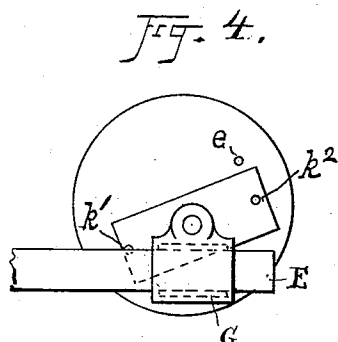
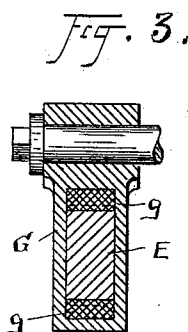
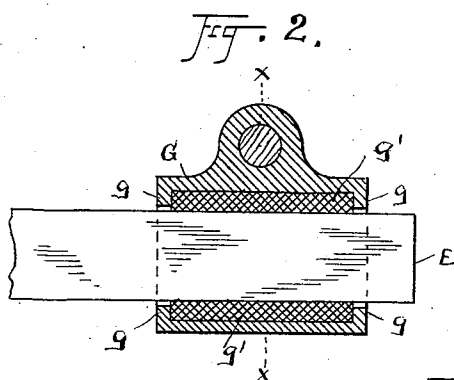
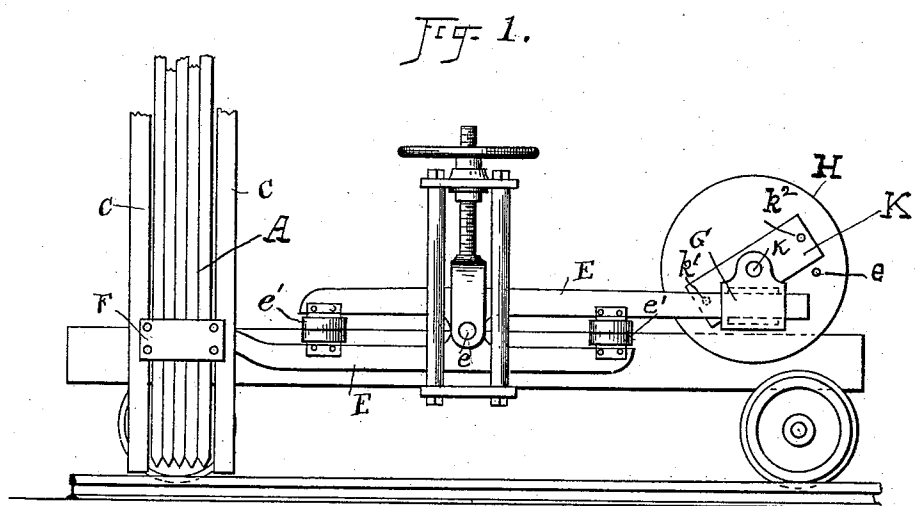


(No Model.)

W. H. BRYANT.
STONE CHANNELING MACHINE.

No. 486,847.

Patented Nov. 29, 1892.



Attest.
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UNITED STATES PATENT OFFICE.

WILLIAM H. BRYANT, OF NORTH AMHERST, OHIO.

STONE-CHANNELING MACHINE.

SPECIFICATION forming part of Letters Patent No. 486,847, dated November 29, 1892.

Application filed September 24, 1891. Serial No. 406,632. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. BRYANT, a citizen of the United States, residing at North Amherst, in the county of Lorain and State of Ohio, have invented certain new and useful Improvements in Stone-Channeling Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in stone-channeling machines; and the invention consists in the construction and combination of parts, as hereinafter fully described, and particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is a side elevation of the construction embodying my invention and illustrating the channeling-lever in working position at both ends and as it is pivoted at the center. Fig. 2 is a longitudinal sectional elevation, enlarged, of the box which holds the inner sliding end of the lever. Fig. 3 is a cross-section of the box and lever on line *xx*, Fig. 2. Fig. 4 is a side elevation of the disk on the power-shaft and the wrist-plate, the lever-supporting box, and a section of the lever, all enlarged over Fig. 1.

Referring to Fig. 1, A represents a set of drills broken off so as to show only the lower portions thereof, and C the side guides in which the drills work.

F is a clamp fixed to the guide and designed to hold the drills in position in a way that is well known in this art.

E represents the lever, formed in two sections overlapping one another and pivoted at *e* in the yoke by which they are suspended. The usual cushions or springs *e'* are placed between the sections of the lever E, and the outer extremity of said lever is connected with the set of drills A. At its inner or opposite end the lever E passes through a box G, forming a bearing therefor, and in which said lever is adapted to slide more or less, according as the wrist-pin upon which said box is supported is brought nearer to or farther from the axial center of the power-shaft upon which the disk H is supported in the usual way. This disk has a flat face, and secured to it is the wrist-plate K, upon which is the wrist-pin *k*. The said plate K, carrying the

wrist-pin at the center, is pivoted at *k'* at one end and is adapted to be adjusted or swung on said pivot and locked at its other end by means of a suitable pin or its equivalent *k²*, which engages any one of the holes *l*. If in the operation of the machine for any reason it is desired that either set of drills should be idle, the wrist-pin *k* is adjusted up so as to come to the axial center of the power-shaft which carries the disk H, and, being in the center thereof, there will be no movement of the drills on that side of the machine. Then if more or less stroke be desired for the said lever the wrist-plate K is adjusted so as to throw the wrist-pin more or less off the center.

The box G is pivotally suspended upon the wrist-pin *k*, and said box is formed in a single piece having an opening longitudinally through its center for the lever E and is provided with recesses above and below the opening for said lever. The said recesses are closed at their ends by what may be termed "lips" *g*, and the said opening is made somewhat larger than the depth of the lever, so that the lever will not bear against said lips or flanges and so that there will be a slight space between the lever and said lips or flanges, and hence no wear thereon. Into these recesses I place suitable bearing-pieces *g'*, which have sufficient thickness to fill the recesses and extend past the lips *g* and to fill the space above and below the lever, and thus produce a comfortably-close-fitting bearing for the lever on which the lever slides back and forth. The entire bearing is upon these bearings, and there is no wear on the box itself, and the bearings are wholly confined within the lips *g* at both ends. By this construction I am enabled to employ bearing-pieces, which, though they may break from the severe pounding which the machine undergoes, will, notwithstanding any breakage or splitting that may occur, remain in their places and do the work for which they are intended.

It is well known that in channeling-machines very severe strain comes upon the lever which operates the drills and that the jar and vibration is carried back to the bearing-box, notwithstanding the springs intervening the lever-sections. It has therefore been very difficult to get bearings for the lever so constructed and arranged as to withstand the

wear and tear that comes upon them and be serviceable, notwithstanding that they were broken. If they were not serviceable in this way, it would necessitate the stopping of the machine and the removal of the broken bearing and the insertion of a new one every time one became broken, and this would greatly interfere with the operations of the machine. The present construction therefore is deemed especially desirable and serviceable, because a bearing may be retained and operated through the day or longer, if it be broken in several pieces, or if the bearing become worn I am enabled to lay one or more sheets of packing in behind the bearing in the recess, and thus continue to wear the same until it is practically worn out.

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

In a stone-channeling machine, the lever for operating the drills pivoted between its ends and having the drills attached to one end, in combination with a box supporting the opposite end of said lever and connected with the power-shaft, said box made in a single piece and having an opening longitudinally through its center for the said lever, and recesses above and below the lever, closed at their ends and provided with separate bearing-pieces confined in said recesses and between which said lever is supported and adapted to slide, substantially as described.

Witness my hand to the foregoing specification this 18th day of September, 1891.

WILLIAM H. BRYANT.

Witnesses:

H. G. REDINGTON,
H. A. PLATO.