

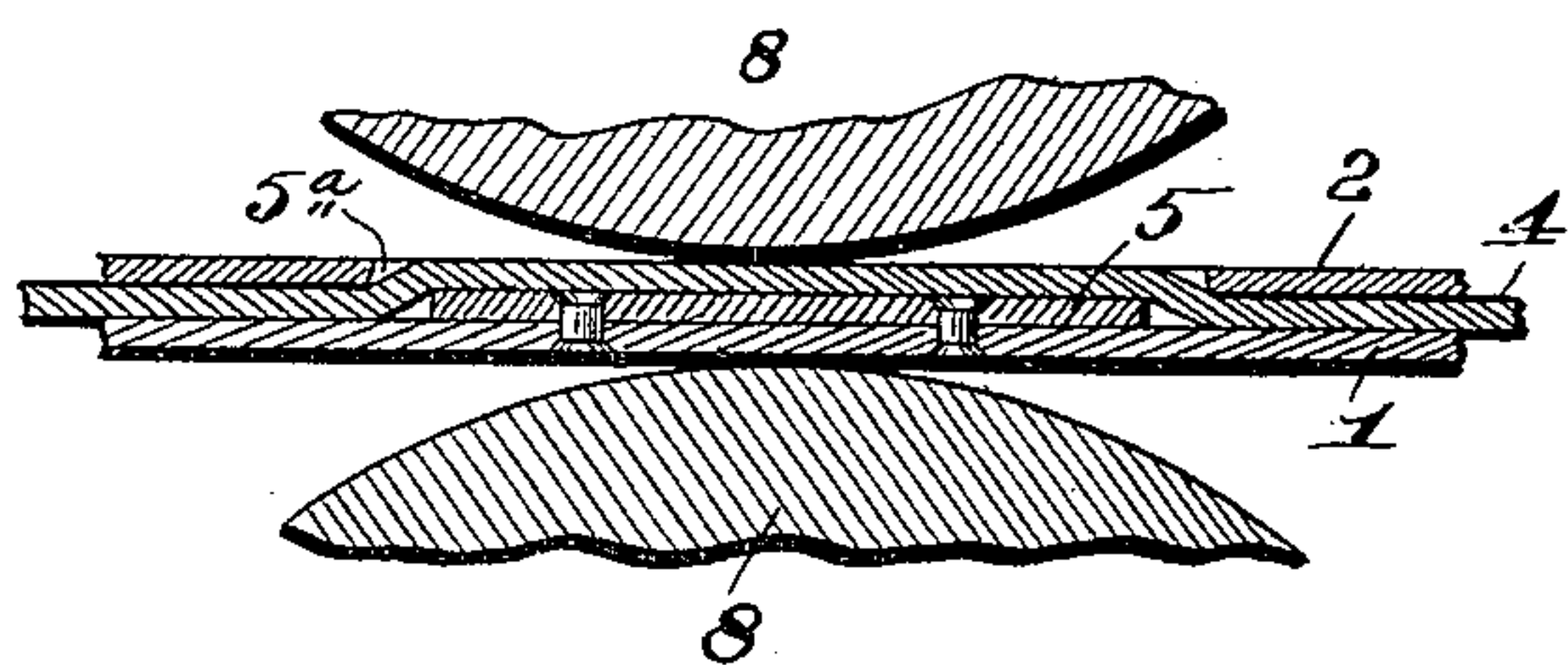
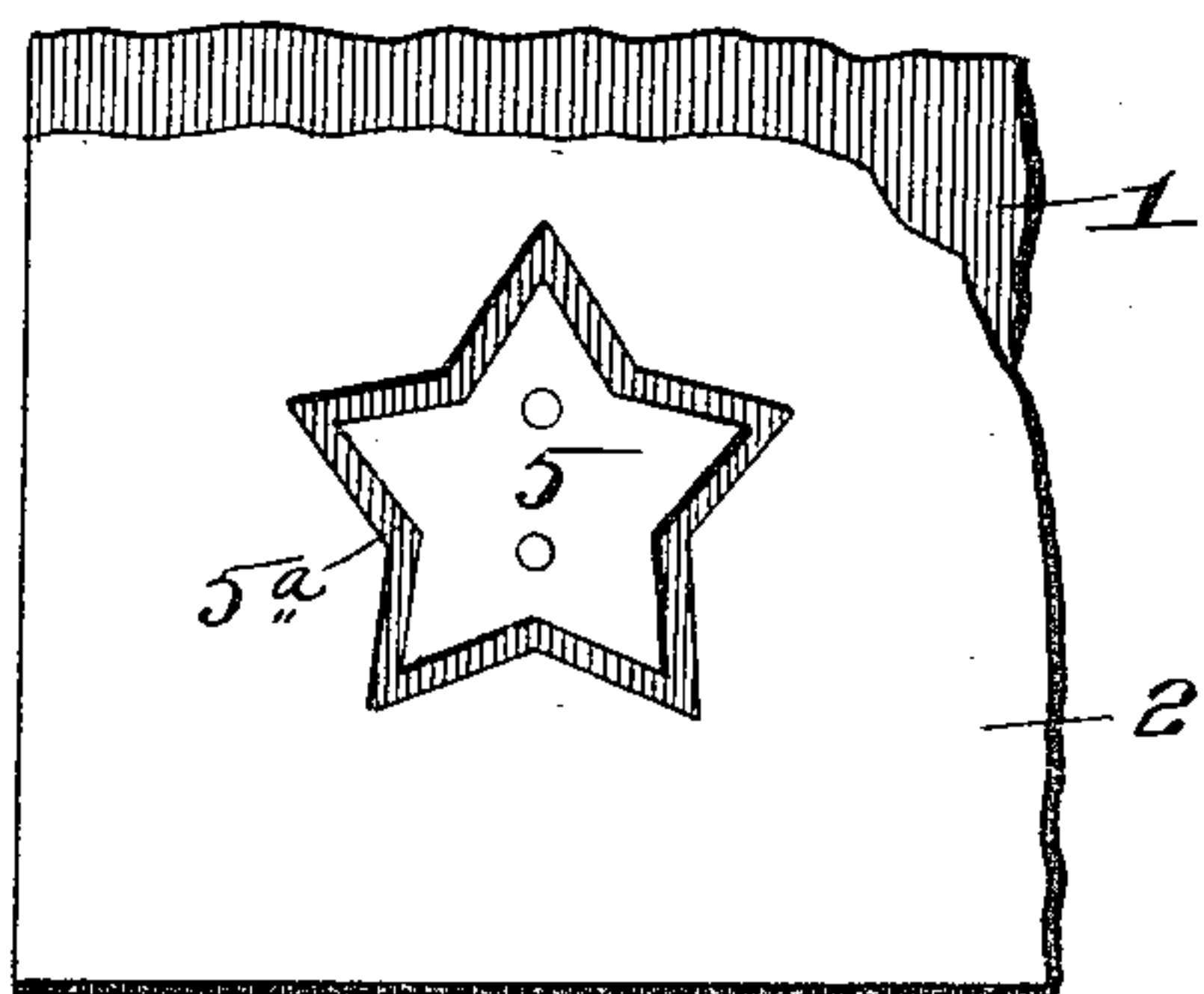
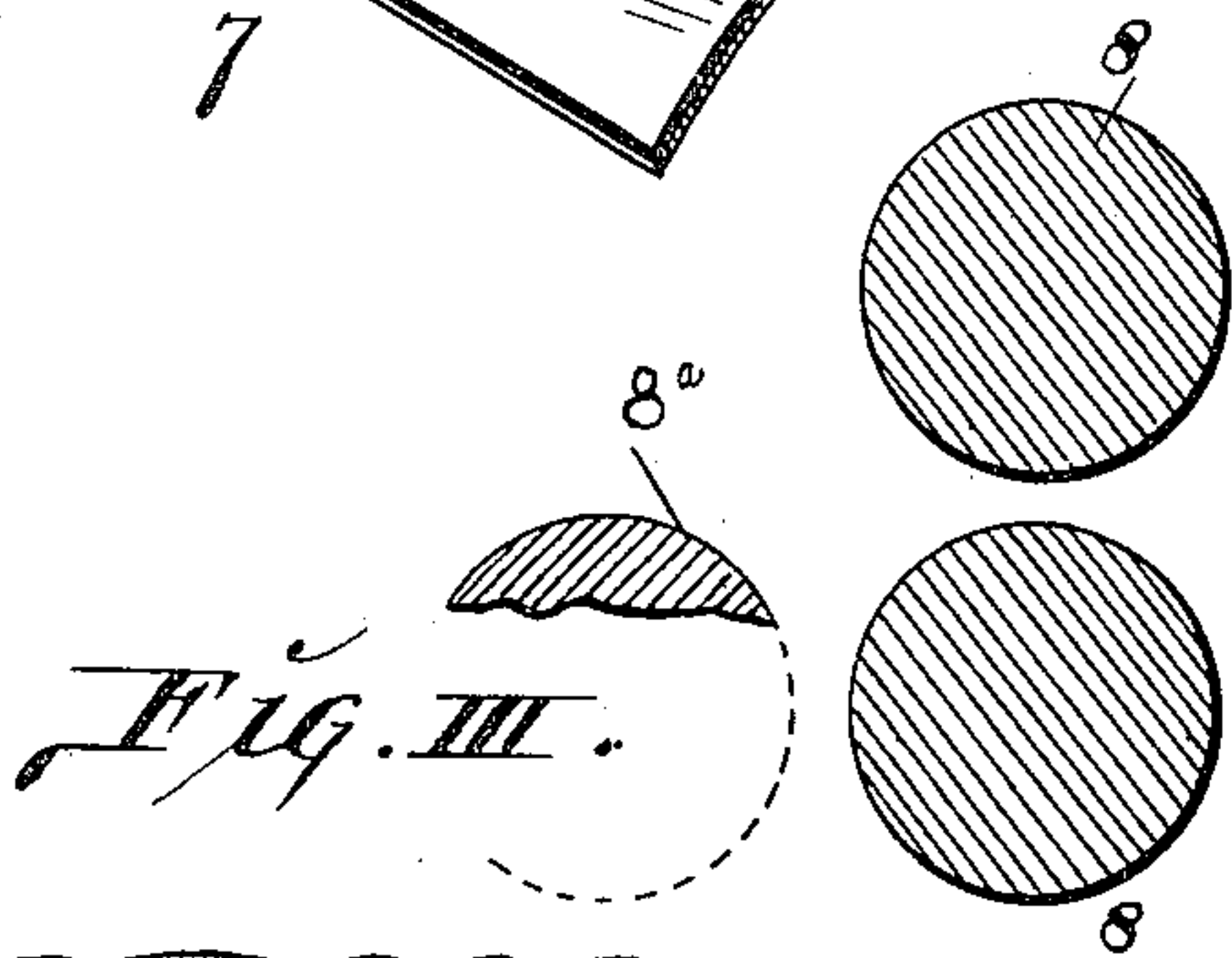
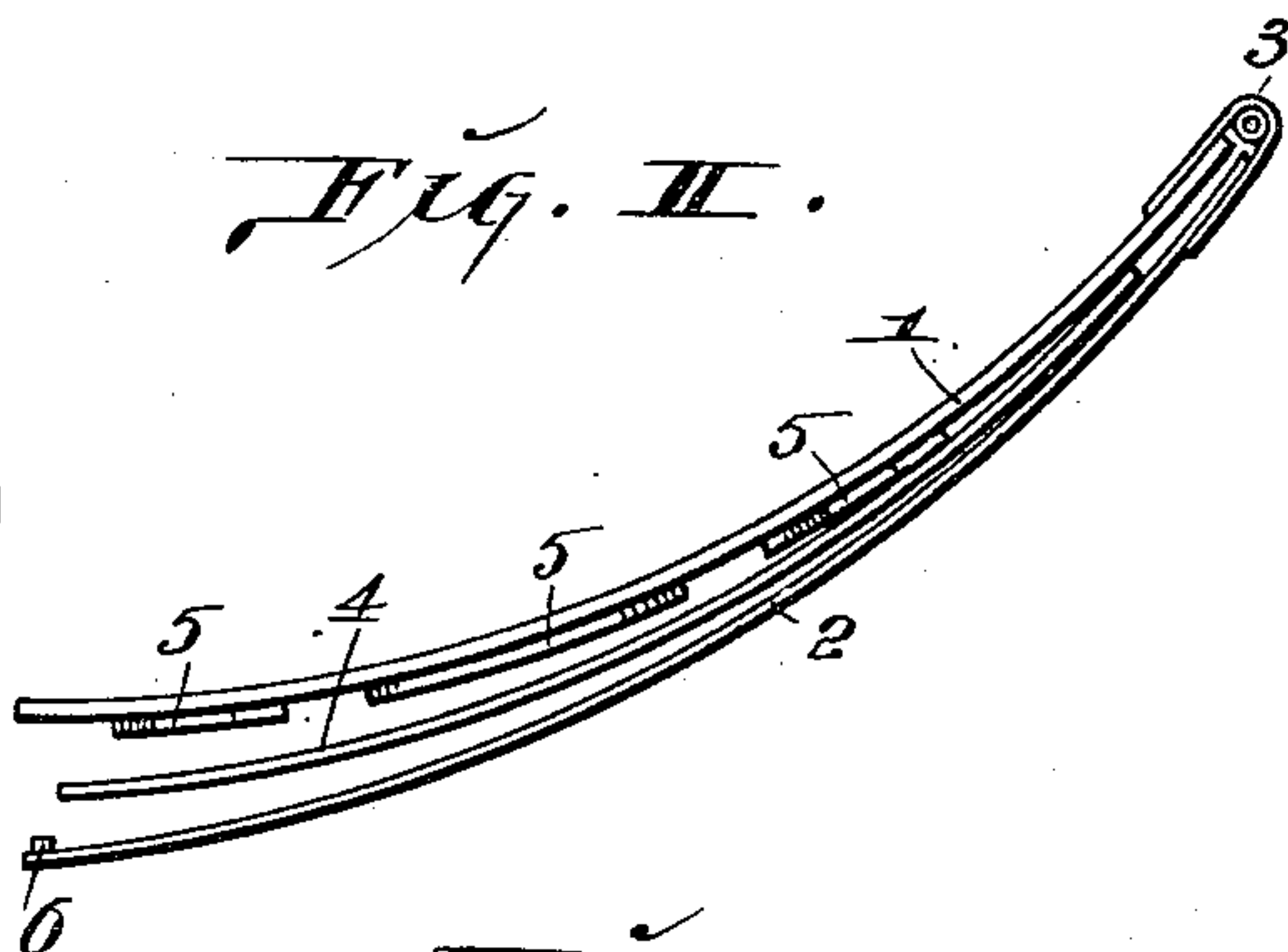
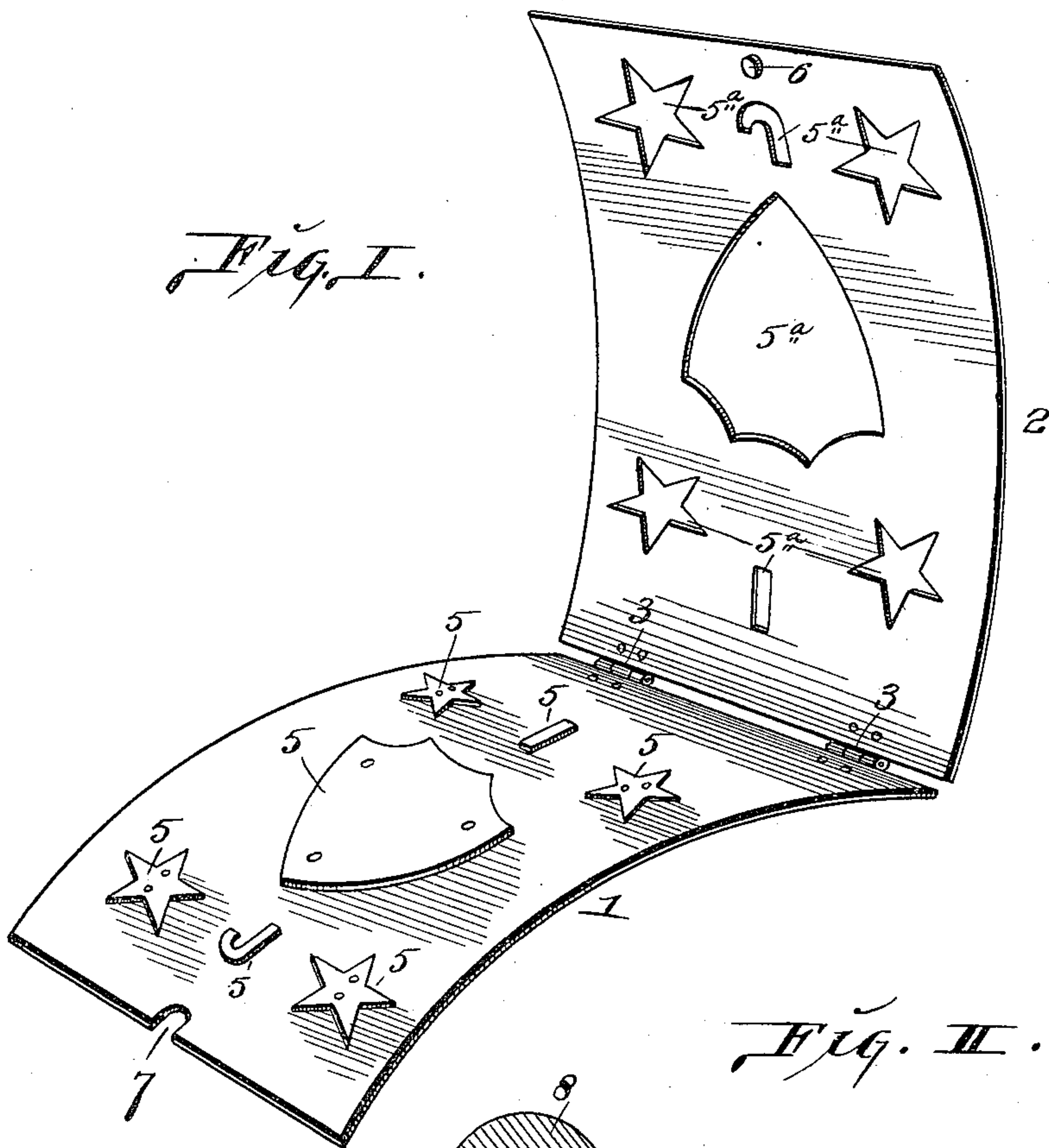
No. 666,468.

Patented Jan. 22, 1901.

J. T. CLEAR.
EMBOSSING DIE.

(Application filed Aug. 4, 1900.)

(No Model.)



attest:
W. P. Smith
E. S. Knight

Inventor: _____
James T. Clear: _____
By *Wright & Bro*
attys.

UNITED STATES PATENT OFFICE.

JAMES T. CLEAR, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO
CHARLES CLEAR, OF SAME PLACE.

EMBOSSING-DIE.

SPECIFICATION forming part of Letters Patent No. 666,468, dated January 22, 1901.

Application filed August 4, 1900. Serial No. 25,876. (No model.)

To all whom it may concern:

Be it known that I, JAMES T. CLEAR, a citizen of the United States, residing in the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Embossing-Dies, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a flexible die for embossing metal and other sheets, the die being so formed that it is capable of being passed between rollers to obtain the pressure or force for embossing.

My invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a perspective view of my improved die. Fig. II is an edge view of the die, showing in section a pair of pressure-rollers and a third idler or curvature-producing roller. Fig. III is an enlarged detail plan view of a fragment of the die. Fig. IV is an enlarged detail section showing part of the die and part of the pressure-rollers in the act of embossing a sheet of metal.

1 designates the male member, and 2 the female member, of the die. The bodies of both of these members are in the form of flexible plates, and the members are hinged together, as shown at 3, Figs. I and II, so as to be held together with proper relation to each other and so that they can be readily separated to receive the sheet 4 that is to be embossed while positioned between them. Mounted on the inner face of the male member of the die are raised characters 5 of any configuration that it may be desired to impress into the sheet 4 to produce the embossing thereon. The characters 5 are preferably riveted to the male member, but may be otherwise secured. In the female member are a series of apertures 5^a, corresponding in configuration to the characters 5 and so positioned as to register with the raised characters 5 when the dies are positioned face to face.

The members of the die may be of flat or curved form, according to the shape of the sheet to be embossed.

In the practical use of the die the sheet to be embossed is placed between the two die members, as shown in Fig. II, and the free ends of the members are brought together and secured by any suitable means—such, for instance, as the pin 6, carried by one of the members, that engages in a notch 7 in the other member. After securing the sheet within the die members the die is passed between a set of revolving rollers 8, through means of which the characters projecting from the face of the male member are pressed into the sheet operated upon, thereby forcing the metal at the locations of the characters into the apertures 5^a and embossing the sheet into a condition corresponding to the configuration of the male member of the die.

A third roller 8^a may be utilized, where desired, to serve as an idler onto which the die passes as it is carried between the pressure-rollers 8, or said third roller may be located at a greater elevation than that shown in Fig. II, so that it will serve to direct the die upwardly and produce a curving travel of the die and effect a corresponding curvature of the embossed sheet.

I claim as my invention—

1. A sheet-embossing die comprising flexible male and female members, said male member being provided with characters projecting from one of the faces thereof and said female member being provided with apertures corresponding in configuration to the characters on said male member, substantially as described.

2. An embossing-die comprising flexible male and female members hinged together so that they may be moved to bring opposing faces thereof together, said male member being provided with raised characters, and said female member being provided with apertures corresponding in configuration to the shape of said raised characters and adapted to register therewith when the members are brought together, substantially as described.

JAMES T. CLEAR.

In presence of—

E. S. KNIGHT,
M. P. SMITH.