

No. 649,173.

Patented May 8, 1900.

H. MUELLER.
TAPPING MACHINE.

(Application filed Nov. 3, 1899.)

(No Model.)

Fig. 1.

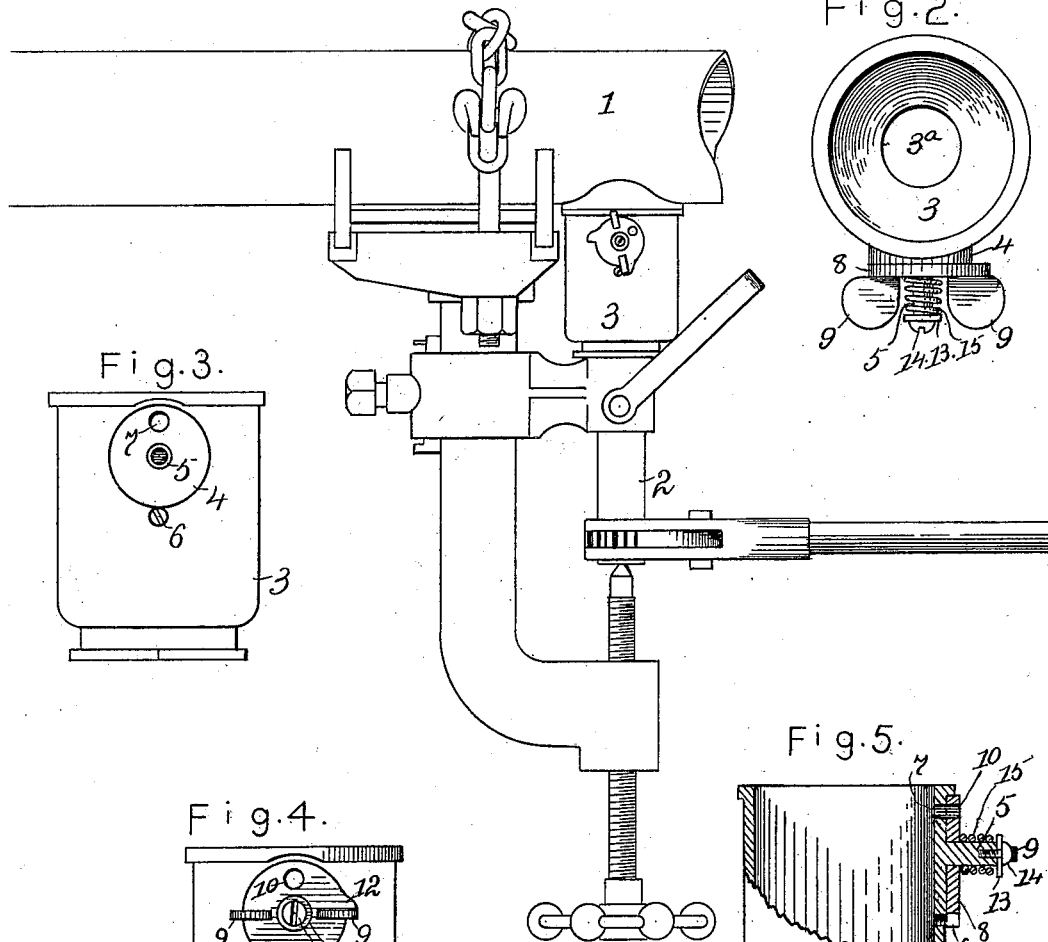


Fig. 2.

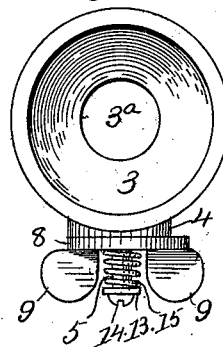


Fig. 3.

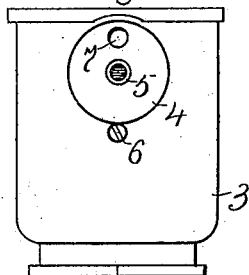


Fig. 4.

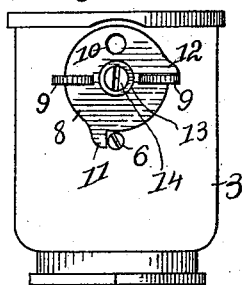
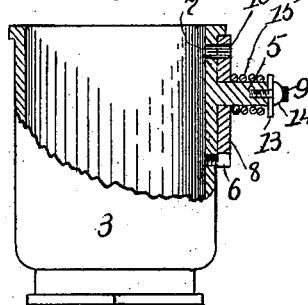


Fig. 5.



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UNITED STATES PATENT OFFICE.

HENRY MUELLER, OF DECATUR, ILLINOIS.

TAPPING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 649,173, dated May 8, 1900.

Application filed November 3, 1899. Serial No. 735,658. (No model.)

To all whom it may concern:

Be it known that I, HENRY MUELLER, of the city of Decatur, county of Macon, and State of Illinois, have invented certain new and useful
5 Improvements in Tapping-Machines, of which the following is a specification.

This invention relates to machines used for tapping gas-pipes without permitting material escape of gas—such, for instance, as that
10 described by me in Letters Patent of the United States No. 611,387, issued September 27, 1898; and its object is to provide for oiling the tapping-tool while the same is in operation in the gas-confining cap of the machine.
15

The invention is exemplified in the structure hereinafter described, and it is defined in the appended claims.

In the drawings forming part of this specification, Figure 1 is a representation of a complete tapping-machine, the gas-confining cap of which is constructed in accordance with my invention. Fig. 2 is an end view of a gas-confining cap provided with a closure for an
25 oil-admitting opening therein. Fig. 3 is a side elevation of a cap formed with an opening for the admission of oil and adapted to receive an oil-opening closure. Fig. 4 is a side elevation of a gas-confining cap provided
30 with an oil-opening and a closure therefor, the closure being shown in an opened position. Fig. 5 is a section through the gas-confining cap and the closure for the oil-opening thereof.

35 The gas-confining cap 3 is adapted to fit against a gasket bearing against the pipe 1 to be drilled and tapped, and it has an opening to receive the stem 2 of the tapping and drilling tool. When the pipe is drilled through,
40 gas may escape into the cap 3, but no farther.

The operations of drilling and tapping are facilitated by applying a lubricant to the tool, and this invention provides means for supplying the lubricant through the gas-confining cap without permitting an appreciable
45 quantity of gas to escape. To effect this result, a flat surface 4 is formed on a side of the cap, a pin 5 is made to project from the center of the flat surface, a stud 6 is made to
50 extend outward from an edge of the flat surface, and a hole 7 is extended through the shell of the cap inside the flat surface. This

gives the cap an oil-admitting opening and provides for the attachment of a closure therefor. The closure consists of a disk 8, provided with wings 9, bored centrally to fit over
55 pin 5, bored at 10 to coincide with the hole 7 of the cap when the disk is properly turned, and provided with peripheral extensions 11 and 12, which are adapted to strike against
60 stud 6 and limit the rotation of the disk on pin 5. A spiral spring 15 fits over pin 5 and bears against the disk, and a washer 13 is held firmly against the end of pin 5 and against
65 spring 15 by means of a set-screw 14, set into the end of the pin. The spring presses the disk closely against the flat surface of the cap, so as to make a gas-tight joint, and the set-screw holds the washer against the pin with
70 sufficient firmness to prevent the screw from turning with the disk and relieving the tension of the spring. The disk stands ordinarily in the position shown in Fig. 1, with lug
75 12 resting against the stud 6 and the hole 10 out of alinement with hole 7; but when it is desired to oil the tapping and drilling tool operating inside the cap the disk is turned by means of the wings thereon until the lug
80 11 strikes the stud and brings the holes 10 and 7 into coincidence. The nozzle of an oil-can is then inserted through the openings into the cap, thus closing the opening by means of the nozzle, oil is supplied to the tool, the nozzle is withdrawn, and the disk is
85 turned until the lug 12 comes in contact with the stud 6.

The location of the stud is a matter of convenience, and the disposal of the lugs is something that may be varied. In this case the disk is given about one-fourth of a complete
90 rotation in swinging from an open to a closed position; but this may be more or less without departing from the principle of my invention. The two holes must coincide to admit the nozzle of the oil-can, and they must be
95 entirely out of alinement to form a complete closure. The opening and closing movements must be precise and rapid to produce best results, and the lugs and the stud aid materially in producing this result.

I claim—

1. A fluid-confining cap for the tool of a tapping and drilling machine having a flat surface through which extends a lubricant-ad-

mitting hole, a disk pivoted to swing on the flat surface of the cap and having a hole adapted to coincide with the opening through the cap and a spring to press the disk against the cap.

5 2. A fluid-confining cap for the tool of a tapping and drilling machine having a flat surface through which extends a lubricant-admitting hole, a disk pivoted to swing on the flat surface of the cap and having a hole adapted to coincide with the opening through the cap, a stud on the cap and lugs on the disk to engage the stud and limit the rotation of the disk.

15 3. A fluid-confining cap for the tool of a tapping and drilling machine having a flat sur-

face provided with a centrally-projecting pin and a lubricant-admitting hole, a winged disk mounted on the pin, such disk having peripheral lugs and a hole adapted to coincide with the opening through the cap, a spring on the pin bearing against the disk, a washer held against the end of the pin to compress the spring against the disk and a stud to engage the lugs of the disk.

In testimony whereof I sign my name in the presence of two witnesses.

HENRY MUELLER.

Witnesses:

OSCAR MUELLER,
ERNEST SKELLEY.