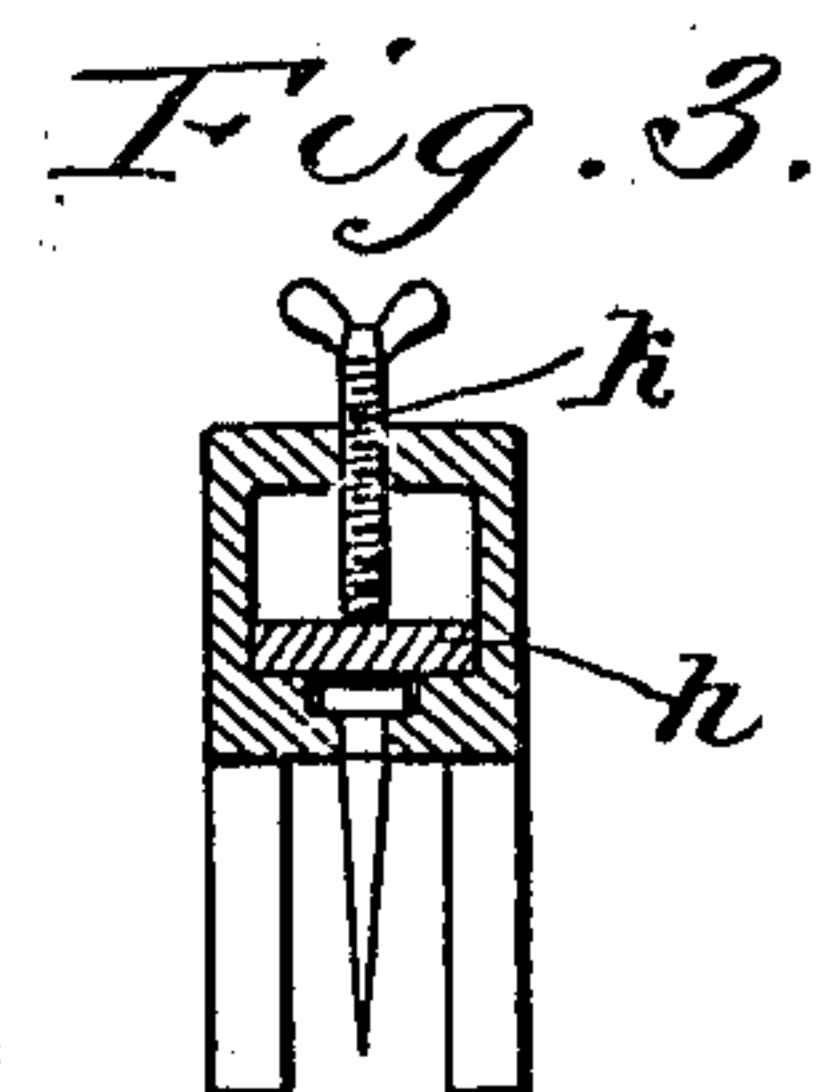
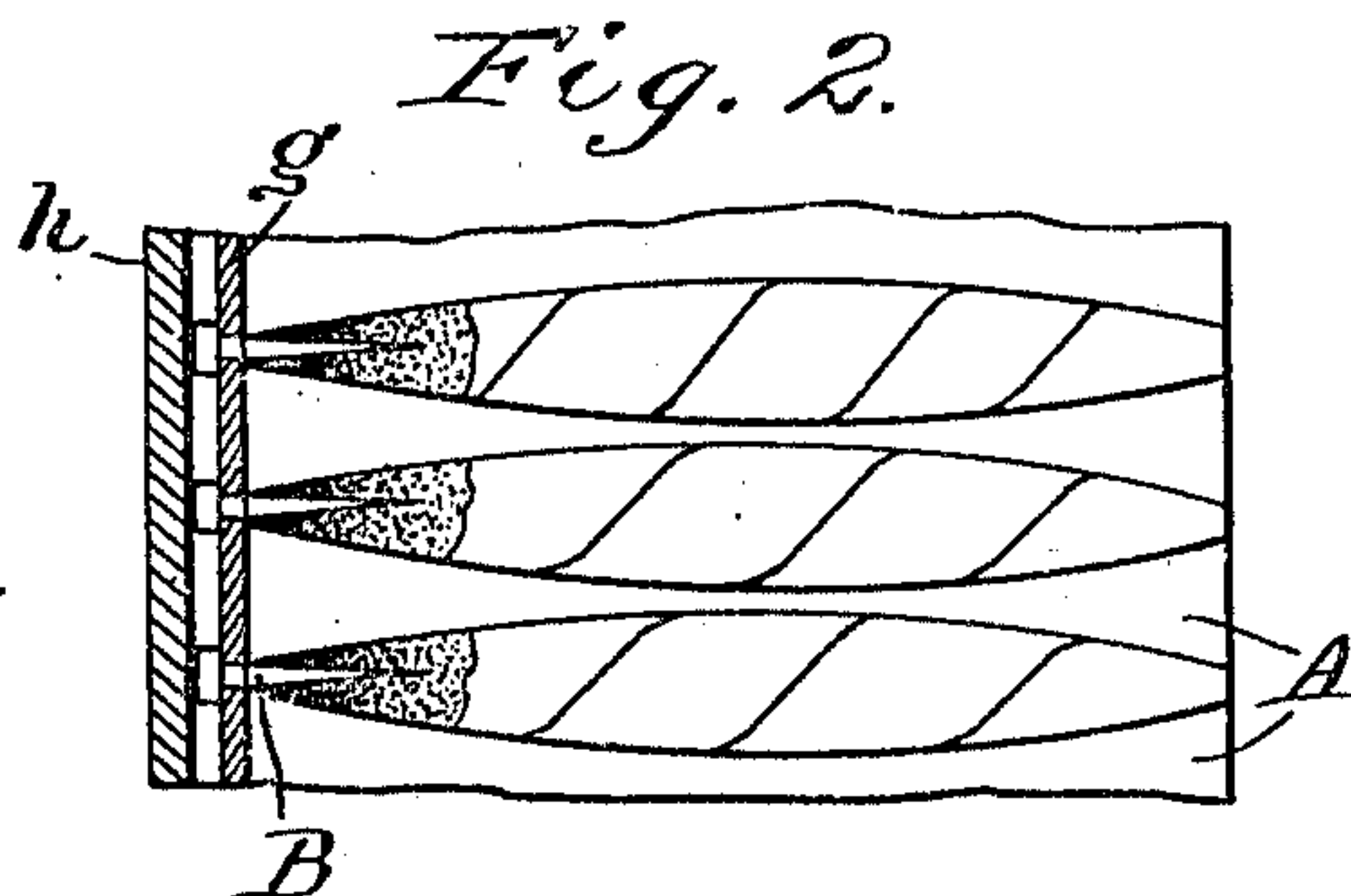
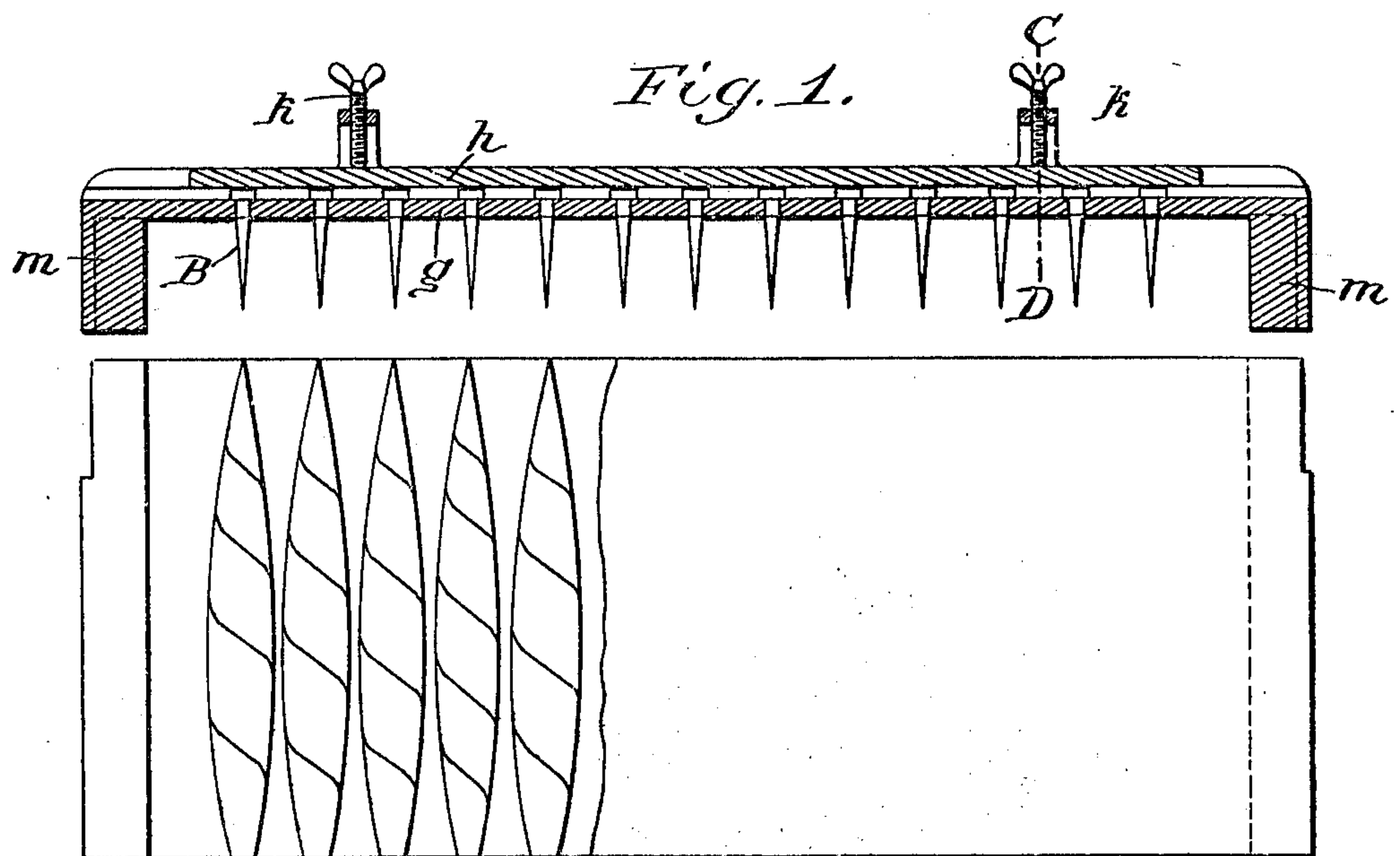
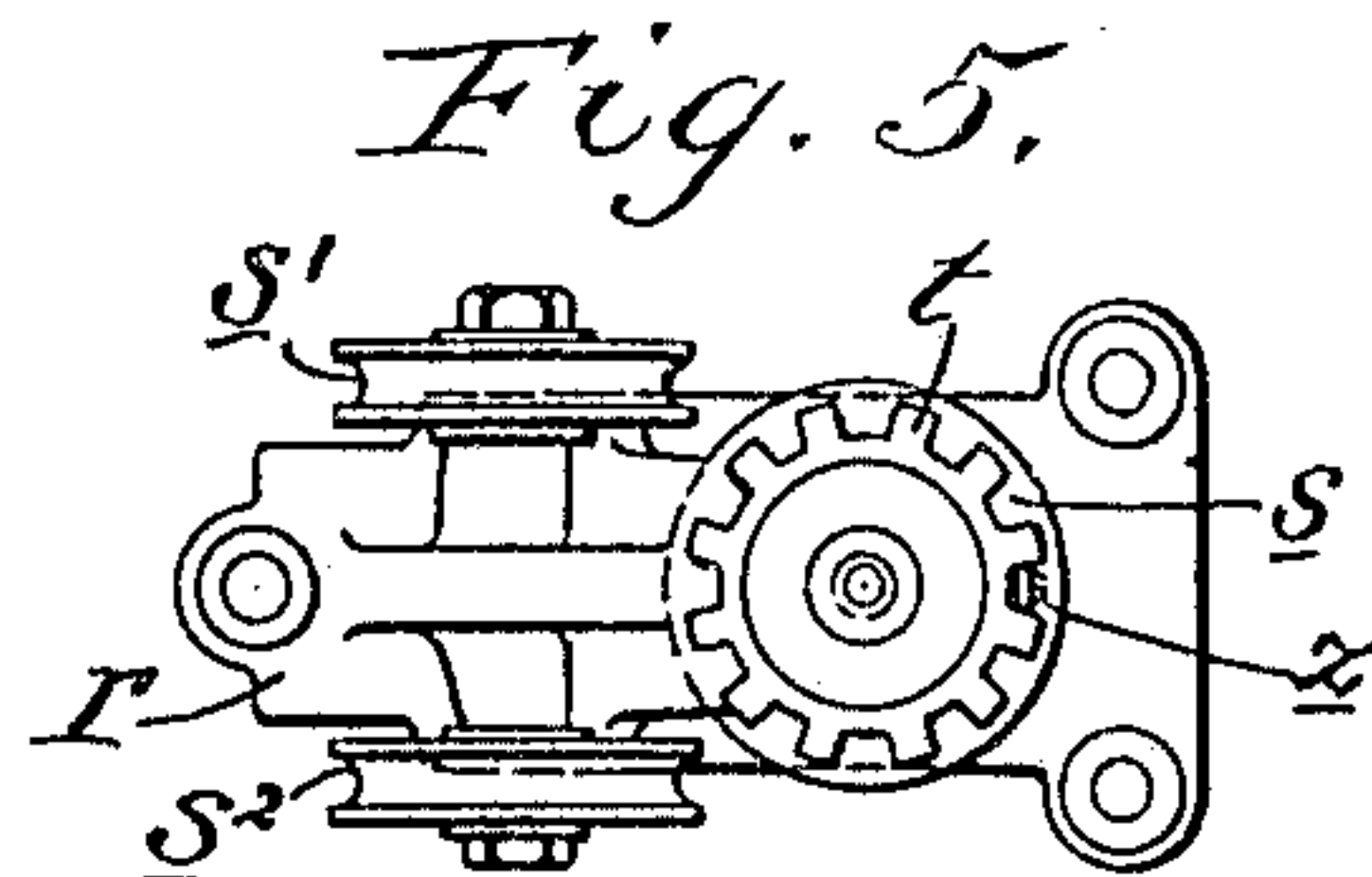
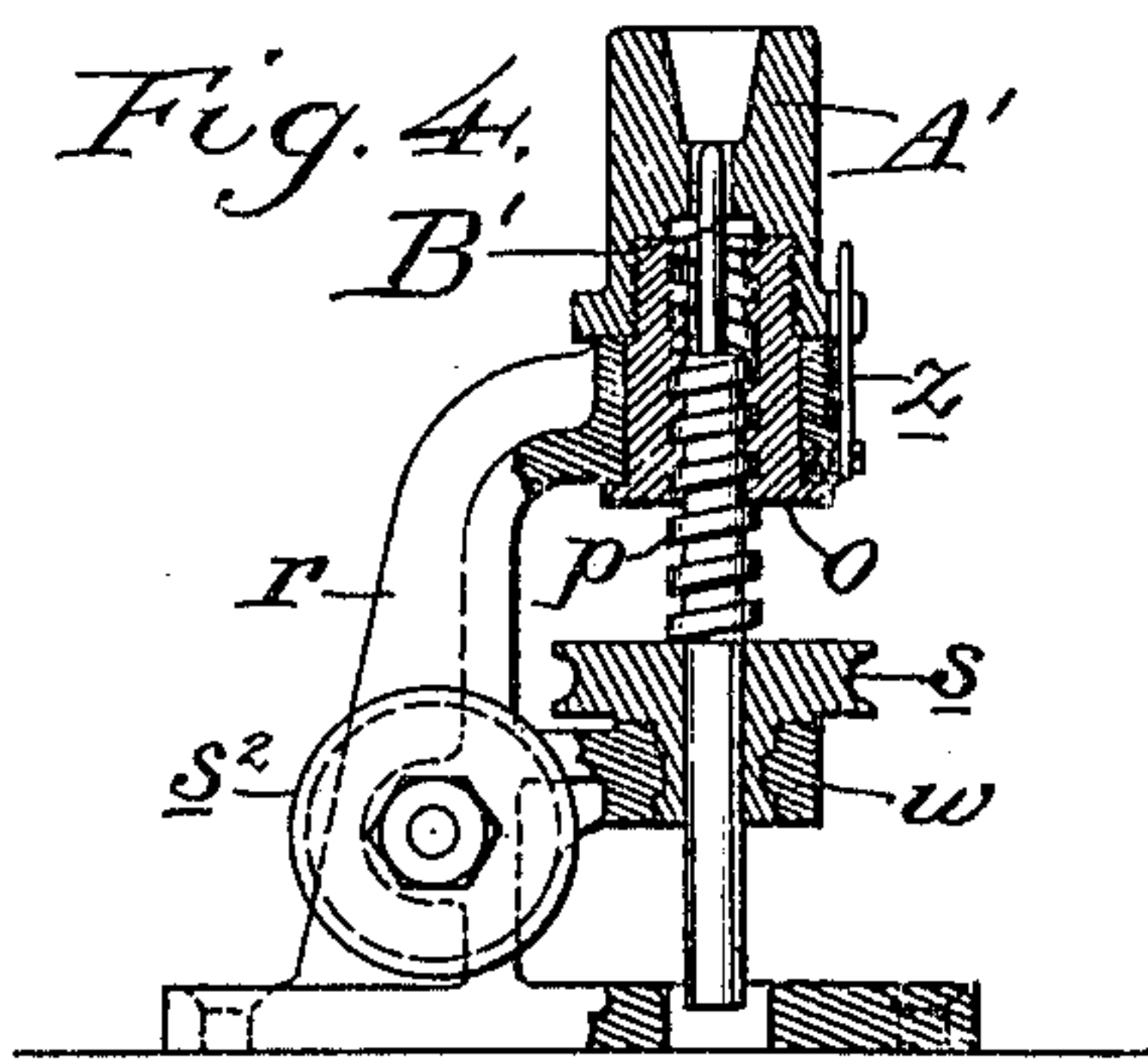


A. BAER.
 PROCESS OF MAKING CIGARS WITH HOLLOW TIPS.
 APPLICATION FILED JUNE 1, 1908.

956,022.

Patented Apr. 26, 1910.



Witnesses
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ALBERT BAER, OF MANNHEIM, GERMANY.

PROCESS OF MAKING CIGARS WITH HOLLOW TIPS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ALBERT BAER, a subject of the Grand Duke of Baden, and resident of Mannheim, Baden, Germany, have
5 invented certain new and useful Improvements in Processes of Making Cigars with Hollow Tips, of which the following is a specification.

This invention relates to a process of making cigars with hollow tips in which the compression is increased toward the tip. According to the invention this increased pressure is effected in two stages, the first stage being termed the primary compression, and the second the secondary compression.
15

Heretofore, according to several known methods, cigars with hollow tips have been made by providing the formed cigar with
20 a wrapper and then providing it with an orifice by inserting a pointed implement in the cigar. In performing the process, the wrapper is broken and damaged, and furthermore, the cigar cannot be made so that
25 the wrapper fits smoothly and uniformly on the walls of the hollow tip. The wrapper has heretofore been secured by means of paste, which very often is formed by the saliva of the workmen, thus rendering the
30 operation very unsanitary. It is therefore desirable that the wrapper be attached by means other than the use of paste, and this desideratum is accomplished by the present invention.

According to this process, the cigars are made into bunches by the known method and before being provided with wrappers are primarily drilled by inserting a pointed drill at their tips; they are then provided
40 with wrappers so that the wrapper extends beyond the tip. A small piercer is then introduced into the aperture which has been previously drilled, said piercer being cylindrical and of a diameter larger than the
45 drill previously used; the piercer engages the extending portion of the wrappers and pushes them into the previously drilled apertures, said piercer rotating about its own axis while advancing, which movement, together with the fact that the piercer is of
50 larger diameter than the drill used for the primary operation, causes the wrapper to be smoothly pressed against the walls of the aperture, where it is securely held without
55 the necessity of the use of an adhesive.

The pressure to which the bunches are

subjected simultaneously internally and externally is effected in the primary compression by retaining the bunches in the molds under compression and inserting conical
60 spikes into the tips in this position. In this manner the advantage is obtained of being able to effect the preliminary compression of a large number of bunches with only one movement of the spikes. The pressure in
65 the secondary compression is obtained by fitting the point of the cigar, after it has been covered by the wrapper, in a matrix and by piercing the orifice previously formed as with a mandrel which on account
70 of its cylindrical form and length effects the secondary compression of the tobacco while pressing the wrapper against the side of the orifice.

For carrying the process into effect I employ the apparatus shown in the accompanying drawing.
75

Referring to the drawings, Figure 1 is a part elevation part vertical section through the apparatus for effecting the primary
80 compression of the cigar bunches, the apparatus being shown in inoperative position: Fig. 2 shows part of the apparatus in that position in which the primary compression takes place: Fig. 3 is a section on the line
85 C—D of Fig. 1: Figs. 4 and 5 show by way of example in vertical section and in plan the apparatus for effecting the secondary compression of the tobacco at the top of the
90 cigar bunch.

The cigar bunches are produced in known manner and after being placed in the mold *f* are placed in the usual press. Each separate bunch is arranged in a shuttle *A*. In front of the bunch mold is a bar *g* through orifices
95 in which conical spikes *B* are passed and are held in their position by a clamping bar *h* and screws *k*. The orifices in the bar *g* are so arranged that on guiding the lugs *m* on the ends of the bar into the guides *m*¹ on
100 the mold the points of the spikes are located exactly in front of the cigar tips. On forcing in these spikes the compression of the tips of all the bunches is effected (Fig. 2). The tips remain in the position of Fig. 2 until the wrapper is to be rolled so that no
105 dust or the like can enter the orifices in the cigar tips. The spikes which preferably consist of bone, vulcanite or the like may be readily interchanged by removing the
110 clamp bar *h* so that any of the spikes being damaged can be replaced.

After the pressure is relieved the cigar bunches are removed from the mold. The cigar bunches are then provided with wrappers in such a manner that a portion of the wrapper extends beyond the tip of the cigar. The cigars are then laid separately in the matrix A^1 of a second apparatus. This consists of a bracket r secured to the work-table, the head of this bracket serving as a bearing for a bushing O having an internal screw thread in which works a screw-threaded spindle p . The spindle p has a squared end entering a corresponding orifice in a cord pulley s which is mounted on a lug w of the bracket so as to be free to rotate while fixed longitudinally. The pulley s is driven by a cord or band, said cord or band being guided by the two pulleys s^1 and s^2 . Over the bushing O a matrix A^1 is screwed said matrix being provided at its lower end with a circular flange, which flange has notches and teeth t distributed over its circumference and the matrix is secured in its position by engagement of a spring Z in the spaces between the teeth. This matrix is shaped to the form of the cigar tip. Into the channel of the same projects the spindle p having at its upper end a cylindrical mandrel B^1 preferably rounded off at its forward end. The wrapped cigar having had its tip inserted in the matrix A^1 , the pulley system is set in motion by a foot lever, the spindle p screws itself out of the pulley s and the mandrel B^1 presses the tip of the wrapper into the hollow cigar tip and penetrates the cigar. The tobacco thus receives a further compression at the end of the cigar tip and the wrapper is caused to fit tightly against the orifice in the cigar tip without the use of any adhesive such as gum-tragacanth. As, however, the mandrel simultaneously with its forward movement receives a rotary movement the wrapper is uniformly polished in the hollow tip and an extremely good fit is obtained.

The matrix A^1 may be raised or lowered to any desired extent, according to the depth to which it may be desired for the orifice in

each cigar to extend. For this purpose the matrix is screw-threaded so as to engage a corresponding screw-thread on the upper part of the bushing O . After being given the proper turn, the matrix is secured in the desired position by the engagement of the spring Z with the teeth t .

I claim—

1. The process of making cigars, which consists in forming the bunch, subjecting the same to external compression, forming an orifice in the tip of the bunch by piercing it and subjecting the tip to a primary compression, then applying the wrapper so that a portion thereof overlaps the pierced tip, then forcing said overlapping portion of the wrapper into the orifice previously formed, enlarging the orifice and subjecting the tip to a secondary compression while pressing the wrapper firmly against the inner walls of the orifice so that it is caused to adhere to said walls without the application of an adhesive.

2. The process of making cigars, which consists in forming the bunch, subjecting the same to external compression, forming an orifice in the tip of the bunch by piercing it and subjecting the tip to a primary compression, then applying the wrapper so that a portion thereof overlaps the pierced tip, then forcing said overlapping portion of the wrapper into the orifice previously formed, enlarging the orifice and subjecting the tip to a secondary compression and simultaneously causing said wrapper to adhere to the inner walls of the orifice while the orifice is being enlarged, and also simultaneously polishing said wrapper, by the assistance of pressure exerted in a different direction to that of the pressure exerted in penetrating the tip.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALBERT BAER.

Witnesses:

ADAM ANKENBRAND,
JOS. H. LEUTE.