

No. 648,034.

Patented Apr. 24, 1900.

J. L. KRAUSER.  
OVEN THERMOMETER.

(Application filed Aug. 12, 1899.)

(No Model.)

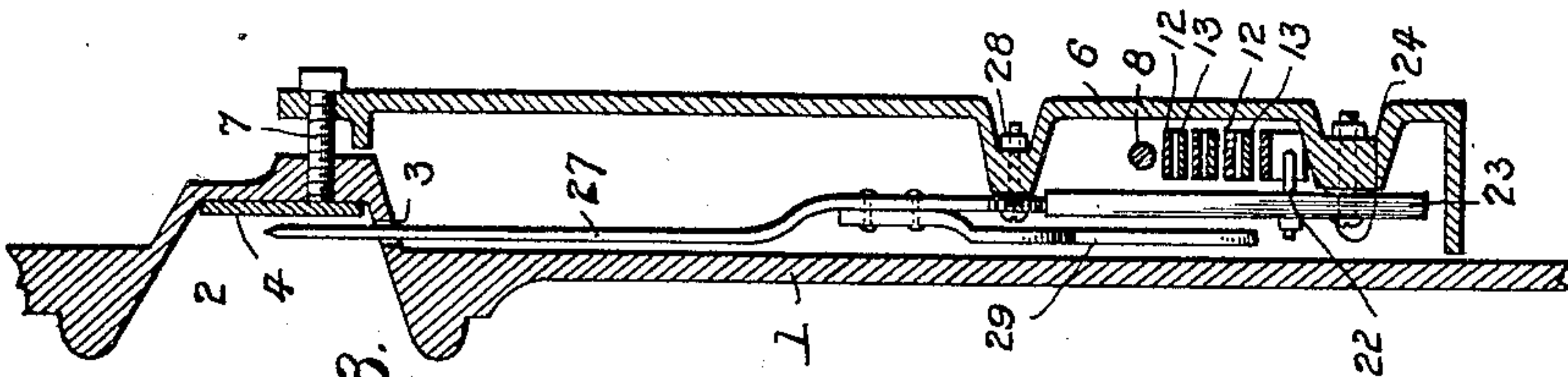


Fig. 3.

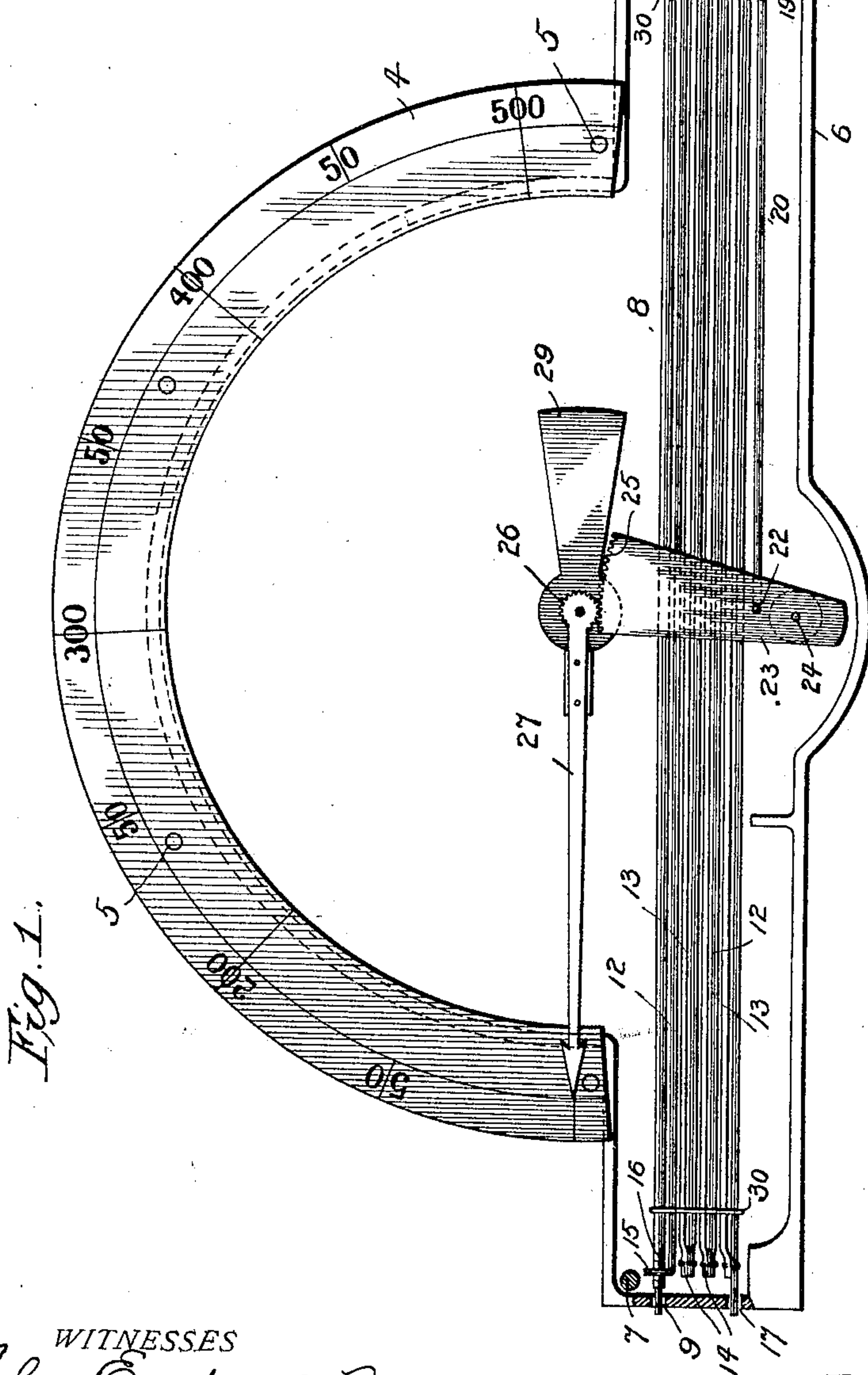


Fig. 1.

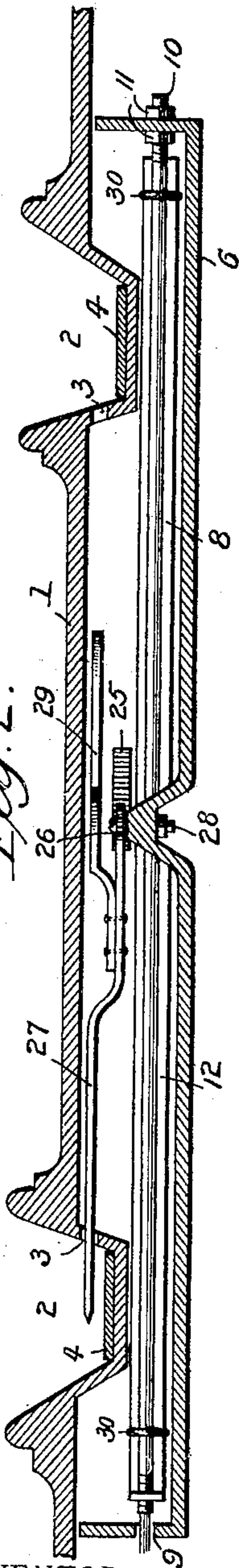


Fig. 2.

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# UNITED STATES PATENT OFFICE.

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## OVEN-THERMOMETER.

SPECIFICATION forming part of Letters Patent No. 648,034, dated April 24, 1900.

Application filed August 12, 1899. Serial No. 727,045. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN L. KRAUSER, a citizen of the United States, residing at Leeper, in the county of Clarion and State of Pennsylvania, have invented certain new and useful Improvements in Oven-Thermometers, of which the following is a specification.

This invention relates to oven-thermometers of the type embodying thermometric bars located within the oven and indicating mechanism actuated thereby exposed to view on the oven-door or other convenient part of the stove.

One object is to provide an oven-thermometer of this type having the thermometric bars arranged and supported in a novel manner whereby accurate adjustment can be easily had to set the pointer or indicator to start at any desired temperature and, further, to render the device extremely sensitive to slight variations in temperature.

Another object is the provision of an oven-thermometer having its parts so arranged and adapted to each other that it is simple in construction and operation and compact in form.

Having the foregoing objects in view, the invention consists of certain improved features and novel combinations of parts fully set forth hereinafter and recited in the appended claims.

In the accompanying drawings, Figure 1 is a front elevation of the invention with the graduated scale shown in relative position; Fig. 2, a section taken horizontally through the casing and the stove-door, and Fig. 3 a vertical section.

The invention is intended to be connected to the inner face of the stove-door 1, which is provided with a semicircular depression or groove 2 in its outer face, having a slot 3 for the traveling pointer in its lower wall. The scale consists of a properly-graduated semicircular metallic band 4, lying in the bottom of depression 2 and secured to the door by suitable fastenings, such as rivets 5.

The casing containing the operative parts is shown at 6, the same being closed on all sides except that facing the stove-door and secured to the latter on its inner face by screws 7. The thermometric bars or couplets are hung from a horizontal rod 8, having one end loosely received in the casing at 9 and its

other end screw-threaded at 10 and passed loosely through the opposite end of the casing and provided with adjusting and clamping nuts 11. The thermometric devices comprise steel bars or strips 12 and brass bars 13, arranged in alternation, which are riveted together at their ends 14 in such manner that each brass strip is connected to a higher steel strip at one end and to a lower steel strip at the other end. The uppermost steel strip 12 has a bent end 15, through which passes the threaded portion 16 of rod 8. The lowest steel strip has one end slidable loosely through the casing at 17 and its other end bent at 18 and receiving the threaded portion 19 of an actuating-rod 20, which has one end slidable freely through the casing at 21 and its other end connected at 22 to an actuating-arm 23, which is pivoted to the casing at 24. This arm has gear-teeth 25 on its end, which mesh with a pinion 26 on a pointer 27, pivoted to the casing at 28 and projecting through slot 3, which is provided with a counterbalance 29, adapted to facilitate the movement of the pointer when actuated by the bars or strips. To more effectually support the bars, so that they will not become distorted by their own weight, I provide loops or bands 30, encircling them and hung from the rod 8. The bars can lengthen and shorten without hindrance because they pass freely through these loops.

In operation the expansion of the different bars causes a movement of the actuating bar and arm, resulting in the shifting of the pointer over the scale until the proper temperature is indicated. To rectify any displacement of the pointer caused by continued use or to adjust it, as desired, the nuts 11 are turned to shift the thermometric appliances as found necessary. Owing to the provision of a depression in the oven-door and the location of the scale therein the pointer is protected and the necessity of providing a glass or other protecting-cover is obviated.

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

1. In an oven-thermometer, the combination with a thermometric bar comprising strips secured together at their ends; of temperature-indicating mechanism adapted to be actuated by said bar; and means for sup-

porting and adjusting said bar comprising a rod threaded at its ends, and provided with adjusting-nuts; and a rod threaded at one end and extending through a bearing, and  
5 connected at its opposite end with the indicating mechanism.

2. In an oven-thermometer, the combination with a rod, of a thermometric bar, and loops or bands loosely encircling said bar and  
10 suspending it from the rod.

3. In an oven-thermometer, the combination with a rod, and means for adjusting it in a longitudinal direction, of a thermometric bar arranged below the rod and lengthwise  
15 thereof and connected thereto, and loops or bands loosely encircling the bar and suspending it from the rod.

4. In an oven-thermometer, the combination with a rod and means for adjusting it in a longitudinal direction, of a thermometric 20 bar composed of a plurality of strips, one of which has a bent end through which said rod is threaded, and another of said strips having a bent end, an actuating-rod threaded through the bent end last named, and indicating mech- 25 anism connected with the inner end of said actuating-rod.

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

JOHN L. KRAUSER.

Witnesses:

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