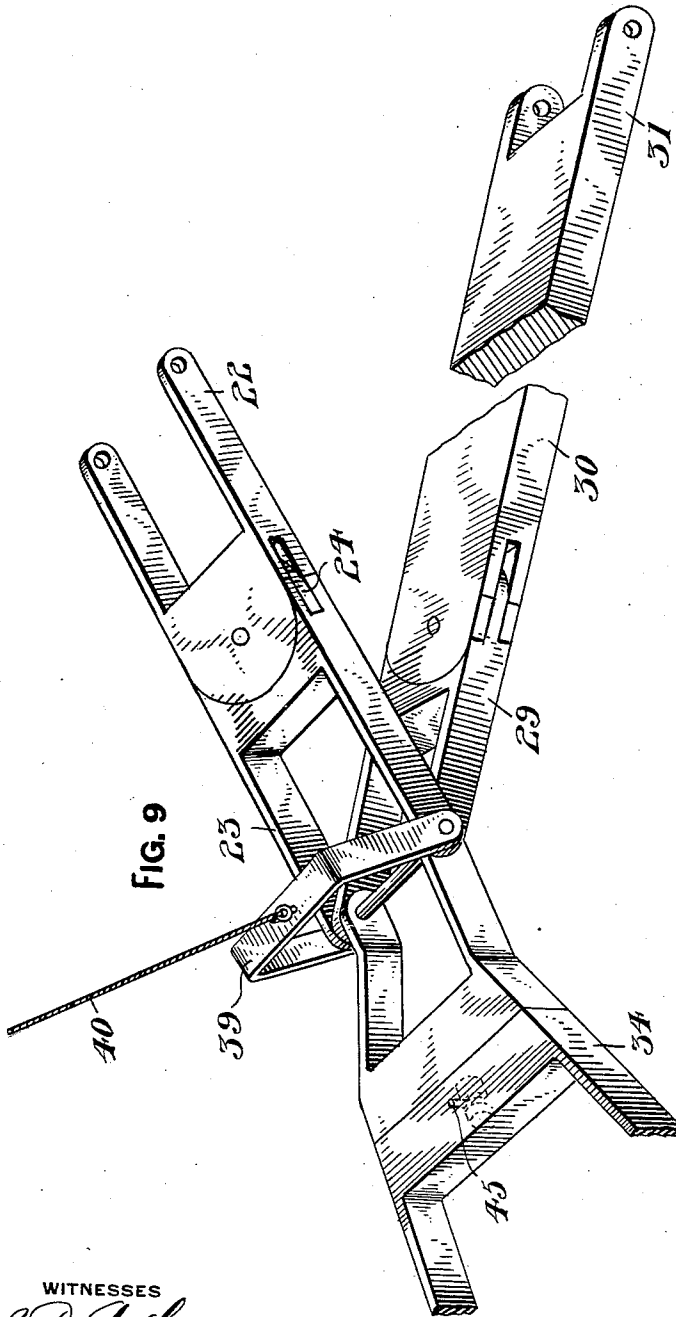
INVENTOR
I. Seweryn
W. C. E. Co.

ATTY.

I. SEWERYN.
 FILING MACHINE.
 APPLICATION FILED JUNE 28, 1912.

1,060,951.

Patented May 6, 1913.
 4 SHEETS—SHEET 4.



WITNESSES
J. P. Appleman
Samuel Payne

INVENTOR
I. Seweryn
A. C. Seweryn Co.
 Attys.

UNITED STATES PATENT OFFICE.

IGNAC SEWERYN, OF PITTSBURGH, PENNSYLVANIA.

FILING-MACHINE.

1,060,951.

Specification of Letters Patent.

Patented May 6, 1913.

Application filed June 28, 1912. Serial No. 706,385.

To all whom it may concern:

Be it known that I, IGNAC SEWERYN, a subject of the Emperor of Austria-Hungary, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Filing-Machines, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to a filing machine especially designed for removing incrustations, irregularity, protuberances, and defective surfaces from bath tubs and other molded articles.

15 The primary object of my invention is to provide a movable filing machine embodying a reciprocatory file holder that can be easily and quickly shifted, as though held in the hand, for removing defective surfaces from a molded article.

20 Another object of this invention is to provide a filing machine that has a suspended adjustable arm that can be swung whereby it can be used at various angles as is necessary when filing molded articles, as bath tubs.

25 A further object of this invention is to provide a filing machine that is durable, inexpensive to manufacture, easy to install and highly efficient for the purposes for which it is intended.

30 With the above and other objects in view, the invention resides in a novel construction, combination and arrangement of parts to be hereinafter specifically described and then claimed.

35 Reference will now be had to the drawings, wherein like numerals denote corresponding parts throughout the several views, in which:—

40 Figure 1 is a side elevation of the filing machine. Fig. 2 is a plan of the same partly in horizontal section. Fig. 3 is an enlarged longitudinal sectional view of a portion of the machine illustrating the reciprocatory file holder. Fig. 4 is a cross sectional view taken on the line IV—IV of Fig. 3. Fig. 5 is a perspective view of the outer section of the machine. Fig. 6 is a bottom plan of the same showing the reciprocatory file holder. Fig. 7 is a longitudinal sectional view of the file clamp, taken on the line VII—VII of Fig. 6. Fig. 8 is a similar view taken on the line VIII—VIII of Fig. 6. Fig. 9 is a perspective view of a portion of the machine, and Fig. 10 is a longitudinal sectional

view of a portion of the machine illustrating a swivel forming part of the outer section of the machine.

The reference numeral 1 denotes a track 60 and movable upon this track are the depending trucks 2 of a housing 3, said housing having uprights 4 provided with guide rails 5 that are movable over hangers 6 carried by a ceiling or other supports. Extending 65 forwardly from the housing 3 is an adjustable arm having inner sections, braces, inner intermediate sections, outer intermediate sections, and outer sections, all of which are connected together in a manner 70 that provides practically a flexible arm, the outer end of which supports a reciprocatory file holder that is operated from a suitable source of power located in the housing 3. Journaled in the side walls of the 75 housing 3, adjacent to the upper end thereof, is a transverse shaft 7 and mounted upon this shaft is a belt wheel 8. Passing over the belt wheel 8 is an endless belt 9 that passes under a belt wheel 10 carried 80 by the armature shaft 11 of a motor 12, located within the housing 3. Any suitable source of power can be used in lieu of this motor. Pivotally mounted upon the shaft 7 are the apertured arms 13 of the 85 inner section of the arm, said section comprising members 14 and 15 that have the confronting ends thereof pivotally connected together, as at 16. The manner of pivotally connecting the members 14 and 15 90 together is as follows:—The end of the member 15 is provided with a lateral semi-circular tongue that extends into a groove provided therefor in the member 14, said tongue being pivotally held within the 95 groove by a pin extending through the ends of said members. The outer end of the inner section supports a revoluble shaft 17 and mounted upon said shaft are grooved belt wheels 18 and 19. The belt wheel 19 100 coöperates with a similar wheel 20 mounted upon the shaft 7 in supporting an endless belt 21 longitudinally of the inner section. Loosely connected to the shaft 17 is the upper end of an inner intermediate section 105 of the arm, said section comprising members 22 and 23 pivotally connected together, as at 24 similar to the members 14 and 15 of the inner section. The lower end of the inner intermediate section supports a 110 revoluble shaft 25 and mounted upon this shaft are grooved belt wheels 26 and 27.

Passing over the wheel 27 is an endless belt 28 that passes over the belt wheel 18 of the shaft 17. Loosely connected to the shaft 25 is an angularly disposed brace, comprising members 29, 30 and 31, said members being pivotally connected together, as at 32. The inner end of the brace is pivotally mounted upon a transverse rod 33, carried by the housing 3 adjacent to the lower end thereof. The pivot connections of the brace are directly below the pivot connection of the sections thus far described. Loosely connected to the shaft 25 is an outer intermediate section 34 that has the outer end thereof provided with a revoluble shaft 35. Mounted upon the shaft 35 is a belt wheel 36 and passing over this wheel and the wheel 26 is an endless belt 37.

The shafts 17 and 25 are provided with stirrups 38 and 39 respectively and these stirrups are connected to the end of a cable 40. The cable 40 passes upwardly over revoluble sheaves 41 supported by the guide rail 5, said cable passing under a revoluble sheave 42, carried by an outer arm section 43 that is pivotally mounted upon the shaft 35. The cable 40 permits of the sections of the arm being easily raised, lowered, and shifted relatively to the guide rail 5, whereby the outer section 43 will be held at the proper inclination to operate upon a piece of work. To permit of further adjustment of the movable arm of the machine, the outer intermediate section 34 is made of two members swiveled together as best shown in Figs. 9 and 10, the swiveled connection being formed by providing one of these members with a pin 44 that extends into the other member, the pin being retained in engagement therewith by a screw 45 or other fastening means. This swivel permits of the outer end of the section 34 being rotated relatively to the inner end thereof. The outer arm section 43 is provided with a longitudinal slot 46 and movably arranged beneath said section is a reciprocatory file holder 47. Secured to the holder 47, at the outer end thereof, is an upright 48, having the upper end thereof provided with parallel apertured bearings 49 and 50. The bearings 49 support revoluble wheels 51 that travel upon the top of the outer arm section 43. The bearings 50 support a transverse revoluble roller 52 that bears against the underside of a brace 53, carried by the top of the outer arm section 43, as best shown in Fig. 3. The inner end of the file holder 47 has the sides thereof provided with plates 54 and these plates engage flanged wheels 55 mounted upon the ends of a transverse shaft 56, journaled in the bearings 57, carried by the top of the outer arm section 43. The inner end of the file holder 47 is provided with a bearing 58 and pivotally connected to said bearing, as at

59, is a pitman 60 that is loosely mounted upon a wrist pin 61 carried by the side of the belt wheel 36, said wrist pin being disposed eccentrically relatively to the shaft 35.

Secured to the underside of the holder 47 is a diagonally disposed file clamp 62 that is retained in engagement with holder 47 by screws 63 or other fastening means. Connected to one end of the clamp 62 by a screw 64 or other fastening means is the outer end of a file 65. The inner end of the file 65 extends into a socket 66 movably mounted in a strap 67, carried by the clamp 62. The socket 66 is shifted through the medium of a set screw 68 adjustably mounted in a depending bearing 69, carried by the clamp 62.

The outer end of the arm section 43 is provided with a transverse handle bar 70, and said bar, adjacent to one end thereof, is provided with a bearing 71, for a bell crank lever 72. The bell crank lever 72 is connected by a reach rod 73 to a latch bar 74 that is slidably mounted in slotted lugs 75, carried by the side of the arm section 43. The latch bar 74 is enlarged and slotted, as at 76 to provide clearance for the end of the shaft 35. The latch bar 74 is adapted to normally engage a segment rack 77, carried by the arm section 34. The latch bar 74 is retained in engagement with the segment rack 77 by a flat compression spring 78, carried by one of the side plates 54 of the file holder 47. The end of the compression spring 78 is connected to the outer end of the reach rod 73 as best shown in Fig. 5. The elements 72 to 78 inclusive are employed for locking the outer arm section 43 in an adjusted position relatively to the outer intermediate arm section 34.

The outer intermediate arm section 34 has one side thereof provided with a segment rack 79 and pivotally connected to the side of said arm section is an arm 80 having a spring pressed latch bar 81 that engages the segment rack 79 and locks the arm 80 relatively to said rack and the arm section 34. The arm 80 is employed in conjunction with the handle bar 70 in manipulating the adjustable arm of the machine, and when the arm 80 is not in use it can be elevated in order not to interfere with a piece of work.

In operation, the manipulator of the arm of the machine controls the operation of the motor 12 and when this motor is placed in operation, a reciprocatory movement is imparted to the file holder 47. The manipulator of the adjustable arm can easily move said arm relatively to a piece of work, whereby the file 67 will remove irregular surfaces from the piece of work. The file 65, when worn or when it is necessary to use a finer or coarser grade, can be easily removed and another file connected to the clamp 62. During the reciprocatory move-

ment of the holder 47, said holder is firmly supported by the outer arm section 43. The outer arm sections are counter-balanced through the medium of the cable 40 and besides raising and lowering the arm bodily, it is also possible to swing sections of the arm to the right or left as occasions may require.

It is thought that the operation and utility of the machine will be apparent without further description, and while in the drawings, there is illustrated a preferred embodiment of the invention, it is to be understood that the structural elements are susceptible to such changes, as in the shape, size and manner of assemblage, as fall within the scope of the appended claims.

What I claim is:—

1. A filing machine comprising a movable housing, a guide rail carried by the top thereof, a source of power located in said housing, an adjustable arm having the inner end thereof movably connected to said housing and the outer end thereof suspended from said guide rail, a reciprocatory file holder carried by the outer end of said arm, and means carried by said arm and actuated from the source of power within said housing to impart a reciprocatory movement to said file holder.

2. A machine of the type described comprising a movable housing, a source of power carried thereby, an adjustable arm

having the inner end thereof movably connected to said housing, a reciprocatory file holder carried by the outer end of said arm, a file clamp connected to said holder, means for counter-balancing one part of said arm relatively to another part thereof, and means arranged longitudinally of said arm, and operated from said housing for imparting a reciprocatory movement to said file holder.

3. A machine of the type described comprising a movable housing, a guide rail supported by the top thereof, a source of power within said housing, an adjustable sectional arm having the inner end thereof movably supported by said housing, a file holder movably supported by the outer end of said arm, a file clamp carried by said holder, means supported from said guide rail for counter-balancing sections of said arm, means whereby the outer end of said arm can be adjusted relatively to the remainder of said arm, and means arranged longitudinally of said arm and operated from the source of power within said housing for moving said file holder lengthwise of the outer end of said arm.

In testimony whereof I affix my signature in the presence of two witnesses.

IGNAC SEWERYN.

Witnesses:

WANDA M. KULESZA,
MAX H. SROLOVITZ.