

(No Model.)

A. K. BECKWITH.

MOLDER'S PATTERN FOR CASTING DOVETAILS ON STOVE BOTTOMS.

No. 547,475.

Patented Oct. 8, 1895.

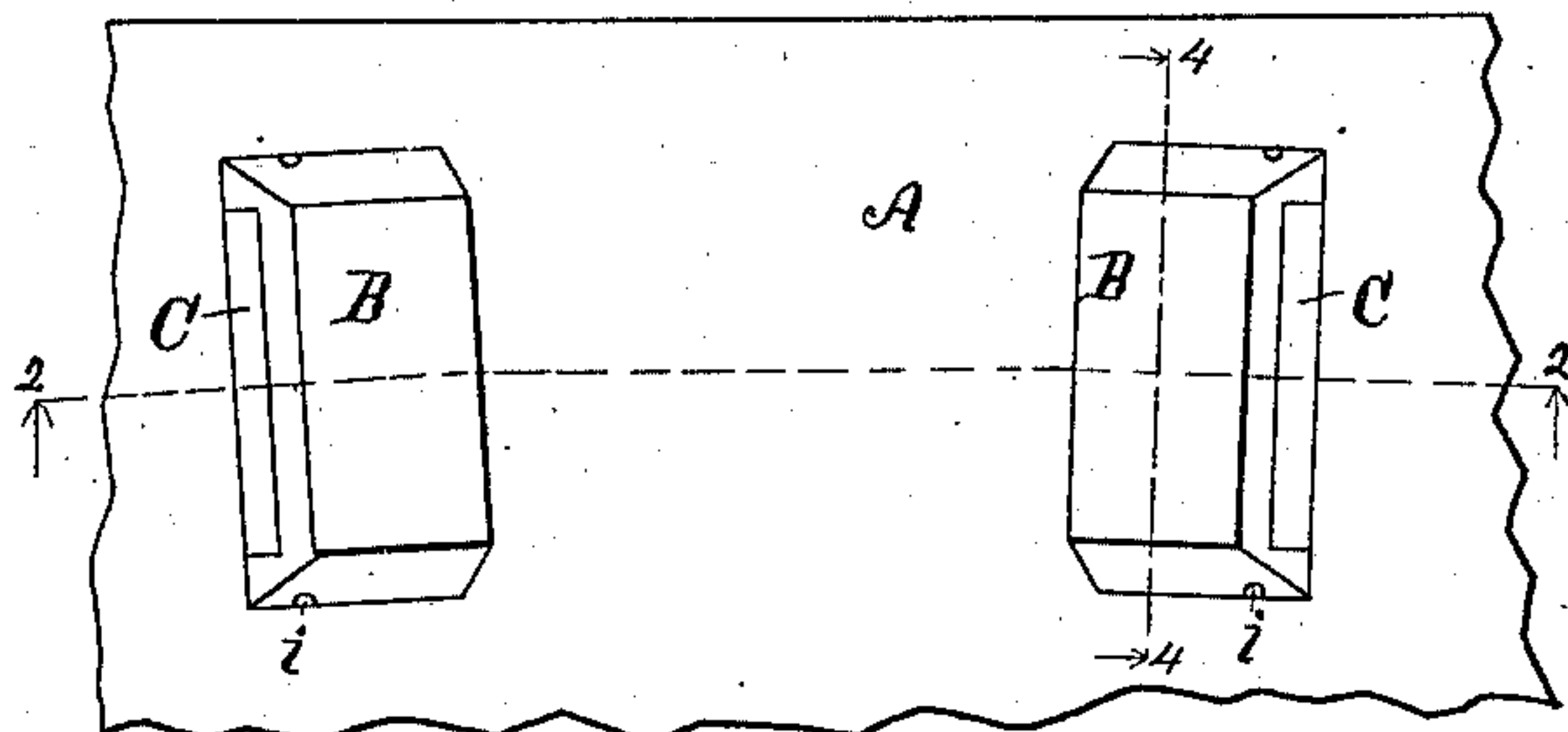


Fig. 1.

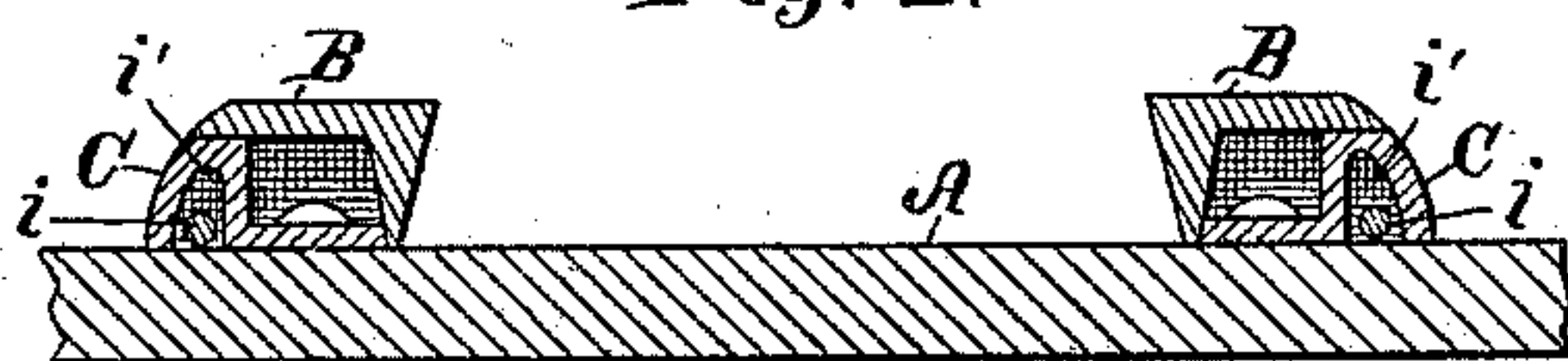


Fig. 2.

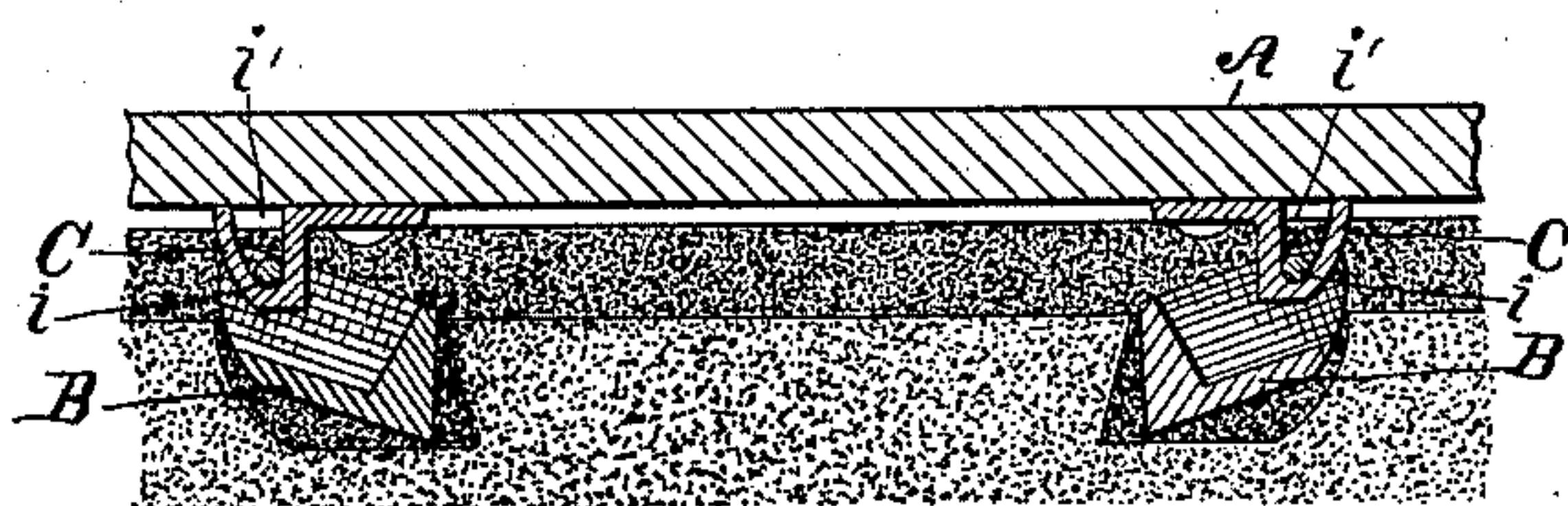


Fig. 3.

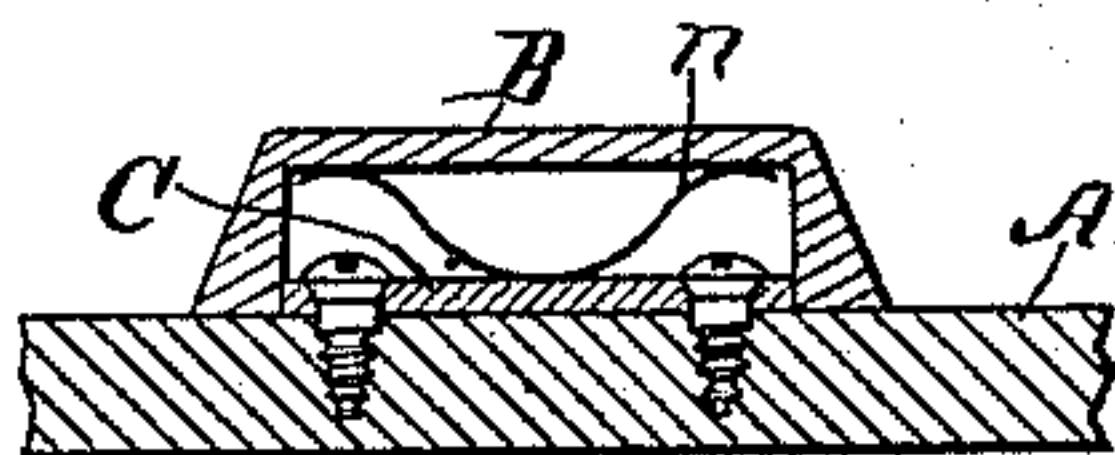


Fig. 4.

Witnesses:

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Inventor.

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UNITED STATES PATENT OFFICE.

ARTHUR K. BECKWITH, OF DOWAGIAC, MICHIGAN, ASSIGNOR TO FRED E. LEE, OF SAME PLACE.

MOLDER'S PATTERN FOR CASTING DOVETAILS ON STOVE-BOTTOMS.

SPECIFICATION forming part of Letters Patent No. 547,475, dated October 8, 1895.

Application filed February 24, 1894. Serial No. 501,356. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR K. BECKWITH, a citizen of the United States, residing at the city of Dowagiac, in the county of Cass and State of Michigan, have invented certain new and useful Improvements in Molders' Patterns for Casting Dovetails on Stove-Bottoms, of which the following is a specification.

My invention relates to molders' patterns for casting dovetails on stove-bottoms for holding stove-legs.

The objects of my invention are to provide a pattern for the purpose which shall have no detached parts; also, to provide such a pattern that can be withdrawn from the molder's sand without breaking or disturbing the sand, and, further, to provide such a pattern that will leave a mold that shall make a casting that is smooth, strong, and will present a finished appearance. I accomplish these objects by the device shown in the accompanying drawings, in which—

Figure 1 shows an inverted plan view of a section of the pattern for a stove-bottom embodying my invention. Fig. 2 is a sectional view on line 2 2 of Fig. 1, looking in the direction of the arrows. Fig. 3 is a sectional view through the pattern on the same line, showing it as it appears while being withdrawn from the sand. Fig. 4 is a sectional view on line 4 4 of Fig. 1, showing details of construction.

Similar letters of reference refer to similar parts throughout the several views.

A represents the pattern of the main portion of the bottom.

B B represent the main portions of the pattern for the dovetail lugs.

C C represent the attaching parts which hold the main part of the lug-patterns in position and fasten them to the pattern A of the main part of the bottom.

The interior of the main part B is hollowed out, and into this hollow the part C is fitted, so as to have the outside portion of the pattern of the lug join smoothly with the part B, which forms the underside, which is dovetailed. The part C is curved up from the main pattern and forms the rounded outside part of the pattern and inside forms a lateral recess *i'*, which receives a pin *i*, which passes

through the rear of the main part B of the lug-pattern. The pin *i*, when the pattern is in place, comes close to the main body of the pattern A; but when the pattern A is lifted up, the pin then comes in contact with the outer part of the lateral recess *i'*.

In using my improved dovetail pattern it is placed with the pattern B B on the upper side, as indicated in Fig. 2, and the sand is carefully rammed or packed around them in that position. When this is thoroughly done, the pattern (with its mold and molding-flask) is inverted, as shown in Fig. 3, and the pattern lifted vertically out. When this is done, as will be readily seen, the pattern A moves freely without disturbing the parts B B, carrying with it the parts C C, which frees nearly the entire outer curved portion from the mold. Then the pin *i* engages with the outer part of the lateral recess *i'*, which causes it to lift up the outer part, first freeing it from the mold, when the inner dovetail portion is backed entirely away from the sand without disturbing it in the least, leaving the mold as smooth and firm as though it had been designed to cast a square lug and the pattern had been lifted out vertically. When it is designed to cope off the mold, the weight of the parts B B would be against any such operation and would break the sharp, angular part of the dovetail mold. To adapt my invention for use where a mold is coped off I insert a small spring *n* (see Fig. 4) under the part B to raise it when the weight of the mold is removed.

When the molder is using this pattern, he places his fingers on the parts B until he has sufficient sand rammed around them to hold them in position, and then, when he raises the mold from the pattern, the portions B B rise up and release themselves clean from the mold. Where the mold is coped off, the piece B should be of light material. Where the pattern is lifted out the heavier the part B is the better it answers its purpose.

My improved dovetail pattern can be considerably varied without departing from my invention.

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

1. In a molder's pattern for stove dovetails,

the combination with the main pattern, A, of the parts, C, shaped to form the outside of the dovetail and rigidly attached to the main pattern, A, with a recess, *i'*, formed therein; 5 a part, B, shaped to form the angular inner portion and hollowed out on its under side to receive the part, C; and a pin, *i*, in part, B, fitting loosely in the recess, *i'*, so as to form a very loose hinge connection, all substantially 10 as described for the purpose specified.

2. In molders' patterns for stove dovetails, the combination of the main pattern, A, the part, C, shaped to form the outside of the dovetail and rigidly attached to the main 15 pattern, A, with a recess, *i'*, formed therein; a part, B, shaped to form an angular inner portion and hollowed out on its under side to receive the part, C; a spring, *n*, under said part, B, to raise it up; and a pin, *i*, in the part, 20 B, playing loosely in the recess, *i'*, to form a loose hinge, all substantially as described for the purpose specified.

3. In a molder's pattern for stove dovetails, the combination with the main pattern, of the 25 outer parts of the dovetail pattern rigidly attached to said main pattern and adapted to withdraw readily from the sand, the inner part of said dovetail pattern forming the angular portion fitted to said rigid part, and a

connection between said angular portion and 30 rigid part consisting of a pivot pin operating in a much enlarged recess so that in withdrawing from the sand, the friction of the parts will be reduced and the inner angular portion will swing down and out on the pivot 35 in the loose recess by the force of gravity, for the purpose specified.

4. In a molder's pattern for a stove dovetail, the combination with the plate pattern, of a suitable guide rigid with said pattern; a pat- 40 tern for a stove dovetail adapted to fit against said guide; and a connection between the rear or outer portion of said dovetail pattern and the plate pattern consisting of a pivot-pin on one of said patterns and a much enlarged re- 45 cess on the other pattern so that in raising the plate pattern the dovetail pattern will separate from the main pattern and swing down and out by the force of gravity so as to withdraw from the sand without injury to the 50 mold, as specified.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

ARTHUR K. BECKWITH. [L. S.]

Witnesses:

W. C. EDWARDS,

H. M. SEE.