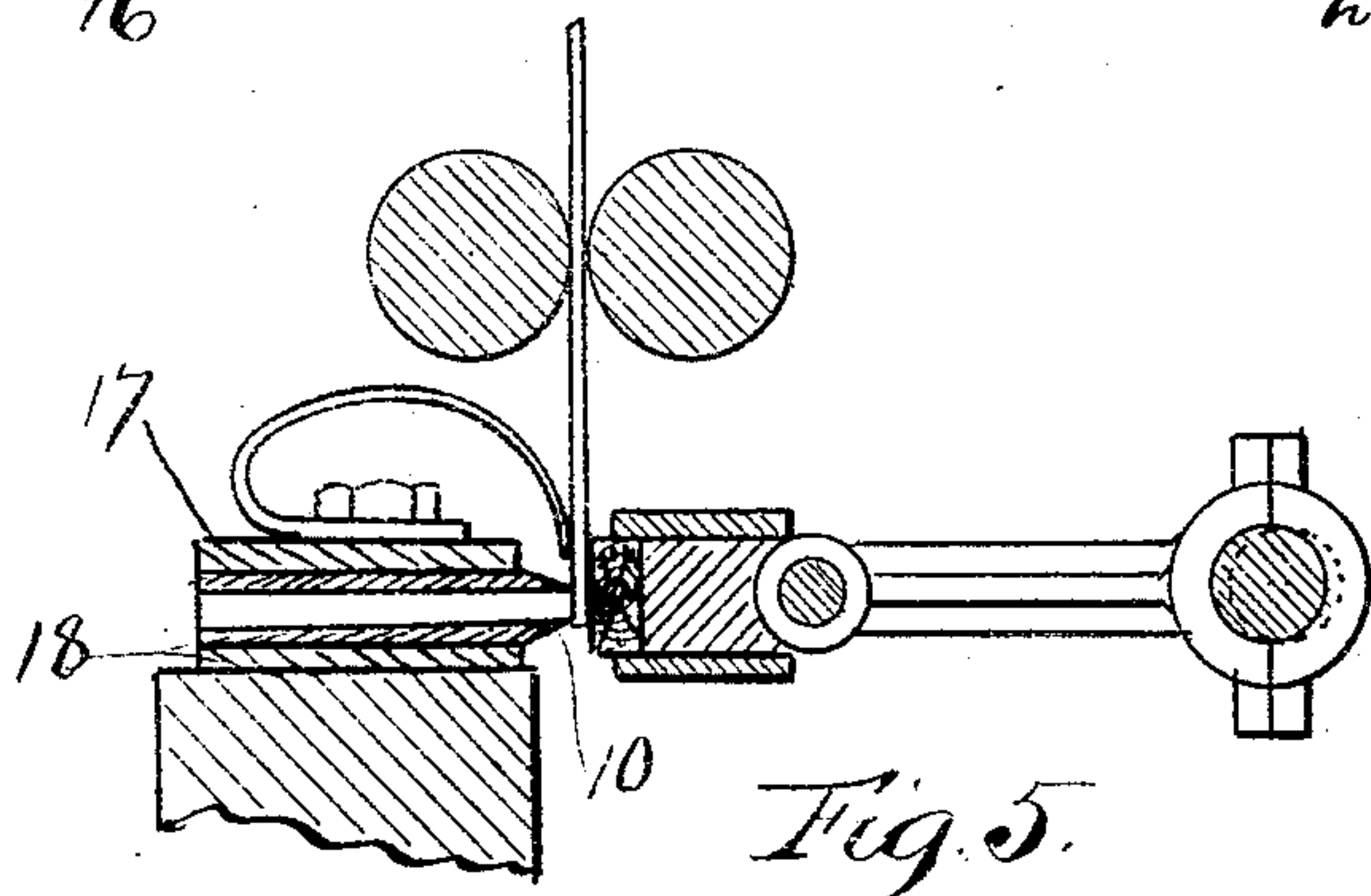
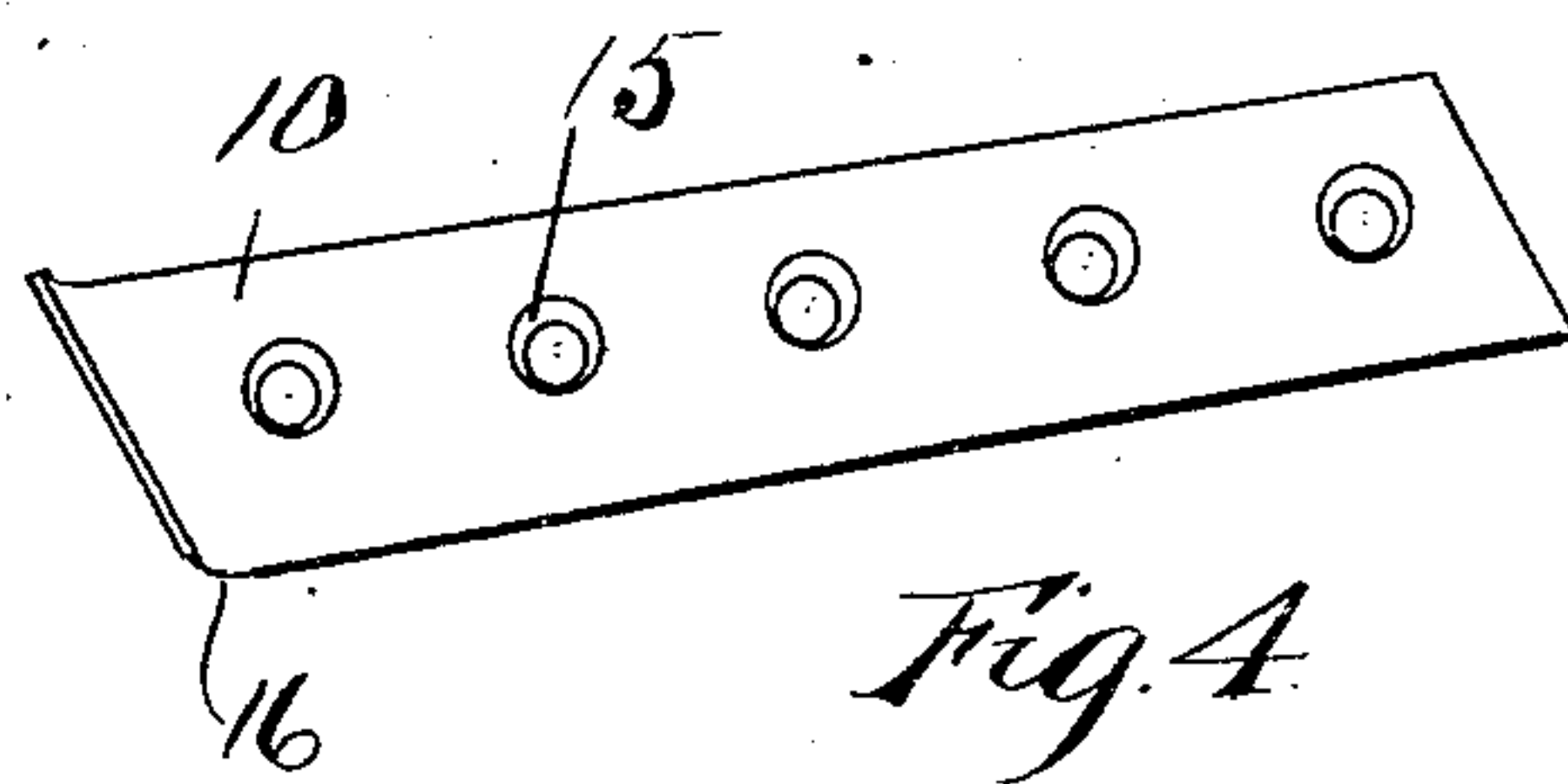
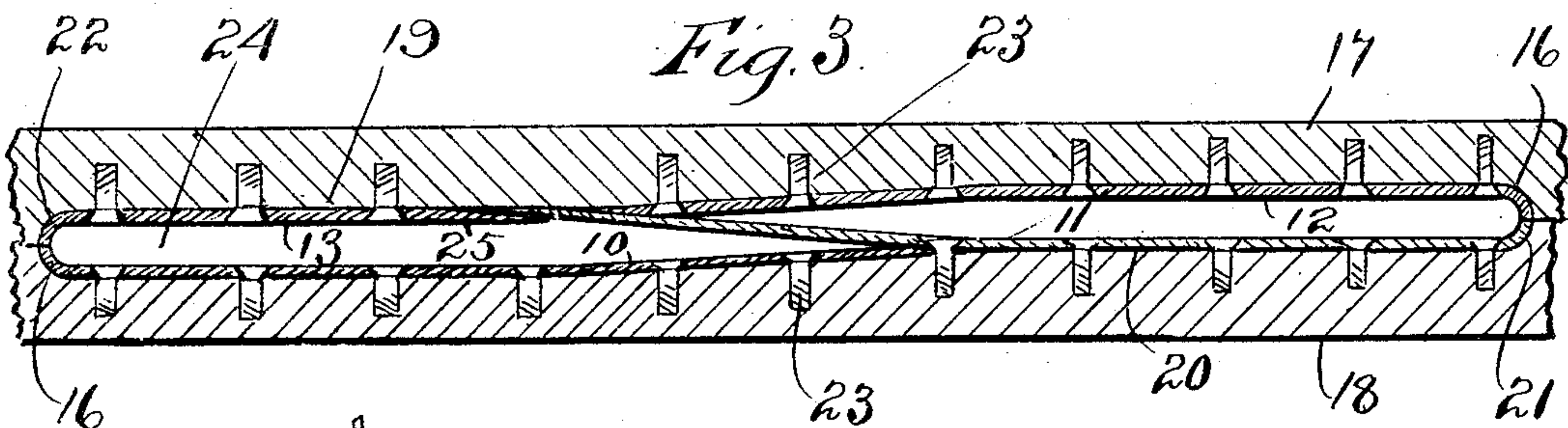
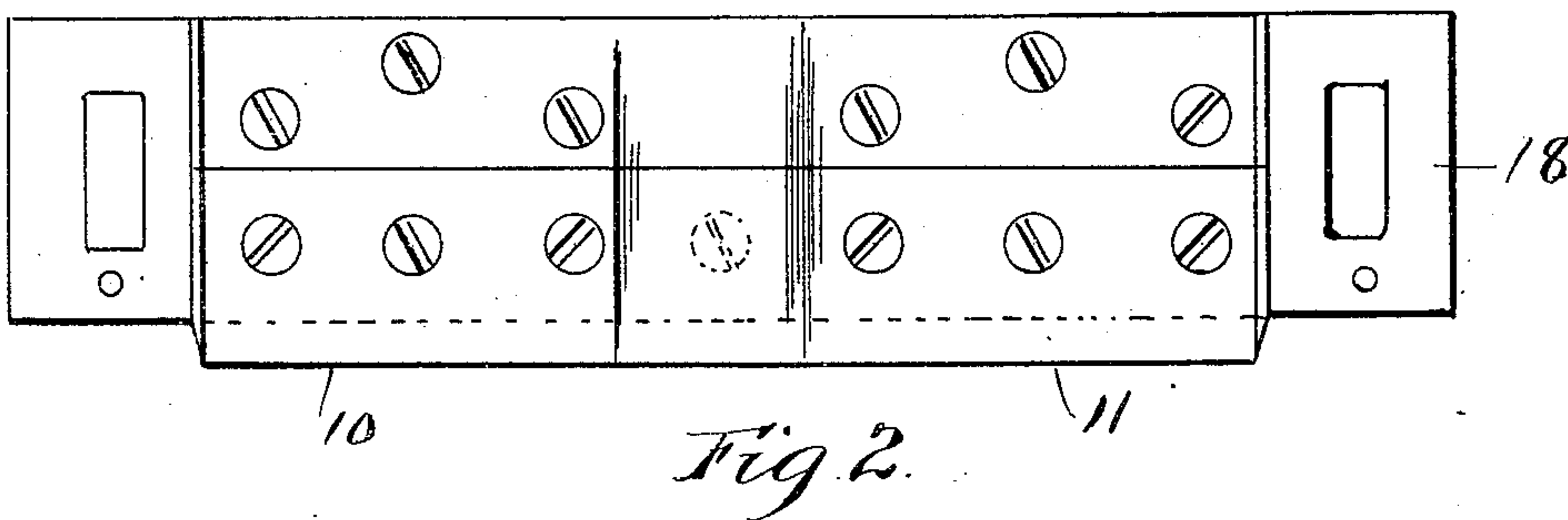
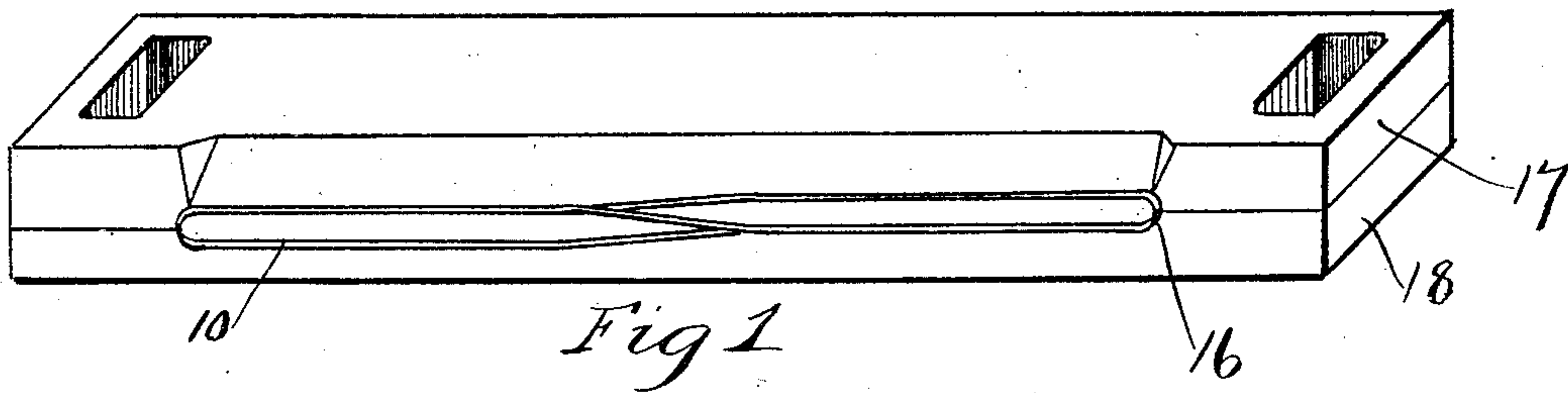


H. A. DORR.
CUTTER FOR TOOTHPICK MACHINES.
APPLICATION FILED DEC. 1, 1905.

931,044.

Patented Aug. 17, 1909.



Witnesses
E. C. Barlow
E. C. Ogden

Inventor
Harry A. Dorr

By *Howard E. Barlow*
Attorney

UNITED STATES PATENT OFFICE.

HARRY A. DORR, OF PROVIDENCE, RHODE ISLAND.

CUTTER FOR TOOTHPICK-MACHINES.

No. 931,044.

Specification of Letters Patent.

Patented Aug. 17, 1909.

Application filed December 1, 1905. Serial No. 289,752.

To all whom it may concern:

Be it known that I, HARRY A. DORR, a citizen of the United States, residing at the city of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Cutters for Toothpick-Machines, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to improvements in the construction of cutters for forming splints, such as toothpicks, manicure sticks and similar articles, from a veneer or ribbon of wood, and is an improvement on my Patent No. 795,494 of July 25, 1905.

One object of this invention is to produce a practical, inexpensive and efficient set of knives for cutting two picks at one stroke.

The primary object of the invention is to so arrange the knives that the pointed or tapered portion of the two picks will be formed so as to lie in opposite directions, and that these tapered portions may overlap each other in such a manner as to use less stock and prevent the large percentage of waste that has heretofore been made by the ordinary cutter, in producing splints of this character. It has been the custom in forming splints to employ a veneer or ribbon of wood the width of which was the length of one toothpick, and to cut one pick therefrom at each stroke of the machine. But by the use of my improved knives I use the veneer of a width equal to the length of one whole pick plus the length of the body portion of another pick, allowing the tapered portion of the second pick to overlap that of the first. Thus it will be seen that by overlapping these picks the stock equal to the tapered portion of one pick is saved at each cut, over the amount used by the old process. It is therefore obvious that as the cost of the stock is the greatest item of expense in the production of picks a saving of about 20% of the wood means much to the manufacturer.

In the operation of the machine a roll of veneered wood may be mounted in any convenient way and fed by feed rolls or other means along in front of a pair of the above described knives, the shape of the openings

between the blades of said knives being the form in which the splint is to be cut. As the veneer is fed along over the edge of said knives it is forced through the opening between the blades of each knife by a reciprocating block forming two picks at each stroke.

The manner in which my improved cutters may be formed is to first shape out two blocks of metal forming templates cut out or recessed into the form required. Four thin flexible knife blades of the desired length and width are then bent or drawn down and fastened to conform to the shaped out portion of the blocks, by screws or other suitable means, one of the blades being arranged to cross the space between the blocks at an angle thereto for the purpose of severing the double formed pick, at the same time forming the tapered portion on one side of each pick. These thin blades are very cheap to construct as they may be blanked out of sheet steel, drilled and sharpened, and when a blade becomes worn out it may be readily replaced by a new one and as it is obliged to take the exact shape of the templates the work produced is always kept uniform, and the expense of regrinding, and replacing new blades is reduced to the minimum.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

In the drawings: Figure 1— is a perspective view of the knife blocks showing the blades arranged therein to cut two picks at once.

Fig. 2— is a plan view of one of the knife blocks with the other block removed showing the cutters and backing plates in place.

Fig. 3— is an enlarged longitudinal sectional view through the blades and blocks illustrating the manner in which said blades are held in position.

Fig. 4— represents one of the blades.

Fig. 5— is a diagram illustrating the veneer as being fed to the knife by rotary feed rolls and a reciprocating cutter block arranged to drive said veneer through a set of hollow knives.

Referring to the drawings, at 10, see Fig. 4, is one of the knife blades that may be constructed in any suitable manner, but I prefer to blank the same out of sheet steel, drill and countersink the screw holes 15, then harden and grind the cutting edge. The expense of thus producing this cutter is reduced to the minimum. When it is desired to form a round end on the splint I turn one edge of the blade up into a half circle as shown at 16. Two of these blades thus shaped when reversed and placed on each other, as shown in Figs. 1 and 3, cut a pick with a nicely rounded end.

At 17 and 18 are the form blocks or templets. These blocks, as indicated in Figs. 1 and 3, are provided with concaved recesses 19 and 20, having shoulders 21—22. In this manner a seat is provided for the cutting blades, one end of each abutting against said shoulders, the concavity of the recesses and the depth of the shoulders being such as will bring the inner face of each of said blades to the proper position for cutting a pick.

In forming a knife to cut two picks at one stroke I preferably employ four blades three of which 10, 11 and 12 are all substantially of the same length, blade 13 being somewhat shorter than the other three. These blades may be secured in position to the templet blocks by screws 23, knife 11 being a trifle longer than knives 10 and 12 is bent to extend from block 18 across the recessed portion 24 to block 17 where it is firmly secured in position by the undercut end 25 of the blade 13 that is ground to overlap and bind it in place. This knife 11 being set to cross from one block to the other on the angle serves to sever the stock of the double pick and at the same time form the tapered portion on one side of each pick. A feature in the arrangement of these knives is that said knives run straight to form the body of the pick and then on a slant or slight angle to said body line where the tapered portion is formed, the upper and lower blades running parallel throughout the length of the cut. By the use of knives arranged in this manner it will be seen that all of the cutting is done with the upper line of knives together with the blade that severs the elongated splint that is cut from the veneer into two parts, and at each stroke of the machine the ribbon is fed forward over the face of the cutters just the width of the space between the knives, which is the desired width of the splints.

My invention is not restricted to the construction and arrangement of parts herein shown and described nor to the various details thereof, as the same may be modified or re-arranged in various particulars without departing from the spirit and scope of my invention, one practical embodiment of

which has been herein illustrated and described without attempting to show all of the various forms and modifications in which my invention might be embodied.

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

1. A toothpick cutter provided with an aperture, means for forcing veneer through said aperture, and a cutter blade diagonally arranged in said aperture for severing the veneer into two parts each tapering at one end as the same is forced therethrough.

2. A toothpick cutter provided with a central aperture surrounded by a knife edge, means for forcing veneer through said aperture, and a blade set diagonally across said aperture adapted to cut the veneer into two tapering splints as the same is forced therethrough.

3. In a device of the character described, a templet block, an aperture through said block, flexible cutter blades surrounding said aperture and secured to said block, one of said blades being set on an angle across said aperture to sever the veneer on an angle forming two tapering splints in one operation.

4. In a device of the character described, a separable templet block, provided with a central aperture, cutter blades set around said aperture, one of said blades being set on an angle to cross said aperture and form two separate tapering splints in one operation as the veneer is forced through said aperture.

5. A device of the character described comprising a pair of templet blocks each provided with a concaved recess in its inner face, flexible blades secured in each of said recesses, means for securing said blocks together, whereby said blades are brought into juxtaposition to form an approximately continuous knife, and one of said blades being set on an angle across the space between said blades to sever the splint formed therein.

6. In a device of the character described, templet blocks, a set of flexible cutter blades secured to said templet blocks and adapted to cut an elongated splint from a ribbon of veneer, and one of said cutter blades being set at an angle to the longitudinal axis of the splint whereby said splint shall be severed thereby forming two tapered splints in one operation.

7. In a device of the character described, comprising a separable templet block provided with an aperture through it, cutting blades secured around said aperture, means for holding the members of said block together, one of said blades being bent to cross said aperture on an angle so as to cut two pointed splints in one operation as the veneer is forced therethrough.

8. In a device of the character described comprising a separable templet block provided with an aperture through it, cutting blades secured around said aperture, said
5 blades being curved so as to cut a splint round at one extremity and one of said blades bent to cross said aperture at an angle so as to cut two pointed splints in one

operation as the veneer is forced there-through.

In testimony whereof I affix my signature in presence of two witnesses.

HARRY A. DORR.

Witnesses:

HOWARD E. BARLOW,
E. I. OGDEN.