

No. 721,367.

PATENTED FEB. 24, 1903.

A. J. GUNTER.
BELLOWS.

APPLICATION FILED MAY 26, 1902.

NO MODEL.

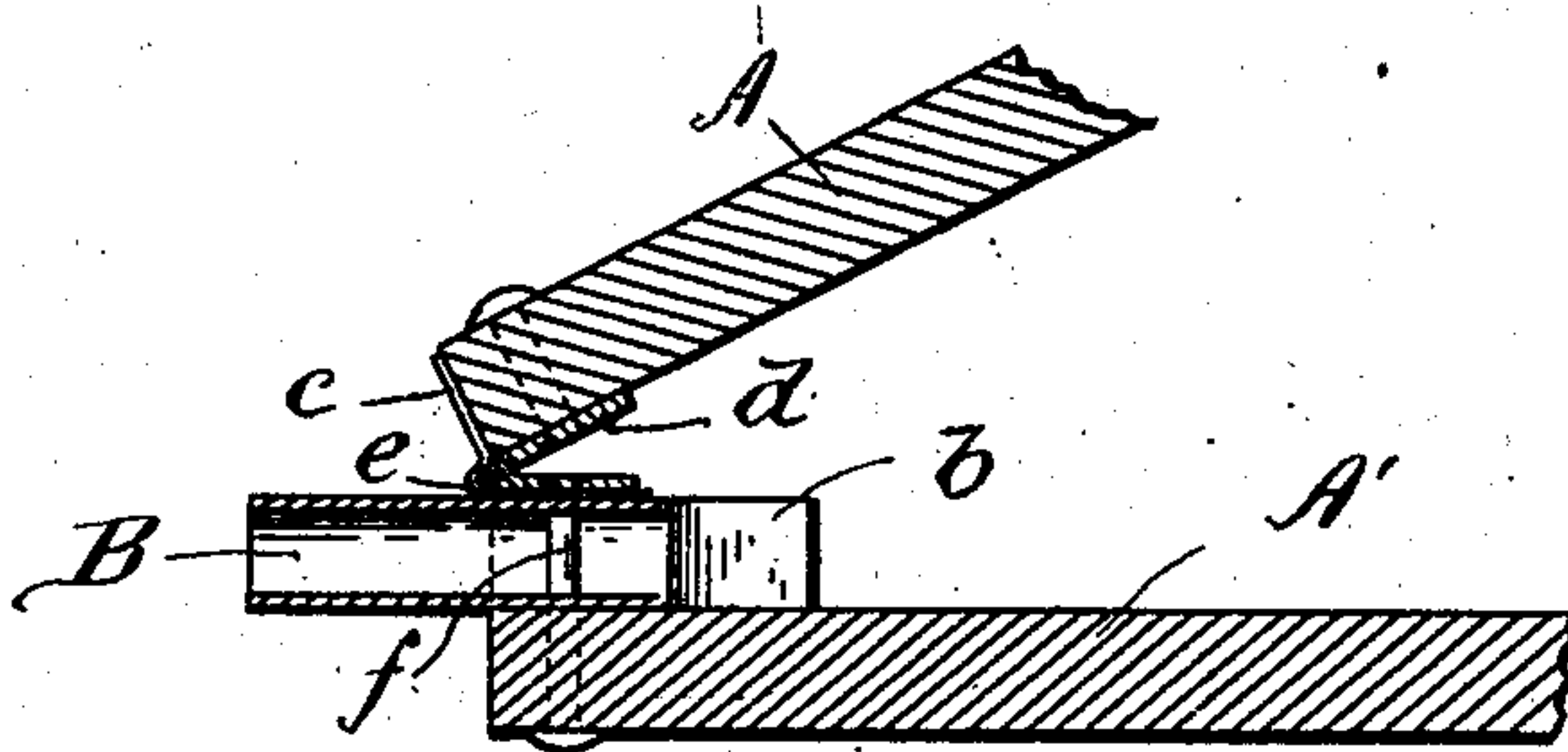


Fig. 1.

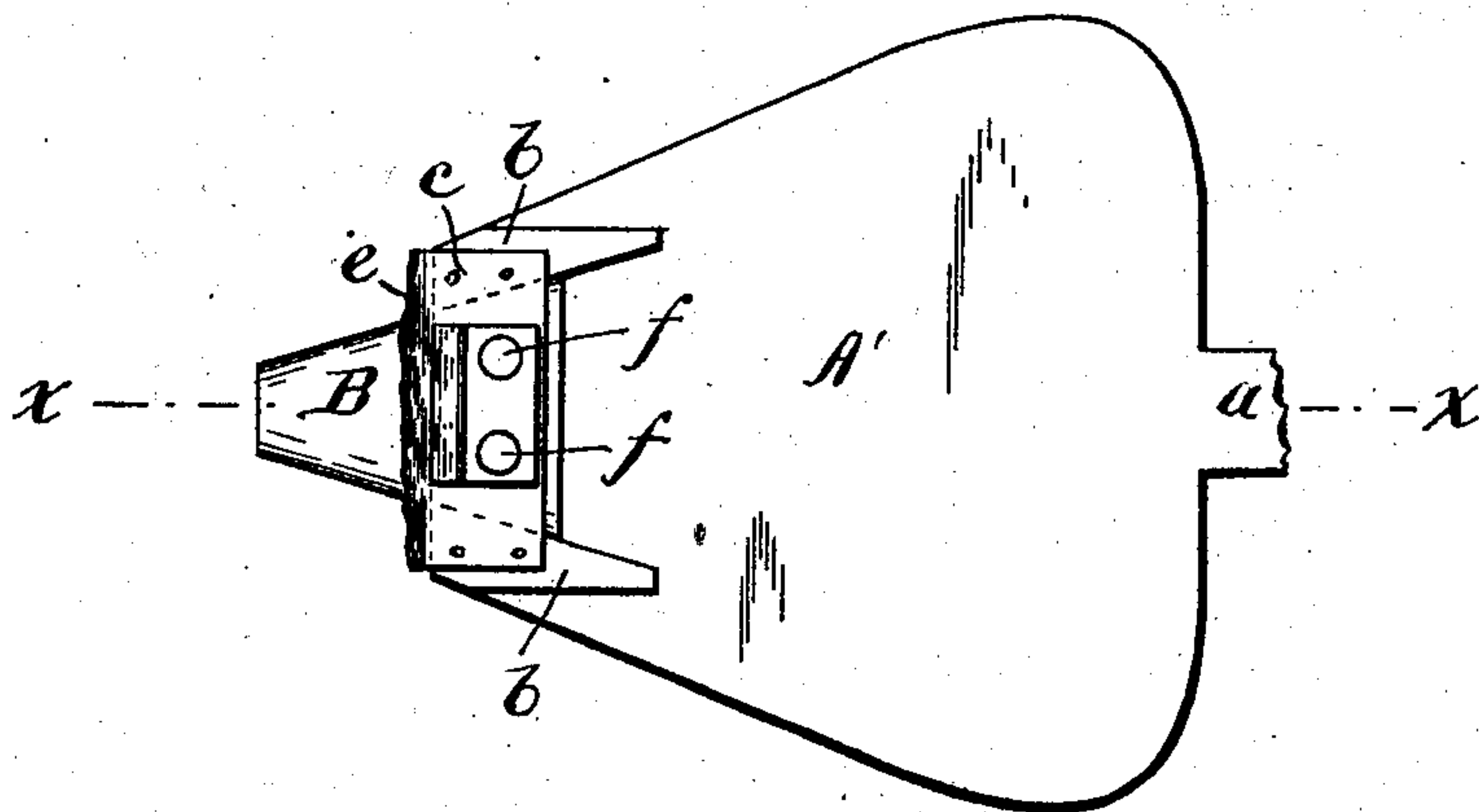


Fig. 2.

Witnesses.
Irwin A. Price
Edward Haat

Inventor.
Andrew J. Gunter,
By *Steen Heideman Melchior*
Attorneys.

UNITED STATES PATENT OFFICE.

ANDREW J. GUNTER, OF NORWOOD, OHIO.

BELLOWS.

SPECIFICATION forming part of Letters Patent No. 721,367, dated February 24, 1903.

Application filed May 26, 1902. Serial No. 109,101. (No model.)

To all whom it may concern:

Be it known that I, ANDREW J. GUNTER, a citizen of the United States, and a resident of Norwood, in the county of Hamilton and State of Ohio, have invented a certain new and useful Improvement in Bellows, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention consists in the novel construction of bellows, and is more especially applicable to hand and blacksmith bellows, whereby the same may be made air-tight and yet simple in construction, having more especially to do with the method of connecting the leaves or bellows-plates to the spout, as will be more fully hereinafter described.

In the drawings, Figure 1 is a sectional view of the forward or spout end of a bellows constructed in my improved manner, taken on the line X X of Fig. 2. Fig. 2 is a plan view of the bellows with the upper leaf or plate removed to show the method of attachment of the spout to the lower leaf and in order to more clearly illustrate the construction of the bellows.

Like letters of reference indicate identical parts in the different figures.

A A' are the bellows-plates or leaves, which are generally constructed of wood, with their forward or spout end made tapering in the usual manner and provided with the rearwardly-extending handle portion *a* when of the hand-bellows type, by means of which the bellows are operated.

B is the spout, constructed of metal and given the desired tapering shape, as clearly illustrated in Fig. 2. This spout must of course be retained in place, and to this end I prefer to secure the same to one of the bellows-plates or leaves—to wit, A'. I find in constructing the bellows that it is desirable to give the spout B a flattened oblong shape, as shown in Fig. 2, at its inner end, thus enabling me to make air-tight connections at this point.

Secured in any suitable manner or made integral with the leaf A', to which the spout B is attached, are head-blocks *b b*, which are adapted to fit snugly against the sides of the spout B to prevent the passage of air at the

sides of the spout. These blocks *b* also furnish an attaching-surface for the leather *c*, which is used to produce an air-tight joint between the hinge *d* and the spout B, as well as also closing the joint between the upper leaf A and the spout B at the point *e*, without which it would not be possible to make an air-tight construction.

By constructing a bellows in my improved manner I am enabled to secure the spout to the leaf of the bellows and one plate of the hinge together by one and the same rivets *ff*.

It will be seen that my improved bellows is very simple in construction and inexpensive to manufacture, and I am enabled also to produce a bellows which will be very efficient and air-tight. It will be also seen that the blocks *b b* furnish a surface for securing the portion of the bellows-leather thereto, or a strip of leather may be secured about the spout on the outer sides of the plates and blocks *b*, beneath which the ends of the bellows-leather may be placed and then securely fastened.

By constructing a bellows as herein described, and illustrated in the drawings accompanying this specification, it is not necessary to gouge out the bellows-plates on the inside near the inner end of the spout to form a passage for the air, as the entire inner orifice of the spout B lies between the bellows-plates.

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

1. In a bellows, the combination with the bellows-plates, a metallic spout, of head-blocks adapted to conform to the contour of the metallic spout, a strip of leather secured to said head-block across the spout and to one of the bellows-plates, and a hinge secured to the spout and one of the bellows-plates, substantially as shown and described.

2. In a bellows, the combination of the bellows-plates, a metallic spout, one of said bellows-plates provided with head-blocks adapted to receive the spout, a strip of leather passing across the spout and secured to the head-blocks, and a hinge whose one leaf is fastened on said spout by rivets securing the spout-hinge and head-block plate together, substantially as and for the purpose described.

3. In a bellows, the combination with bellows-plates, an enlarged end on one of said plates conforming to and adapted to receive the spout, a hinge for securing the two plates
5 of the bellows together, and a washer of suitable material placed between the one leaf of the hinge and the spout and secured to the enlarged end of said plate and to the outer end of the other bellows-plate, the hinge and spout and enlarged end plate being secured together by rivets substantially in the manner described. 10

ANDREW J. GUNTER.

Witnesses:

GEORGE HEIDMAN,
EDWARD HAAT.