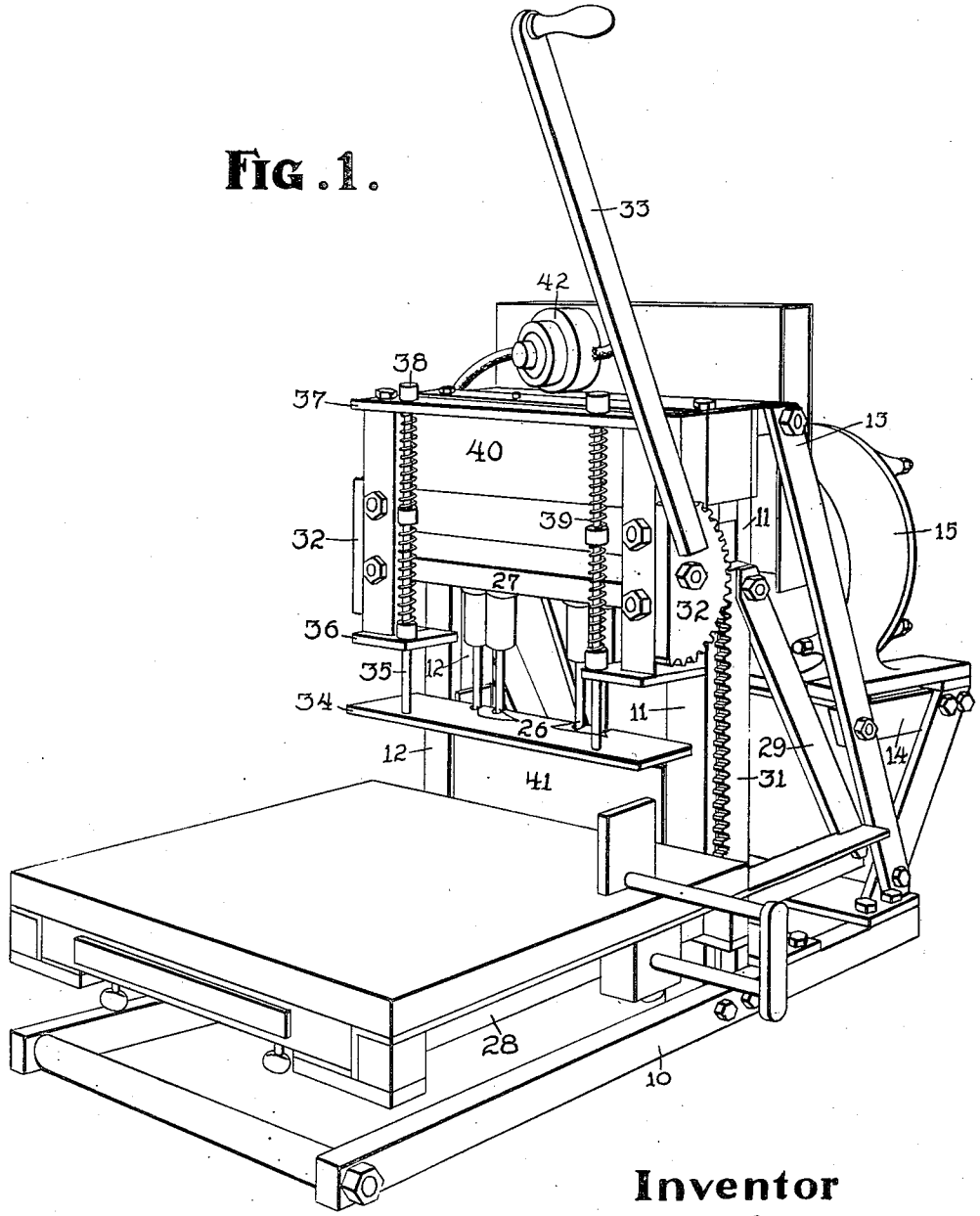
Aug. 5, 1924. 1,503,761

C. F. McBEE

PUNCHING MACHINE

Filed Feb. 2, 1921 4 Sheets-Sheet 1

FIG. 1.



Witnesses

Geo. L. Lawrence

Arthur C. Wright.

Inventor

Charles F. McBee

By Dodson & Coe.

Attorneys.

Aug. 5, 1924. 1,503,761

C. F. McBEE

PUNCHING MACHINE

Filed Feb. 2, 1921 4 Sheets-Sheet 2

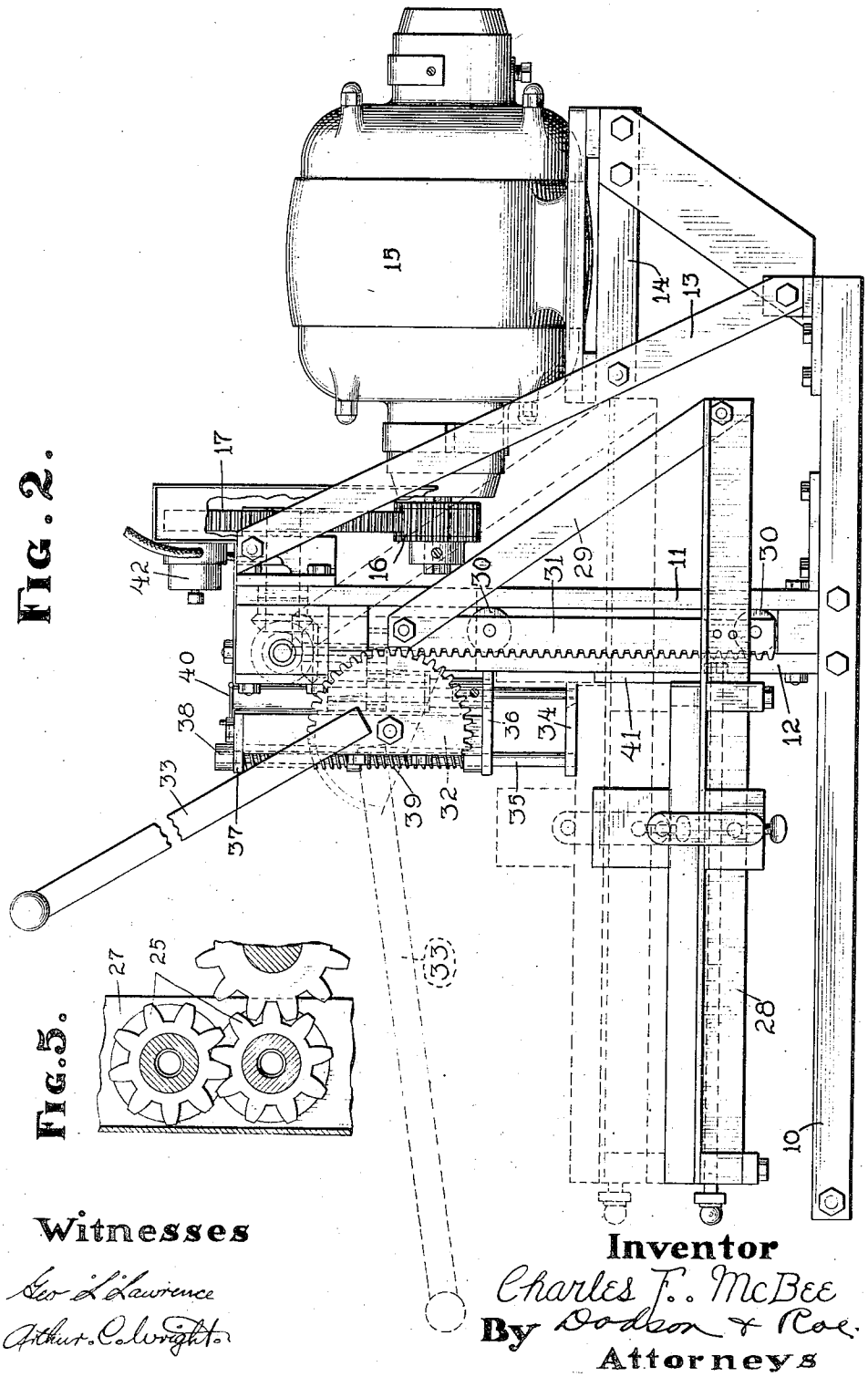


FIG. 2.

FIG. 5.

Witnesses

Geo. L. Lawrence

Arthur C. Wright

Inventor

Charles F. McBee

By Dodson & Coe.

Attorneys

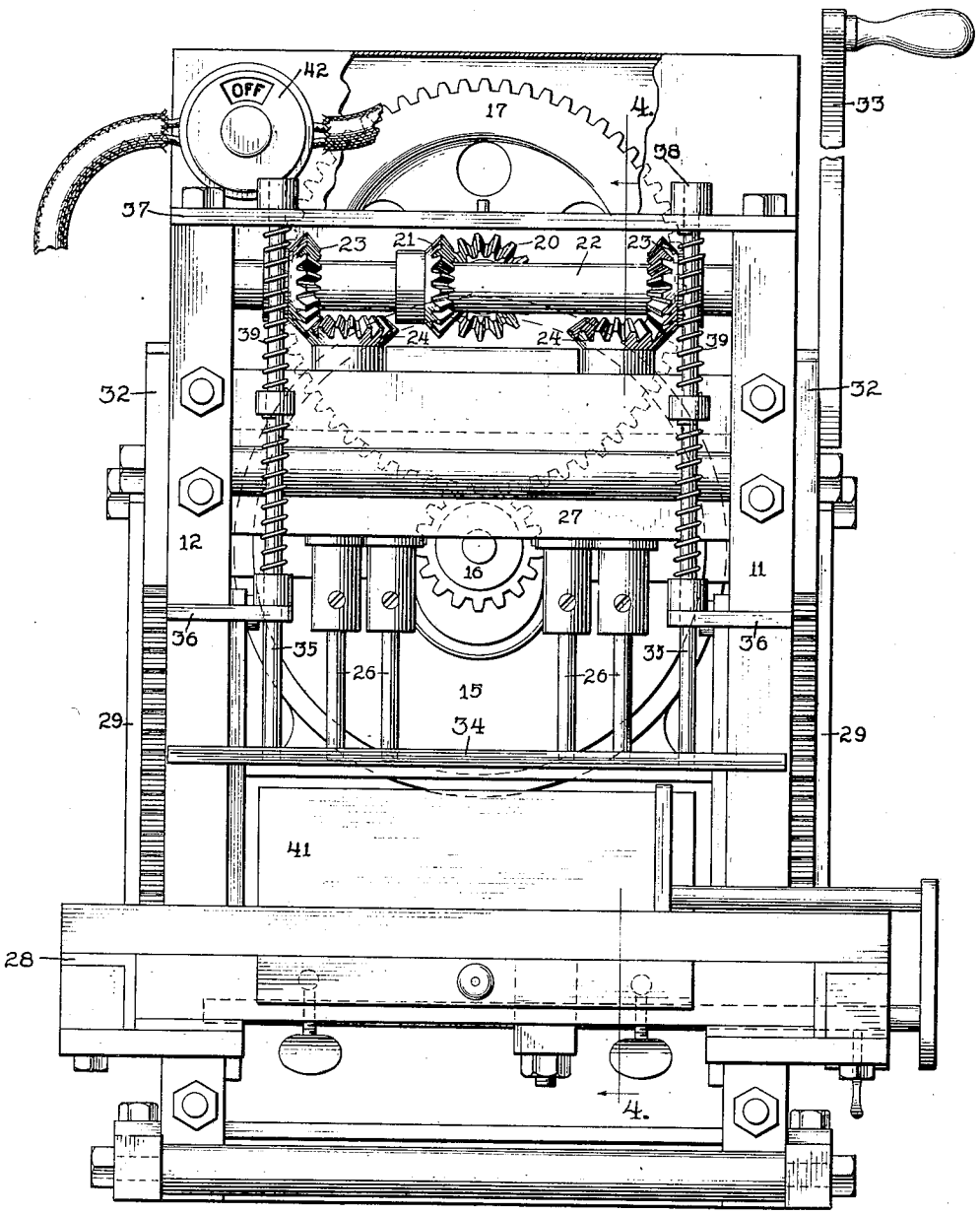
Aug. 5, 1924. 1,503,761

C. F. McBEE

PUNCHING MACHINE

Filed Feb. 8, 1921 4 Sheets-Sheet 3

FIG. 3.



Witnesses

Geo. L. Lawrence

Arthur C. Wright.

Inventor

Charles F. McBee.

By Dodeck & Roe.

Attorneys

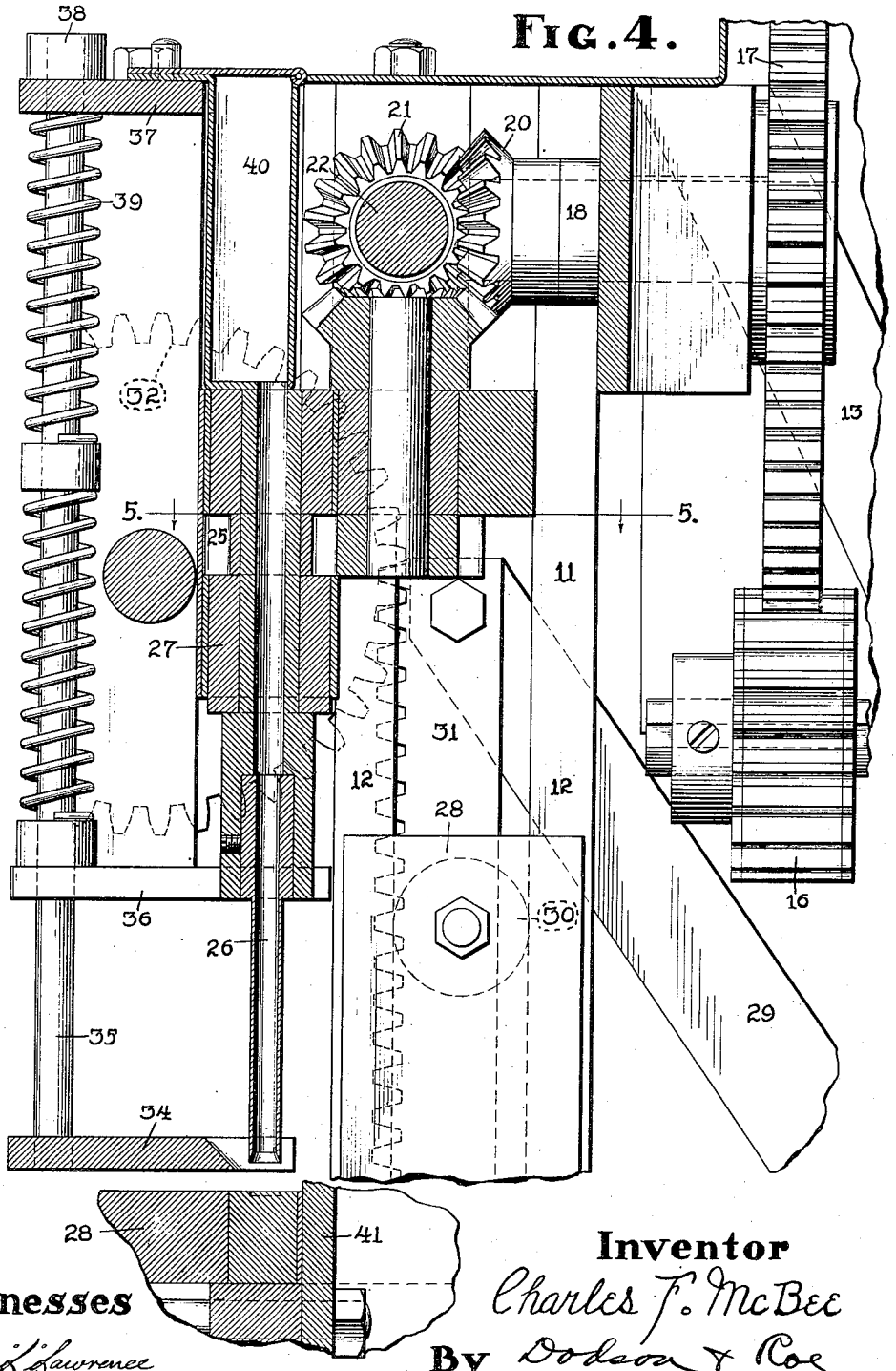
Aug. 5, 1924. 1,503,761

C. F. McBEE

PUNCHING MACHINE

Filed Feb. 2, 1921 4 Sheets-Sheet 4

FIG. 4.



Witnesses

Geo. L. Lawrence

Arthur C. Wright.

Inventor

Charles F. McBee

By Dodson & Coe

Attorneys

Patented Aug. 5, 1924. 1,503,761

UNITED STATES PATENT OFFICE.

CHARLES F. McBEE, OF ATHENS, OHIO, ASSIGNOR TO THE McBEE BINDER CO., A CORPORATION OF OHIO.

PUNCHING MACHINE.

Application filed February 2, 1921. Serial No. 441,804.

To all whom it may concern:

Be it known that I, CHARLES F. McBEE, a citizen of the United States, residing at Athens, in the county of Athens and State of Ohio, have invented certain new and useful Improvements in Punching Machines, of which the following is the specification.

This invention relates to machines adapted to perforate material to be bound in volumes, or filed in loose leaf holders, and has for its object to provide such a machine in a simple, durable and efficient, as well as relatively inexpensive construction.

My invention consists of certain details of construction hereinafter set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which:

Fig. 1 shows a perspective view of my machine.

Fig. 2 shows a side elevation view of the same.

Fig. 3 shows a front elevation view of the same.

Fig. 4 shows an enlarged sectional view taken on the line 4—4 in Fig. 3.

Fig. 5 shows a detail view, partially in section, taken on the line 5—5 in Fig. 4.

Referring to the accompanying drawings, the reference numeral 10 is used to indicate the base of my machine, provided on each side with a pair of parallel spaced uprights 11—11 and 12—12 respectively, which are securely held in position and braced as shown at 13. A platform 14 is provided at the outer part of the machine to support a motor 15, the pinion 16 of which is designed to mesh with a gear wheel 17 mounted for rotation on a shaft 18 journaled in the upper part of my frame, said shaft having at its inner end a beveled pinion 20 designed to mesh with, and drive, a beveled gear pinion 21 secured on a cross shaft 22, journaled in the sides of my machine, said shaft also carrying beveled gear wheels 23 adapted to mesh with and drive pinions 24 which, in turn, mesh with a chain of gears 25, each gear on the chain being mounted to the head of a rotatable punch 26, all of which are rotatably mounted in a stationary cross bar 27.

The numeral 28 indicates a base to receive the papers and covers to be perforated, and projects inwardly from the uprights 11—11 and 12—12. This base has a frame 29 extending outwardly beyond the uprights, which frame is secured to rollers 30 mounted for vertical movement between the uprights 11—11 and 12—12 respectively, and to this carrying frame 29, I have secured a rack 31 designed to mesh with, and be elevated or lowered by, a gear 32, provided with a lever handle 33, as shown, which is secured to the frame of my machine.

The ends of the drills, or punches 26, are protected by an orificed plate 34, which projects inwardly therefrom, its outer end being provided with upwardly projecting rods 35 passing through a second plate 36 (or arms), their upper ends being slidably mounted in a cross bar 37, on which are channeled caps 38, one to receive each of said rods, 35, and said rods are held in downward position by compression of the coil springs 39. The caps 38 are channeled to permit the rods 35 to project upwardly therethrough.

The drills 26 are hollow and a registering channel for each drill, extending upwardly therefrom, all of said channels being covered by a box 40, provided with orifices to register with the channels, said box being so mounted and secured, as to be removable.

In practical operation the papers to be perforated are placed on the base 28 and evened in any of the ordinary ways. A plate 41 determines the outward position of the papers which, obviously brings them in proper position below the punches. The switch 42 (the connection having first been made with an electric light socket in the room) is then turned on and the drills are rapidly rotated. The operator then presses downwardly on the lever handle 33, rotating the gear 32 and raising the rack 31 which carries upwardly the base 28 on which the papers to be perforated are secured.

As the papers contact with the plate 34, it is forced upwardly and the drills are forced through the papers. As the drills are hollow the punchings remain in the drills and as they accumulate are forced upwardly into the box 40, which can be removed and emptied as desired.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States is:

1. A punching machine comprising punches and means for rotating same; a yielding plate with orifices therein designed as a guard for the punch ends; a movable base receptacle to receive and retain in position the material to be punched; means to force the receptacle toward the punches and thereby forcing the yielding plate away from the punches and the punches through the material; automatic means to restore the yielding plate to its normal position when the receptacle is moved away from the punches.

2. A punching machine comprising a plurality of hollow punches and means for rotating same; a yielding plate with orifices therein designed as a guard for the punch ends; a movable base receptacle to receive and retain in position the material to be punched; means to force the receptacle toward the punches and thereby forcing the yielding plate away from the punches and the punches through the material; automatic means to restore the yielding plate to its normal position when the receptacle is moved away from the punches; channels registering with and extending from the hollow punches, and a box provided with perforations, to receive the punchings, substantially as shown and described.

CHARLES F. McBEE.