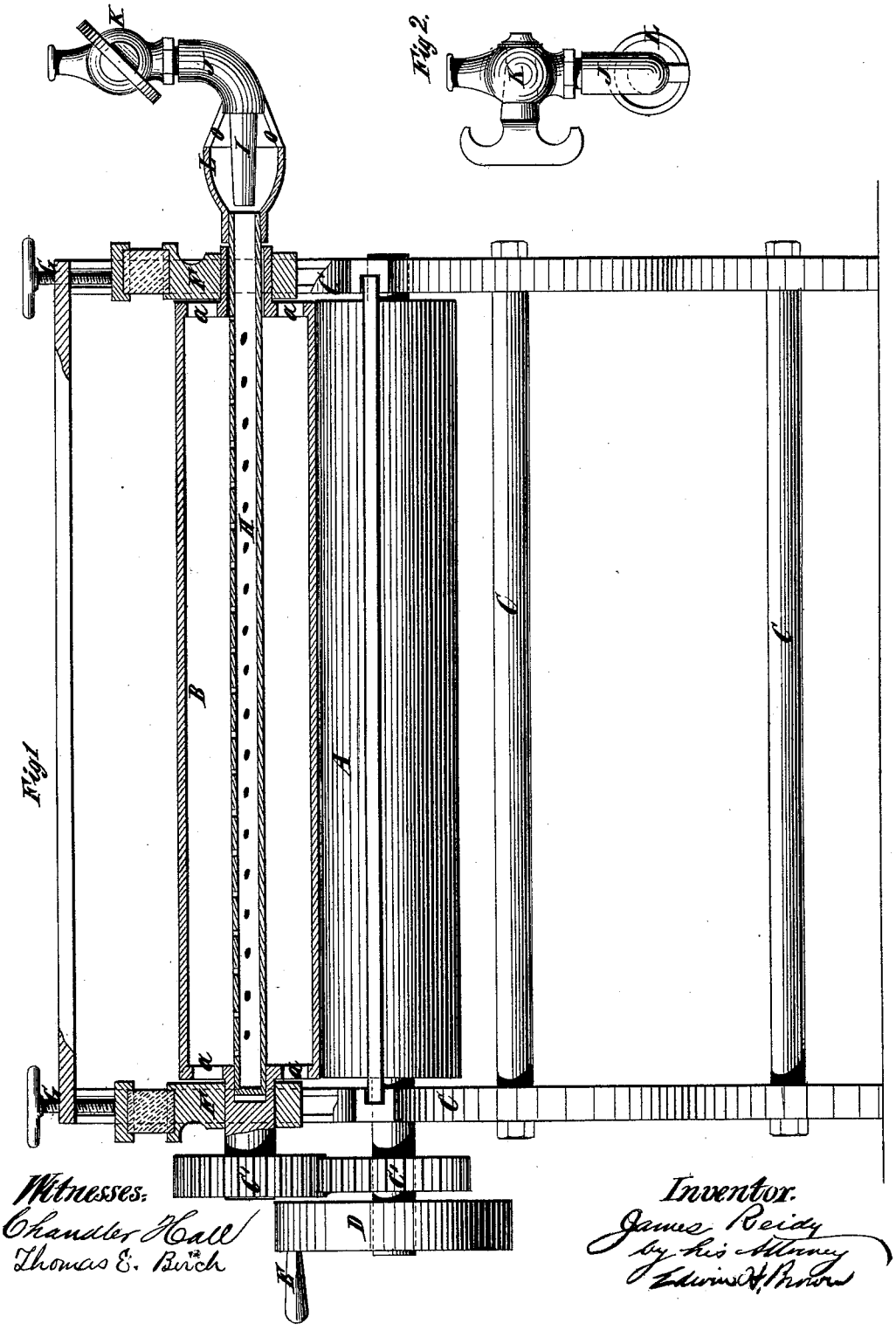
J. REIDY.

Ironing-Machines.

No. 220,868. Patented Oct. 21, 1879.



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UNITED STATES PATENT OFFICE.

JAMES REIDY, OF KENNINGTON ROAD, COUNTY OF SURREY, ENGLAND.

IMPROVEMENT IN IRONING-MACHINES.

Specification forming part of Letters Patent No. **220,868**, dated October 21, 1879; application filed April 25, 1879.

To all whom it may concern:

Be it known that I, JAMES REIDY, of Kennington Road, in the county of Surrey, England, have invented a new and useful Improvement in Machinery for Ironing, Airing, Wringing, Mangling, and other similar purposes, of which the following is a specification.

My improvements relate to machinery for ironing, airing, wringing, mangling, and other similar purposes, wherein the articles to be treated are passed between rollers, to one or both of which heating apparatus is applied; and the object of the improvement is to provide a simple and convenient heating apparatus, rendering the machinery susceptible of use in households, and not alone in large factories or establishments.

My improvements consist in a machine comprising a hollow rotary cylinder provided with openings, a perforated jet-pipe extending into the same through one of its journals and having its end inserted in the other journal, a nozzle for supplying gas to said jet-pipe, a chamber surrounding said nozzle and serving to properly direct air drawn in by the flow of gas to the point of said nozzle where it commingles with the gas and enters the jet-pipe through the same opening, and a cock for regulating the supply of gas. They also consist in the combination, with a hollow roller or rotary cylinder, of a perforated jet-pipe extending into the same, a nozzle provided with a cock for supplying gas thereto, and a chamber communicating with said jet-pipe and surrounding said nozzle, provided with openings at the rear portion for the entrance of air, and made internally concave and tapering toward the front end, which is in close proximity with the front end of said nozzle, whereby it acts as a deflector to deflect air close to the forward end of said nozzle.

In the accompanying drawings, Figure 1 is a sectional front view of the machine embodying my improvement, and Fig. 2 is a rear view of the jet-pipe and nozzle employed therein.

Similar letters of reference designate corresponding parts in all the figures.

A B designate two rollers or cylinders supported in a suitable frame, C, shown as consisting of side frames and stretchers. The lower cylinder, A, may be solid or of any other suitable construction; but the upper cylinder, B, is hollow and has openings *a* in its ends communicating with the outside atmosphere. Both cylinders are geared together by gear-wheels C′ in this instance, and motion is imparted to them by means of a pulley, D, or crank E, affixed to the lower cylinder. Preferably the upper cylinder is supported in bearing-boxes F, arranged in housings, and actuated by screws G so as to be adjustable at will.

H designates a jet-pipe passing through one of the journals of the upper cylinder, B, and fitting in a recess in the opposite journal. It is shown as perforated throughout its extent within the said cylinder, except along the bottom, so as to allow gas and air entering it to issue in jets and burn so as to heat the interior of said cylinder, all parts of the latter during rotation passing in proximity to them.

Opposite the outer end of the jet-pipe is a nozzle, I, whence issues from a pipe, J, under control of a cock, K, with which it is furnished, a current of gas—for instance, ordinary illuminating-gas. Around this nozzle I is a chamber, L, having at the rear openings *o*, through which enters air. The chamber L is internally concave and tapering toward the front end, which is in close proximity to the front end of the nozzle I. By this construction and arrangement of the chamber L the air drawn in is deflected across the nozzle at its tip, and directly in the path of the gas, thus effecting the thorough commingling of the two before entering the jet-pipe.

The gas issuing from the nozzle I induces a current of air to flow through the chamber L, and both the air and gas are commingled together and enter the jet-pipe H, whence the two issue in jets and are consumed, the spent products of combustion escaping through the openings *a* in the cylinder B. By adjusting the cock K the relative proportions of gas and air may be regulated at pleasure. About three parts of air to one of gas make the most desirable mixture.

It will be seen that by my invention I produce a very simple means for heating a roller or cylinder in a machine for ironing, airing, wringing, mangling, and other purposes, and

one capable of being employed in the household whenever the ordinary illuminating-gas is obtainable.

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

1. The combination, with the hollow rotary cylinder B, of the perforated jet-pipe H, extending through one of its journals, and having its end inserted in a recess in the opposite journal, the nozzle I, provided with the cock K for the supply of gas, and a chamber surrounding said gas-nozzle, whereby the gas serves to draw air into the jet-pipe with it, substantially as specified.

2. The combination, with a hollow roller or rotary cylinder, of a perforated jet-pipe extending into the same, a nozzle provided with a cock for the supply of gas thereto, and a chamber communicating with said jet-pipe and surrounding said nozzle, provided with openings at the rear portion for the entrance of air, and made internally concave and tapering toward the front end, which is in close proximity to the front end of the nozzle, whereby it acts as a deflector to deflect air close to the forward end of said nozzle, substantially as specified.

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