

(No Model.)

A. M. BURRITT.

TAP WITH DETACHABLE CUTTERS.

No. 385,543.

Patented July 3, 1888.

Fig 1

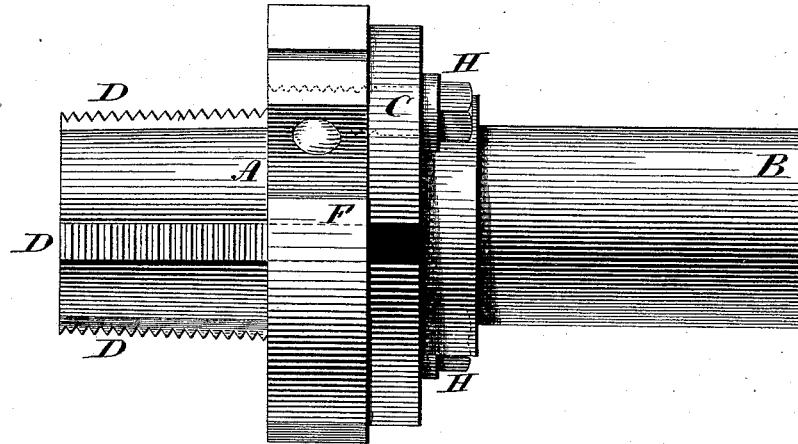


Fig 2

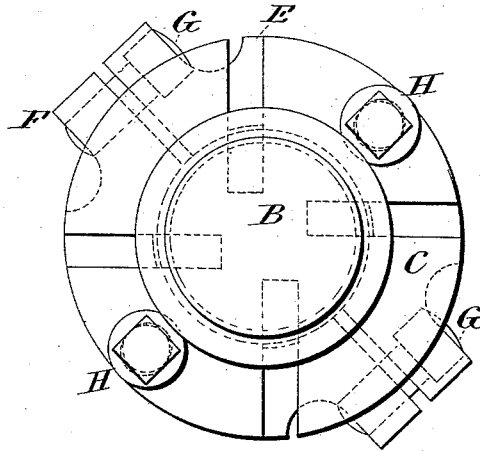
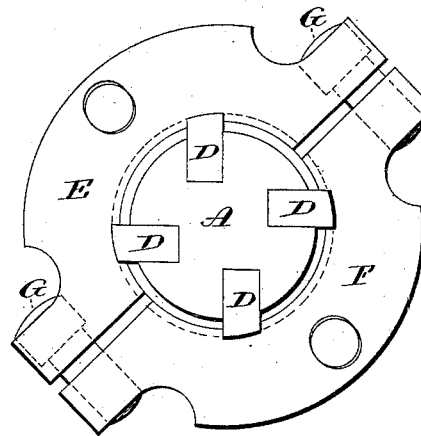


Fig 3



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TAP WITH DETACHABLE CUTTERS.

SPECIFICATION forming part of Letters Patent No. 385,543, dated July 3, 1888.

Application filed April 16, 1888. Serial No. 270,845. (No model.)

To all whom it may concern:

Be it known that I, ALBERT M. BURRITT, of Waterbury, in the county of New Haven and State of Connecticut, have invented a new Improvement in Taps for Steam, Gas, and Water Fittings; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view of the tap complete; Fig. 2, a rear view of the same; Fig. 3, a front view of the same.

This invention relates to an improvement in the construction of taps for cutting the female thread in steam, gas, water, and like fittings. These taps are usually employed in a machine adapted to hold the article to be tapped, the tap itself arranged in a revolving mandrel.

The particular class of taps to which this invention specially relates consists of a cylindrical body provided with a shank adapted to be set into the mandrel, the body constructed with longitudinal grooves upon its surface, into which bars are set, the said bars projecting beyond the surface of the body, and the projecting edges of the bars serrated to form cutters corresponding in pitch to the thread required. The bars are held in their proper relation to each other by means of a ring which surrounds the body, the interior of the ring being screw-threaded corresponding to the projecting edges of the ribs, and so that the said ring will engage the respective ribs and hold them in their proper relation to each other. This ring has been divided in a plane parallel with its axis, so as to be readily set onto the body over the ribs, and the ring held in place by means of a groove or its equivalent around the body, the two parts of the ring secured together, the groove serving as the means for locating the ring upon the body.

In practice there is liable to be play between the ring and the groove in which it is arranged, and this play, however slight, interferes materially with the proper cutting by the ribs. For perfect work it is essential that the ribs

shall be so firmly held as to prevent the slightest play.

The object of my invention is to construct a tap so that the ribs may be held substantially as firm as if an integral part of the body; and it consists in constructing the body with an annular flange and with longitudinal grooves on the body forward of the flange, to receive the cutting-ribs, combined with a divided ring, screw-threaded upon its inside, corresponding to the cutting-edges of the respective ribs, and bolts through said flange into said ring, whereby the ring may be drawn hard and firm against said flange, as more fully hereinafter described.

A represents the head or body of the tap, formed as a part of a shank, B, the shank being adapted for attachment to the mandrel of the machine in the usual manner. On the body an annular collar, C, is rigidly fixed, or, better, made as an integral part of the body. This collar stands at a distance from the outer end of the head and forms substantially the junction between the shank and body. The body is constructed with several longitudinal grooves in the usual manner, the grooves preferably extending through the collar, as shown. Into the grooves the cutting-bars D are set, also in the usual manner, the edge of the bars projecting radially beyond the surface of the body, and the edges serrated to produce cutting-teeth corresponding to the screw thread required.

The holding ring is made in two parts, EF, each part constructed with ears, through which screws G are introduced to hold the two parts together, as usual in this class of taps. The interior of the ring is screw-threaded, corresponding to the projecting edges of the several ribs, and so that when placed around the body and its internal threads are forced into the edges of the bars they will bring the several bars into their proper relation to each other, so that the said several bars may act as successive cutters. The ring rests against the face of the collar C. To secure the ring to the head, bolts H are introduced through the collar into the respective parts of the ring, and so as to draw the ring and hold it hard and firm against the face of the collar C. The

holes through the collar may be elongated radially, as represented in broken lines, Fig. 2, so as to permit a limited amount of play to the parts of the ring for convenience of adjustment.

5 The cutting-bars are placed in their respective grooves, then the parts of the rings set thereon and secured together, then the bolts applied to draw the ring hard and firm against the collar C. As the edges of the bar fit the threads in the ring, it necessarily follows that by bringing the ring hard and firm against the collar, as I have described, the bars are not only located in their proper relation to each other, but are so firmly held in place as to prevent accidental disadjustment—in fact, become as firm as if an integral part of the head.

I claim—

The combination of the head A, constructed with longitudinal grooves in its surface and with the stationary annular collar C, the threaded cutter-bars D, arranged in said longitudinal grooves, the divided ring E F, threaded upon its inner surface corresponding to the thread of the said cutter-bars, the two parts of the ring secured together, and with bolts through said collar and the parts of said ring, substantially as described, and whereby the said ring is firmly held against said collar.

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Witnesses:

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