(No Model.)

# F. ZIKA.

## ADJUSTABLE RULE.

No. 589,064. Patented Aug. 31. 1897.

Fig. 1

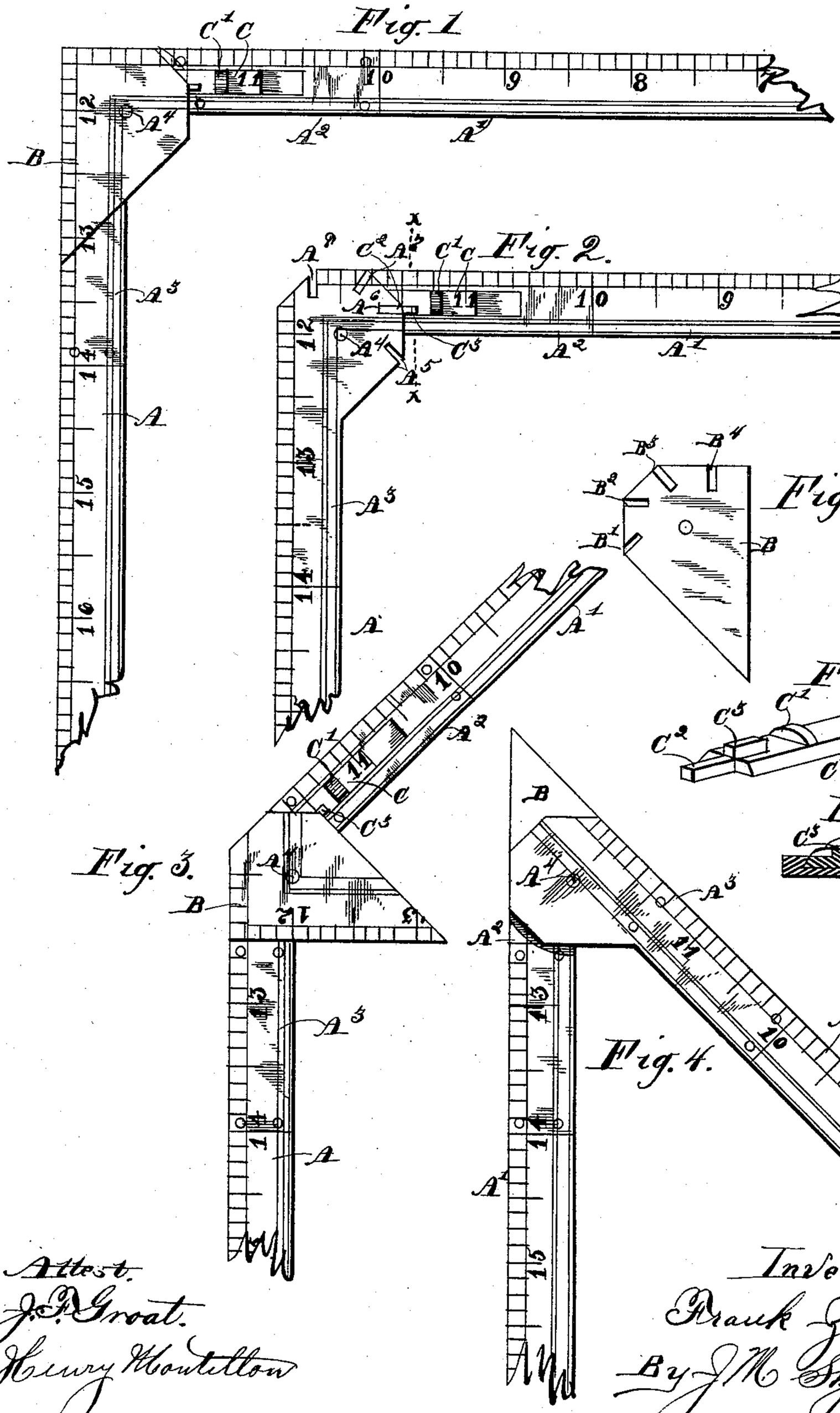


Fig. 2.




Fig. 5.




Fig. 6.




Fig. 7.


Fig. 3.




Fig. 4.




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## ADJUSTABLE RULE.

SPECIFICATION forming part of Letters Patent No. 589,064, dated August 31, 1897.

Application filed May 25, 1897. Serial No. 638,019. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK ZIKA, a citizen of the United States, residing at Cedar Rapids, in the county of Linn and State of Iowa, have invented certain new and useful Improvements in Adjustable Rules; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of this invention is to render a folding rule capable of adjustment, so as to serve as a square or try-square at various angles.

The invention is fully described and illustrated hereinafter, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a plan view illustrating the joint portion of the rule to which my improvement is applied. Fig. 2 is a similar view, but with the top plate removed. Fig. 3 is a similar view showing the rule set at a different angle, the top plate serving as a right-angled try-square for both arms of the rule. Fig. 4 is a similar view from the opposite side, showing the rule set at an acute angle, the top plate forming the apex thereof. Fig. 5 is a view of the under side of the top plate. Fig. 6 is a view in perspective of the sliding catch which locks the parts in position. Fig. 7 is a transverse section of the catch and one arm of the rule in the line *x x* of Fig. 2.

Similar letters of reference indicate corresponding parts.

In the drawings, A and A′ designate the arms of the rule, which are provided with suitable hinge-plates $A^2$ and $A^3$, respectively, through which passes a suitable pivot-pin $A^4$. The hinge-plates, which should be of metal to secure requisite strength, are made angular instead of circular at the joint, so that when the rule is set in varying positions the angles of the two plates coincide and form a complete angle to the rule, as illustrated more particularly in Fig. 3, reference being also had to Fig. 4. It will be readily seen that the angles of the hinge-plates as shown in Fig. 4, when set in the same position as that illustrated in Fig. 3, would coincide with the external angle shown in Fig. 3 as they do with the top plate B. This would of course not be the case if the hinge-plates were made circular externally.

Outside the hinge and on the same pivot-pin is mounted the top plate B, above referred to. This is preferably made in the angular form illustrated, the angles being ninety and forty-five degrees, respectively. The two longer sides, which are at an angle to each other of forty-five degrees, serve each, when in the position shown in Fig. 3, as one side of a try-square in connection with the corresponding arms of the rule. The adjacent angles are at ninety and forty-five degrees to the longer sides, respectively, and the side opposite the angle formed by the longer sides lies in the same angle to the longer sides, but in reverse order.

In one arm of the rule in a suitable dovetail groove is mounted a sliding catch-plate C. This has a nib C′, by means of which it is moved back and forth by the thumb or finger, and at one end is provided with a projection $C^2$, adapted to engage with notches $A^5$, $A^6$, $A^7$, and $A^8$, formed in one of the hinge-plates, as clearly illustrated in Fig. 2. The catch-plate also has a projection $C^3$, which engages with suitable recesses B′, $B^2$, $B^3$, and $B^4$, formed in the top plate B. In order that the top plate may present a smooth and finished appearance externally, these recesses B′, $B^2$, $B^3$, and $B^4$ extend only partially through it, as indicated in Figs. 1 and 5, respectively.

It is to be understood that the top plate B may turn freely on its pivot and independently of either arm of the rule.

The operation of the device is very simple and will be readily understood. When used as a rule, the arms of the rule are preferably set parallel, this adjustment not being illustrated in the drawings, but the position of the top plate being as shown in Fig. 1. To form a right-angled square of the main arms of the rule, they are set in the position shown in Fig. 1, the slide C engaging with the notches $A^6$ and $B^2$, respectively. In the same manner the rule may form a bevel at an angle of forty-five degrees, as shown in Fig. 3, in which case the slide C engages with the notches $A^7$ and $B^2$, respectively. In this case the longer sides of the top plate form one side of the

right-angled triangle with each arm of the rule and thus serve as one side each of separate try-squares, as above explained.

When adjusted to the forty-five-degree angle illustrated in Fig. 4, the angle is completed by turning the top plate to the position illustrated, in which case the catch-plate engages with the notches $A^4$ and $B^2$, respectively.

The device as thus constructed is thus adapted to a considerable variety of uses and serves the purpose of several tools, as will be readily understood.

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

An adjustable rule composed of two main arms provided with suitable hinge-plates provided with notches for the engagement of a catch-plate mounted to slide in one of the arms and adapted to engage with said notches, a variously-angled top plate mounted adjacent to said hinge and having recesses formed on the inner side thereof adapted to engage with the projections on said catch-plates, substantially as and for the purpose set forth.

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

FRANK ZIKA.

Witnesses:
J. M. ST. JOHN,
J. F. GROAT.