

(No Model.)

S. H. BRAND.
BLACKSMITH'S OR HAND BELLOWS.

No. 472,187.

Patented Apr. 5, 1892.

FIG. 1.

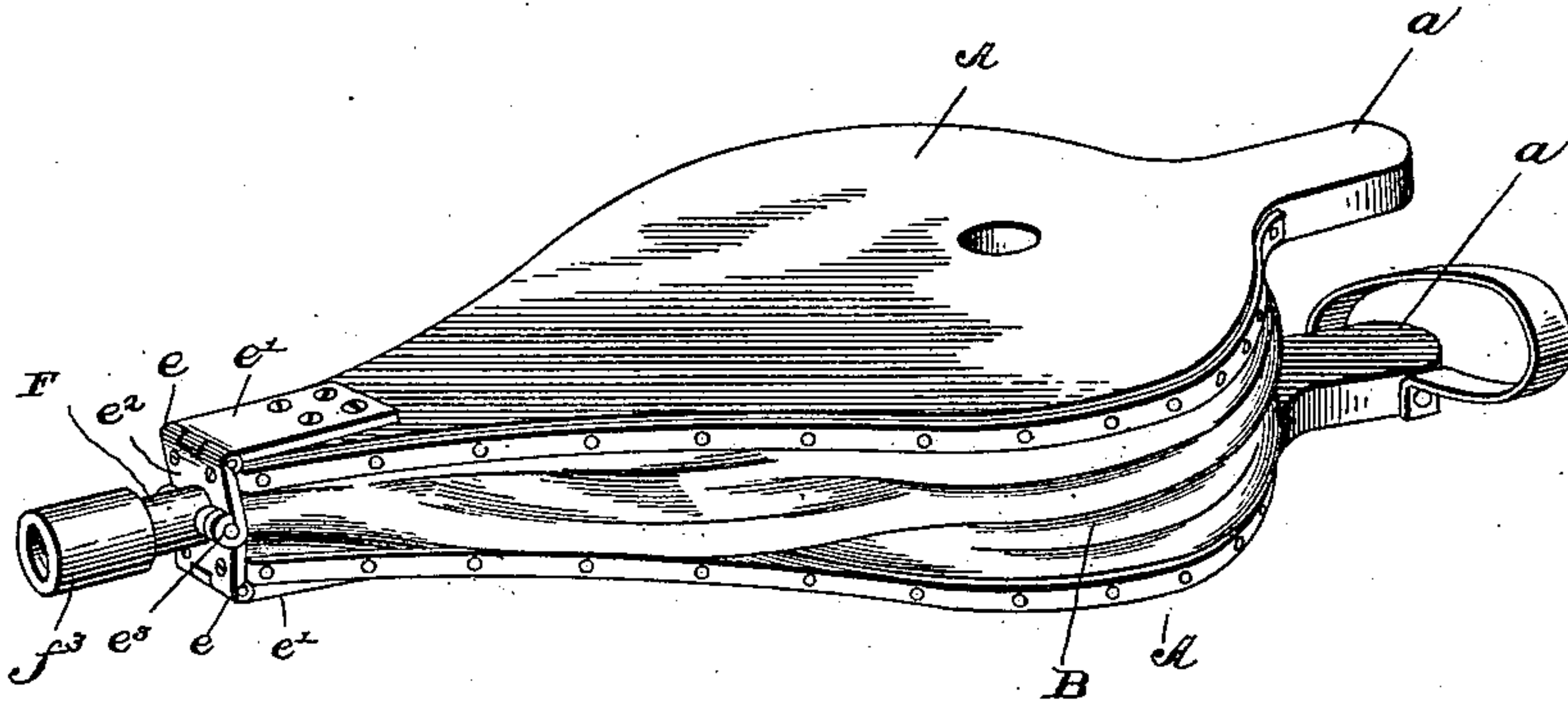


FIG. 2.

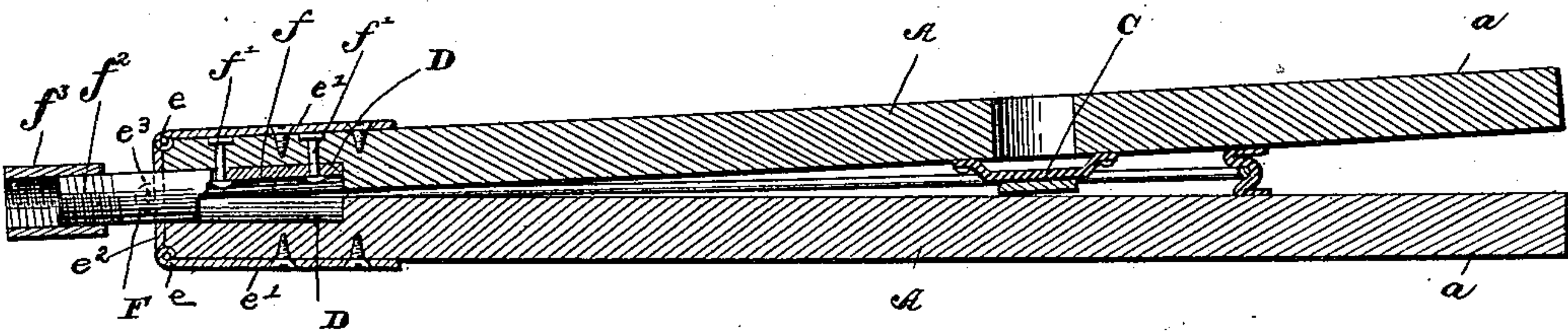


FIG. 3.

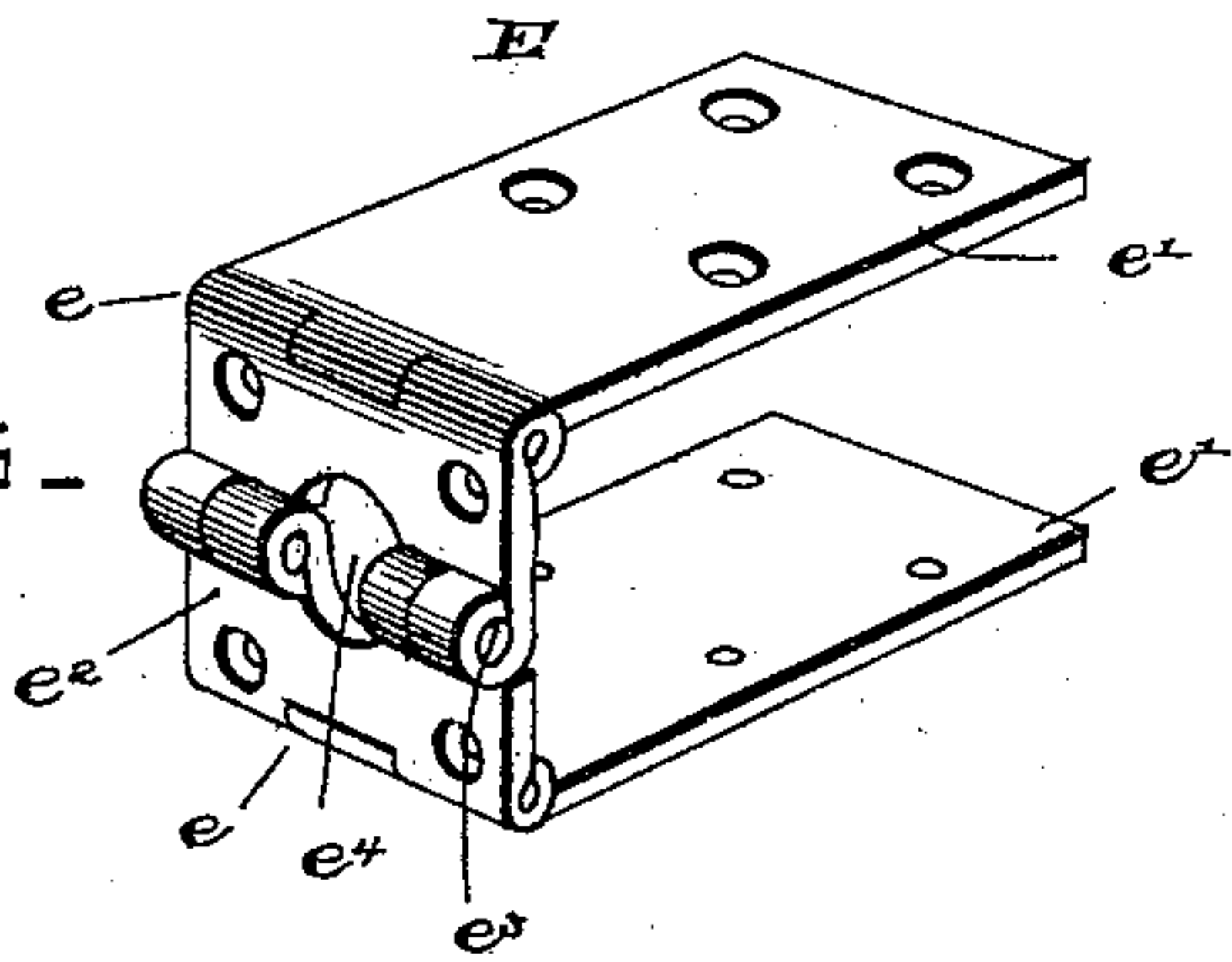
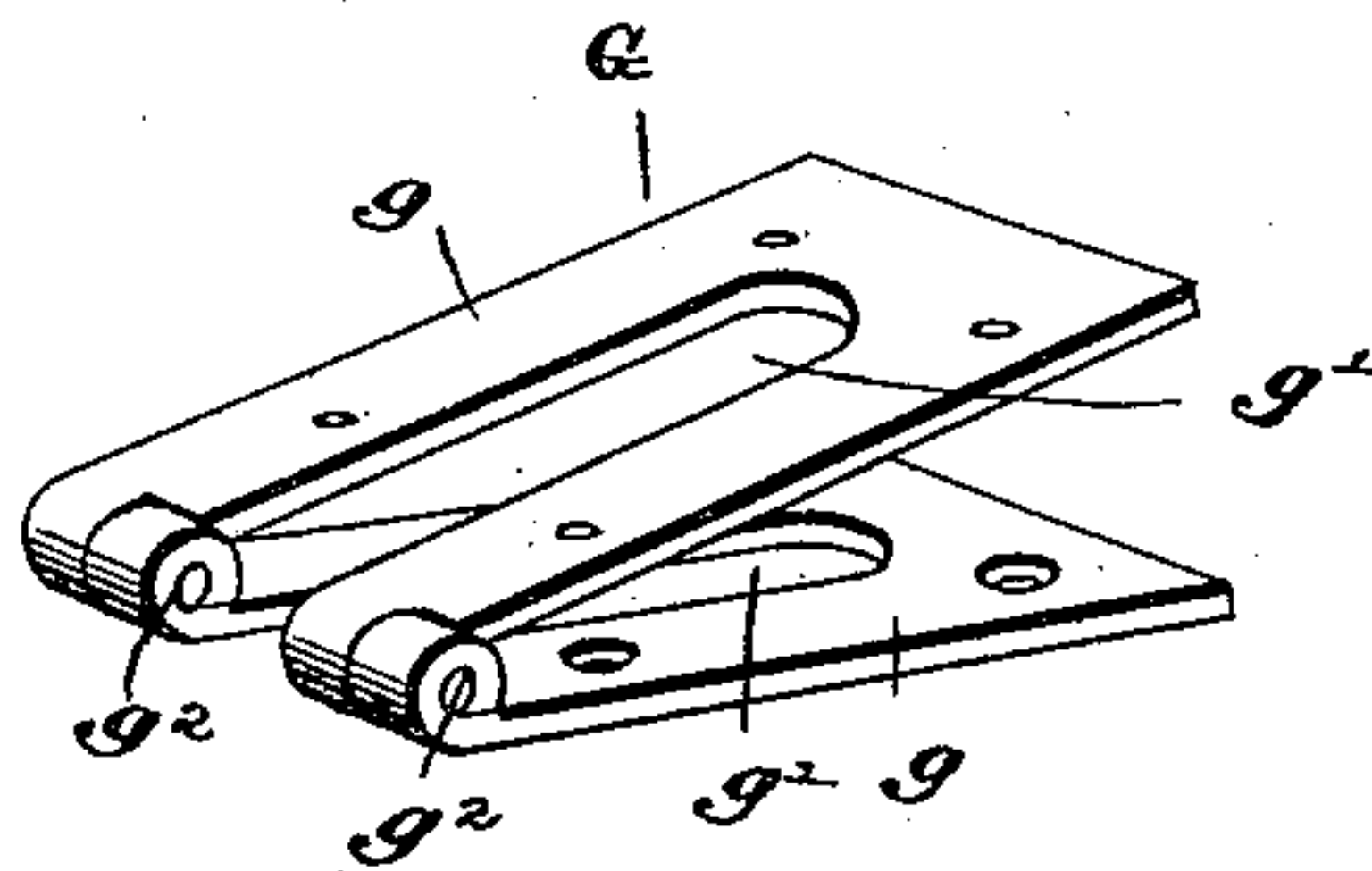


FIG. 4.



Witnesses

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BLACKSMITH'S AND HAND BELLOWS.

SPECIFICATION forming part of Letters Patent No. 472,187, dated April 5, 1892.

Application filed November 27, 1891. Serial No. 413,328. (No model.)

To all whom it may concern:

Be it known that I, SILAS HEWITT BRAND, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Blacksmith's and Hand Bellows, of which the following is a specification.

This invention relates to bellows; and it has for its object to provide an attachment or construction adapted for use upon all kinds of bellows, preferably hand or blacksmith's bellows, and to this general end it is the primary and principal object of this invention to provide an end hinge and spout attachment which will be far more durable than the old type of hand-bellows, which employ the old tapered or cone spout capping the ends of the opposite bellows-plates provided with non-durable leather hinges or metallic hinges working against the leather covering, eventually breaking the same, and thereby destroying the bellows itself and rendering it totally unfit for use, and also to avoid the cumbersome construction of having one of the plates provided with a projecting nose-piece through which is bored the discharging-hole. It is to simplify said construction and avoid the many objections thereto that the gist of this invention aims.

With these and many other objects in view, which will readily appear as the nature of the invention is fully understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a hand-bellows provided with a hinge attachment as contemplated by my invention. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a detail in perspective of the preferable form of hinge employed. Fig. 4 is a similar view of a modified form of hinge.

Referring to the accompanying drawings, A A represent the opposite bellows-plates constructed of the usual material and tapered toward their front ends in the usual shape, and the same are provided with the rearwardly-extending handle portions *a*, by means of which the same may be readily manipulated and operated. The edges of each plate are continuously connected by means of the ordi-

nary flexible leather wall B, forming an air-chamber between said plates, which, as the same are distended, is supplied with air through the valve C, located in one of said plates, and which closes upon the collapsing of the bellows, as usual. The front edges or ends of the plates A meet in alignment with each other and are bored out from the ends thereof inwardly to form the semicircular recess D, which, when the bellows is collapsed, form an approximately continuously circular opening, accommodating the discharge-pipe, as will be presently described. The said extreme front end of said plates are coupled together by the outer U-shaped hinge E, provided with the joints *e* at the meeting of the opposite arms *e'* thereof with the base *e²*, which is itself provided with the central joint *e³* intermediate of the end joints *e*, and is further provided with a circular opening *e⁴* therein, which, when the said hinge is secured over the ends of said plates, is adapted to register with the circular opening formed by the bored ends of said plates. The base of said U-shaped hinge is secured by means of suitable screws to the front ends of each plate, and the opposite arms thereof to the top faces thereof. Thus it can be readily seen by the triple-jointed hinge that there is nothing to prevent the free and easy manipulation of the bellows.

The discharge nozzle or pipe F is circular in shape and inserted through the opening in the end hinge and said plates, and is provided with an inner reduced tongue *f*, which, by means of suitable bolts *f'*, is fastened securely into one of the semicircular recesses D at the front end of one of said plates, and serves to securely hold the uncut portion of the pipe within the opening and allow the air to be forced from the bellows therethrough without any escape whatever except through said pipe, which is further provided with an outer screw-threaded end *f²*, which, by means of the coupling-sleeve *f³*, provides means for making the discharge-pipe any length desired or required.

The modification of the outer hinge E is illustrated in Fig. 4 of the drawings, and which, while differing but slightly in construction, still retains the principles and objects thereof, and is secured by means of suitable

screws at the end of, but inside of, the opposite plates A. The modified form or hinge G comprises the opposite hinge members *g*, provided with longitudinal slots *g'*, the outer
5 ends of which meet each other in the hinge-joint *g*², which, while allowing for the ready manipulation of the bellows, also provides an opening for the reception of the discharge-pipe, which is secured in place in the man-
10 ner previously described.

It is of course understood that the leather wall B encircles and covers all parts where there is likely to be any leakage.

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

1. In a bellows, the combination of the opposite bellows-plates provided with rounded recesses in their outer meeting ends, a metallic hinge joining the meeting ends of said
20 plates and provided with an opening communicating with said recesses, and a discharge-pipe secured in said opening of the hinge and said recesses, substantially as set forth.

25 2. In a bellows, the combination of the op-

posite bellows-plates provided with opposing semicircular recesses at their outer meeting ends, a triple-jointed U-shaped hinge capping the outer ends of said plates and provided with a circular recess registering with
30 the opening formed by said semicircular recesses, and a discharge-pipe located within said opening and recesses and provided with an inwardly-extending tongue secured within one of said semicircular recesses, substan-
35 tially as set forth.

3. In a bellows, the combination of the opposite bellows-plates, a triple-jointed U-shaped hinge capping the outer ends of said
40 plates and provided with a circular recess, and a discharge-pipe located within said recess, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

SILAS HEWITT BRAND.

Witnesses:

CARL BEUTIN,
GEORGE DUFFY.