

No. 803,824.

PATENTED NOV. 7, 1905.

C. C. HIATT.
DIE FOR MAKING AUGER BITS.

APPLICATION FILED SEPT. 24, 1904.

2 SHEETS—SHEET 1.

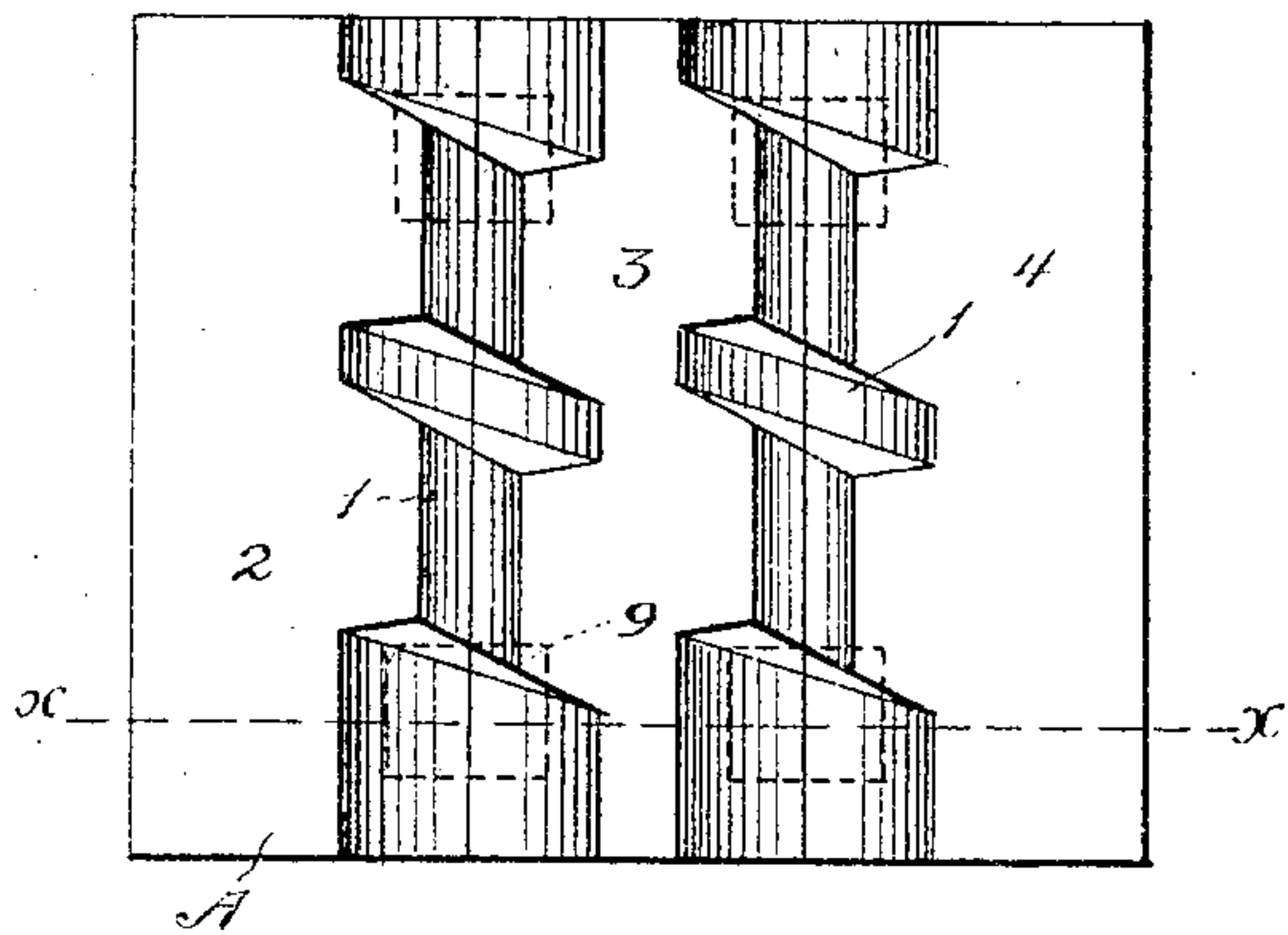


Fig. 1

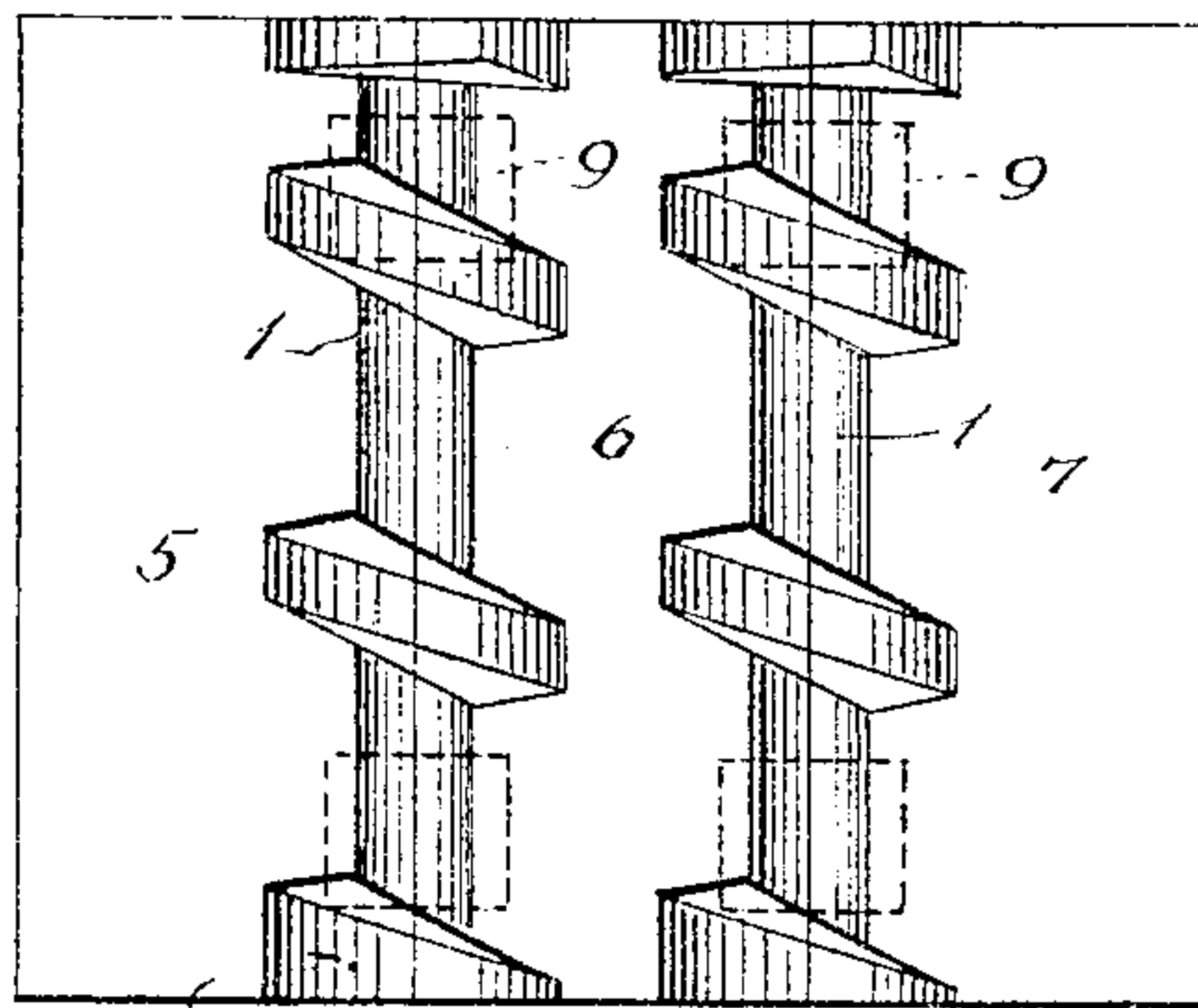


Fig. 2

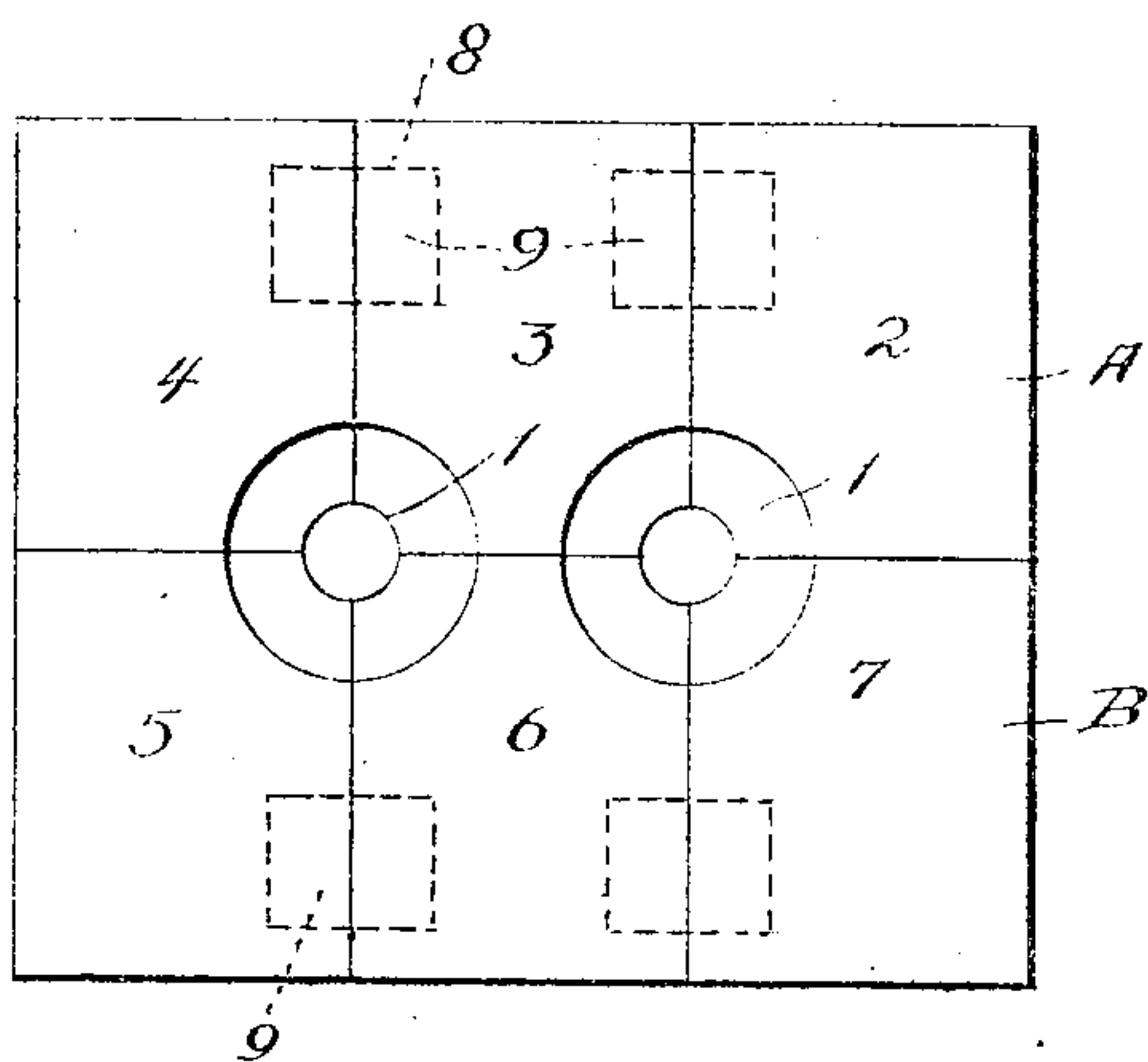


Fig. 3

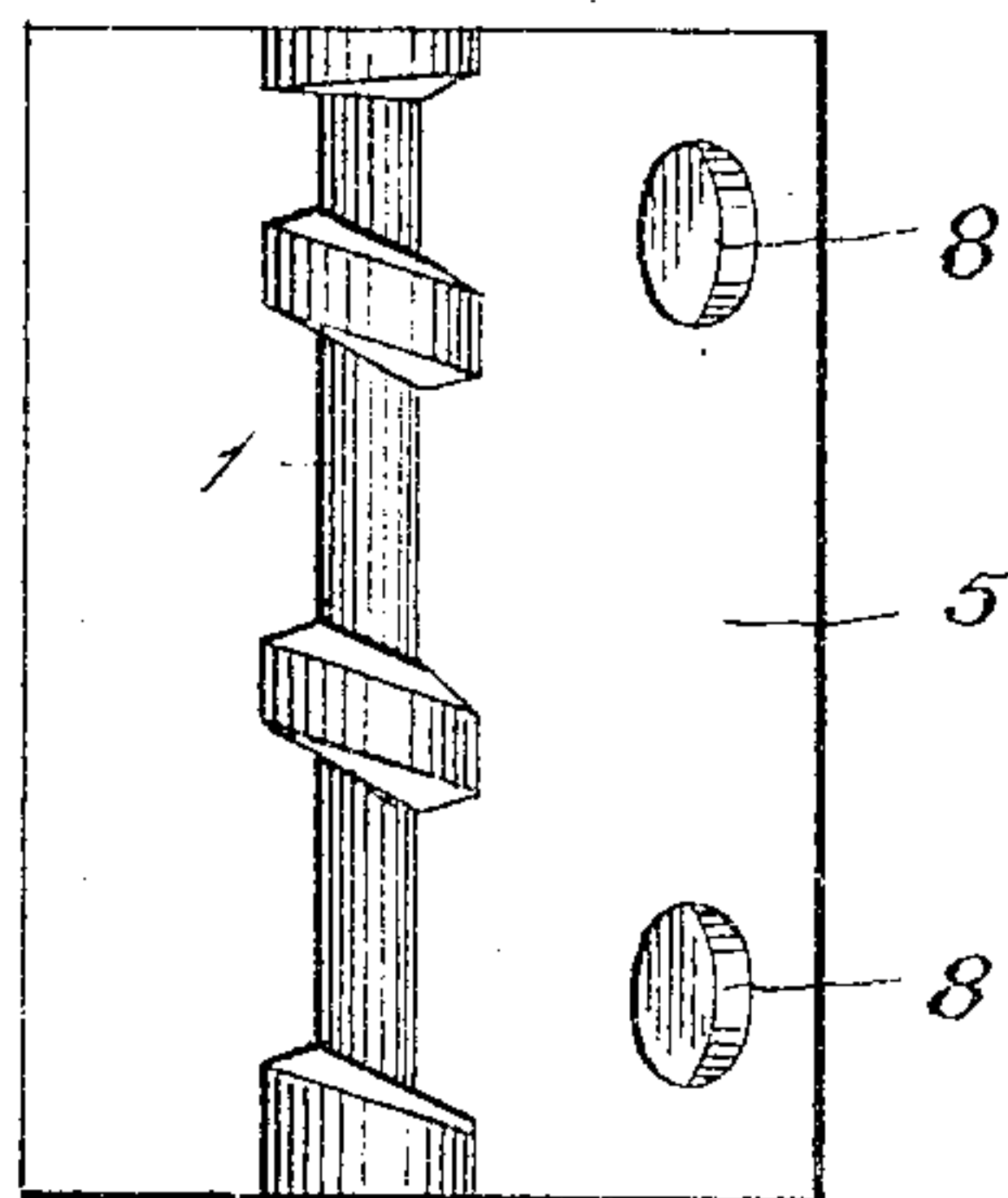


Fig. 4

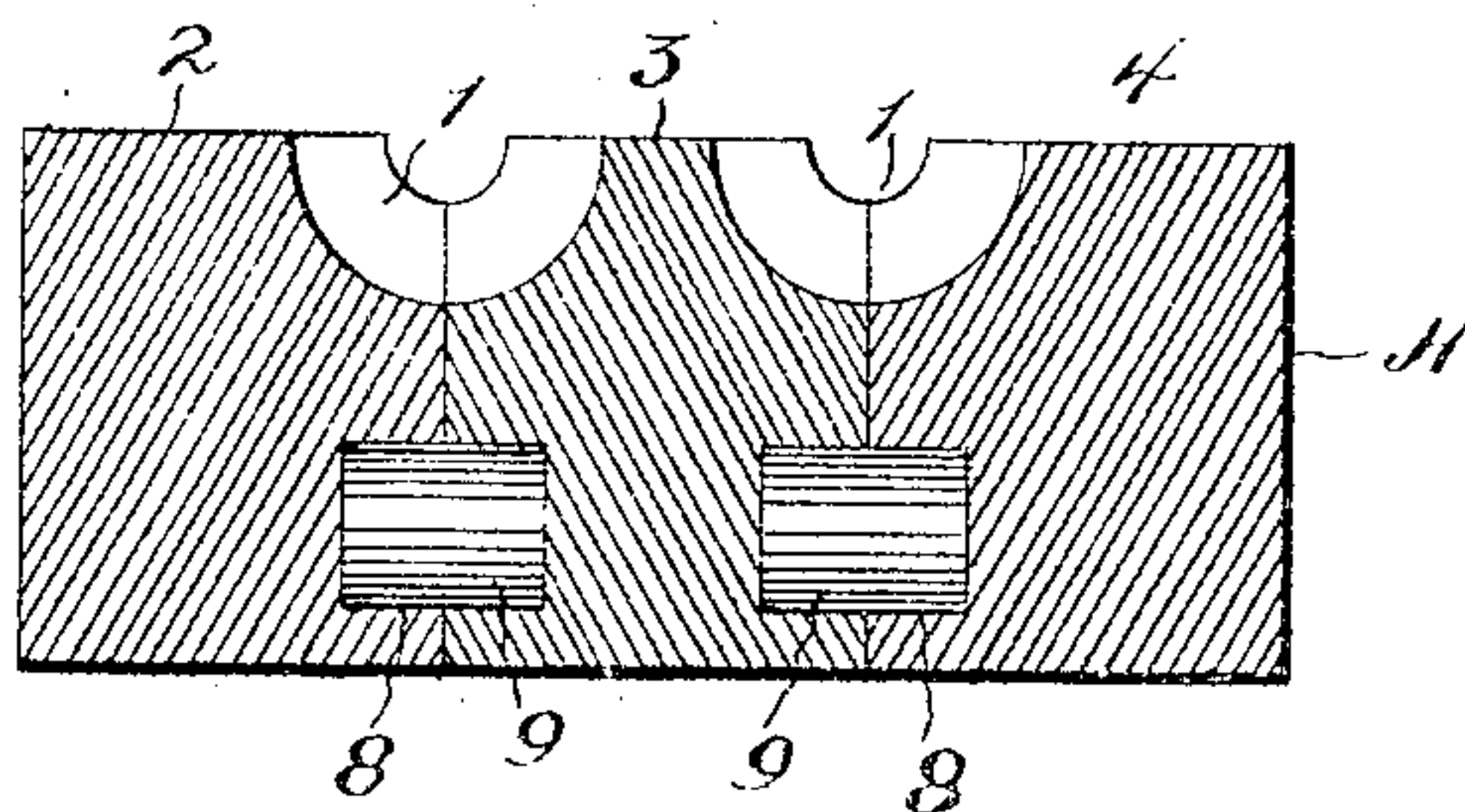


Fig. 5

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2 SHEETS—SHEET 2.

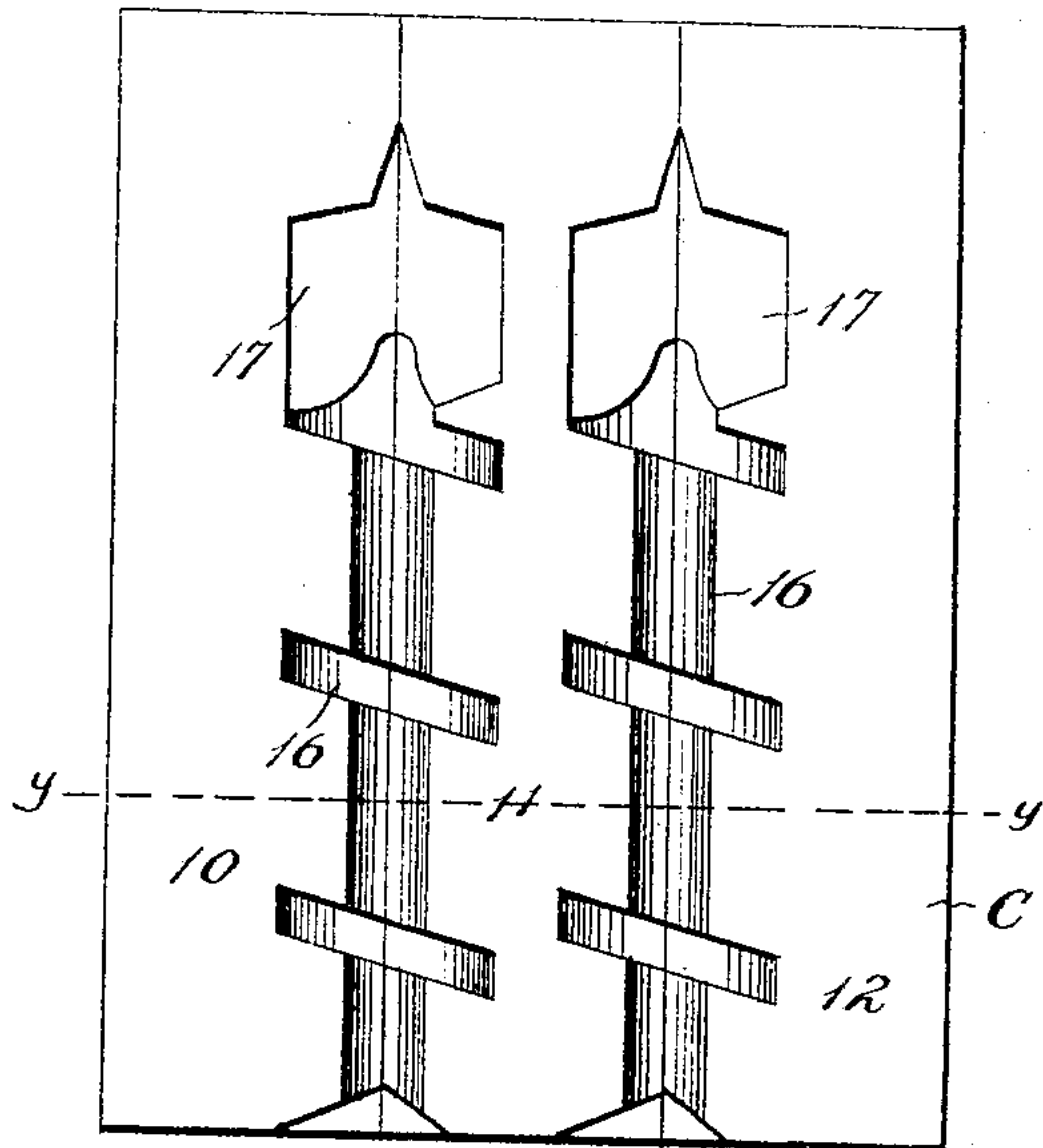


Fig. 6.

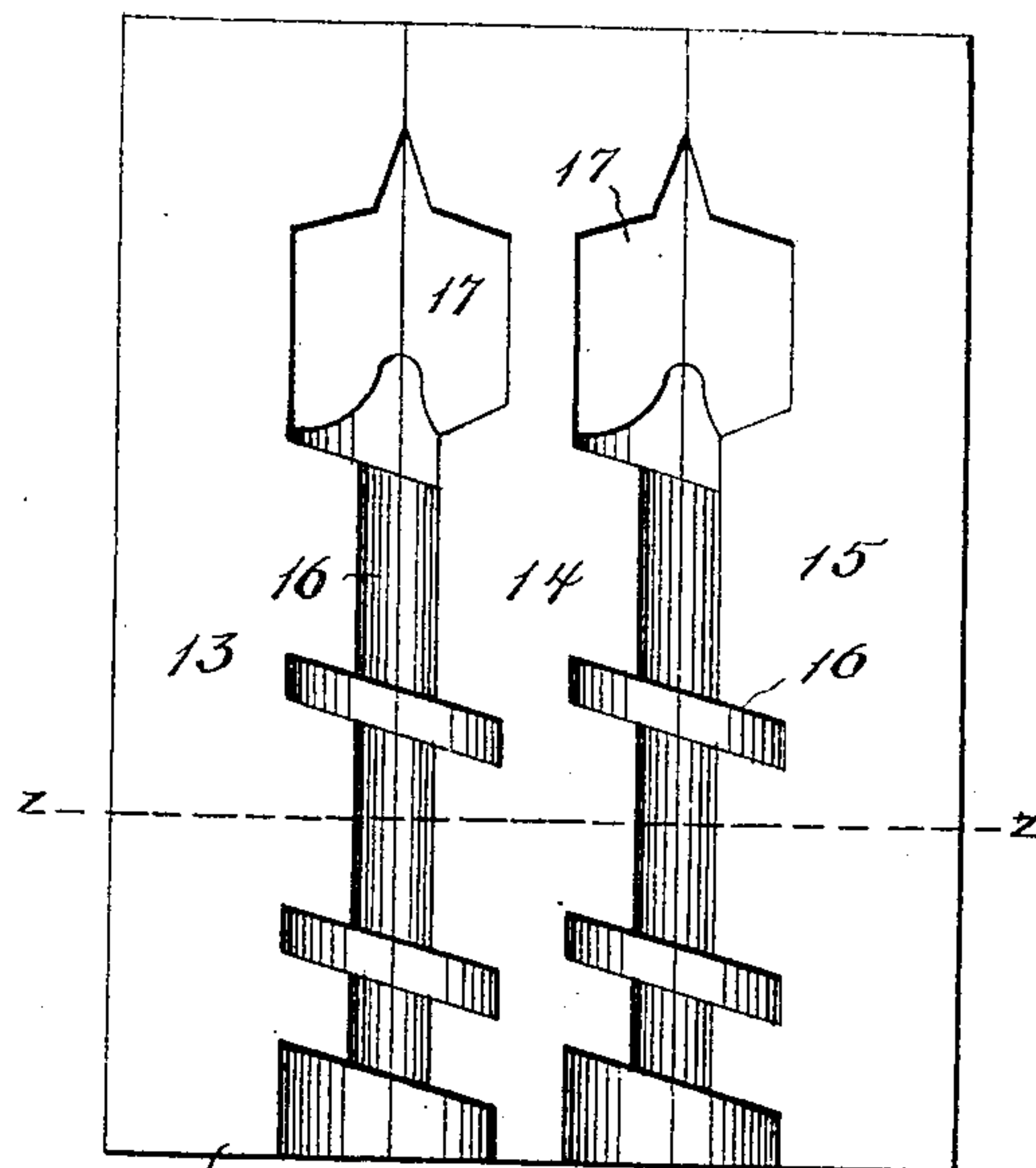


Fig. 7.

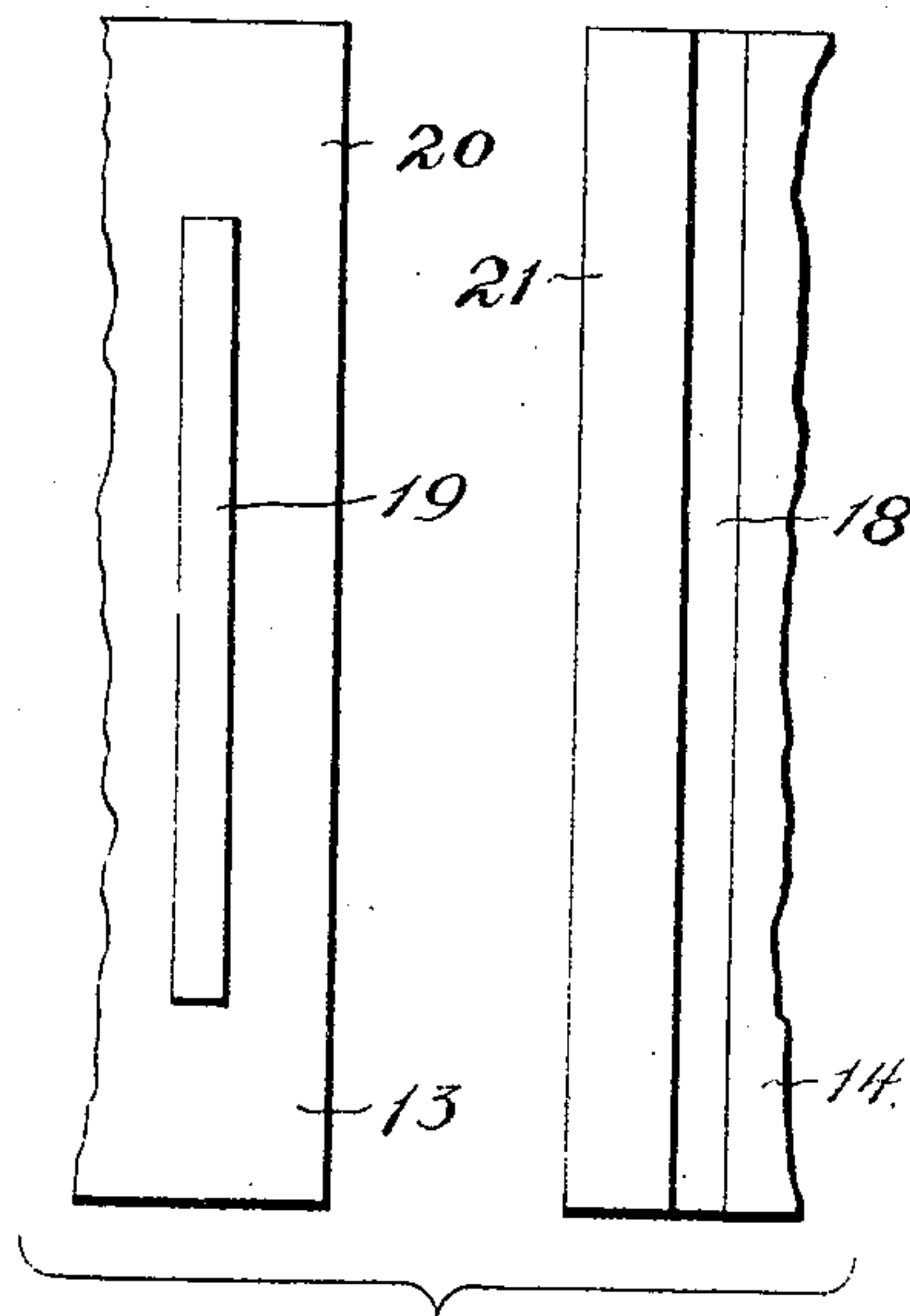


Fig. 8.

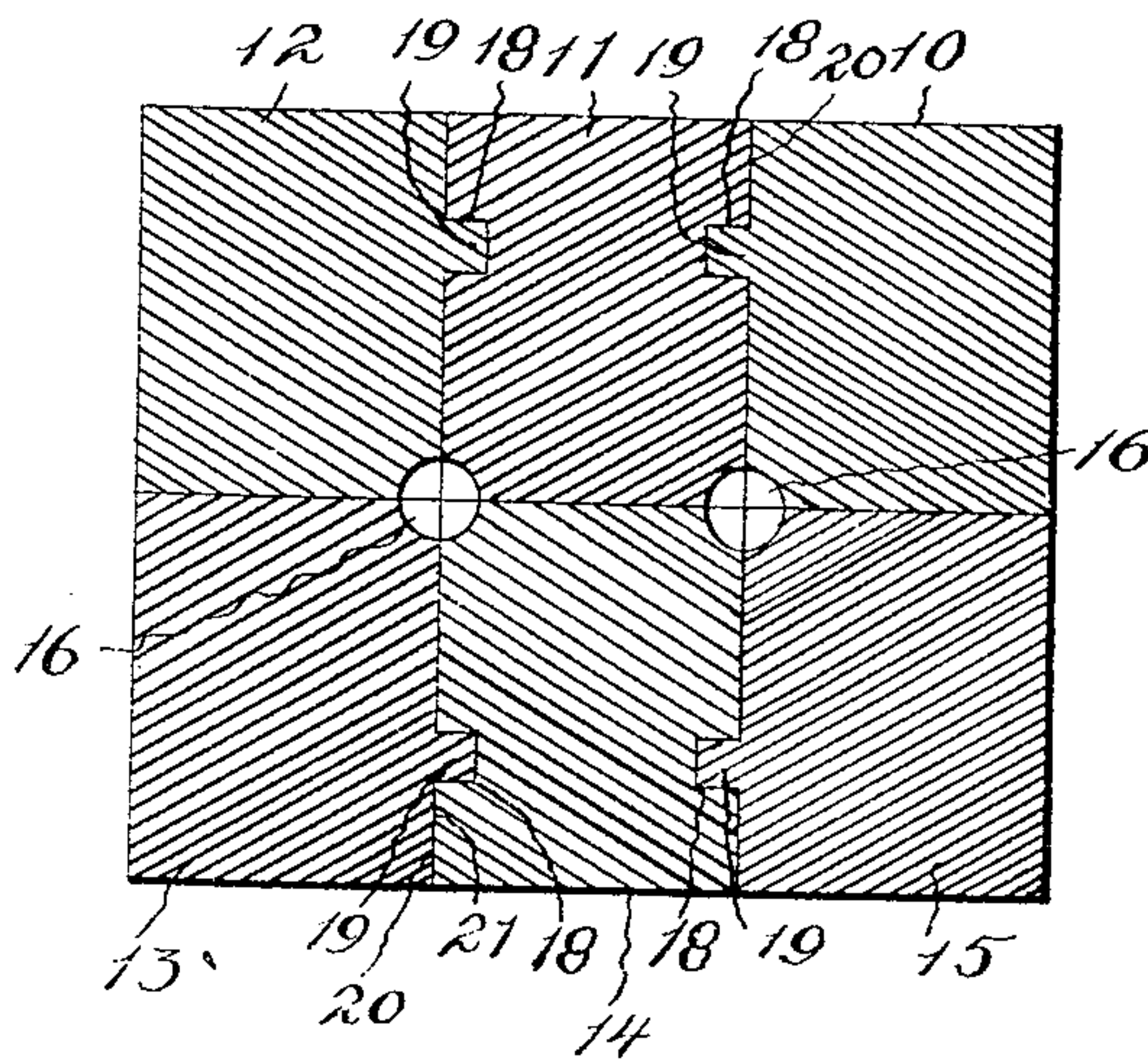


Fig. 9.

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DIE FOR MAKING AUGER-BITS.

No. 803,824.

Specification of Letters Patent.

Patented Nov. 7, 1905.

Application filed September 24, 1904. Serial No. 225,826.

To all whom it may concern:

Be it known that I, CHARLES CHRISTOPHER HIATT, a citizen of the United States, residing at Wilmington, in the county of Clinton and State of Ohio, have invented a certain new and useful Improvement in Dies for Making Auger-Bits, of which the following is a specification.

My invention relates to a new and useful improvement in dies for making auger-bits.

The object of the invention resides in forming the upper and lower dies in sections. Heretofore it has been the practice to chisel out the depressions in the dies, which is a very slow and laborious procedure. Therefore by forming the dies in sections intersecting in the center of the depressions it will be seen that the said depressed portions may be readily milled, as they would be formed in the corners of the sections.

Another feature of the invention resides in the means for securing the dies together.

Finally, the object of the invention is to provide a device of the character described that will be strong, durable, and efficient and one which will be simple and comparatively inexpensive to make.

With the above and other objects in view the invention consists of the novel details of construction and operation, a preferable embodiment of which is described in the specification and illustrated in the drawings, wherein—

Figure 1 is a plan of the face of the upper twisting-die. Fig. 2 is a plan of the face of the lower twisting-die. Fig. 3 is an end elevation of the upper and lower dies in contact. Fig. 4 is a corner elevation of one of the section-blocks. Fig. 5 is a transverse sectional view taken on the line *x x* of Fig. 1. Fig. 6 is a plan view of the face of the upper heading-die. Fig. 7 is a plan view of the face of the lower heading-die. Fig. 8 is a view showing detail partial elevations of the meeting faces of two of the sections illustrating the key and keyway, and Fig. 9 is a transverse sectional view showing the dies in contact and taken on lines *y y* and *z z* of Figs. 6 and 7.

In the drawings the letters A and B indicate the upper and lower parts of the twisting-die, which are preferably formed of suitable metal and provided with depressions 1, by which the bit is formed. I prefer to arrange two sets of depressions, so that two bits may be twisted at the same time. I divide

the upper and lower dies A and B into section-blocks 2, 3, 4, 5, 6, and 7, which meet in the longitudinal centers of the depressions. By so arranging the blocks it is apparent that the depressions 1 will be disposed in the upper corners of the blocks and may be readily milled. The center blocks 3 and 6 are formed with depressions at each of their adjacent or meeting corners. For the purpose of holding the blocks in position in their proper relation I form in their meeting faces registering recesses 8, in which are placed dowel-pins 9. I preferably form each block with two recesses 8 near each end. The dies are suitably supported in any ordinary frame or head to hold them together and are used and operated in the usual manner. Although I have shown the dies formed with two sets of depressions, it is to be understood that they may be made with one set of depressions and also that the number of section-blocks may be increased or decreased provided the lines of intersection lie along the depressions. It is to be further understood that I may use other means than the recesses 8 and dowel-pins 9 for holding the section-blocks in position.

As is common in the art of bit-making after the bits have been twisted they are conveyed to the heading-die. In Figs. 6 and 7 I have shown at C and D the upper and lower members or dies of my sectional heading-die. Each die is composed of section-blocks 10, 11, 12, 13, 14, and 15 and are provided with two sets of depressions 16, each terminating in the heading depressions 17. As in the twisting-dies the lines of intersection of the blocks run through the longitudinal center of the depressions, thus allowing the depressions to be milled in the corners of the blocks. In connection with the heading-die I have illustrated another means for securing the section-blocks together. This consists in forming the central blocks 11 and 14 with grooves or keyways 18, extending the entire length thereof at such point as not to interfere with the depressions. The outer blocks 10, 12, 13, and 15 are each formed with keys 19, preferably terminating short of the ends of the blocks and provided on the sides 20, which contact with the sides 21 of the center blocks. The blocks are assembled by inserting the key 19 in the keyway 18 and sliding the blocks upon each other until their ends register. Of course it is to be observed that various means for fastening

the blocks together may be provided and also that more or less blocks may be employed.

Among other advantages gained by making the die members in sections is the possibility to renew any one of the blocks. In dies of the present construction a slight damage to one of the depressions renders the die useless and requires the production of an entire new member. It is apparent that any one of the sections might be readily replaced.

I do not wish to limit myself to the exact details of construction herein set forth, as I may make various changes in the same without departing from the spirit of my invention.

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

20 1. A die for auger-bits, comprising two members each formed with registering concavities, one of said members comprising two or more blocks, said blocks having portions of the concavities formed along the 25 edges of their meeting faces.

2. A die for auger-bits, comprising two members each formed with registering concavities, one of said members comprising two or more blocks, said blocks having portions of the concavities formed along the 30 edges of their meeting faces, and means for holding the blocks in registration with each other.

3. A die for auger-bits, comprising two members each formed with registering concavities and each member comprising two or more blocks, said blocks having portions of the concavities formed along the edges of their meeting faces. 35

4. A die for auger-bits, comprising two 40 members each formed with registering concavities, one of said members comprising two or more elongated blocks each having along one of its edges half-concavities adapted to register with each other when the blocks 45 are placed side by side.

CHARLES CHRISTOPHER HIATT.

In presence of—

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J. Q. JORDAN.