

S. W. BUDD.
Improvement in Pad Locks.

Patented Jan. 23, 1872.

No. 122,991.

FIG. 1

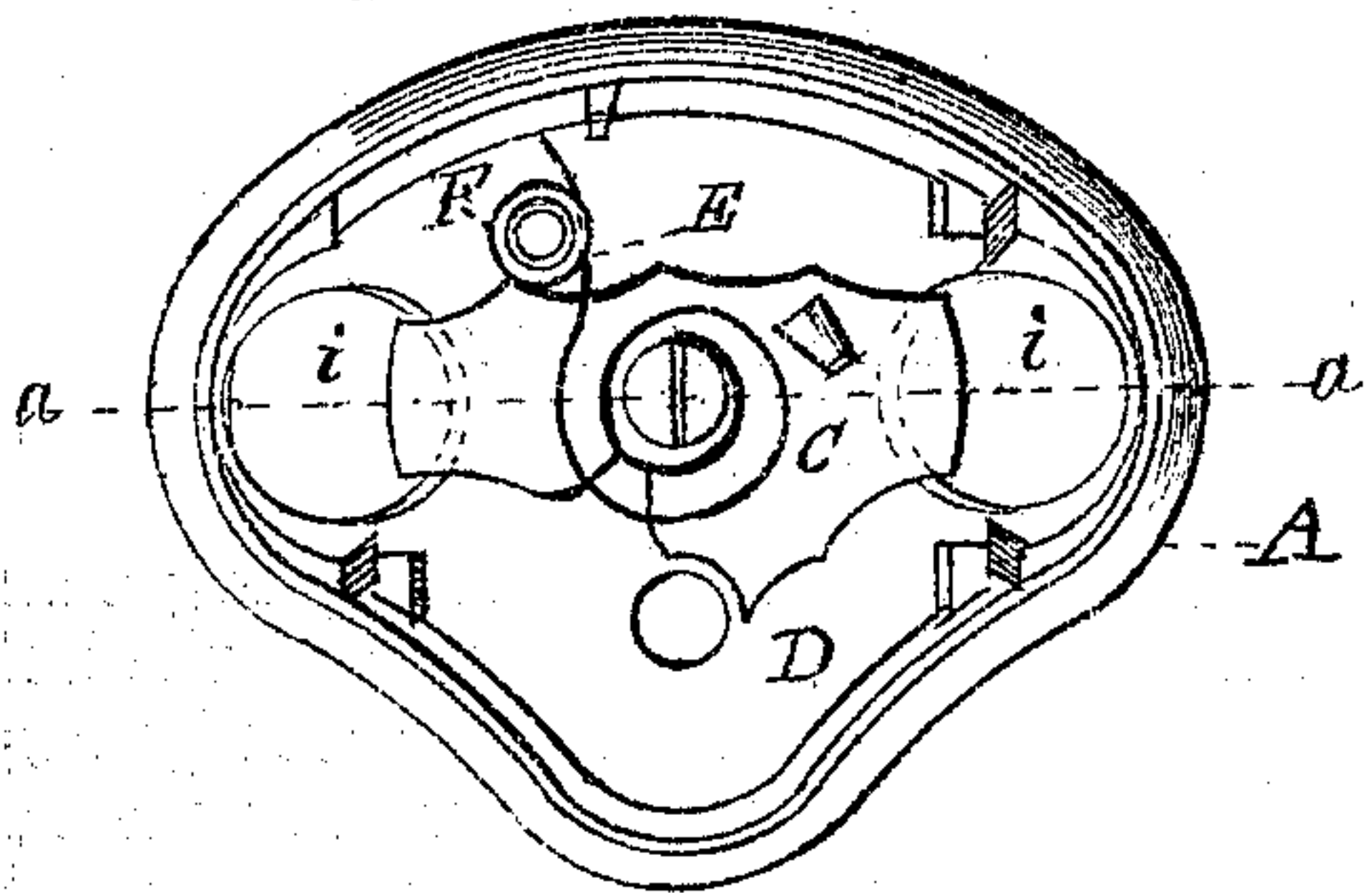


FIG. 3

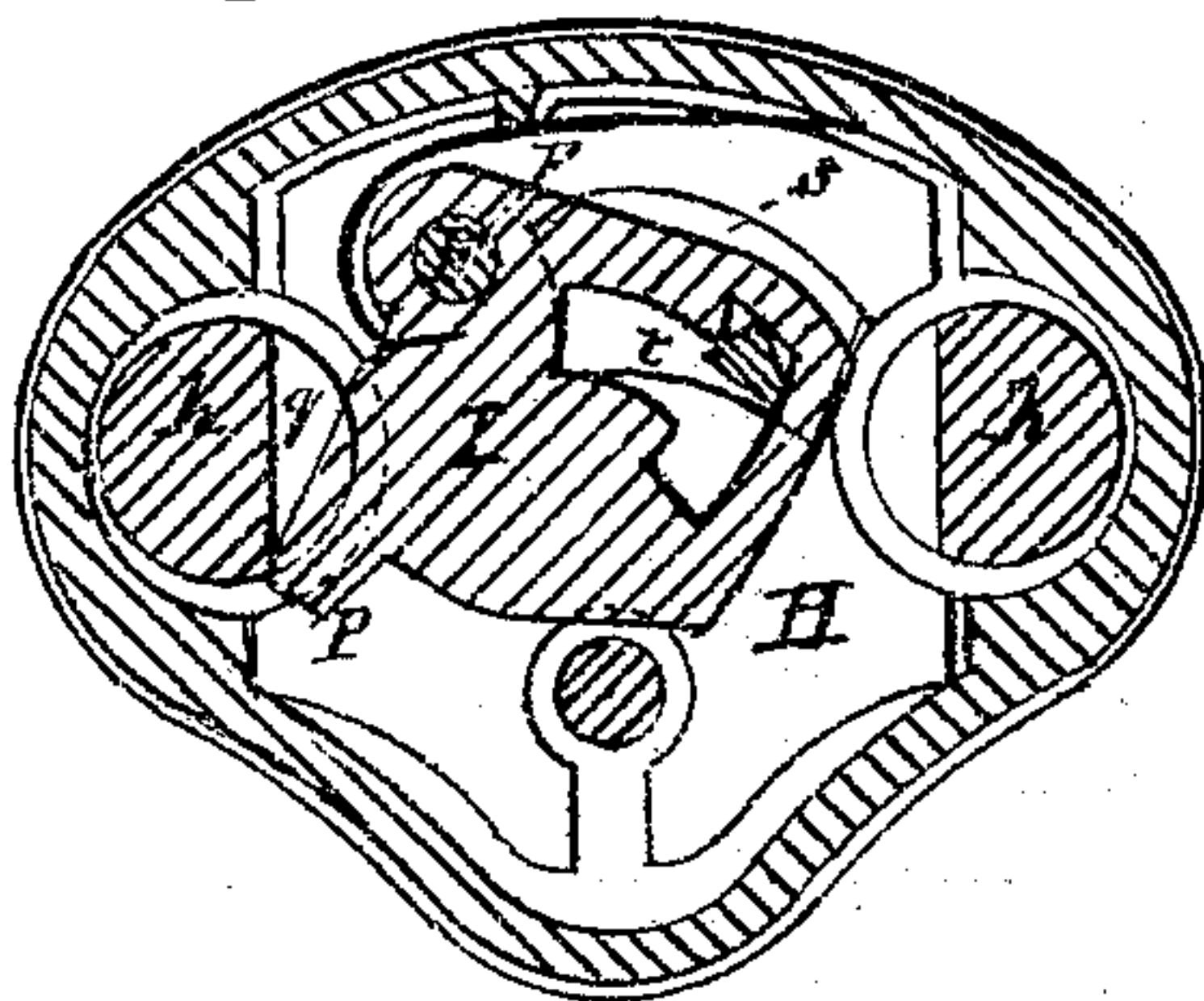


FIG. 2

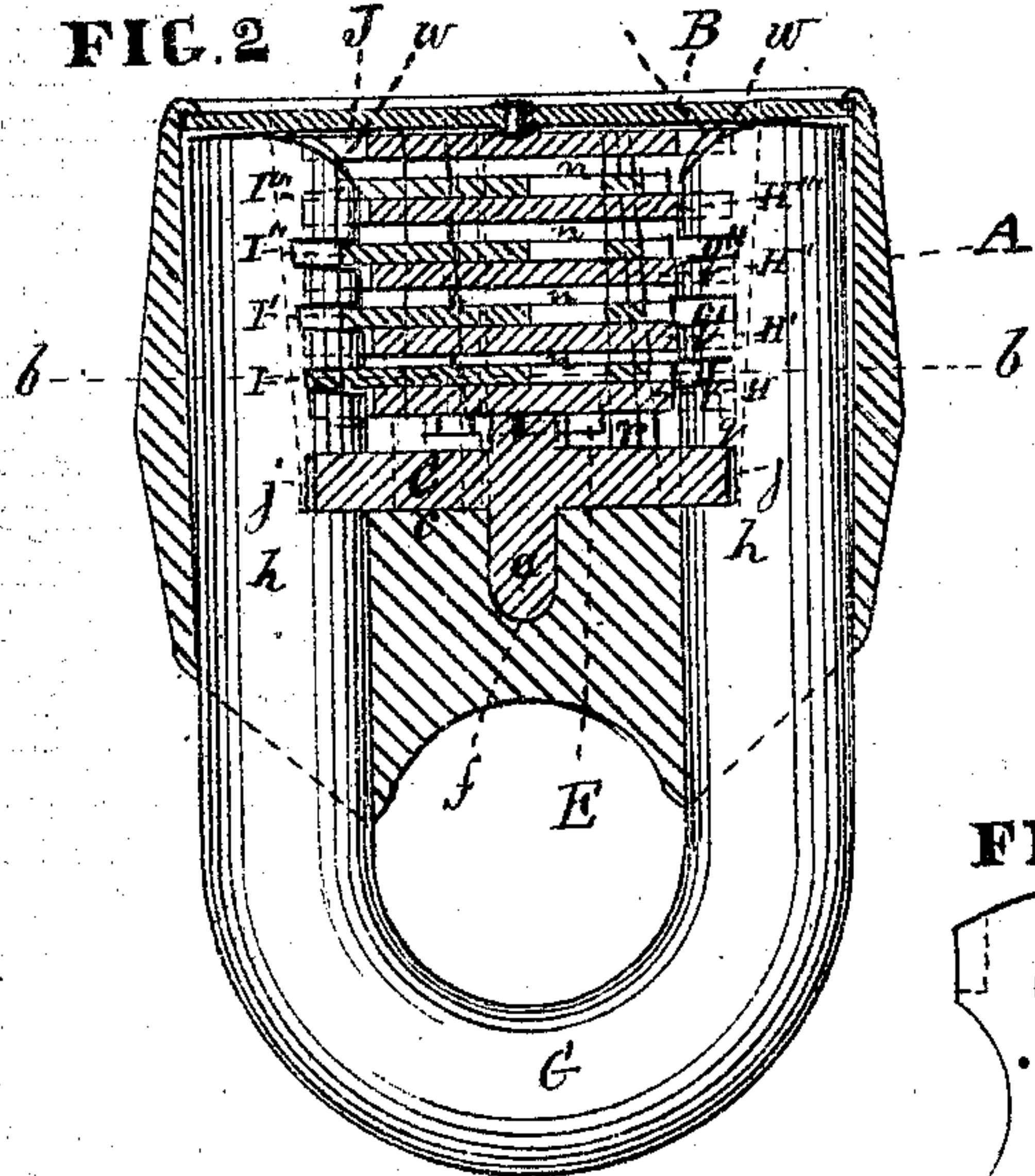


FIG. 4

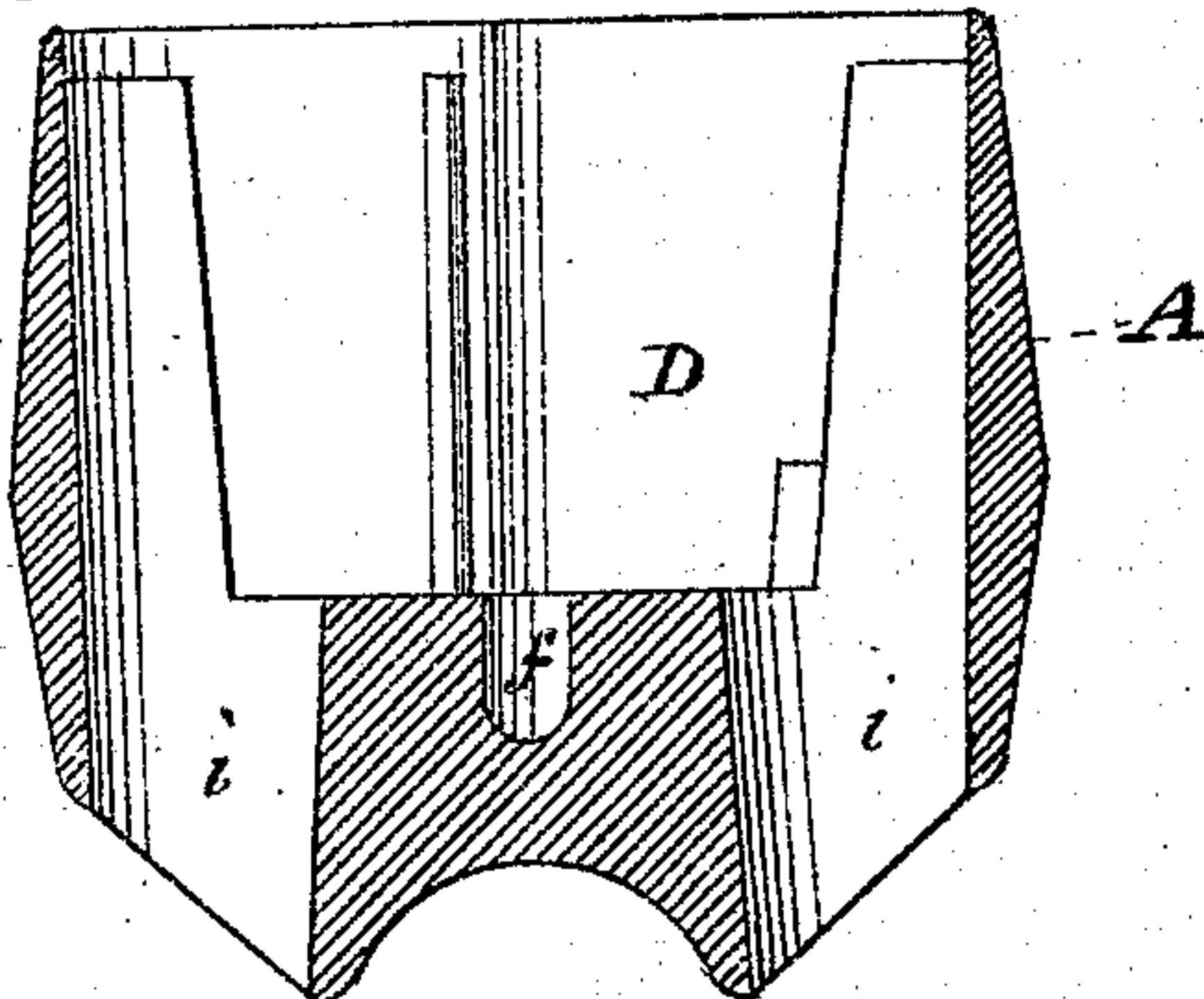


FIG. 9

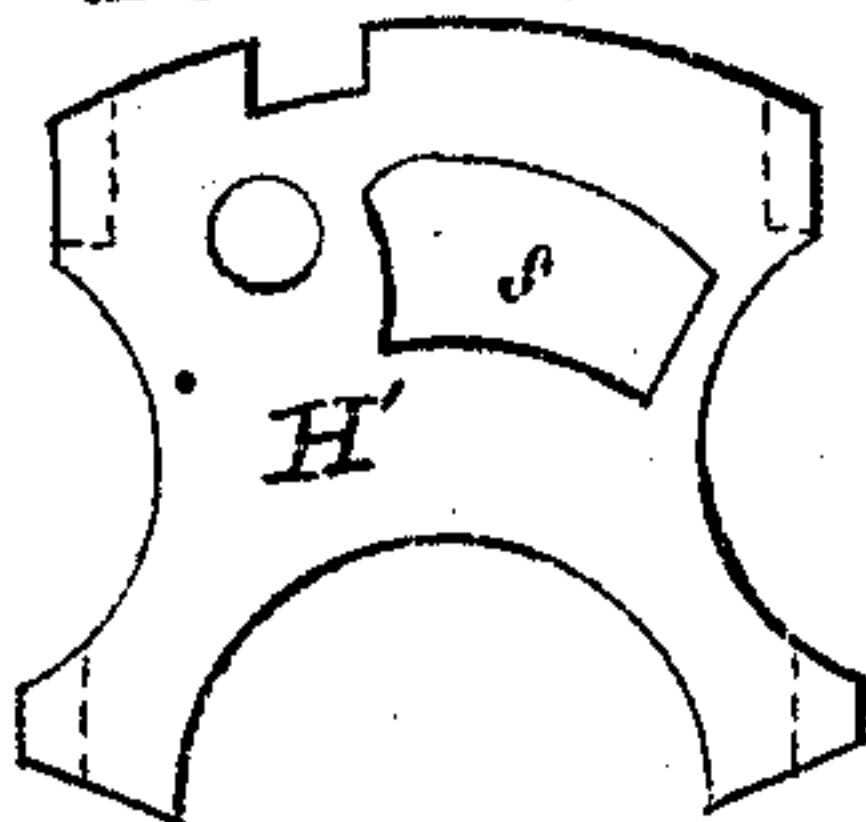


FIG. 7

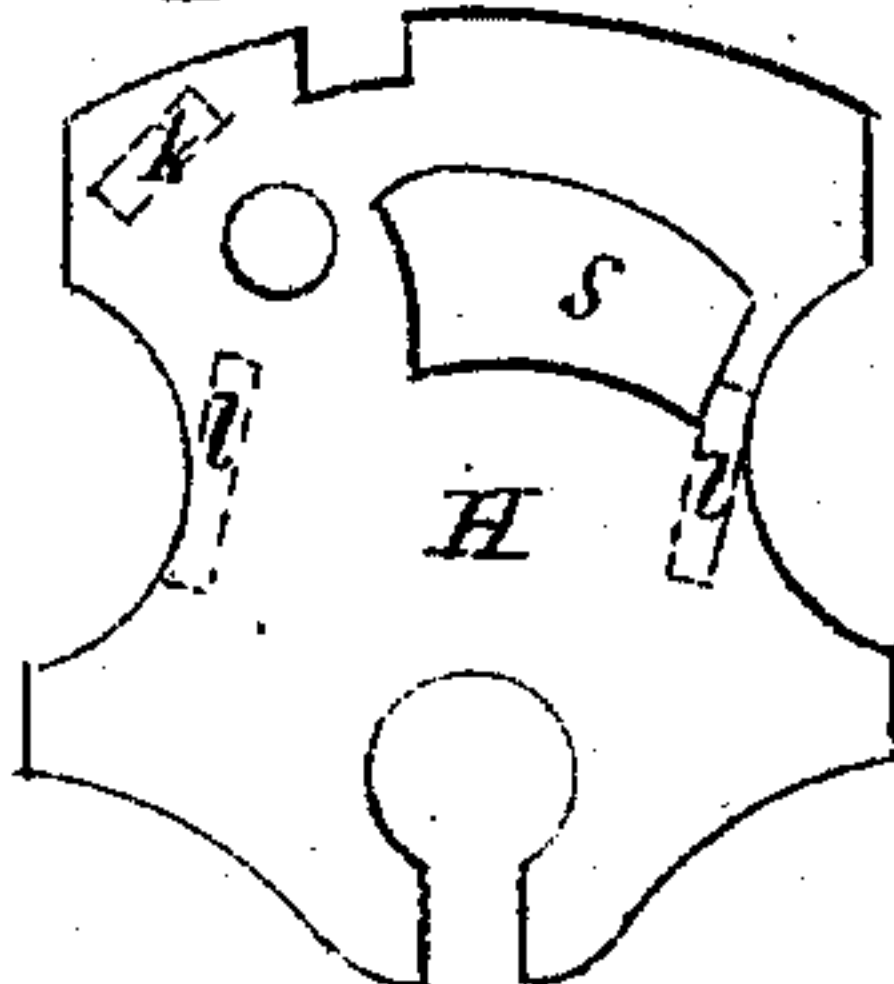


FIG. 5

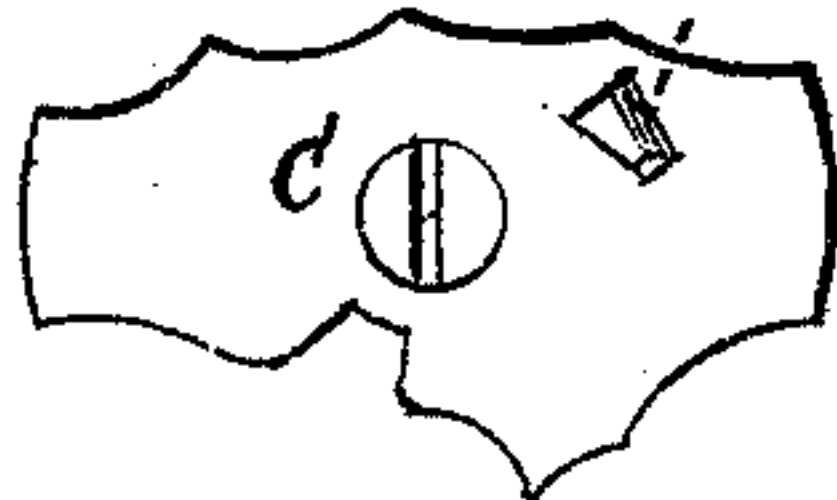


FIG. 10

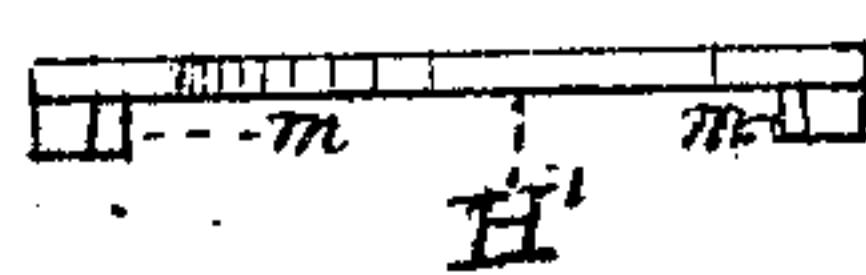


FIG. 8

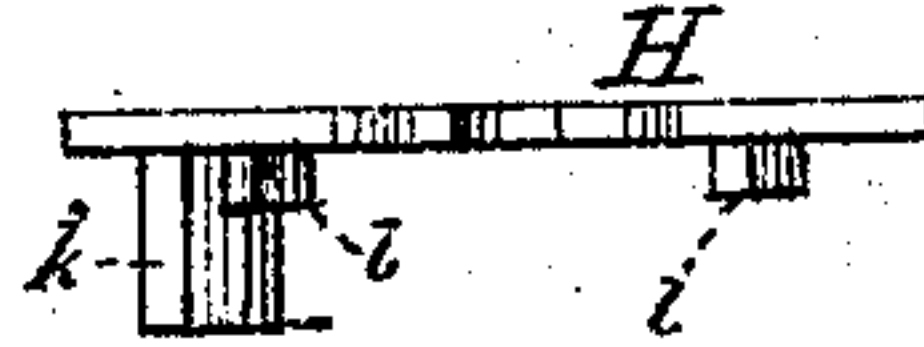


FIG. 13

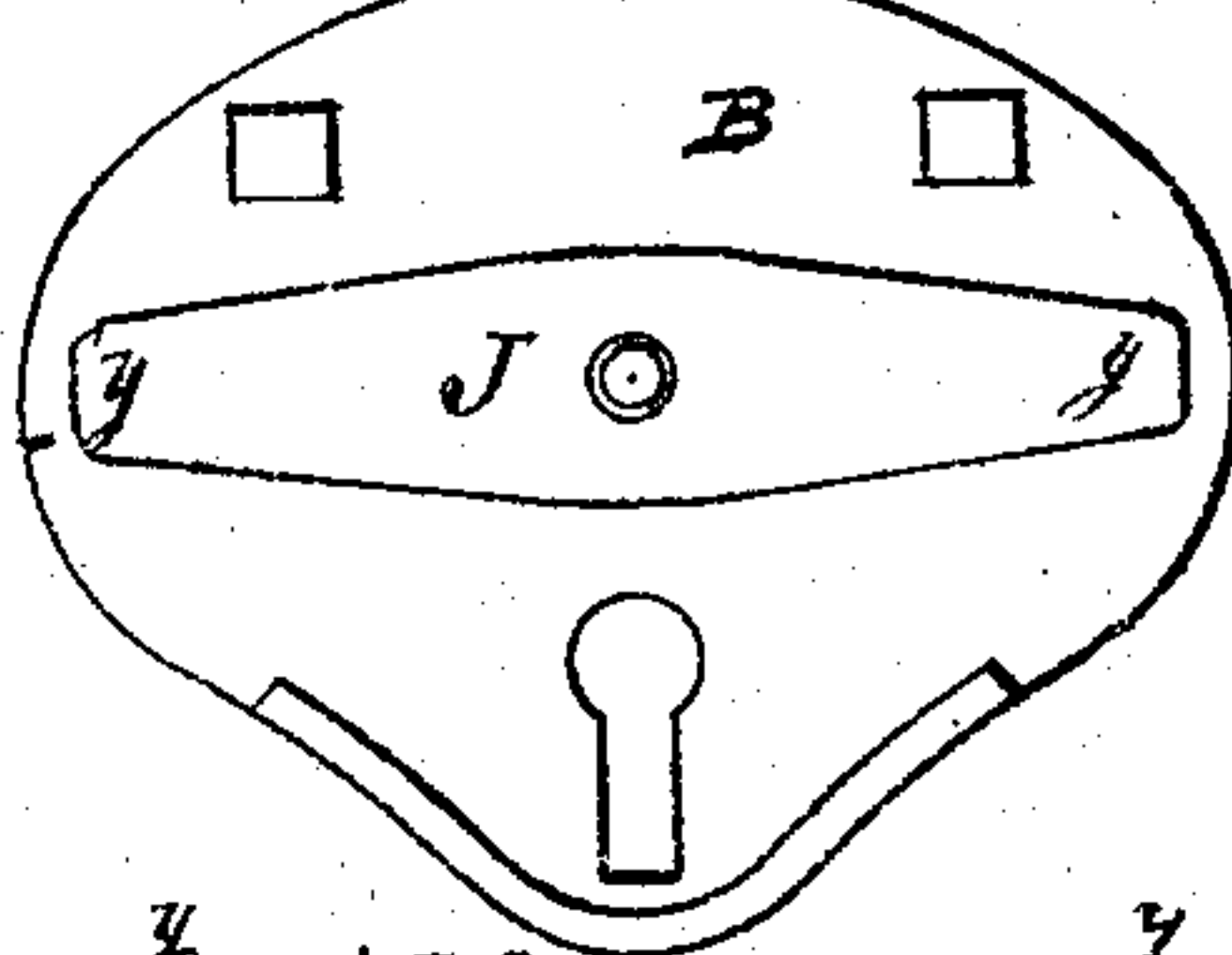


FIG. 6

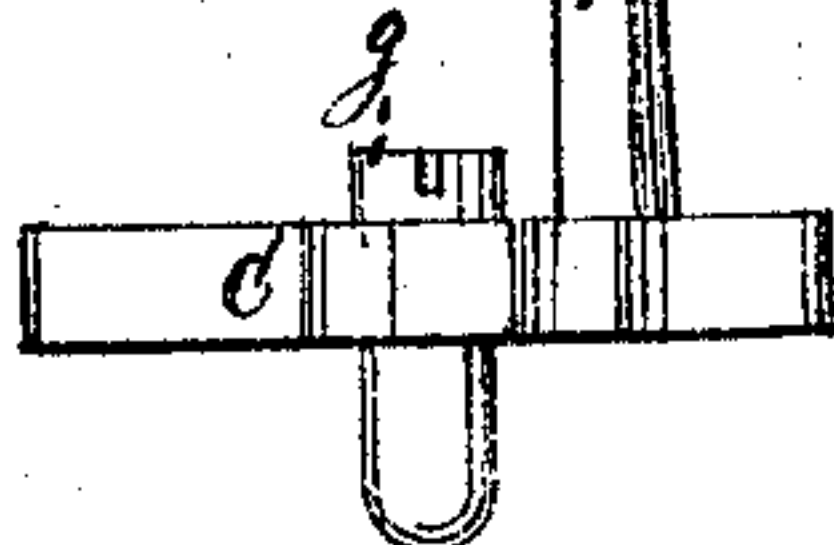


FIG. 11

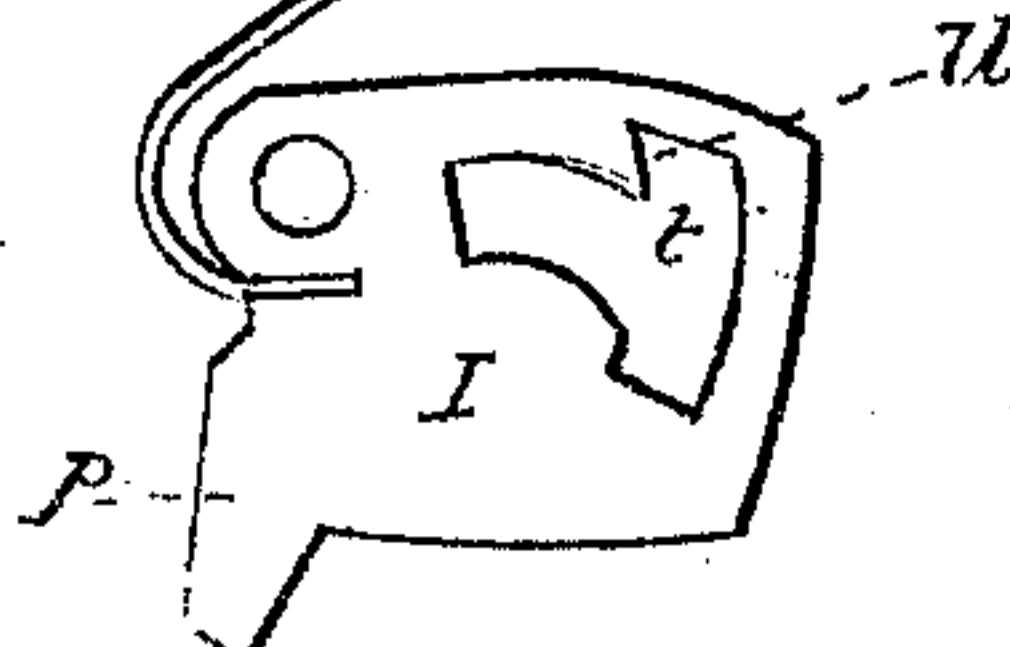


FIG. 12

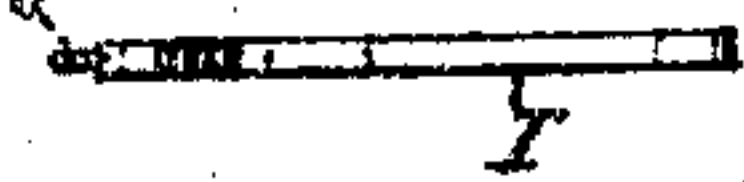


FIG. 15

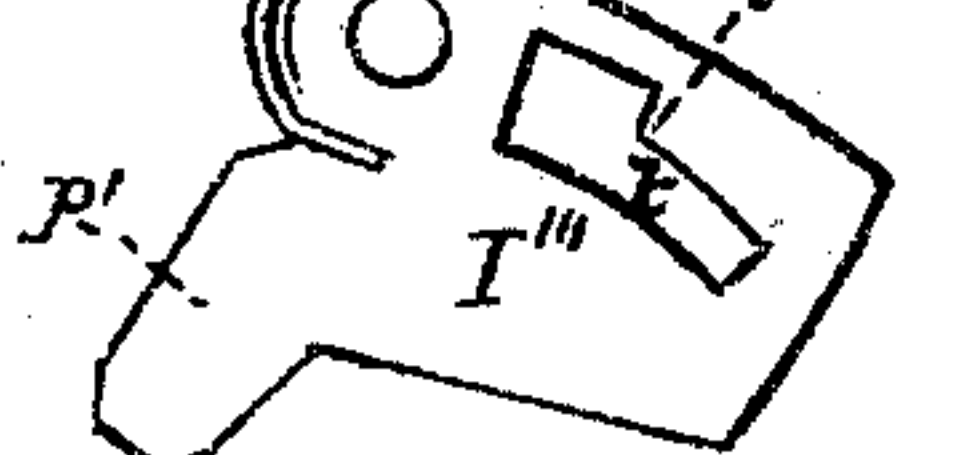
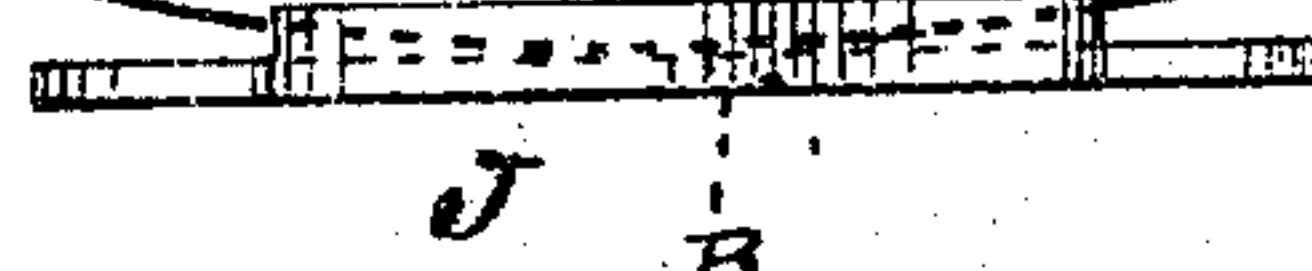


FIG. 14



WITNESSES:

Thomas J. Bewley
David Hodge

INVENTOR

Samuel W. Budd
by his Attorney.

Stephen Votick

UNITED STATES PATENT OFFICE.

SAMUEL W. BUDD, OF PHILADELPHIA, PENN-
SYLVANIA, ASSIGNOR TO HIM-
SELF AND HENRY BUDD, OF SAME PLACE.

IMPROVEMENT IN PADLOCKS:

Specification forming part of Letters Patent No. 122,991, dated January 23, 1872.

Specification describing certain Improve-
ments in Jail-Padlocks, invented by SAMUEL
W. BUDD, of the city of Philadelphia and State
of Pennsylvania.

My invention consists of the following par-
ticulars: The bridges which support the tum-
blers are provided with feet, and the feet of
each succeeding bridge rest upon the bridge
next below it, throughout the series, to form
spaces to hold the tumblers, and in which they
have free play. Each of the tumblers is pro-
vided with a projection, and all but the last
one of the series engage with a cross-slot in
the shackle to assist in locking the same. Each
of these tumblers has a slot with which an arm
of the bolt is connected in such a manner as
to hold the bolt in its locked position until the
tumblers have, by the action of the key, been
partly raised. The projection of the last tum-
bler in the series, in combination with an in-
cline on the end of one prong of the shackle,
and the above-mentioned arm of the bolt, in
combination with a projection in a slot of the
said tumbler, are used to hold the bolt in its
unlocked position, as hereinafter described.

Figure 1 is a plan view of the case A, hav-
ing the bolt C in position and the cap-plate B
removed. Fig. 2 is a longitudinal section of
the improved lock at the line *a a* of Fig. 1.
Fig. 3 is a cross-section at the line *b b* of Fig.
2. Fig. 4 is a longitudinal section of the case
A. Figs. 5 and 6 are a plan and edge views
of the bolt C. Figs. 7 and 8 are a plan and
edge views of the bridge H. Figs. 9 and 10
are like views of the bridge H'. Figs. 11 and
12 are like views of the tumbler I. Fig. 13 is
a reversed plan of the cap-plate B. Fig. 14 is
an edge view of the same. Fig. 15 is a face
view of the tumbler I'''.

Like letters in all the figures indicate the
same parts.

A is the body or case of the lock. B, seen
in detail in Figs. 13 and 14, is the cap-plate.
C is the bolt. It is represented in detail in
Figs. 5 and 6. It rests on the bottom *c* of the
chamber D of the case A, and is connected
therewith by means of the pin *a*, on which it
turns—the pin fitting in the central hole *f*.
The bolt is provided with a spring, E, which
bears against the stationary post F, and brings
the former into its locking position, seen in

Figs. 1, 2, and 3, the heel of the spring being
held in a slot in the projection *g* of the bolt.
G is a shackle, of staple form, whose prongs,
h h, are passed into the openings *i i* of the case
A, and when in the position seen in Fig. 2 the
bolt in locking the same is connected with each
prong by the ends of the former falling into
the slots *j j*. H H' H'' H''' H'''' are bridge-
plates, between which are placed the tumblers
I, I', I'', and I''', which are hung on the post F.
The bridge H is shown in detail in Figs. 7 and
8, and the bridge H' in Figs. 9 and 10. The
bridges H'' H''' H'''' are of similar construc-
tion to that of H'. The tumbler is represent-
ed in Figs. 11 and 12. The bottom bridge-
plate H is supported at one corner by means
of the foot *k*. The other corners are support-
ed by lugs on the sides of the chamber D. The
lugs *l l* nearly touch the contiguous side of the
bolt, to assist in keeping it in its normal po-
sition in the plane of its movements. The re-
maining bridges are provided with feet *m*, the
feet of one plate resting against the contiguous
plate beneath, to form spaces *n*, in which the
tumblers have a free movement. The tumblers
are provided with springs *o*, which bear against
one side of the chamber D, and cause the pro-
jection *p* of the tumblers I, I', and I'' to fall in-
to the cross-bolts *q, q', and q''* of the contiguous
prong *h*. The two prongs of the shackle are
slotted alike, to admit of the tumblers con-
necting with either prong. The bolt C is pro-
vided with an arm, *r*, which passes through
the slots *s* of the bridges and the slots *t* of the
tumblers. The said slot in tumblers I, I', and
I'' have shoulders *u*, against which the arm *r*
of the bolt C rests, whereby the bolt is held in
its locked position until the tumblers are part-
ly lifted by the action of the key. The move-
ment of the tumblers then removes the shoul-
ders *u* from the arm and allows the bolt to be
sprung open. The slot *t* of the tumbler I''' has
a shoulder, *v*, seen in Fig. 15, against which
the arm *r* rests, whereby the bolt is held in its
unlocked position until the shackle G is brought
nearly into its position to be locked. Then the
incline *w*, on the contiguous prong *h* of the
shackle, bears against the projection *p'* of the
tumbler, and turns the same partly around, so
as to disengage the projection *v* from the arm
r, and thus admit of the spring E shooting the

bolt C into its locking position. When the shackle is freed from its connection with the bolt and tumblers it is ejected from the case A by means of the spring J, which is confined to the inner side of the cap-plate B, the resilient parts *y y* bearing against the ends of the shackle, as seen in Fig. 2.

I claim as my invention—

1. The projections *p* and shoulders *u* of the tumblers I I' I'', in combination with the re-

cesses *q q' q''* of the shackle G and the arm *r* of the bolt *c*, for the purpose herein set forth.

2. The projections *p'* and *v* of the tumbler I''', in combination with the incline *w* on the prong *h* of the shackle and the arm *r* of the bolt *c*, for the purpose above set forth.

SAMUEL W. BUDD.

Witnesses:

STEPHEN USTICK,
THOMAS J. BEWLEY.