J. RAMSAY & H. H. BROWN.

PERFORATING MACHINE.

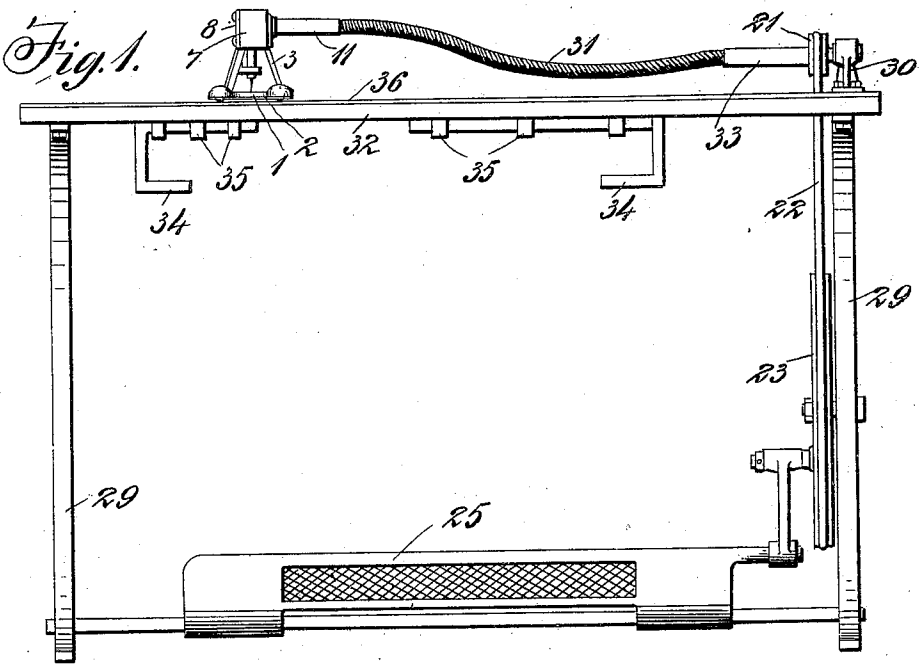
APPLICATION FILED JAN. 24, 1908.

917,146.

Patented Apr. 6, 1909.

2 SHEETS—SHEET 1.

Fig. 1.



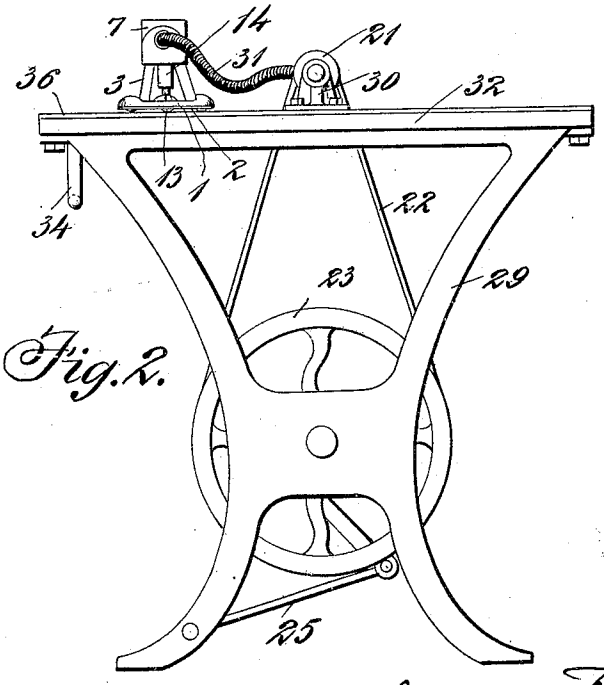


Fig. 2.

Witnesses

A. H. Sinnaster.

Geo. E. Lew

Inventors

James Ramsay

Harold H. Brown

By Miller B. Stevenson Attorneys

THE NORRIS PETERS CO., WASHINGTON, D. C.

J. RAMSAY & H. H. BROWN.

PERFORATING MACHINE.

APPLICATION FILED JAN. 24, 1908.

917,146. Patented Apr. 6, 1909.

2 SHEETS—SHEET 2.

Fig. 3.

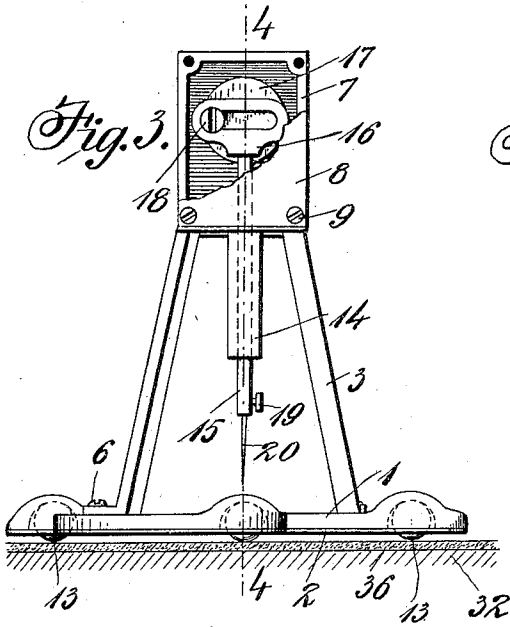
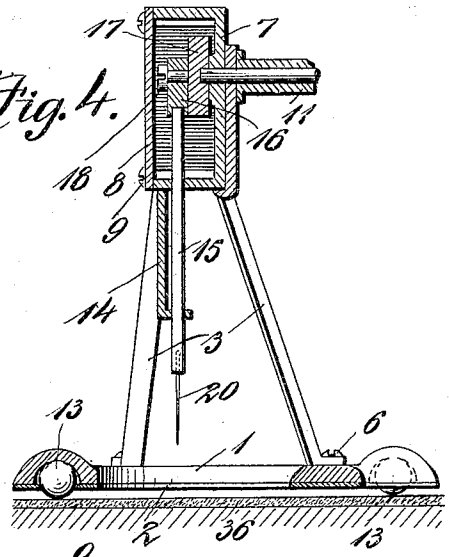


Fig. 4.



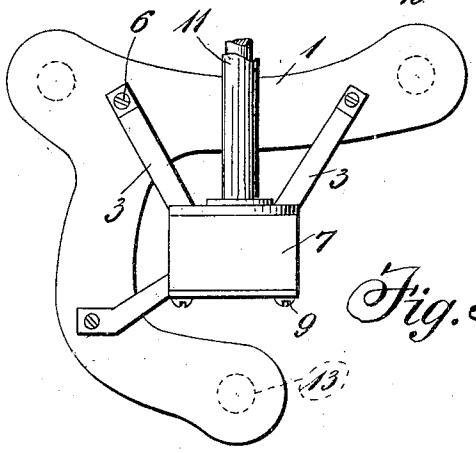


Fig. 5.

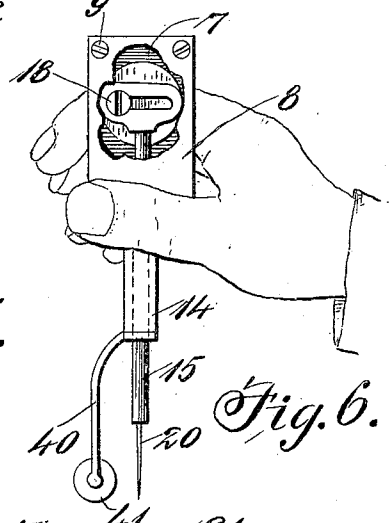
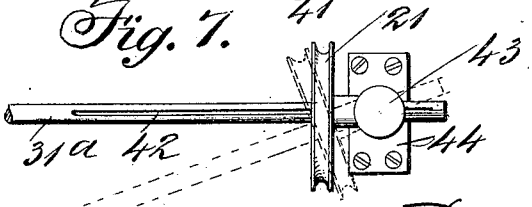


Fig. 6.

Fig. 7.



Witnesses

A. D. Smart

Geo. E. Lew.

Inventors

James Ramsay

Harold H. Brown

By Miles B. Stevenson Attorneys

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES RAMSAY AND HAROLD HAYS BROWN, OF CLEVELAND, OHIO.

PERFORATING-MACHINE.

No. 917,146. Specification of Letters Patent. Patented April 6, 1909.

Application filed January 24, 1908. Serial No. 412,481.

To all whom it may concern:

Be it known that we, JAMES RAMSAY and HAROLD HAYS BROWN, citizens of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Perforating-Machines, of which the following is a specification.

This invention is a perforating machine, particularly adapted for perforating or punching paper sheets, and especially intended for cutting out ornamental designs and borders on wall paper and the like, although it is capable of use for various other purposes.

The object of the invention is to form an improved machine which can be moved around on a table to follow the device or design being cut, the machine being mounted for this purpose upon a carriage or roller on which it will travel over the work on the bed or table.

A further object of the invention is to form an improved table or bed for use in connection with the machine.

In the drawings, Figures 1 and 2 are side and end views respectively of a table with the machine thereon. Fig. 3 is a front elevation, partly broken away, of the perforating machine. Fig. 4 is a section on the line 4—4 of Fig. 3. Fig. 5 is a top plan view of the machine. Fig. 6 is a side elevation of a modification and Fig. 7 is a plan of the modification shown in Fig. 6.

The table is provided with a top 32 mounted upon legs 29 at the ends thereof. A treadle 25 operates a wheel 23 which by a belt 22 drives a pulley 21 on a shaft 33 which is mounted in a bearing 30. On the under side of the table top are brackets 34 which slide in staples 35 and are adapted to support a roll of wall paper or the like in position to be drawn over the table top. The table top is covered by a cushion or table pad 36 stuffed with or consisting of some soft material into which the needle or punch of the perforating machine can enter, which will prevent the needle from being broken, as by contact with a hard surface.

The machine hereinafter described is mounted upon the pad or cushion on the table top and is movable over the same for the purpose intended. It is in one embodiment connected by a flexible shaft 31 to the spindle 33.

The base 1 of the machine is an irregular shaped casting having three arms or branches in the ends of each of which is a cavity which receives a ball 13 on which the machine is supported, to form roller bearings or casters. These balls are held in place by a bottom plate 2, secured to the bottom of the base.

The casing 7 which contains the driving mechanism is mounted upon the base by legs 3, forming a tripod, and which are fastened at the foot to the base by screws 6. A guide 14 depends from the casing 7, which casing is provided with a removable front plate 8 held on by screws 9.

The end of the flexible shaft 31 enters the casing at the back thereof, through a guard tube 11, and carries the disk 17 provided with a wrist pin 18 which operates in a yoke 16 at the head of a plunger 15 which slides through a guide opening in the bottom of the casing 7 and through an opening at the foot of the guide 14; and the needle 20 is fixed in the lower end of the plunger 15, as by a set screw 19.

In operating the machine the shaft is driven and the supporting frame is mounted upon the paper to be perforated which is laid upon or drawn over the table top. The reciprocation of the needle perforates the paper accordingly, and as the machine is moved around it will describe or cut a line of perforations, and in view of the manner in which it is mounted it may be very easily moved over the surface of the paper being perforated.

In the modification shown in Figs. 6 and 7 the casing 7, instead of being mounted upon a base as described, is adapted to be held in the hand, as illustrated, and so moved over the surface of the paper to be perforated, the lower end of the guide 14 having a leg 40 depending therefrom at the foot of which is a roller 41 which moves over the surface of the paper adjacent to the needle and which assists in supporting and directing the movement of the instrument. Instead of the flexible shaft above described, the wrist pin and disk may be mounted upon a rigid shaft 31^a, with the pulley 21 thereon, said shaft being grooved as at 42 to receive a feather on the pulley, the groove being long, so that the shaft may be moved lengthwise in its bearing in the supporting standard 43 pivotally mounted upon a base 44 which will be attached to the table top, and allowing the shaft to be swung laterally, as indicated in

dotted lines. This construction will allow the needle to be moved around to follow the lines of a design, with the same effect as with a flexible shaft.

The machine is capable of various other modifications within the scope of the invention, and it is not limited to the exact forms shown. The machine has the advantage that the supporting legs and base are spaced from the needle so that an unobstructed view thereof can be had, and both hands can be used to manipulate the carriage to cause the needle to follow the desired lines. As before stated, the cushion on top of the table allows the needle to perforate the plate without breaking the needle, and nevertheless said cushion being covered with fabric or the like does not prevent the necessary movement of the carriage.

We claim:

The combination of a carriage consisting of projecting branches forming an open three-sided base adapted to partly surround the surface being operated on, spaced supporting legs standing thereon, and converging toward the top so that the carriage will be self-supporting, a casing mounted at the top of the legs and having a depending guide, a plunger movable up and down in the guide and adapted to carry a punch or the like, and means connected to the plunger within the casing to operate the same.

In testimony whereof we affix our signatures, in presence of two witnesses.

JAMES RAMSAY.
HAROLD HAYS BROWN.

Witnesses:
JOHN A. BOMMHARDT,
MONROE E. MILLER.