P. H. CHILDRESS.
Millstone-Driver.

No. 210,498. Patented Dec. 3, 1878.

FIG. 1.

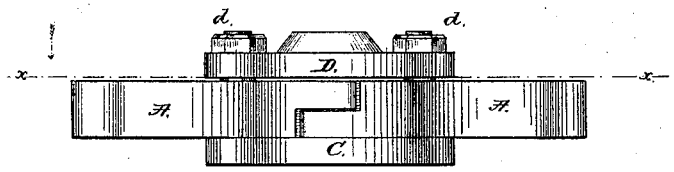


FIG. 2.

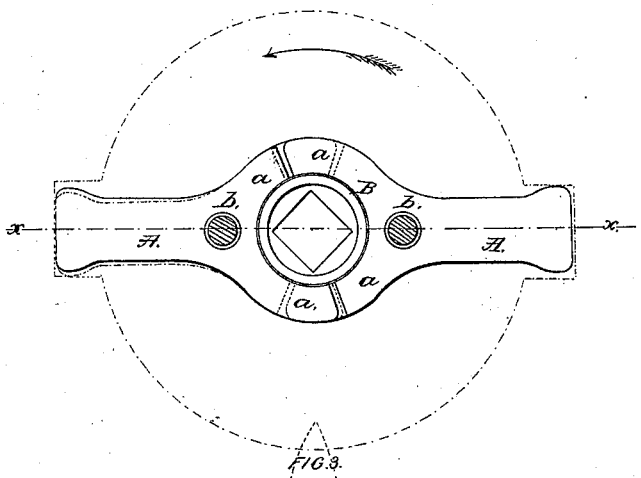
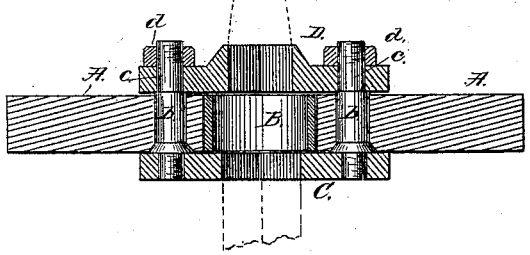


FIG. 3.



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UNITED STATES PATENT OFFICE.

PATRICK H. CHILDRESS, OF WAYNESBOROUGH, VIRGINIA.

IMPROVEMENT IN MILLSTONE-DRIVERS.

Specification forming part of Letters Patent No. **210,498**, dated December 3, 1878; application filed September 25, 1878.

To all whom it may concern:

Be it known that I, PATRICK H. CHILDRESS, of Waynesborough, in the county of Augusta and State of Virginia, have invented a new and Improved Millstone-Driver; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a side view. Fig. 2 is a plan view of the device with the upper plate or cover removed. Fig. 3 is a vertical longitudinal section.

My invention relates to an improvement upon the millstone-driver for which Letters Patent were granted me August 13, 1878, in which the driver was made in two pivoted sections, and their inner ends jointed together by forks formed upon the said inner ends of the driver-sections and an interposed ring which encircled the spindle. In fastening the several parts together I employed in said patent a housing, consisting of a cup-shaped case, and a cover, which were secured upon the outside of the jointed driver-sections by the same bolts that constitute the fulcrums for said driver-section.

These devices I have found objectionable in the following respects: The rim or flange of the cup will not permit the bottom plate to be cheaply made. It holds within itself the dust and other obstructions that may get between the jointed ends of the driver, which will not allow a free action, and said rim or flange also so increases the size of the device as to necessitate the making of a larger eye for the stone.

The object of my present improvement is to obviate these objections.

To this end it consists in dispensing with the flange or rim of the cup, so that the joints of the driver-section are no longer housed, but are exposed. This of itself, it will be seen, permits the particles of dust, &c., to be thrown out from the joints of the driver from centrifugal action, and also reduces the size of the device, so that the eye of the stone need not be made large.

In dispensing with the flange or rim of the cup, however, it will be seen that there is nothing left to hold the two frame-plates apart against the binding action of the screws, and if the invention stopped here the two plates would bind tightly against the jointed ends of the driver and obstruct the free movement necessary to secure the general result aimed at. In meeting this difficulty I reduce the size of the bolts at their upper end, so as to leave a shoulder against which the top clamp-plate rests, and which shoulders, when the bolts are tightened, serve to prevent the clamp-plates from binding against and obstructing the action of the jointed driver.

In the drawing, A A represent the two sections of the driver, which are made with forks *a a*, whose ends are lapped a short distance. B is the loose ring which fits between the forks of the driver and encircles loosely the spindle, so as to form an articulated bearing around the spindle for the two inner ends of the driver-section, all as fully described in my said previous patent.

Instead, however, of making the bottom plate, C, in the shape of a cup whose rim extends up around the outer edges of the jointed ends of the driver, I make it in the form of a plain plate, corresponding to the plate D above. Upon the said bottom plate, also, I fix rigidly bolts or pillars *b b*, whose upper ends are reduced in size at *c*, so as to correspond to the perforations in the top plate, D. Now, when the top plate is forced down by the nuts *d* on the screw-threaded ends of the pillars *b*, the shoulders *c* receive the strain and relieve the jointed ends of the driver from any binding or cramping which would otherwise result from the tightening of the nuts on the said bolts or pillars. The bolts or pillars *b* are thus made to assume this additional function, while retaining those of clamps and pivotal bearings for the sections A, as shown in my patent referred to.

With this construction and arrangement of devices, it will be seen that the size of the devices immediately around the spindle is reduced an amount equal to the thickness of the flange or rim of the cup, as shown in my previous patent, which obviates the necessity of making the eye of the stone unduly large. The sides of the inner ends of the driver are also exposed, so that dust and other obstruc-

tion can be thrown out by centrifugal action. The bottom plate is also made plain and flat, so that it can be economically constructed by forging or otherwise; and, furthermore, while all these results are reached, the cramping and binding of the inner ends of the driver is avoided.

In constructing the device, the parts may be cast, forged, or otherwise formed, and made of such different sizes as to suit the eyes of different millstones.

Having thus described my invention, what I claim as new is—

The combination, with the jointed driver-sections A, having forks swiveling about a loose ring, of the flat frame-plates C D and the bolts or pillars *b*, having shoulders *c* and nuts *d*, arranged to both clamp and hold apart the frame-plates about the inner ends of the driver-sections, and also serve as pivotal bearings for said sections, substantially as shown and described.

P. H. CHILDRESS.

Witnesses:
EDWD. W. BYRN,
SOLON C. KEMON.