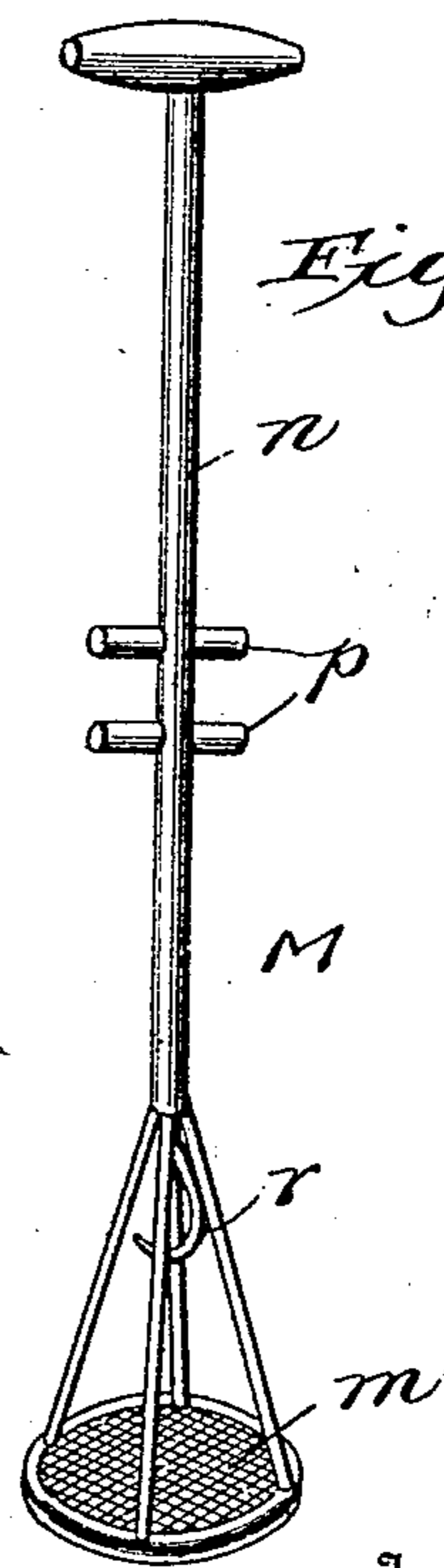
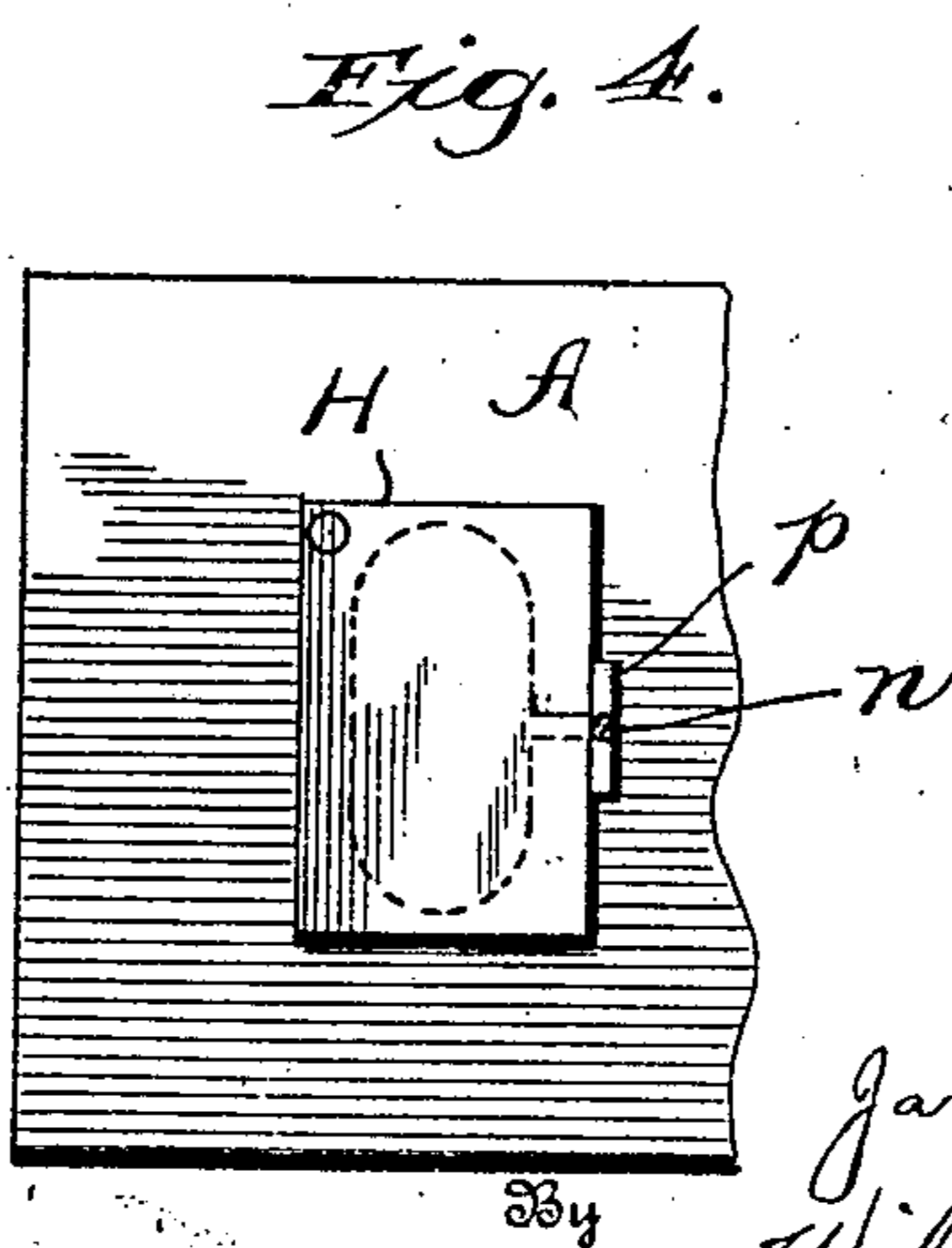
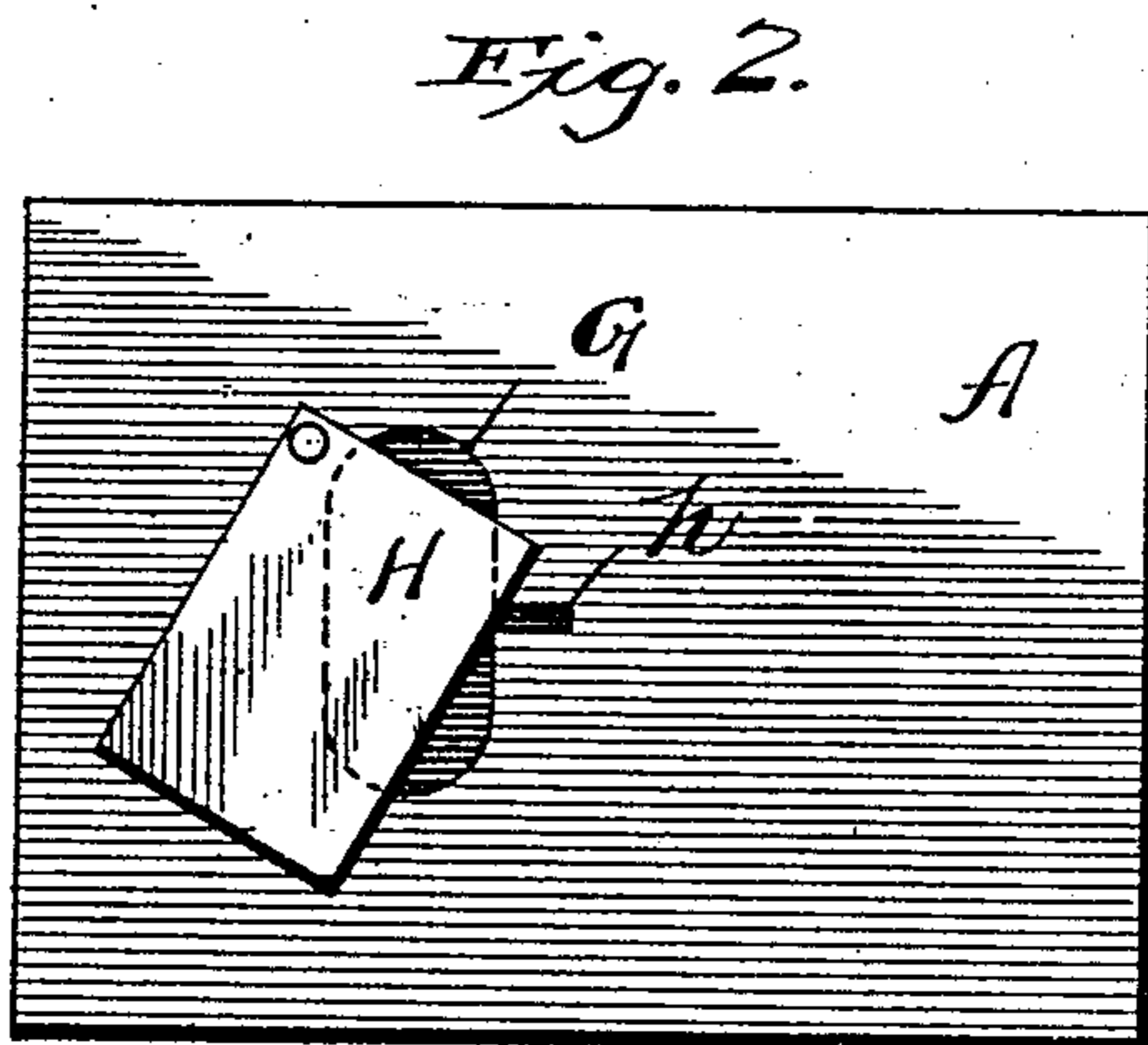
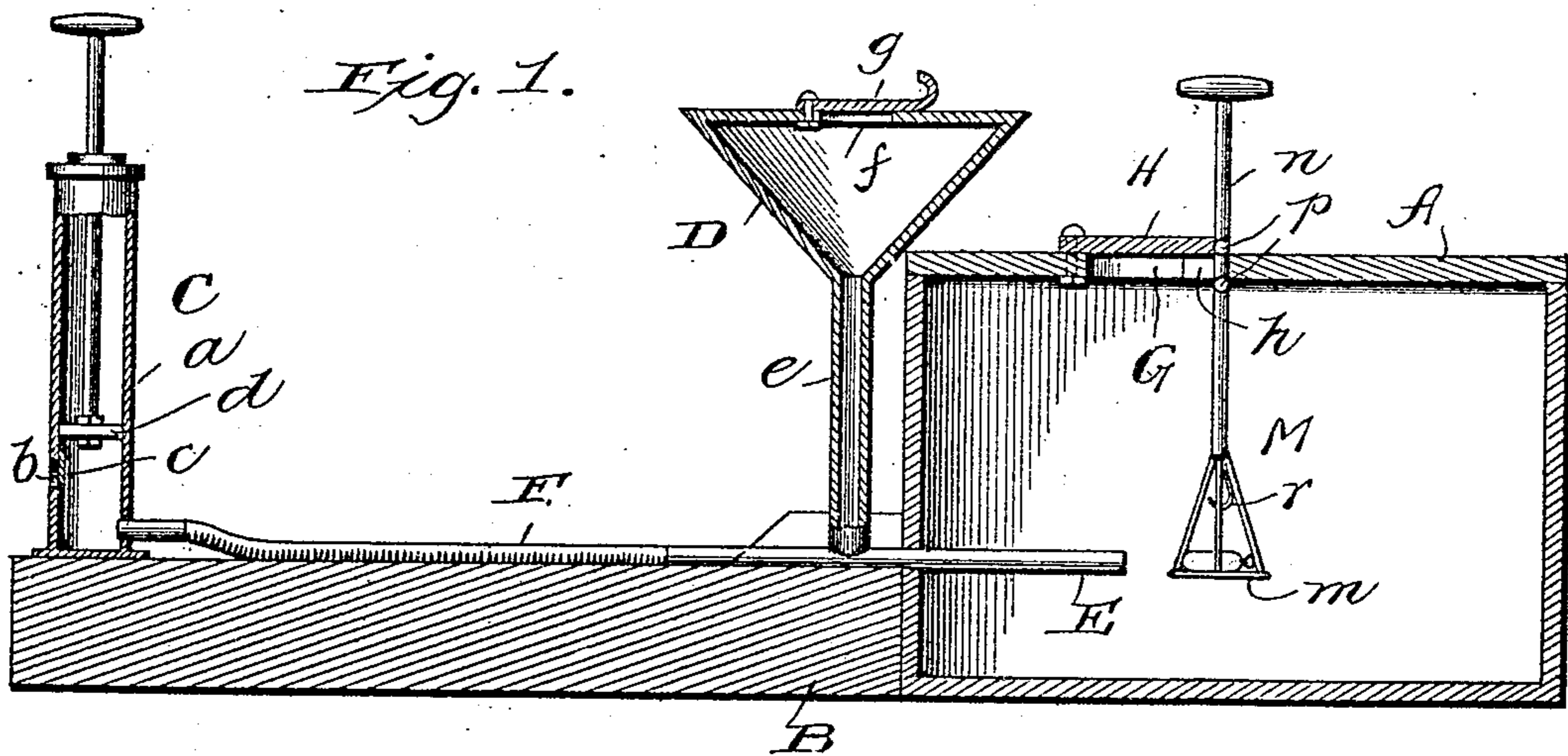


No. 861,138.

PATENTED JULY 23, 1907.

J. L. NEWELL.  
ABRADING APPARATUS.  
APPLICATION FILED NOV. 11, 1905.



Witnesses  
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# UNITED STATES PATENT OFFICE.

JAMES L. NEWELL, OF COAL CITY, ILLINOIS.

## ABRADING APPARATUS.

No. 861,138.

Specification of Letters Patent.

Patented July 23, 1907.

Application filed November 11, 1905. Serial No. 286,968.

*To all whom it may concern:*

Be it known that I, JAMES L. NEWELL, a citizen of the United States, residing at Coal City, in the county of Grundy and State of Illinois, have invented certain new and useful Improvements in Abrading Apparatus, of which the following is a specification.

My invention has reference to abrading apparatus of the kind in which sand or other comminuted abrasive substance is forcibly blown against the article to be abraded; and it seeks to provide an inexpensive and easily operated blast apparatus through the medium of which metallic articles, particularly articles of jewelry, may be expeditiously and thoroughly abraded with a view of imparting to such articles what is known as "satin finish."

The novelty, utility and practical advantages of the invention will be fully understood from the following description and claims when taken in connection with the accompanying drawings, forming part of this specification in which:

Figure 1 is a longitudinal, vertical section of the apparatus constituting the present and preferred embodiment of my invention; the same shown with a watch in position to be subjected to a blast of sand, bort or other abrasive substance suitable to the purpose. Fig. 2 is a top plan view of the casing of the apparatus, with the closure lid thereof in an open position. Fig. 3 is a perspective view of the device for holding articles to be abraded in proper position in the blast casing; and: Fig. 4 is an enlarged, detail view illustrative of the manner in which the said article holder is secured in the blast casing and the opening in the top of said casing is closed as when an article is to be subjected to a blast of abrasive substance.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which:

A is the casing of the apparatus. B is a support fixed to and extending from one end of the casing; C, an air pump placed on the support B, and comprising a cylinder *a* having the usual air induction port *b* and non-return valve *c* controlling the same, and a reciprocating piston *d* disposed in the cylinder; D, a hopper fixed on support B, at a point intermediate the pump C and the blast casing A, and having a depending discharge pipe *e* and also having an opening *f* in its top and a swinging lid *g* for closing said opening; E, a pipe intersecting and arranged to receive abrasive substances from the discharge pipe *e* of the hopper D and extending within the blast casing A; and F a conduit, preferably a flexible hose, connecting the discharge of the pump and the adjacent end of the pipe E.

In the top of the blast casing A is an opening G from one side of which extends a notch *h*, and on the said top is pivoted a swinging lid H arranged as shown, relative to the opening and the notch. The opening G is for the

introduction and removal of the device M for holding the article to be subjected to the abrasive treatment. This device or article holder comprises a basket *m* having a preferably circular base and arms reaching upwardly and inwardly from said base, and a stem *n* extending upwardly from the said basket and having spaced arms *p* extending in opposite directions from it at intermediate points of its length. The device or article holder M is placed and secured in the casing A and removed therefrom as follows: In introducing the article holder, the basket *m* of the same is lowered through the opening G of the casing, and the stem *n* is placed in the notch *h*, while the arms *p* are disposed above and below the top wall of the casing, and are moved to the end of the notch, after which the lid H is swung to its closed position. In this latter position the lid H will bear against the end of the top arm *p* at the right, and thereby hold the holder M against casual lateral movement. When, however, it is desired to remove the article holder from the casing, it is simply necessary to swing the lid toward the right, move the stem *n* of said holder out of the notch *h*, and turn the holder on its axis so as to permit of the ready withdrawal of the arms *p* and basket *m* through the opening G.

When desired, the holder, M may be provided in the top of its basket *m* with a hook *r* on which watch cases and the like may be hung.

In the practical use of my invention the hopper D is charged with fine sand, bort or other suitable abrasive substance, and the article to be treated is placed in the holder M and the latter is secured in the blast casing A. With this done the piston of the pump C is actuated, when, as will be readily apparent, sand or other abrasive material supplied to the pipe E from the hopper D will be forcibly impelled against the article in the basket *m* of the holder M. In this way what is known as the "satin finish" is expeditiously imparted to metallic articles, and this with but little effort on the part of the operator who works the pump C.

In addition to the advantages which I have hereinbefore ascribed to my novel apparatus, it will be noted that the apparatus is simple, compact and inexpensive in construction and embodies no delicate parts such as are likely to get out of order after a short period of use.

Having thus described my invention what I claim is:

1. An abrading apparatus comprising a blast casing having an opening in one of its walls and a notch extending from one side of said opening, a movable lid connected to the casing and arranged to close said opening, an article holder arranged removably in the casing and having a stem disposed in the notch of the casing wall and also having spaced arms disposed above and below the casing walls; one of the upper arms being arranged to be engaged by the lid, a conduit communicating with the interior of the casing, and means for forcing abrasive substances through the said conduit.

2. An abrading apparatus comprising a blast casing, a

conduit communicating with the interior of said casing, means for forcing abrasive material through said conduit, an article holder removably arranged in the casing and having a basket and a stem on the basket, and coacting 5 means on the casing and the stem of the article holder for holding the latter against casual movement or displacement.

10 3. An abrading apparatus comprising a blast casing, having an opening in one of its walls and a notch extending from one side of said opening, a movable lid connected to the casing and arranged to close said opening, an article holder removably arranged in the casing, and having a stem disposed in the notch of the casing wall and also having spaced arms disposed above and below the casing wall;

one of the upper arms being arranged to be engaged by the 15 lid, a hopper arranged adjacent to the casing and having a depending discharge pipe and also having a feed opening and means for closing the same, a pipe intersecting the discharge pipe of the hopper and extending into the casing, an air pump, and a conduit connecting the latter pipe 20 and the discharge of the air pump.

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

JAMES L. NEWELL.

Witnesses:

L. L. BELAY,  
MARTIN MORAN.