

A. G. STEVENSON.

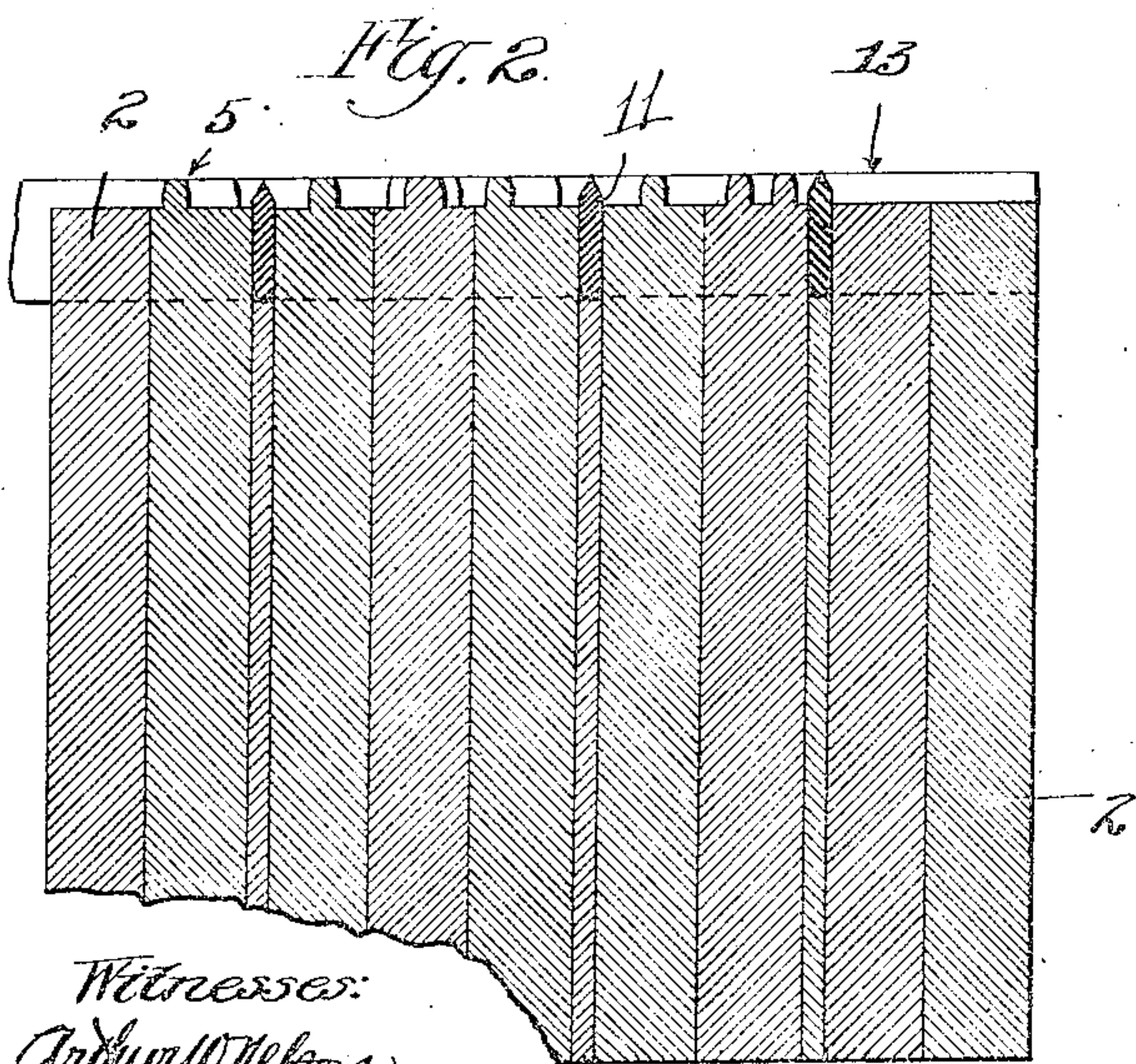
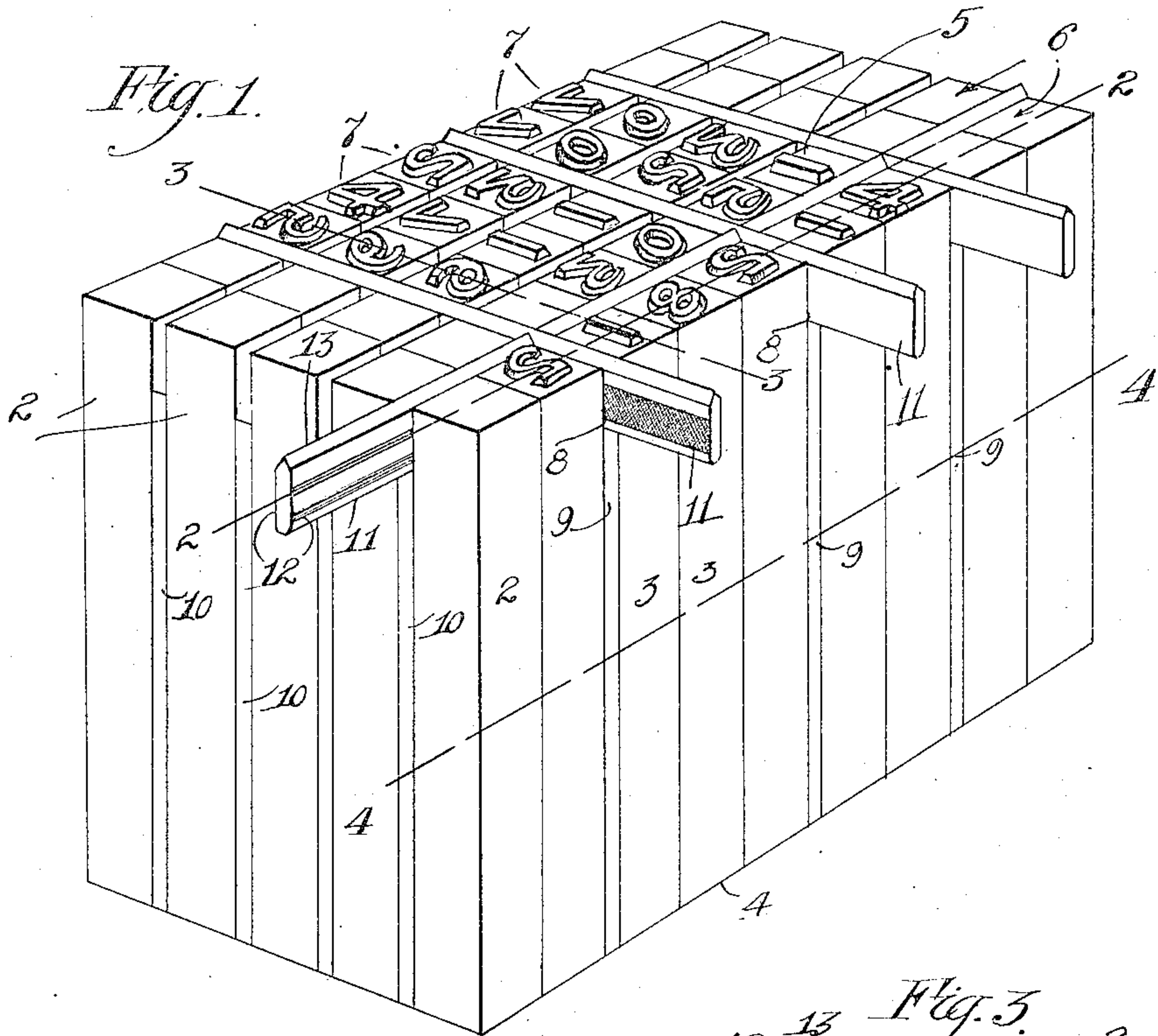
PRINTING RULE AND SYSTEM OF APPLYING SAME TO PRINTING FORMS.

APPLICATION FILED SEPT. 2, 1910.

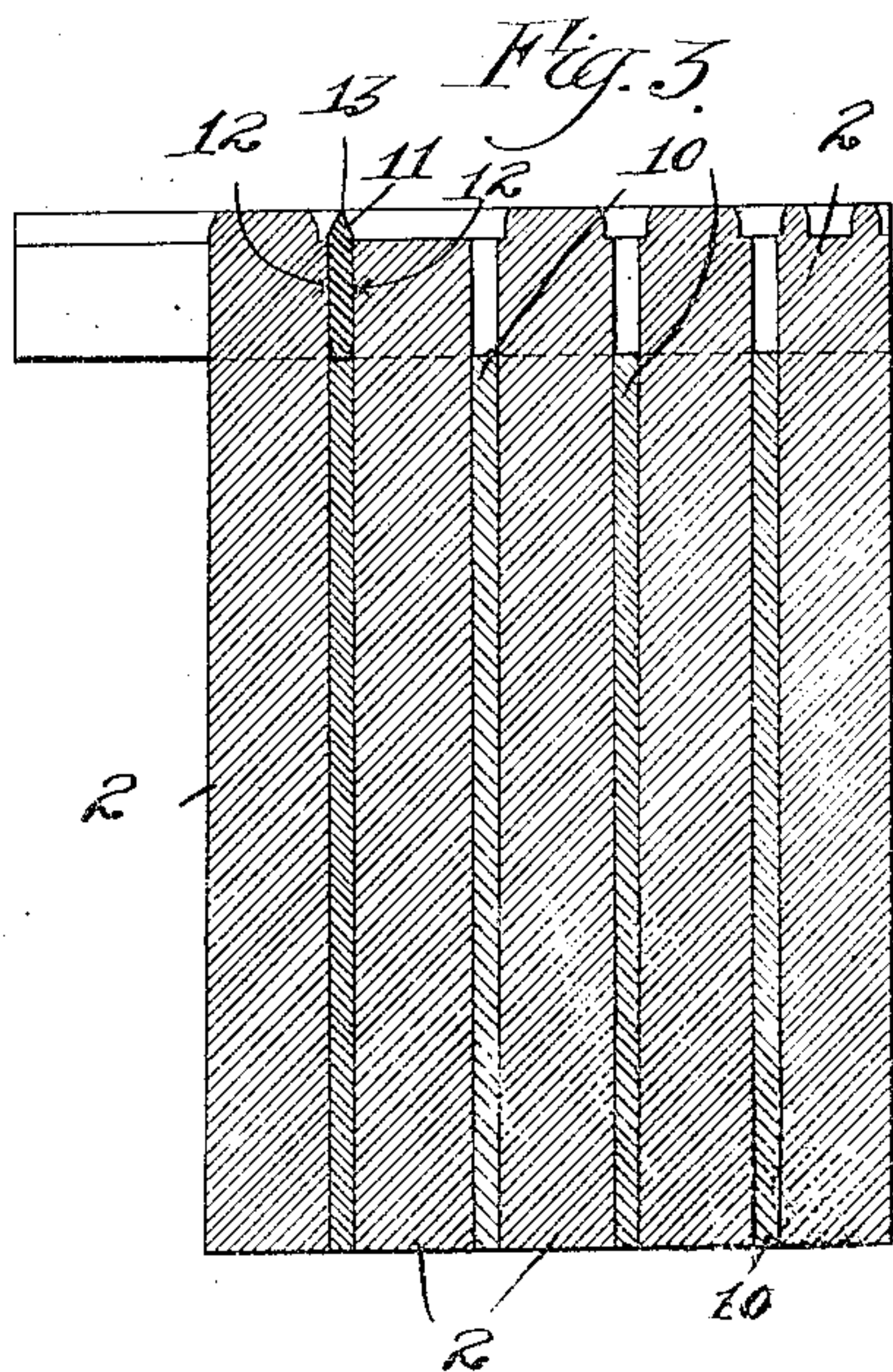
993,328.

Patented May 23, 1911.

3 SHEETS—SHEET 1.



Witnesses:
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Inventor:
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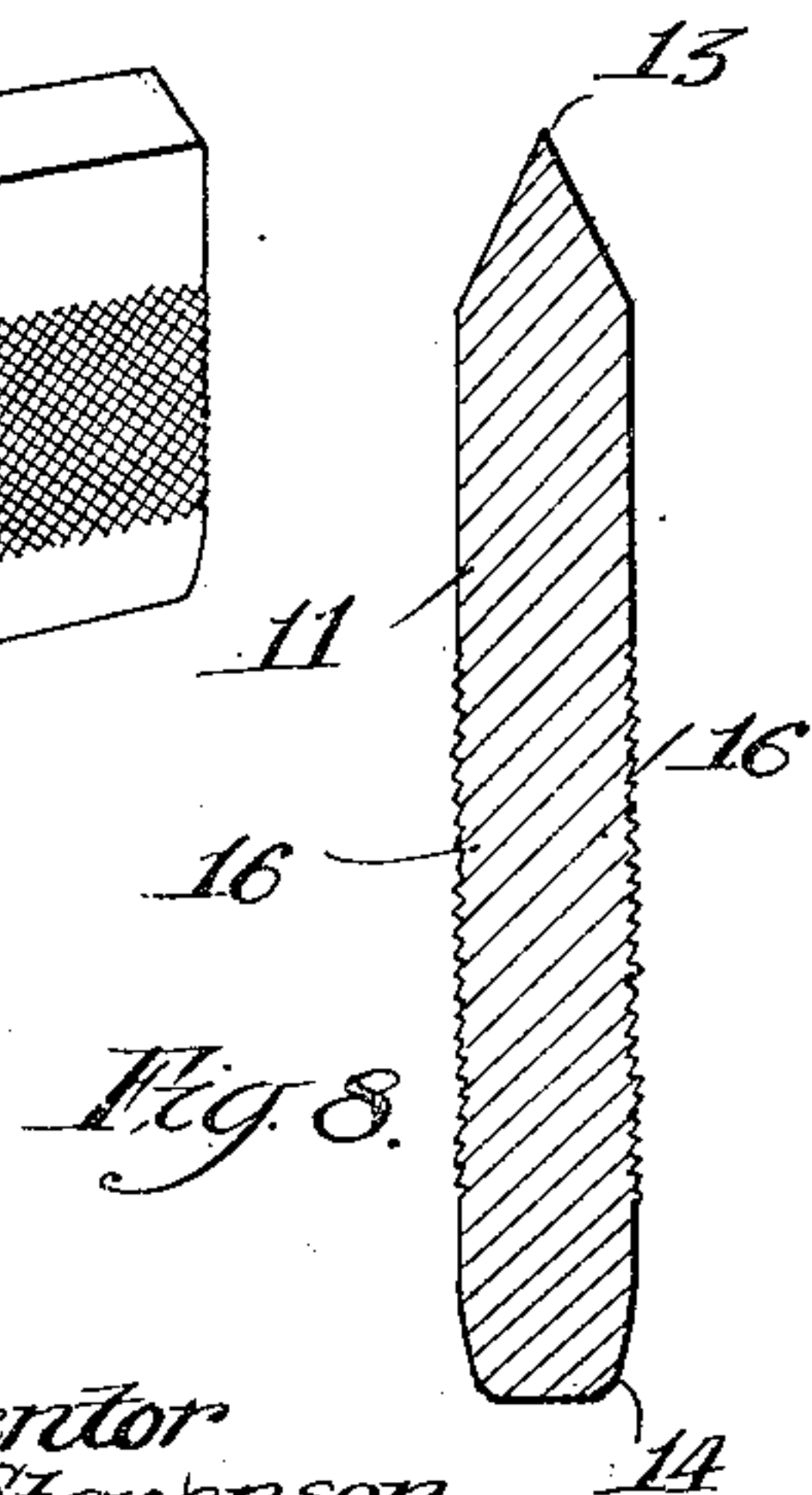
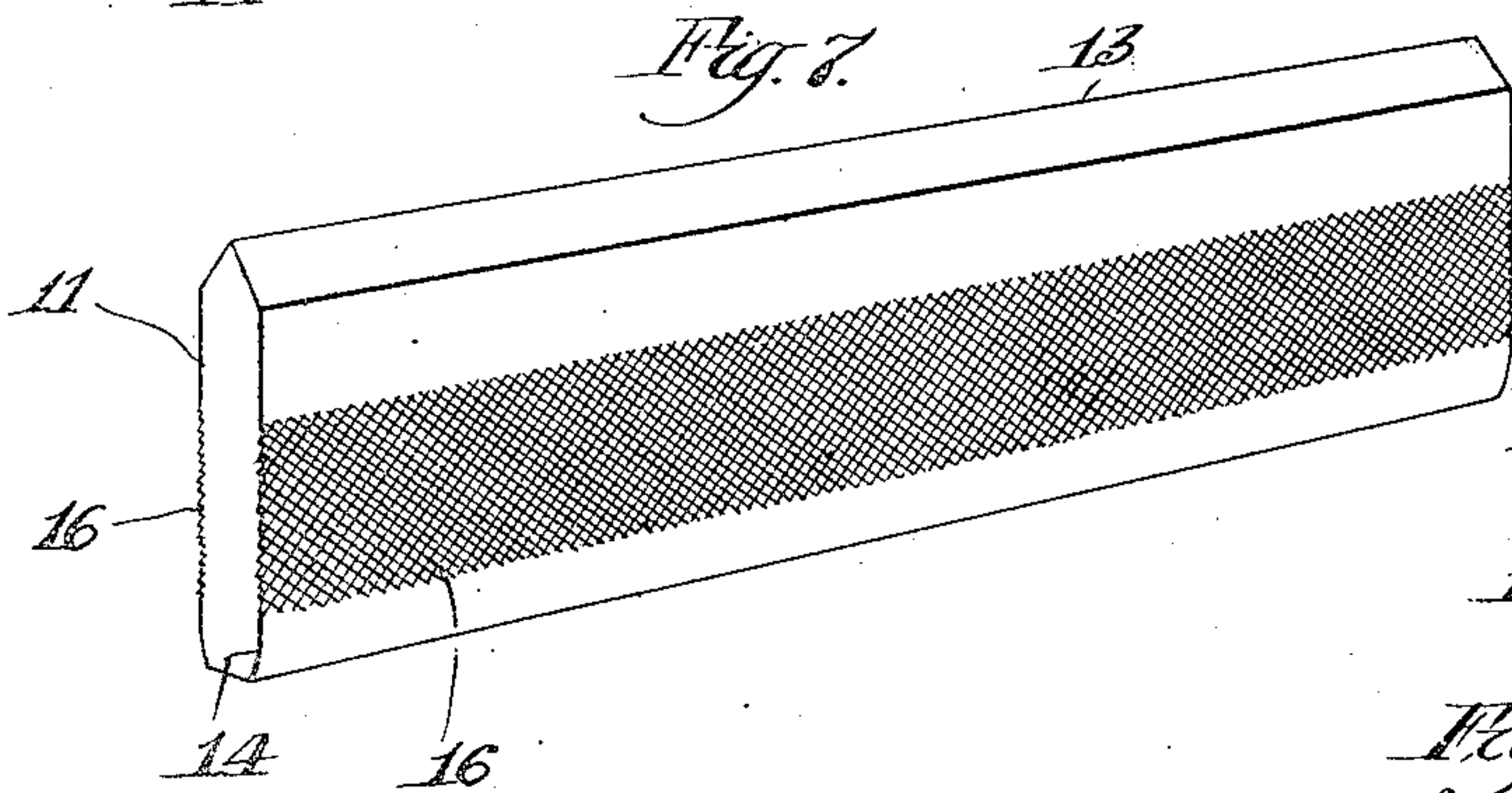
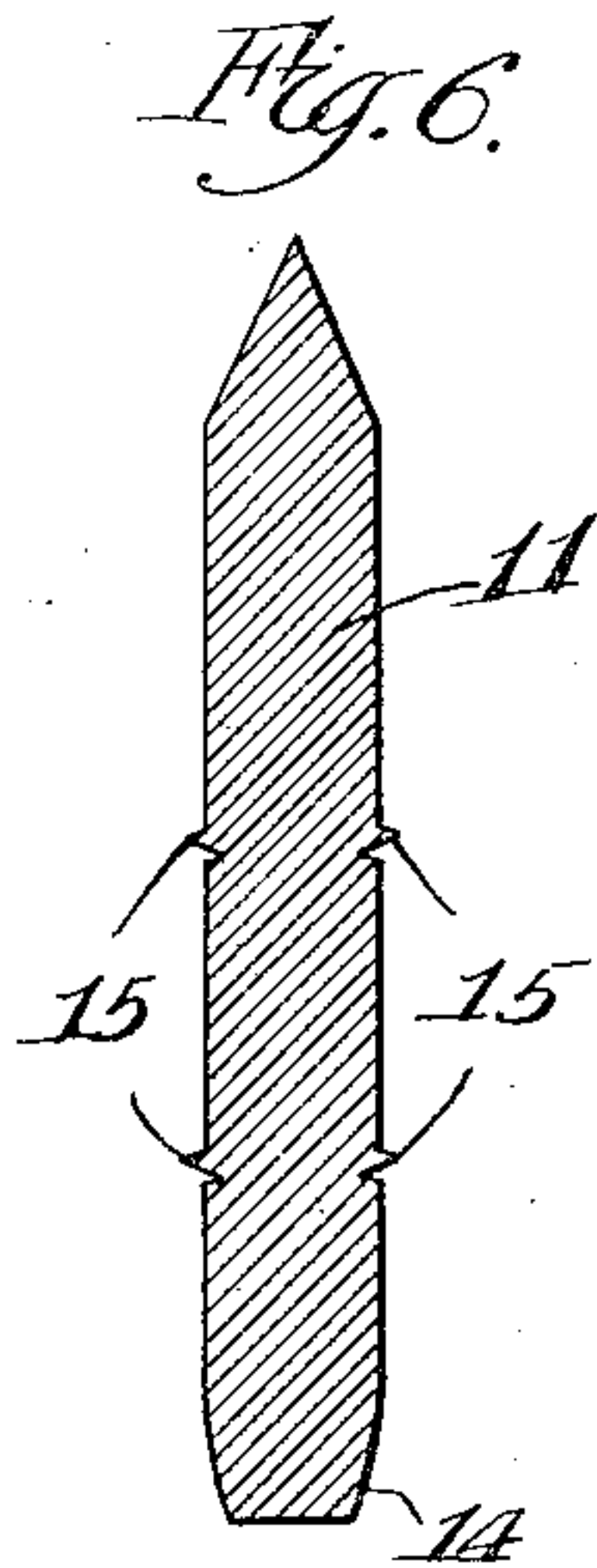
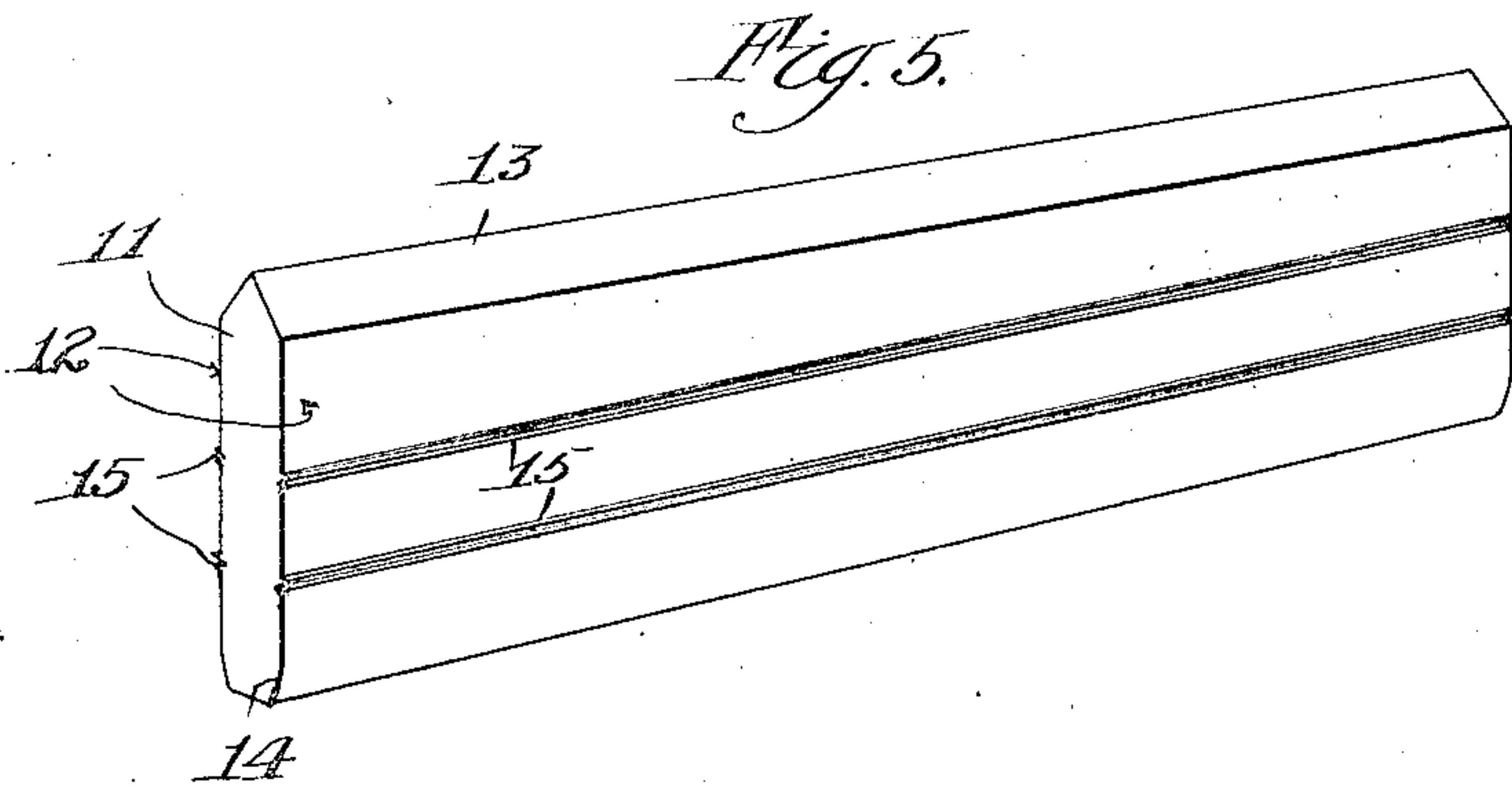
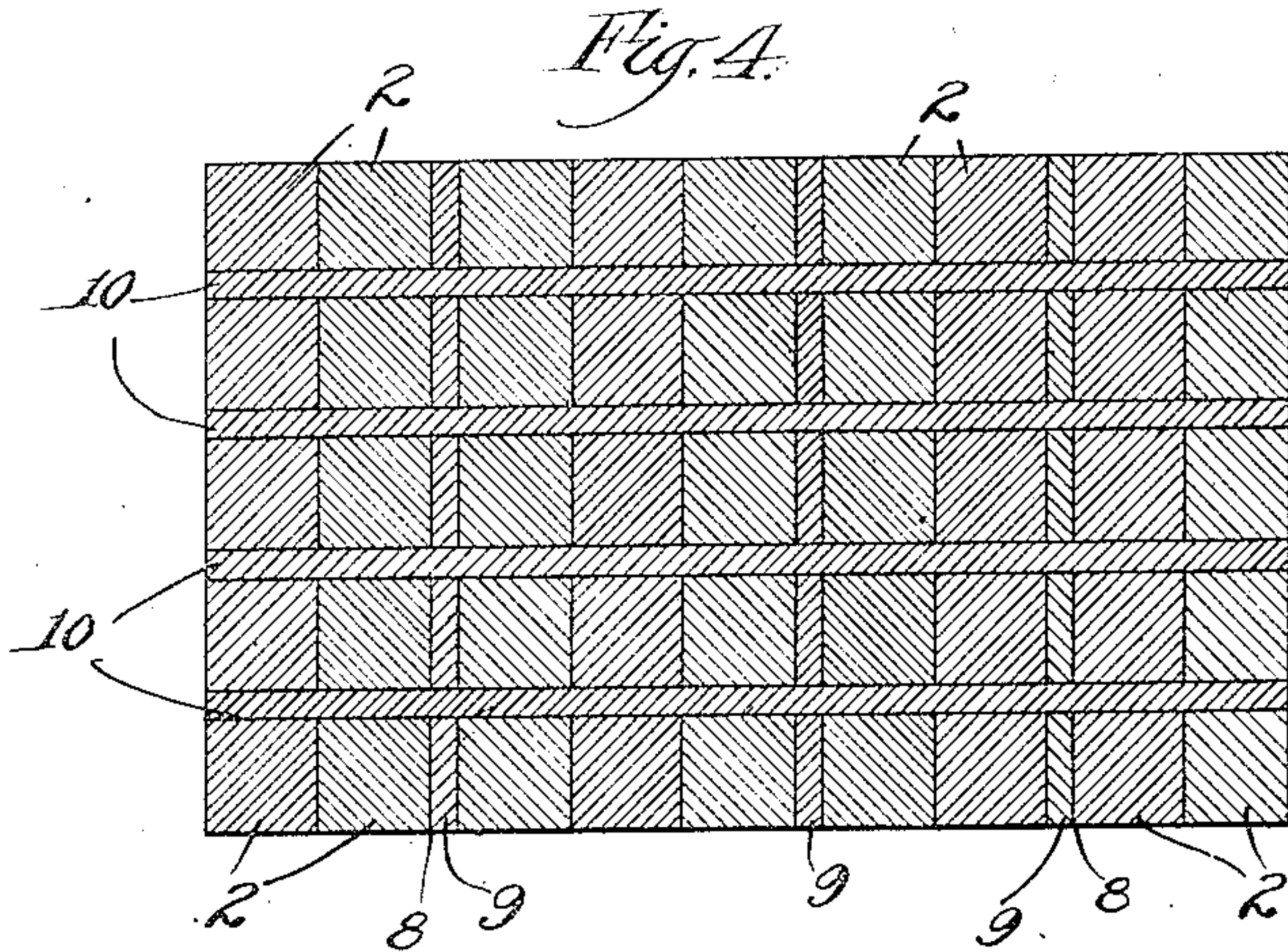
PRINTING RULE AND SYSTEM OF APPLYING SAME TO PRINTING FORMS.

APPLICATION FILED SEPT. 2, 1910.

993,328.

Patented May 23, 1911.

3 SHEETS—SHEET 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

ASHTON G. STEVENSON, OF CHICAGO, ILLINOIS, ASSIGNOR TO CHICAGO LINO-TABLER COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

PRINTING-RULE AND SYSTEM OF APPLYING SAME TO PRINTING-FORMS.

993,328.

Specification of Letters Patent.

Patented May 23, 1911.

Application filed September 2, 1910. Serial No. 580,238.

To all whom it may concern:

Be it known that I, ASHTON G. STEVENSON, a citizen of the United States, and resident of Chicago, Cook county, Illinois, have
5 invented certain new and useful Improvements in Printing-Rules and System of Applying the Same to Printing-Forms, of which the following is a full, true, clear, and exact description.

10 My invention relates to improvements in printing devices and has particular reference to a system of ruling type forms which consists of individual or hand set type, as distinguished from printing forms composed of
15 linotype or similar slugs.

The object of the invention is to provide a system for ruling type forms by means of which the cost both in time and material of this work, will be decreased, and which shall
20 be especially adapted for use with monotype or individual type systems.

A further object of the invention is to provide a type form rule so formed that it may be easily inserted between lines or rows
25 of composed type and which is adapted to be securely held in position by the type when the type are pressed together.

The invention consists in a ruling system for type forms composed of individual type,
30 and comprises a type form rule of less than type height, means supporting the rule between the type with its printing edge in the plane of the printing surface of the type form, the rule being locked in position by
35 the pressure of the type.

A further feature of the invention consists in a type form rule of less than type height supported between individual or separable type and having outstanding projections on
40 its side faces adapted to interlock with the type when the type are pressed against the rule.

My invention consists further in a type form rule of less than type height made of
45 suitable material for this purpose and a support of type metal or other comparatively cheap material adapted to hold the rule in position between individual or separable type with its printing edge in the printing
50 surface of the form, said support extending from the bottom of the rule to the bottom plane of the type form.

My invention will be more readily under-

stood by reference to the accompanying drawings forming a part of this specifica- 55
tion and in which;

Figure 1 is a perspective view of a printing form ruled in accordance with my invention; Fig. 2 is a vertical sectional view in the plane of the line 2—2 of Fig. 1; Fig. 60
3 is a vertical cross-sectional view in the plane of line 3—3 of Fig. 1; Fig. 4 is a horizontal sectional view in the plane of line 4—4 of Fig. 1; Fig. 5 is a view in perspective of one form of my novel rule; Fig. 65
6 is an enlarged vertical section of the rule shown in Fig. 5; Fig. 7 illustrates another form of my novel rule; Fig. 8 is a section similar to Fig. 6, of the rule illustrated in Fig. 7; Fig. 9 is a top plan view of a ruled 70
type form, the form being partly composed of shoulder type. Fig. 10 is a vertical section of the type form shown in Fig. 9 on line 10—10 thereon; and Fig. 11 is an enlarged perspective view of one of the shoulder type. 75

The usual practice in ruling type forms composed of ordinary hand set or individual type is to rule them with brass rules of type height or, in other words, the rules extend from the printing surface of the form to the 80
bottom thereof. These ordinary type height brass rules are comparatively expensive, and in making use of them in ruling tabular work set up with ordinary type, it is necessary to cut the rules into lengths to suit the 85
work or the form produced. This results in a plurality of short pieces of rule which accumulate in quantities and are not of much value, as the time necessary to select short pieces for any particular work would 90
amount to greater expense than the cutting of new pieces from longer stock. Another point in the use of the type high brass rule is that many ruled forms, such for instance as the forms for railroad freight tariffs, are pre- 95
served for considerable lengths of time, and as large quantities of rules are used in the ruling of these forms, it results in the use of or tying up of considerable capital. In consequence of this, it is a common practice, 100
when storing these forms, to remove the longer pieces of rules from the forms so that these pieces may be made use of during the time that these forms are stored, and as the time necessary to remove and replace the 105
shorter pieces of rules in these forms would

be too great, the shorter pieces are left in the forms. This results in the forms being left in such condition that they can not be securely or thoroughly bound or tied up and in consequence the forms are frequently pied or broken up accidentally, in being transferred from place to place.

In my novel system of ruling type forms composed of individual or separable type, I provide a rule of considerably less than type height and support this rule in position between the type upon a supporting member composed preferably of type metal, the supporting member being slightly thinner than the rule, and I clamp the rule in position by means of the pressure exerted against the rule by the adjacent type. Should it be desirable to remove the longer pieces of rules from a form, ruled in accordance with my system, when preparing the form to be stored it may be done without any harmful results as the type metal supports remaining in the form maintain the form in its original shape in which it may be satisfactorily bound or clamped for storage purposes without the risk of its being accidentally pied or broken up. However, the necessity of removing the rules from forms ruled by my system does not exist in the same sense as it does in regard to forms ruled by the ordinary method because the rules being of much less height than the ordinary rules they are much less expensive, and the capital which is tied up in forms of this character does not amount to so large an item.

Fig. 1 of the drawings illustrates a type form composed of individual or hand set type 2 and 3. The type 2 are what might be termed "blank" type or quads and the type 3 are shown as provided with printing characters or figures. The form itself has a bottom plane surface 4 and an upper or printing surface 5. The printing surface 5 of the form is formed by the printing surface of the type characters on the type 3. The form is composed of horizontal lines 6 of individual type and of vertical rows 7 of the type. The form illustrated shows a column of figures and is provided with rules for the purpose of producing lines in proper relation to the figures. Instead of the usual type high brass rule commonly used for this purpose, I provide a ruling member 11 of a height considerably less than the height of the type and adapted to be inserted between adjacent lines or rows of type, and I support this rule between the type with its printing edge or surface in the plane of the printing surface 5 of the type form by means of type supports 9 and 10. These supports I preferably make of type metal or some similar inexpensive material and I make them of a suitable length to extend from the bottom of the ruling member 11 to the bottom 4 of the type form. The

rule supports 9 are similar to what are known as "spaces" and are inserted between individual type in a line. I make these supports 9 slightly thinner than the rule 11 so that when the form is locked in the chase the type will be free to bind or lock the rule and yet the supports are not so much thinner than the rule but that the form will be capable of being locked in proper condition. The supports 10 are similar to what are known as leads and divide or separate adjacent lines of type apart, and extend across the form from side to side. I make these supports 10 similar to the supports 9 in that they are slightly thinner than the rules which they hold in position and are of a height to support the rule in a proper printing relation to the printing form.

A form thus built up or produced is provided with what might be termed rule receiving slots 8 between lines and rows of type and these slots are adapted to receive the rules 11 after the form has been composed. The rule itself, as already stated, is much less than type height. It is provided on its upper edge with a printing surface 13 and is adapted to be held in position in the slot, as has been explained, by the pressure of the adjacent type upon its side faces 12. The pressure of the type upon the rule holds the rule in position against the tendency of the printing operations to dislodge the rule from the form and under some circumstances I provide the rule with outstanding projections on its side faces to add to the interlocking of the type with the rule for the purpose of more securely retaining the rule in position between the type. In Figs. 5 and 6 I have illustrated one form of these outstanding projections which comprise horizontally arranged ribs or ridges 15 produced upon a rule by means of scoring the rule with some sharp instrument or by some other convenient method. In Figs. 7 and 8 I have illustrated another form of outstanding projections 16 produced by nurling or milling the side surfaces of the rule as indicated. These projections form what might be termed roughened side faces on the rule for engagement with the type to add to the frictional interlocking of the type and rule.

In order to be able to easily insert the rule in the slots 8 after the form has been composed of type and rule supports, I form the rule 11 with a smooth round lower edge 14 formed by beveling the lower corners of the rule or making the lower portion of the rule slightly tapered or it may be produced by simply rounding or smoothing the lower corners. This construction results in a rule sufficiently narrower at its lower edge than its support so that it may be readily entered into the rule slot 8 even when the adjacent type are positioned against the side

faces of the rule supports, in which position the rule slot 8 would obviously be narrower than the rule.

The rule supports may be either separate from the individual type or formed integrally therewith. In Figs. 9 and 10 I have illustrated a type form composed of individual type which are formed with integral rule supports 17 which extend up from the bottom of the type a sufficient distance to support the rule 11 with its printing edge in the plane of the printing surface of the form. These rule supports 17 are similar to the separate rule supports 9 in that they are formed slightly thinner than the rules they are designed to support so that the pressure of the type, as the form is locked in the chase, will be received upon the sides of the rule and retain it thereby in its position.

As will be readily understood, many modifications of my novel system of ruling type forms will readily suggest themselves to those skilled in the art, and I therefore do not confine myself to the exact or particular construction of rule and supports as herein described.

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

1. A printing form ruling system comprising the combination with two type, of a printing rule of less than type height, arranged between the type and having its printing edge in the impression plane of the printing form, and a separate rule support arranged between the type, of less thickness than the rule and adapted to support the rule in the position stated, substantially as described.

2. A type form ruling system comprising the combination with two type, of a printing rule of less than type height arranged between the type with its printing edge in the plane of the printing surface of the form, and a rule support of less thickness than the rule, extending from the bottom of the rule to the bottom of the type and permitting the type to clamp the rule in place.

3. A system for ruling type forms which comprises the combination with two type of a ruling member of less than type height arranged between the type with its printing surface in the plane of the printing surface of the type form and a rule supporting member independent of and arranged between the type extending from the bottom of the rule to the bottom of the type and of less thickness than the rule thereby permitting the type to clamp the rule in place.

4. A system of ruling type forms which comprises two type in combination with a type form rule of less than type height, said rule having outstanding projections on its sides to interlock with the type when the type are pressed together upon the rule and a rule support of less thickness than the rule extending from the bottom of the rule to the bottom of the type.

5. A system of ruling type forms which comprises two type in combination with a type form rule of less than type height and having a smooth rounded lower edge for insertion between the type a rule support of less thickness than the rule arranged between the type and permitting the type to clamp the rule in place.

6. A system of ruling type forms which comprises two type in combination with a type form rule of less than type height having a smooth rounded lower edge for easy insertion between the type and outstanding projections on its side faces interlocking with the type when the type are pressed together upon the rule, and a rule support of less thickness than the rule extending from the bottom of the rule to the bottom of the type.

In testimony whereof, I have hereunto set my hand, this 1st day of August, 1910, in the presence of two subscribing witnesses.

ASHTON G. STEVENSON.

Witnesses:

EDWARD F. WILSON,
JOHN R. LEFEVRE.