J. AGNEW.
BELLOWS.

No. 193,907. Patented Aug. 7, 1877.

Fig. 1.

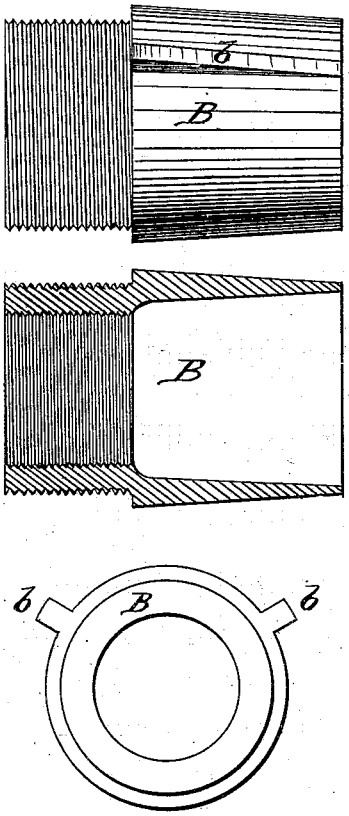


Fig. 2.

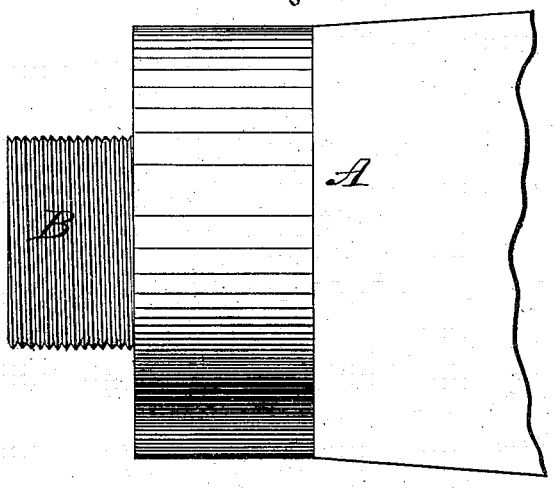
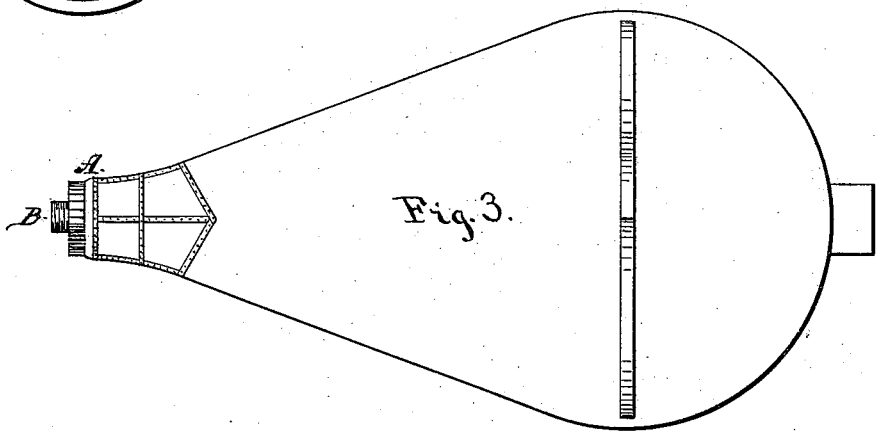


Fig. 3.



Witnesses
F. A. Pollock,
G. Smith.

John Agnew Inventor.
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UNITED STATES PATENT OFFICE.

JOHN AGNEW, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO WILLIAM W. SOMMERVILLE, OF SAME PLACE.

IMPROVEMENT IN BELLOWS.

Specification forming part of Letters Patent No. **193,907**, dated August 7, 1877; application filed July 5, 1877.

To all whom it may concern:

Be it known that I, JOHN AGNEW, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a certain new and useful Improvement in Bellows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 shows, respectively, a side elevation, longitudinal section, and end view of my improved bellows-nozzle. Fig. 2 shows the head of a bellows with my nozzle attached. Fig. 3 is a top view of a blacksmith's bellows, exhibiting my invention.

This invention relates to the construction of blacksmiths' bellows; and consists in replacing the old conical smooth nozzle by a screw-threaded one, and in the specific construction of the same, whereby the bellows is better adapted for use in certain industries.

At nearly every oil-well in the oil-producing regions a forge is maintained for the purposes of repairs and construction of tools or appliances; but, on account of the danger of conflagration, the forge must be located some distance from the well, while, at the same time, it is the general custom to place the bellows on or under the derrick, where it can be operated by the walking-beam, or other part of the machinery, connecting-pipes being arranged from the bellows-nozzle to the forge. This has been done by taking the well tubing or casing, (quantities of which are usually on hand,) inserting the conical smooth nozzle into one end, and packing the joint. This is a very crude way of doing, and is seldom air-tight, is weak, and the consequence is an irregular and unreliable blast at the forge.

This defect I desire to overcome by my invention, which is as follows: I fit the head A of the bellows with a nozzle, B, projecting but slightly, and provided with a thread or threads, either exterior or interior, or both. The object of an outer and inner thread is to provide a means of attaching either a piece of tubing or casing, according to which is on hand and to be spared, the two being of different sizes.

The part of nozzle B which is fitted into the head A is slightly conical, and has one or more inclined lugs or wings, *b*, longitudinally disposed on its surface. The head A is bored out to receive it, and recessed for the lugs *b*. It is firmly driven into the head, where the lugs prevent it from turning when making the connection with the blast-conductors. Constructed thus, no trouble is met in connecting.

Quantities of both tubing and casing are always at hand, and it is simply necessary to screw either of them on the nozzle to make a firm, substantial, and air-tight connection, which will not work loose nor require attention; hence the forge-blast will be regular and reliable—a matter of importance, because often a great deal depends upon the speed with which repairs or alterations can be effected.

What I claim as my invention is—

The combination of the bored-out head A and the threaded nozzle B, having one or more longitudinal lugs, *b*, substantially as specified.

In testimony that I claim the foregoing I have hereunto set my hand this 27th day of June, 1877.

JOHN AGNEW.

Witnesses:
A. V. D. WATTERSON,
MARSHALL BROWN.