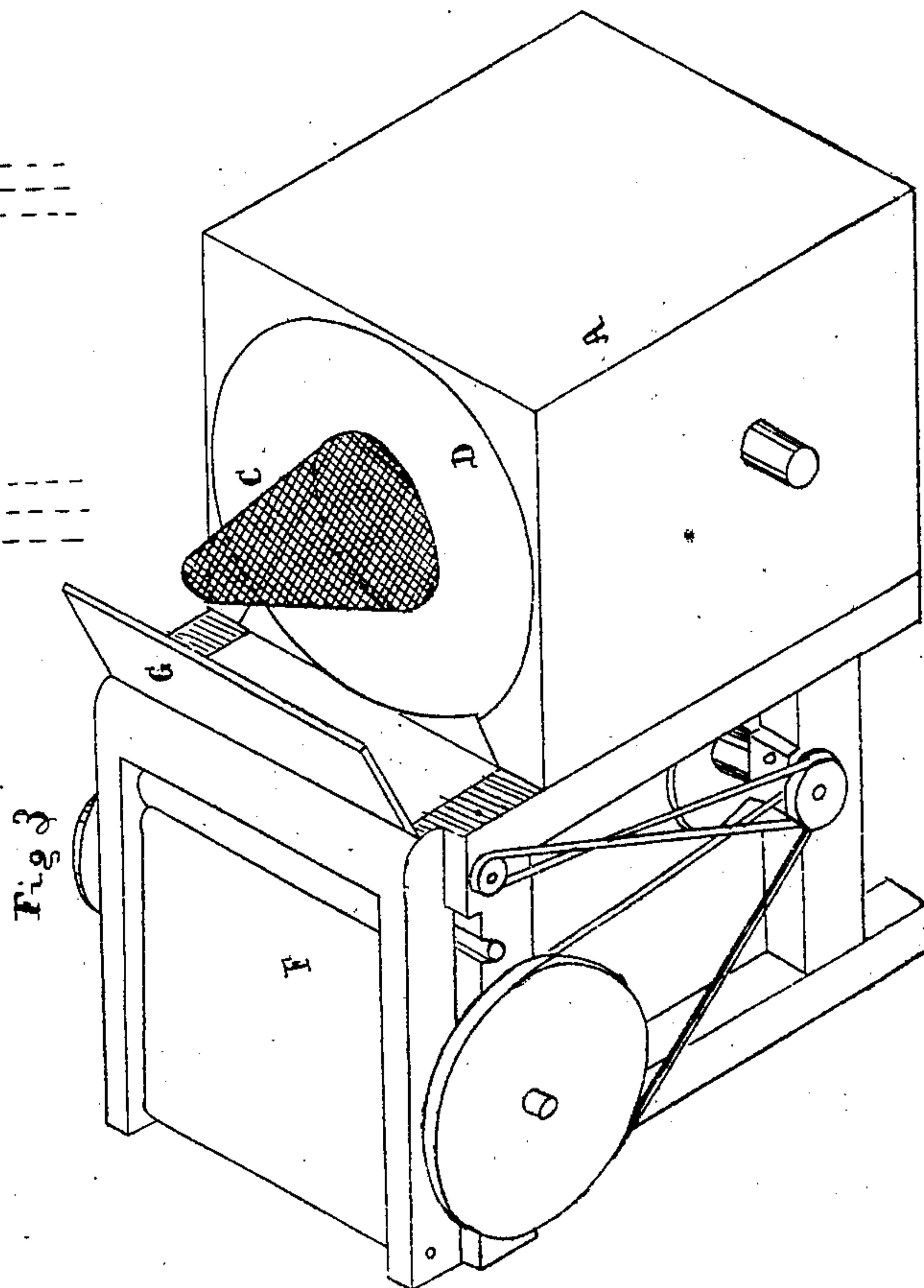
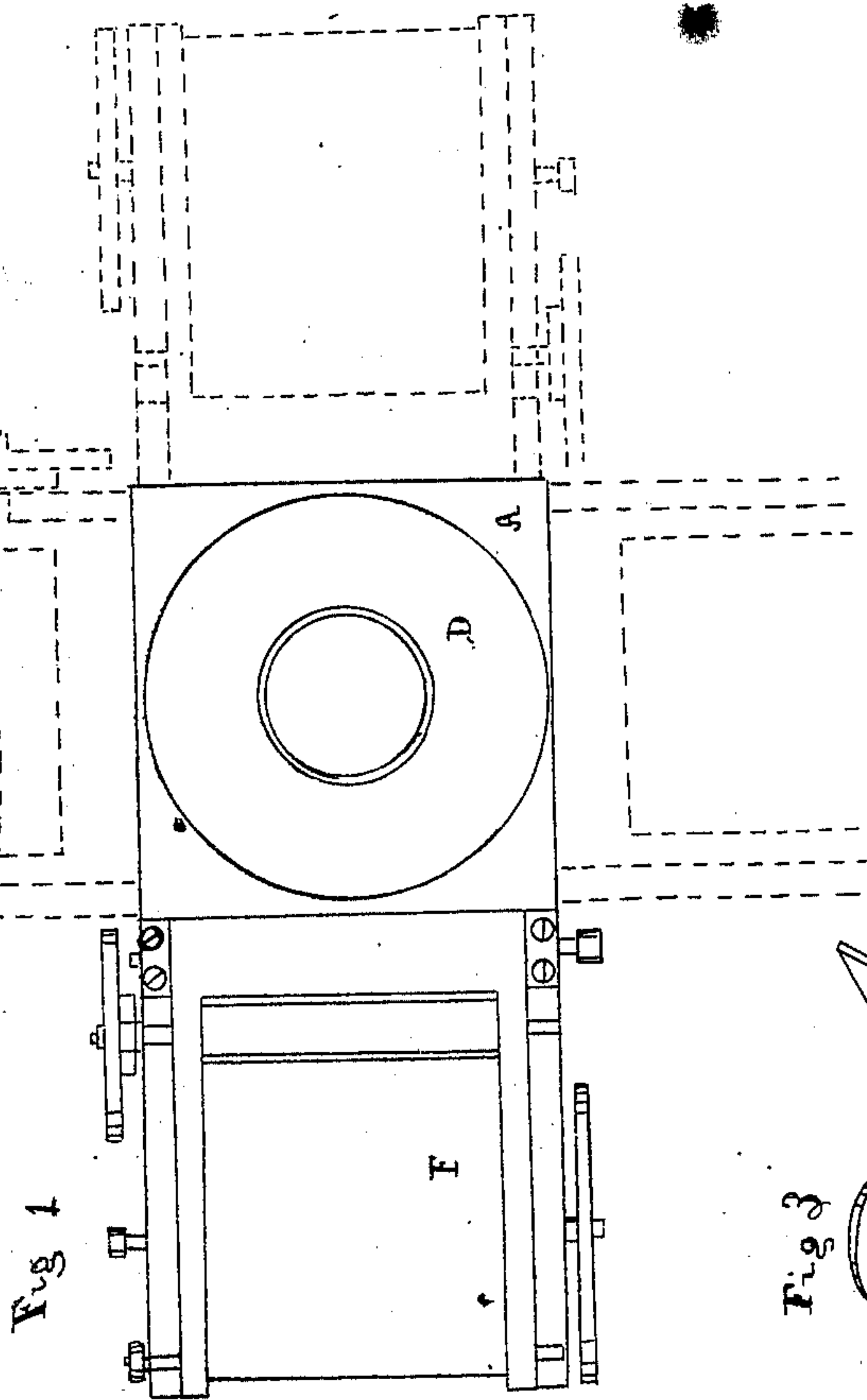
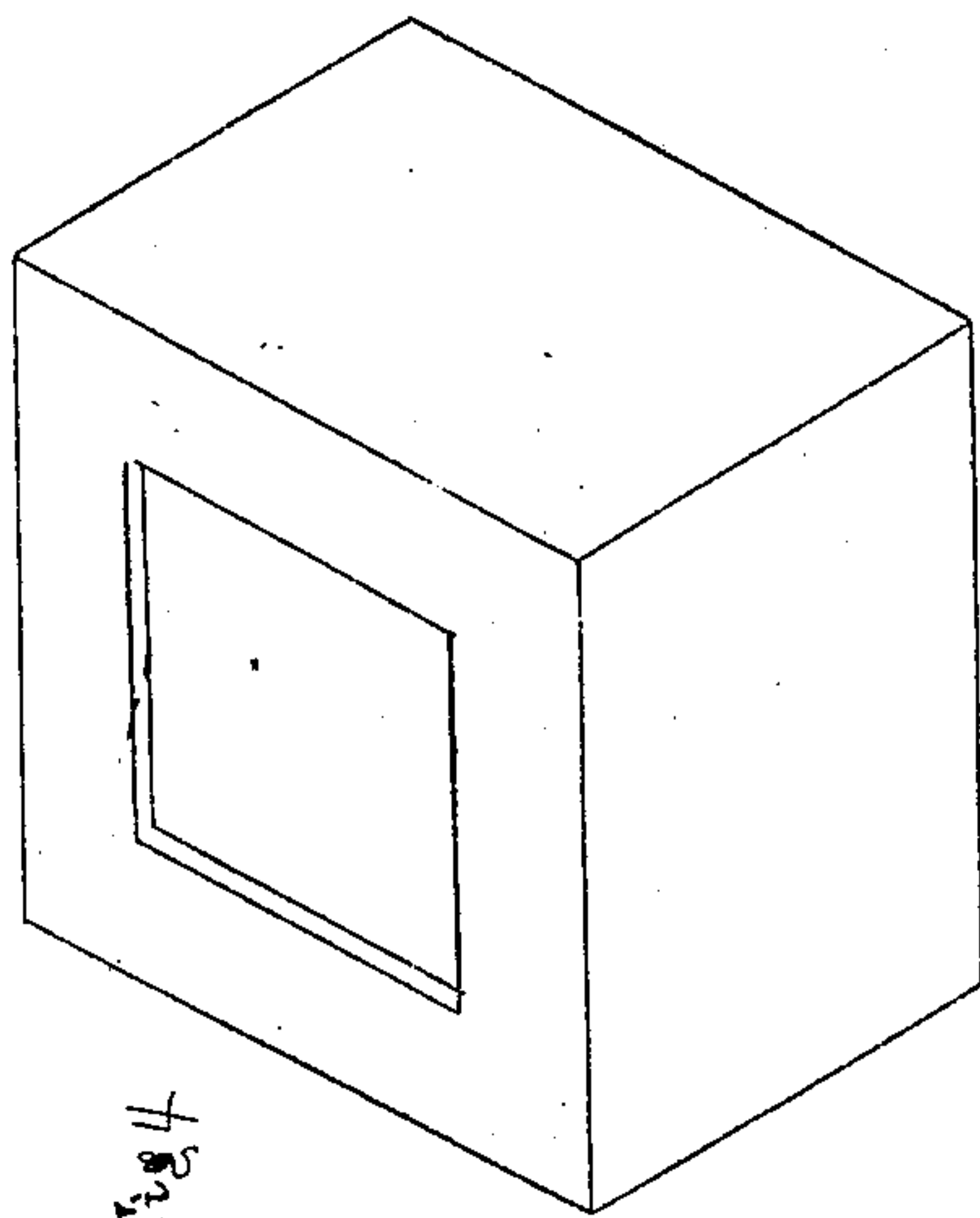
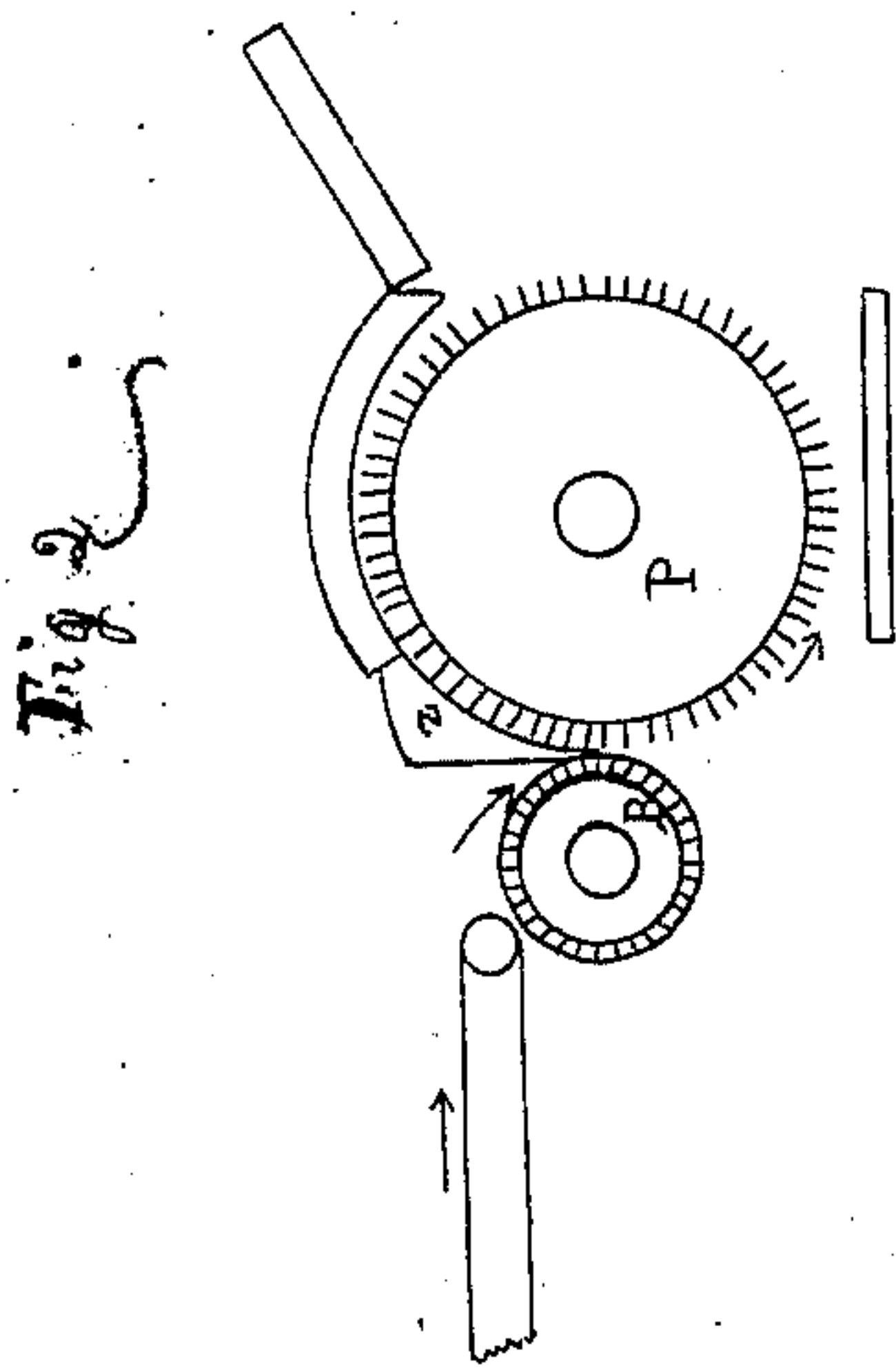


I. Searles.
Forming Bats.

No. 11,910.

Patented Nov. 7, 1851,



UNITED STATES PATENT OFFICE.

ISAAC SEARLES, OF NEWARK, NEW JERSEY.

MACHINERY FOR MAKING HAT-BODIES.

Specification of Letters Patent No. 11,910, dated November 7, 1854.

To all whom it may concern:

Be it known that I, ISAAC SEARLES, of Newark, in the county of Essex and State of New Jersey, have invented a new and useful
5 Machine for Making Hat-Bodies; and I hereby declare the following to be a full and clear description thereof, reference being had to the drawings herewith presented, which drawings constitute a part of said de-
10 scription.

Two difficulties have hitherto attended the making of fine hat bodies by use of the common machines so that the manufacturers of fine fur hats have preferred making them by
15 hand. The source of one difficulty has been in the picker, the picker teeth cannot be brought near enough to the bite of the feeding rolls, so but that the fur will have passed the line of contact before it reaches the teeth
20 of the picking cylinder and consequently a part of the fur will be thrown upon the cone in tufts that will cause a knotty appearance on the surface of the hat. I have obviated this by using a brush feed roller, or cylinder furnished with bristles, see (B) in Figure
25 2 which shows an enlarged section of the feeding roll, this revolves against a metallic plate or bar (Z) which extends nearly down to the center of the roll terminating in a
30 thin edge so that the picking cylinder (P) comes close up to it. It may be seen that the teeth of the picking cylinder strike within a twentieth of an inch of the roller and the fur is held and combed out straight before
35 it is released from the shell, the object is to have the fibers all separated.

I am aware that rolls have been tried that were covered with card fillets, but if we set them near enough to catch the fur they will
40 hit the teeth and dull them. I have found the bristles to be much the best.

Another objection arises from using a single picker and throwing all the fur on one side of the cone, it is necessary to re-
45 volve the cone very fast, in order to lay the fur on all sides equally thick, and this motion causes the fibers to lie mostly in a direction parallel to the tangent, or in a lateral direction, and having the fur nearly all in
50 one direction makes it very difficult to work

and very tender in the opposite direction. To remedy this I have four pickers working on the four sides of the cone (C,) as indicated by the dotted lines on Fig. 1
55 which is a plan of the machine showing one picker and the air chest in which are the fans to exhaust the air from the cone. As all the pickers are alike it is only necessary to show one, and the dotted lines indicate the positions of the others. 60

Now by throwing the fur on all sides of the cone at once we are enabled to lay it equally over the surface without much motion of the cone and it is only necessary to revolve it very slowly, to guard against any
65 little difference that might be made by feeding one picker heavier than another. There is also another advantage in using four pickers, it enables us to spread the fur much thinner and to turn the roller slower
70 so as to pick the fur a great deal more completely and still perform more work in a given time. I also use a guide or movable board to direct the fur as it comes from the picker; see the guide (G) at Fig. 3 which
75 figure is an isometrical view of the machine with one feeding frame (F,) and the air chamber (A) having the caps removed in order to show the cone (C) and the disk (D) on which it revolves; it may be observed
80 that there is an opening through the disk communicating with the inside of the air-chamber, this chamber is partitioned off into three apartments in two of which are the fans to draw the air from the cone as they
85 need not differ from the common form and construction it may not be necessary to give any minute description of them or of the other parts of the picker, these things are in common use and are well understood. 90

Fig. (4) is an isometrical view of the case having a pane of glass in the top for the purpose of seeing the progress of the work and regulating from time to time by the
95 guide.

I do not claim these devices when used in the manner as heretofore used, and for the purposes for which they may have been used; but when used in the manner and for the purposes above set forth. 100

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

1. The brush feeding roll in combination with the metallic bar as described.
- 5 2. I claim the use of two or more pickers when used to throw the fur on all sides of one and the same cone or wire gauze, for the purpose of laying the fibers of fur in all di-

rections without depending on the rotary motion of the cone to equalize the thickness. 10

In testimony whereof I hereto subscribe my name in presence of two witnesses.

ISAAC SEARLES.

Witnesses:

JOHN L. SMITH,
A. ARNOLD.