W. L. MASON.

LATHE DOG.

APPLICATION FILED APR. 10, 1919.

1,380,822. Patented June 7, 1921.

Fig. 1.

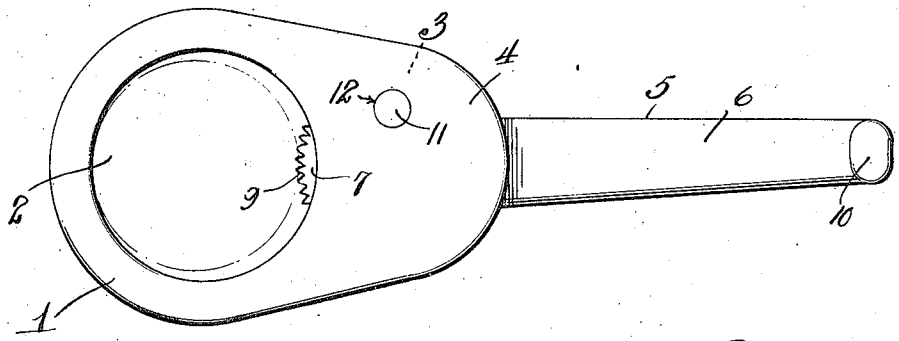


Fig. 2.

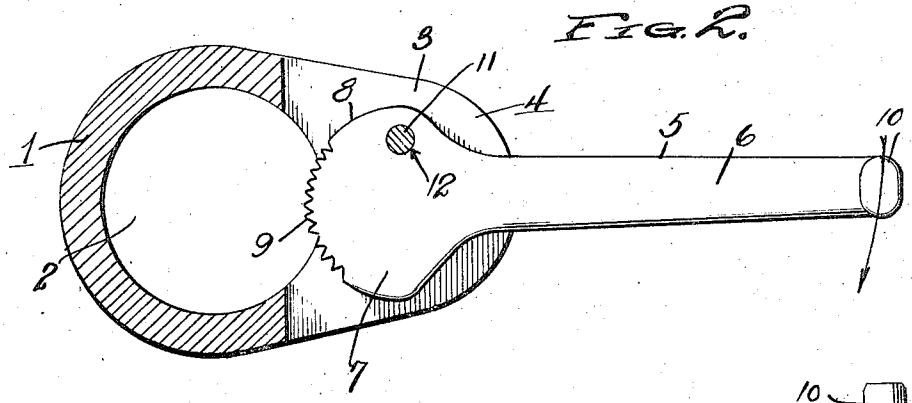
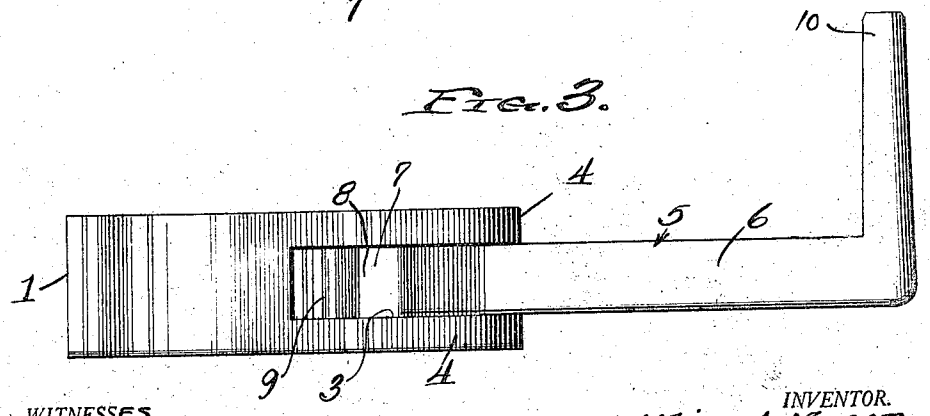


Fig. 3.



WITNESSES

G. E. Walling

Wm. H. Milligan

INVENTOR.

William L. Mason

BY

Richard Beaven.

ATTORNEY.

UNITED STATES PATENT OFFICE.

WILLIAM L. MASON, OF HOLYOKE, MASSACHUSETTS.

LATHE-DOG.

1,380,822. Specification of Letters Patent. Patented June 7, 1921.

Application filed April 10, 1919. Serial No. 288,913.

To all whom it may concern:

Be it known that I, WILLIAM L. MASON, a citizen of the United States, residing at Holyoke, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Lathe-Dogs, of which the following is a specification.

This invention relates to lathe-dogs and the primary object is to improve the general construction of devices of this character so that an effective grip may be obtained while the device is in use without resorting to springs, adjusting screws, clamp elements or similar devices which rapidly wear and become defective.

The invention further aims to provide a lathe-dog which will be simple in construction and consists of only two movable parts arranged to coöperate for effecting a firm grip on the work so that the pull exerted by the lathe mechanism will not only revolve the work but will also cause the same to be tightly held in position until such time as the lathe is stopped.

Another object of the invention is to provide a lathe-dog of this character which will be practically automatic in its releasing action when the lathe is stopped.

The invention further aims to provide a device of this character which can be quickly mounted in position and applied thereby saving considerable time and thus improving the general efficiency and speed of the workman using the device.

A further object of this invention is the production of a device of this character which consists of comparatively few parts and is simple in construction but durable and well adapted to withstand the rough usage to which devices of this character are ordinarily subjected.

For a full description of the invention and the advantages and merits thereof, reference is to be had to the following description and accompanying drawings, in which:—

Figure 1 is a side elevation of the dog constructed in accordance with my invention.

Fig 2 is a longitudinal section through the same.

Fig. 3 is an edge elevation.

Referring to the drawings, wherein is illustrated the preferred form of my invention, wherein like numerals of reference indicate like or corresponding parts throughout the several views, the head has one end substantially circular and provided with a circular opening 2 through which the work may be passed as indicated by broken lines in Fig. 1. The opposite end of the head 1 is extended and this extended portion is bifurcated by providing the slot 3 which extends from the end of the head inwardly to intersect the opening 2 thereby providing the laterally spaced ears 4. A gripping member 5 is provided for coöperation with the head 1 and consists of the shank 6 having an eccentric disk or plate 7 formed at one end. This eccentric disk 7 has a curved marginal edge 8 provided throughout a portion of its length with the gripping teeth 9. The opposite end of the shank 6 carries a right angularly projecting finger 10, this finger being similar to the finger usually employed on lathe-dogs for engaging the driving plates to receive the force exerted for turning the work. The arrow in Fig. 2 indicates the direction of pull exerted by the lathe when the device is in use.

The disk 7 is disposed between the ears 4 and is pivotally mounted on the pivot pin 11 which has its ends fixed in the ears 4. This pivot pin is set at one side of the longitudinal center line of the head 1, so that it is disposed at one side of the center of the ear 4. The disk 7 is eccentrically mounted as shown on the pin 11, the opening 12 for the pin being disposed at one side of the center of point from which the curved edge 8 is struck.

It will be obvious that when a pull is exerted on the finger 10 to move the same in the direction indicated by the arrow in Fig. 2 the eccentric plate 7 will swing on the pivot pin 11 and the teeth 9 will be swung into the space formed by the opening 2 so that a firm grip is obtained on the work received in the opening. The head being bifurcated to provide the ears 4 between which the eccentric disk is mounted, prevents lateral loosening or play of the disk and consequently desired rigidity is obtained and the parts are firmly held in applied position without the use of springs or set screws. As soon as pressure or pull on the finger 10 ceases, the shank 6 may be easily swung so that the teeth may be readily disengaged from the work and, in fact, the teeth will loosen their grip immediately upon stopping of the lathe. The loosening of the locking member, therefore, is substantially

automatic and the gripping action of the locking member is automatic in so far as it engages the work with greater pressure and the speed of the lathe increases.

The foregoing description and accompanying drawing have reference to what might be considered to be the approved or preferred form of my invention. I desire it to be understood that I may make such changes in the construction, combination and arrangement of parts, materials, dimensions, et cetera, as may prove expedient and fall within the scope of the appended claim.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent, is:—

In a lathe-dog, an annular head provided with a slotted elongated side, a lever pivotally mounted within said slot and provided with an angularly projecting finger, said lever provided with a circular face struck from the middle of said lever, the pivotal mount for said lever being positioned to the side of said middle on said lever and distant from the inner part of said annulus, so that when said middle is radial to the center of said annulus said annulus will receive a member to be clamped of almost the size of its inner diameter.

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

WILLIAM L. MASON.

Witnesses:

CECELIA A. FREEMAN,

RUSSELL L. DAVENPORT.