

F. DIAUSS,
Supplying Water to Grindstones.
 No 75,725. Patented Mar 24. 1868

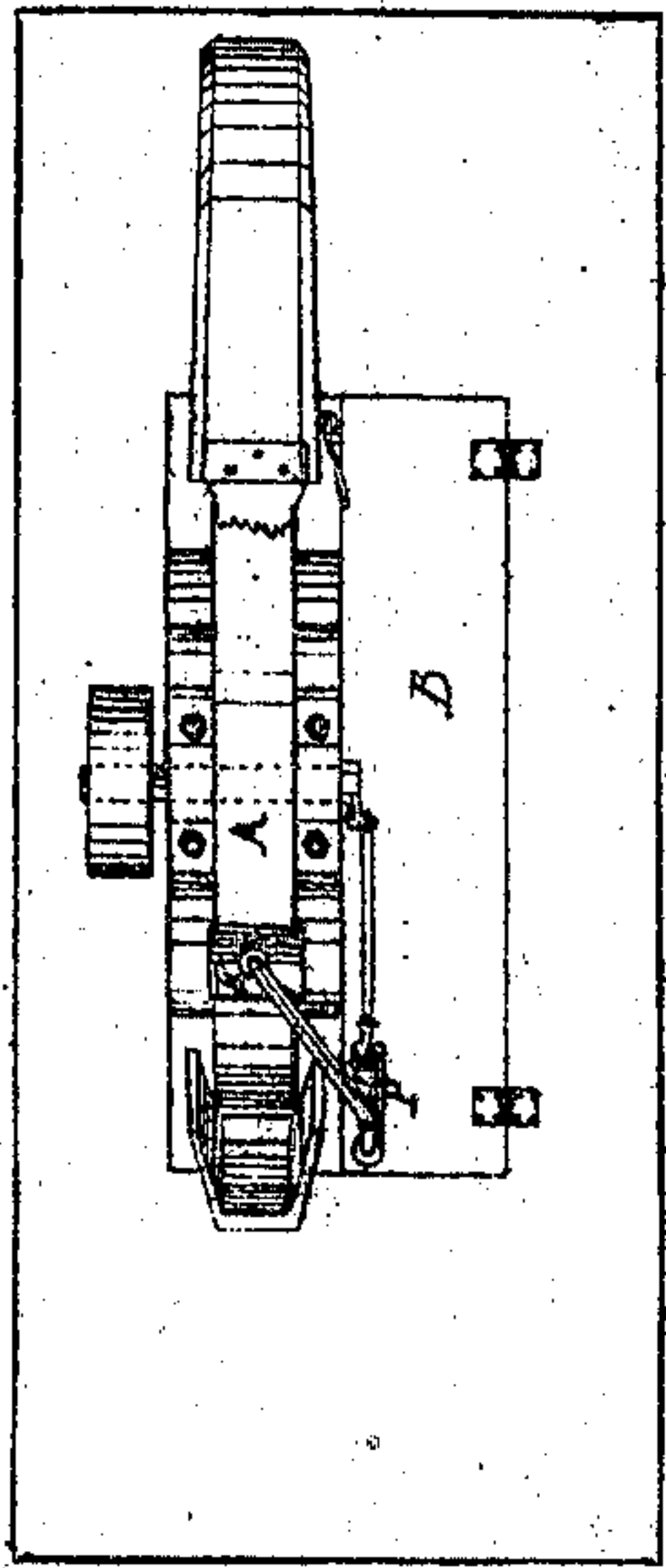


Fig. 3

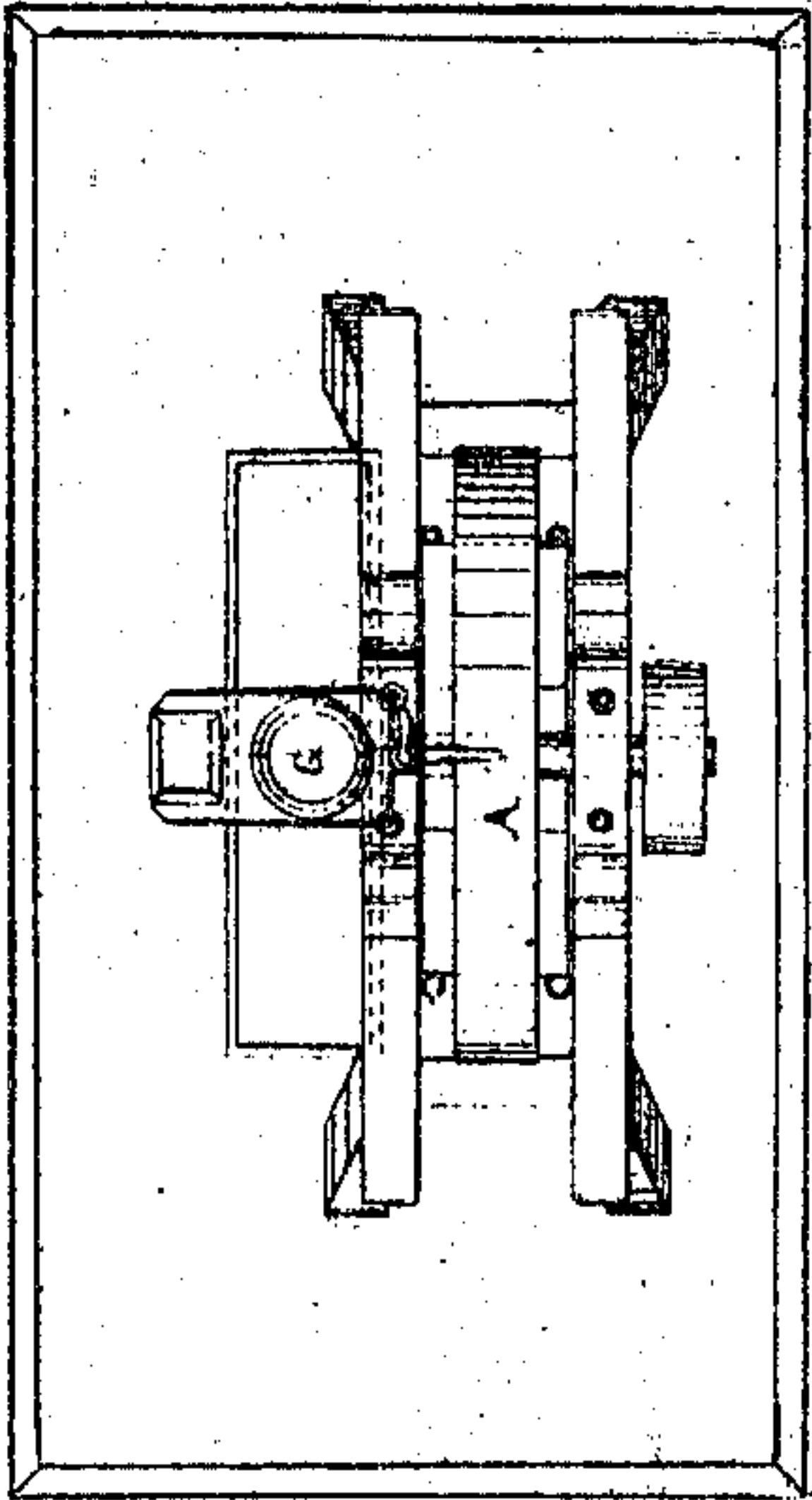


Fig. 6

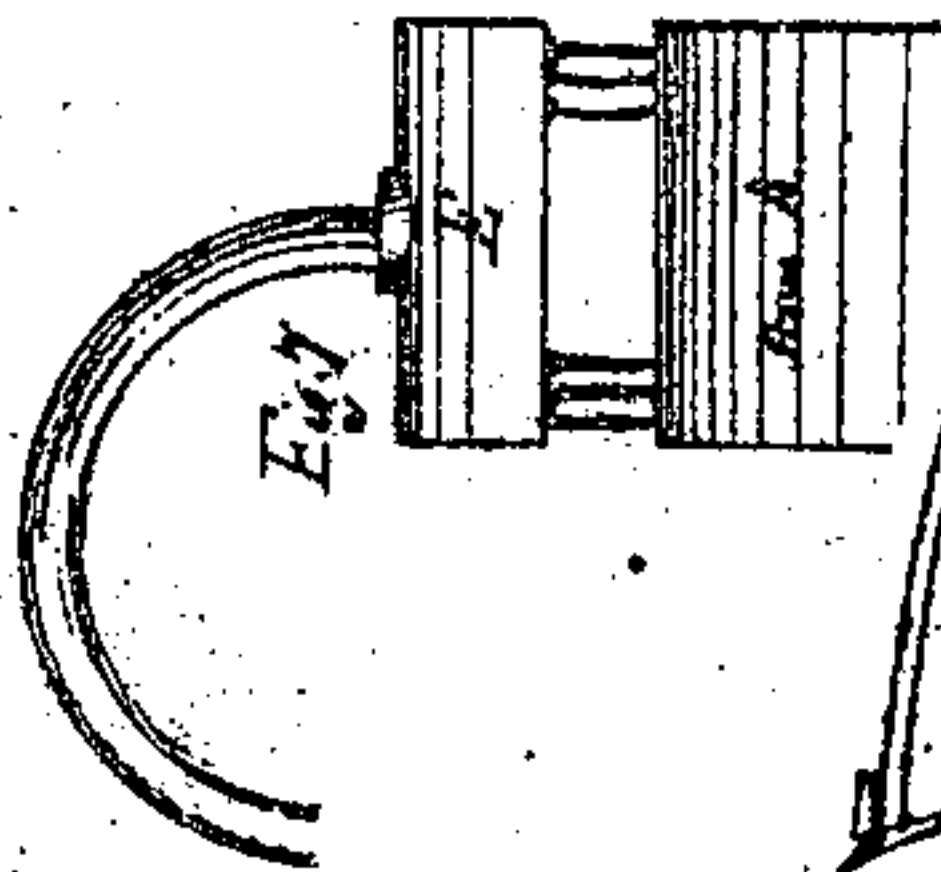


Fig. 7

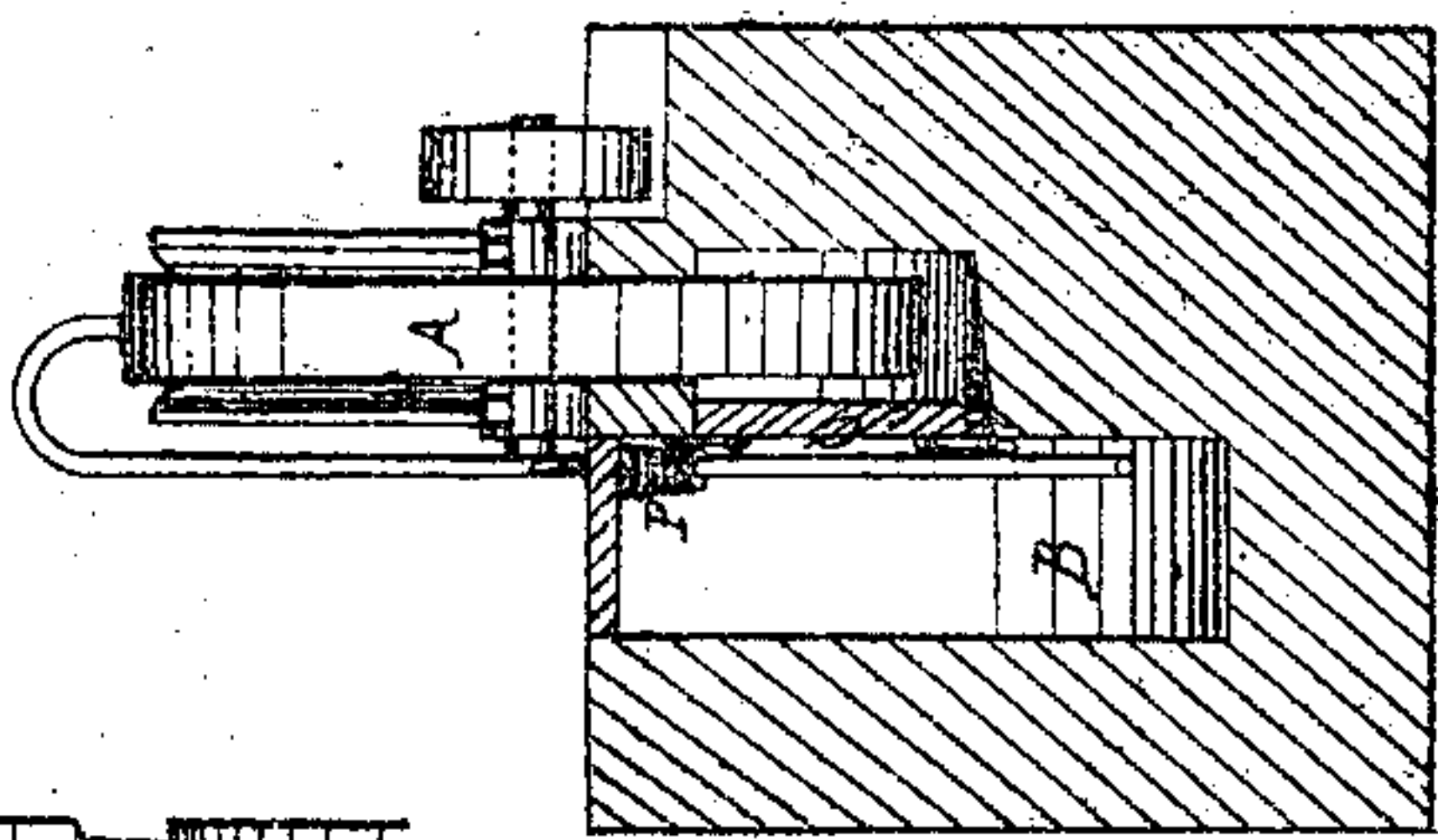


Fig. 2

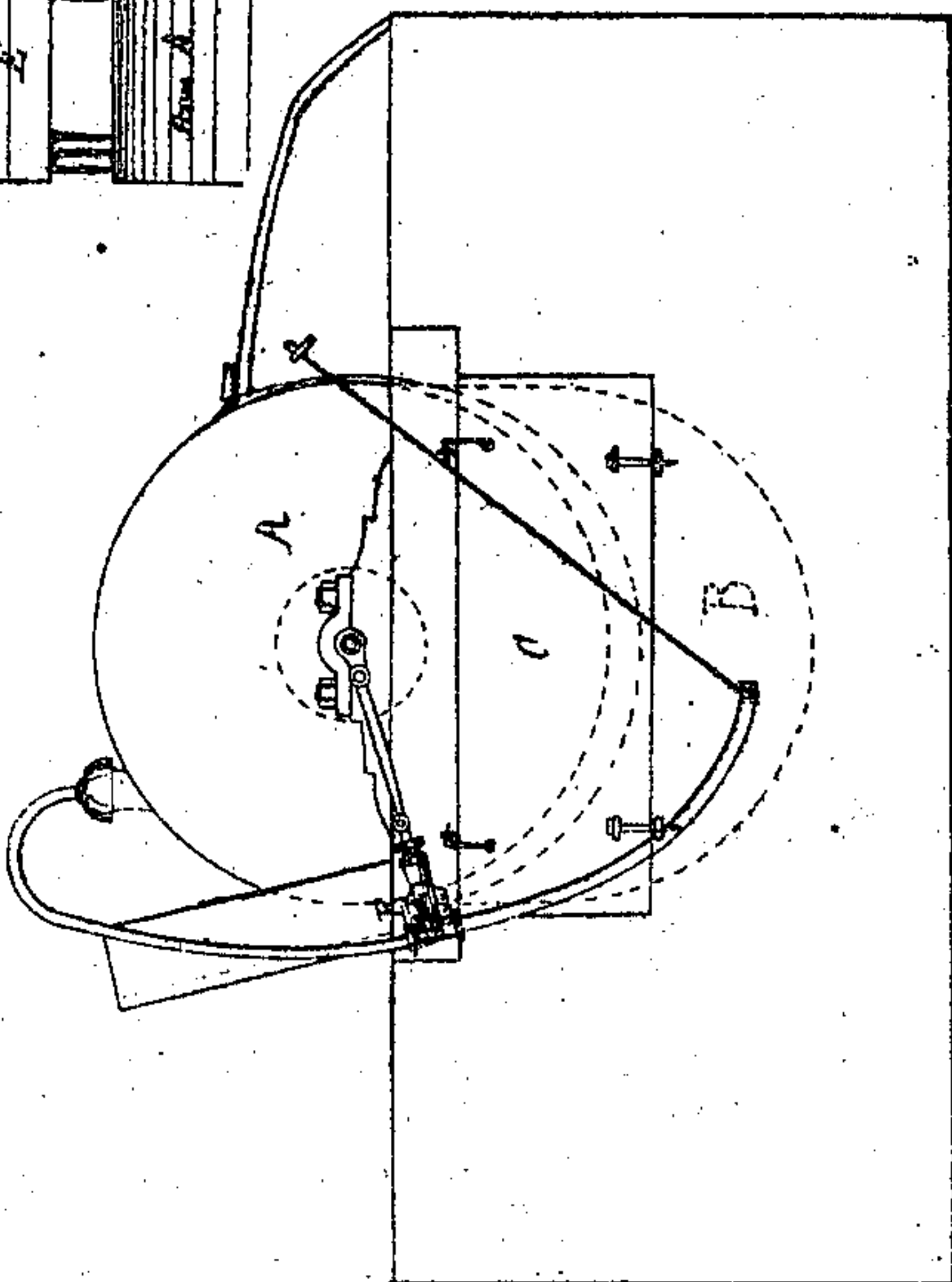


Fig. 1

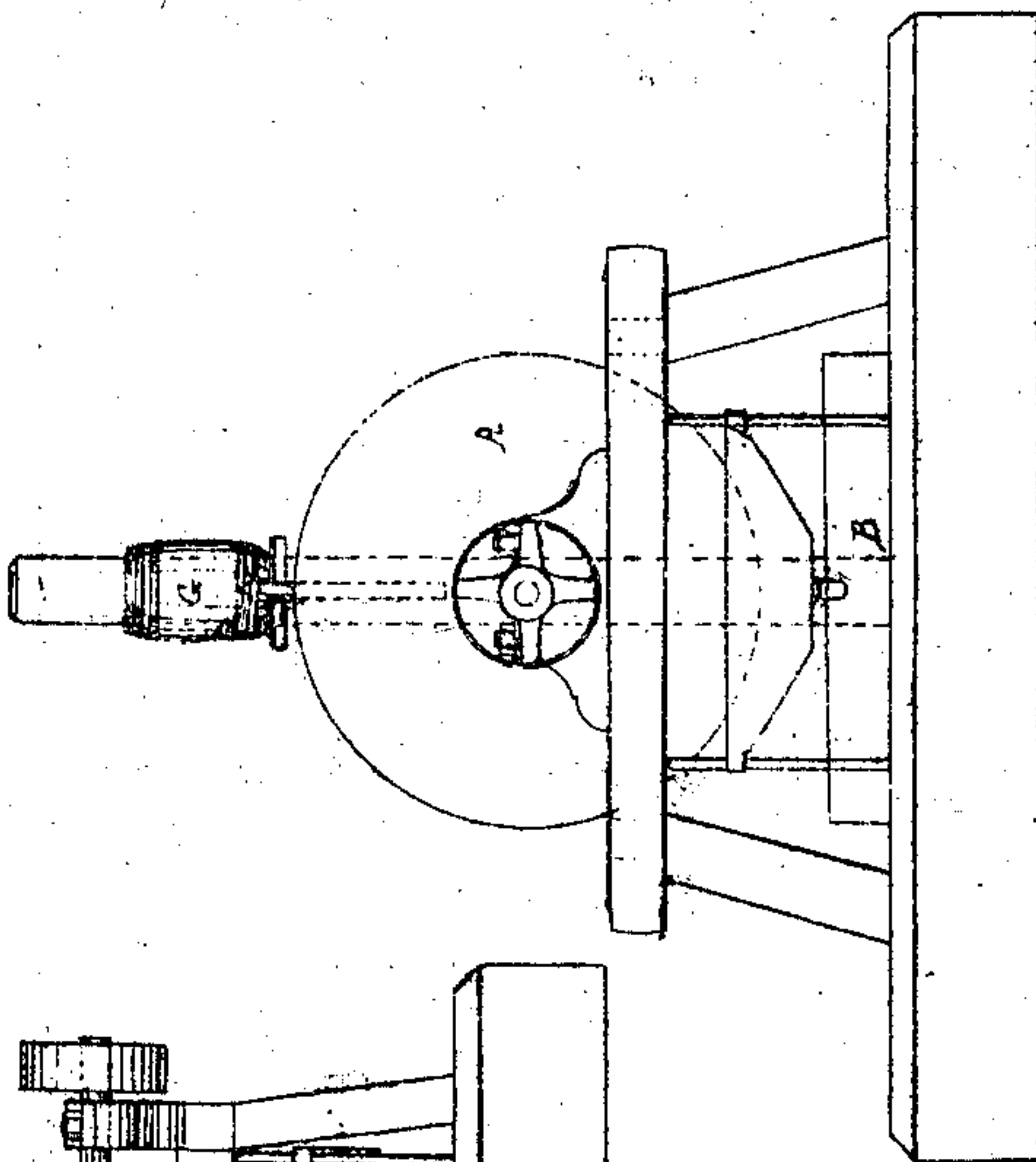


Fig. 4

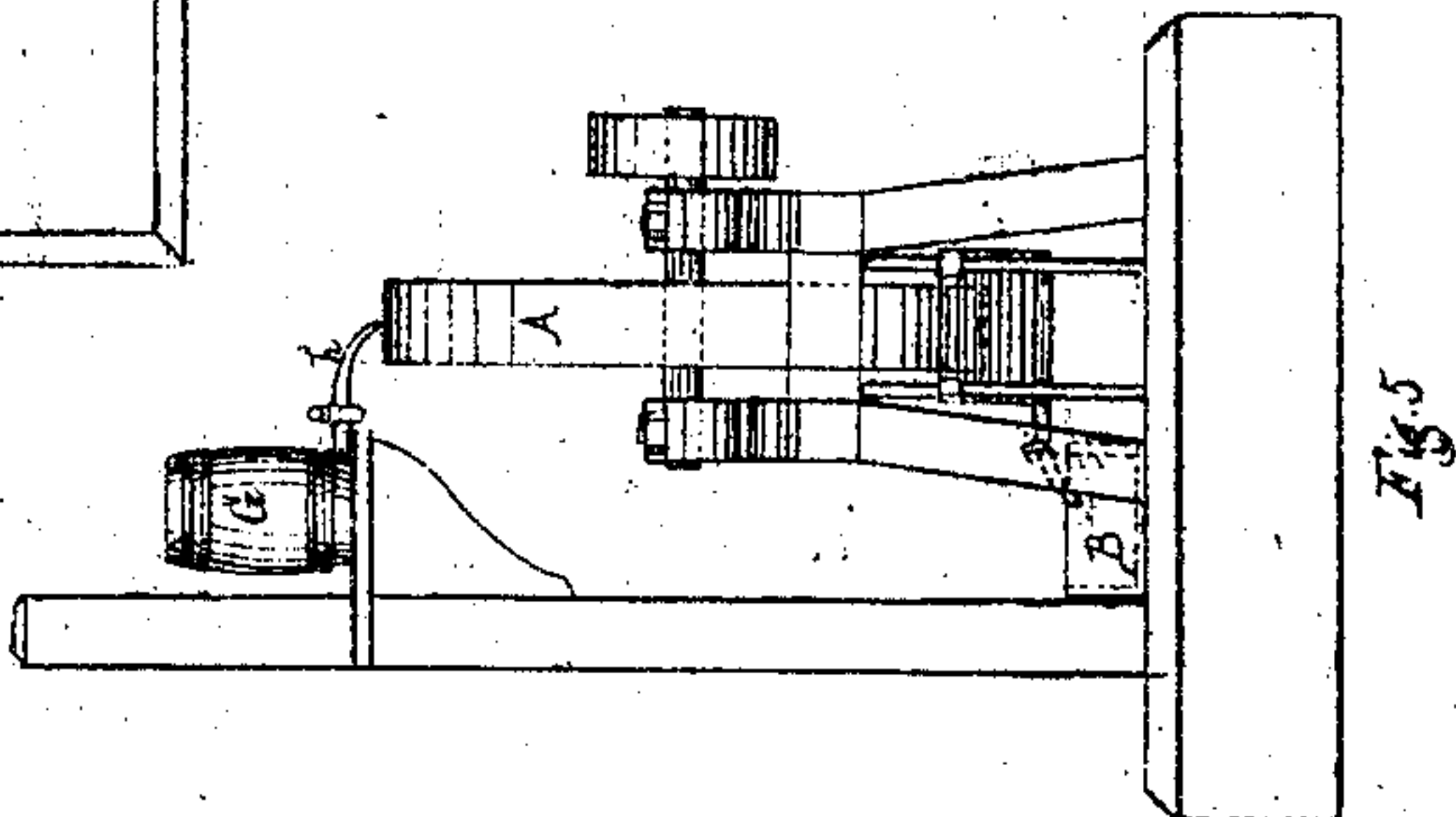


Fig. 5

Witnesses
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FERDINAND BLAUSS, OF NEW YORK, N. Y.

Letters Patent No. 75,725, dated March 24, 1868.

IMPROVED APPARATUS FOR SUPPLYING WATER TO GRINDSTONES.

The Schedule referred to in these Letters Patent and making part of the same.

Specification of Improvements in Grindstone Water-Supply.

In the use of grindstones for grinding down metallic surfaces, it is found that it is often necessary to true the stone in consequence of there being soft spots in the stone, which soft spots wearing away more rapidly than the remaining surface, the stone gets out of round, and it becomes necessary to true it up, at an expense of time and labor. I have ascertained that in most cases these soft spots are caused by an injudicious treatment of the stone.

It is the object of my invention to provide a better treatment, whereby these soft spots will not be created.

It will be found by trial and observation that if the lower part of the stone is allowed to remain in a state of rest immersed in water for many hours, it will absorb moisture, and that during the same time the remaining surface, especially the top, will become dry. This relative state of parts of the stone is produced whenever, as from Saturday night to Monday morning, the stone is left with its lower part immersed in water. When in this state the stone is run, it will be found that a soft spot has been created that is soft in reference to the other parts of the stone.

A similar result, though less in degree, is found when for a considerable time the lower part of the stone is in a state of rest above the water-trough, although not immersed in the water, as the evaporation from the water will charge the stone above it with moisture.

I propose to prevent the lower part of the stone from being water-soaked in any degree, by removing the water-trough to one side, and separating it by a partition, and leading the water running from the stone, by inclined surfaces and pipes, into the water-trough, and raising the water, by mechanical means, from the water-trough to a vessel, from which it can flow at will on the stone.

Figures 1, 2, and 3 represent one combination and arrangement. A is the grindstone. B is the water-trough, placed one side, and separated from the stone by a partition, C. D is the pipe, which conducts the water to the water-trough. E is the distributor, into which the water is raised from the water-trough by pump or other mechanical means, and from which the water flows in small streams on to the surface of the stone.

By the use of this combination, the stone is not subjected to the action of moisture in any part except when in use, and hence all parts of the grinding-surface are in exactly the same condition.

Figures 4, 5, and 6 represent another combination and arrangement, in which, as in figs. 1, 2, and 3, the water flows into a side trough, from which it is taken by hand and put in the reservoir, from which it flows on to the stone. A, as before, represents the stone. B, as before, represents the water-trough, placed on one side, and separated from the stone by the partition C. D represents the pipe, which conducts the water to the water-trough. G is the reservoir, kept supplied from the trough B, and from which the water runs, through pipe *p*, on to the stone.

The treatment of the stone can be improved also in another particular. It is best that the water should be distributed equally on the surface of the stone. The tendency of the water, when the stone is running, is to gather to the centre of the surface. I therefore make the distributor of the length of the face of the stone, and allow the water to issue in small streams only for about one-quarter of the length at each end, with no streams from the central part of the distributor. This arrangement equalizes the supply of water as far as may be.

Figure 7 shows this arrangement. E is the distributor, having holes at *m* and *n* at the ends, through which only the water is allowed to go on to the stone.

What I claim as my invention, and desire to secure by Letters Patent, is—

The separation of the water-trough of a grindstone from the grindstone, so that the lower part of the stone does not remain immersed in water or exposed to the action of moisture of water when the stone is in a state of rest, and furnishing water from the water-trough to the upper surface of the stone by means of a pump, or its mechanical equivalent, worked by the revolution of the stone.

I also claim the supply of water to the upper surface, by means of streams from the ends of the distributor, all substantially in the manner and for the purpose herein described.

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Witnesses:

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