

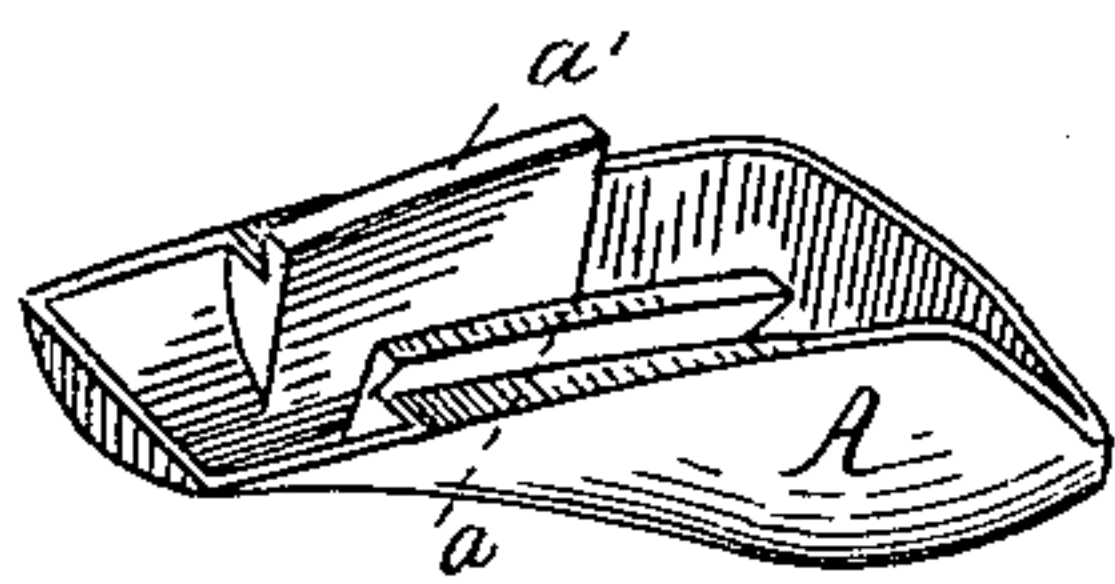
(No Model.)

G. M. WELLS.

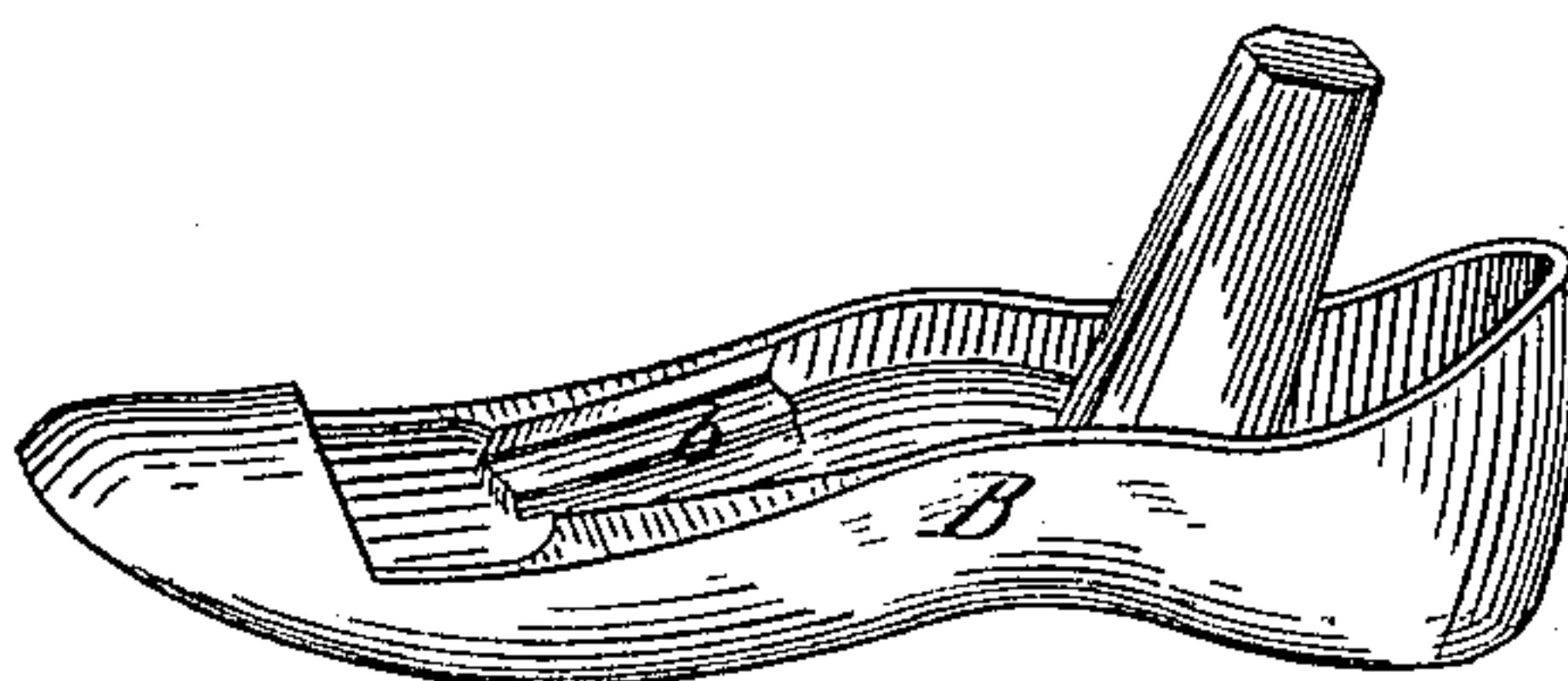
LAST.

No. 344,229.

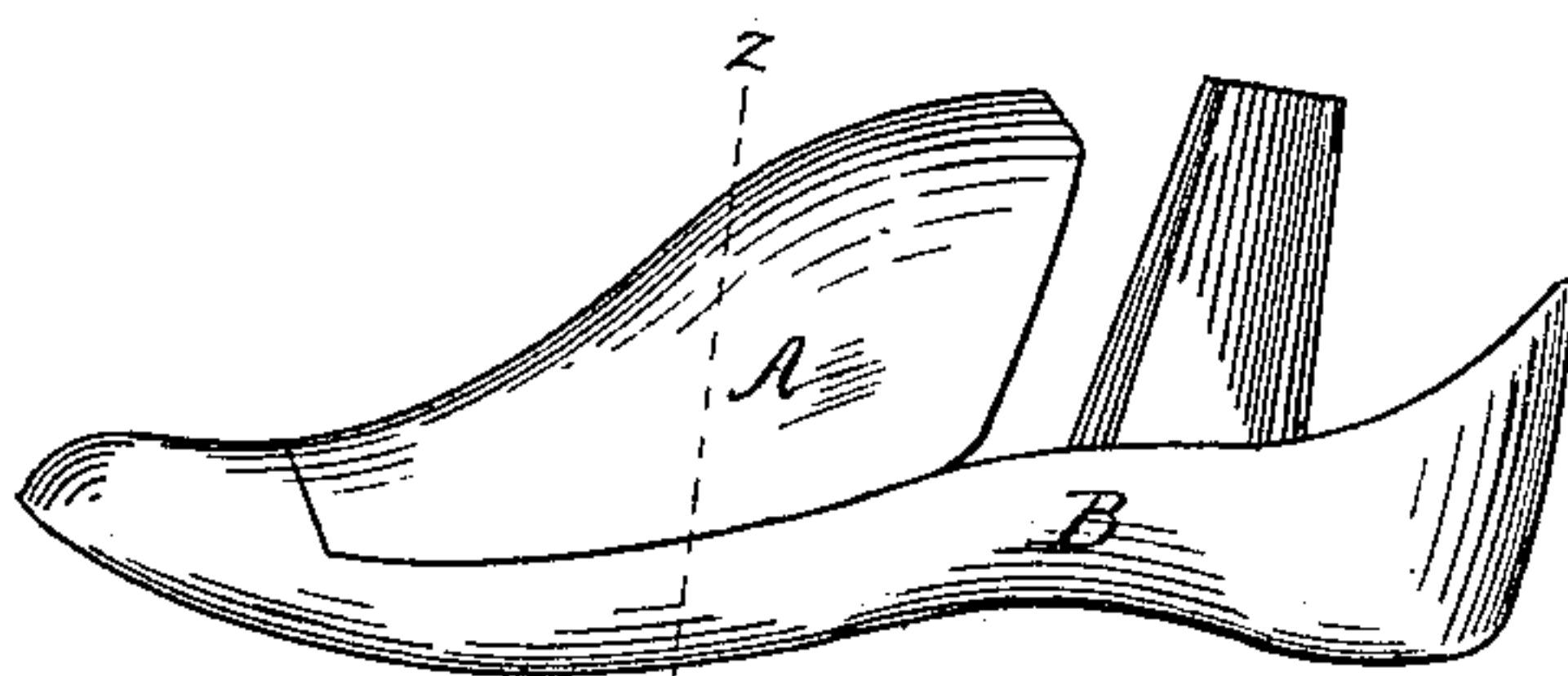
Patented June 22, 1886.



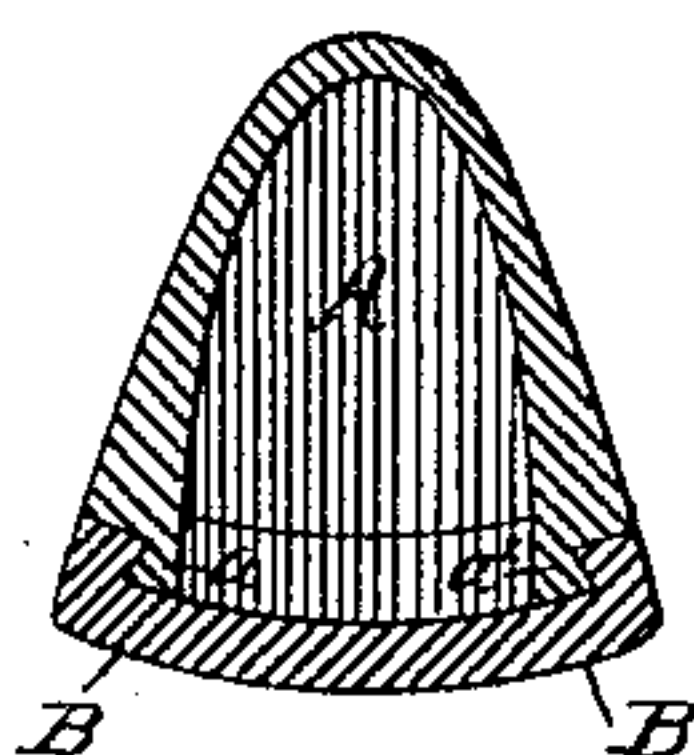
*Fig. 1.*



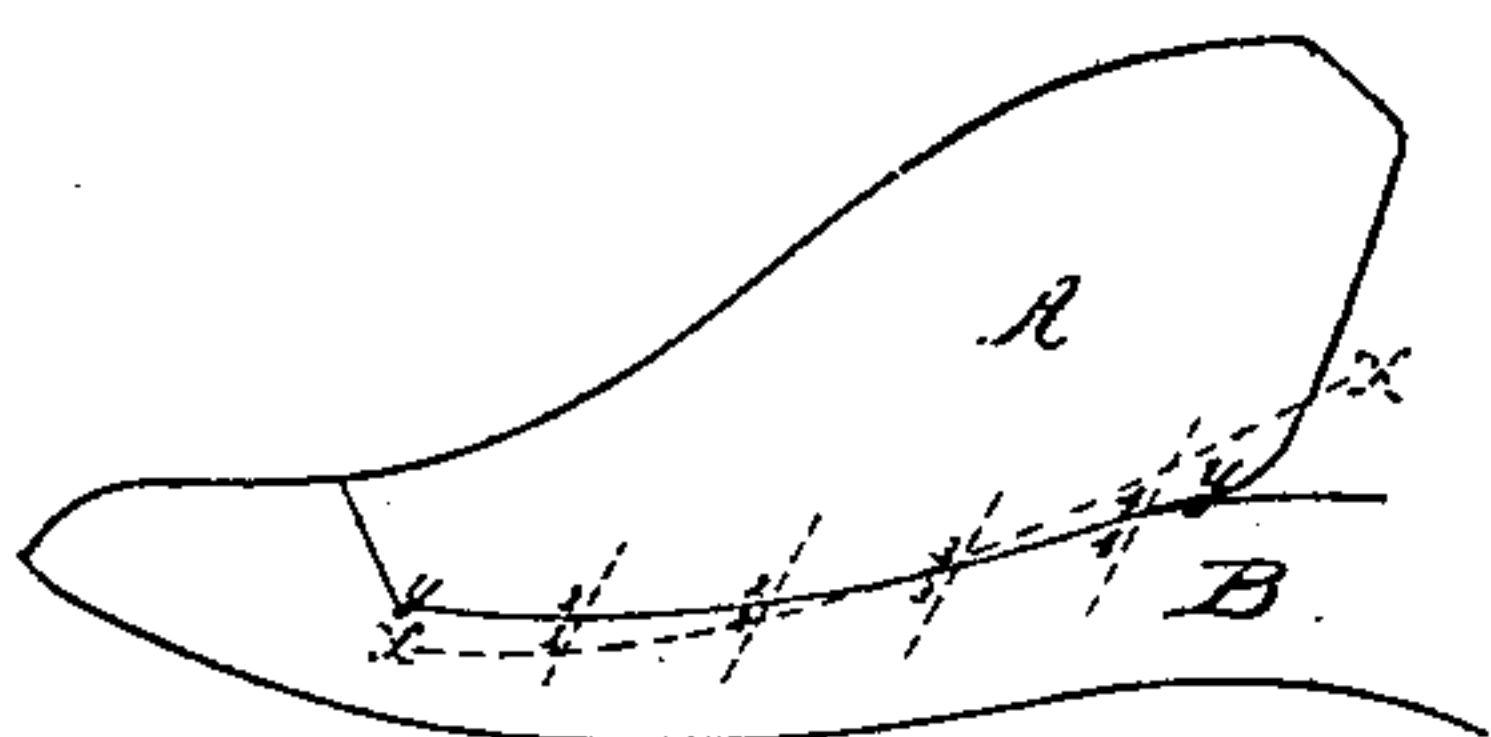
*Fig. 2.*



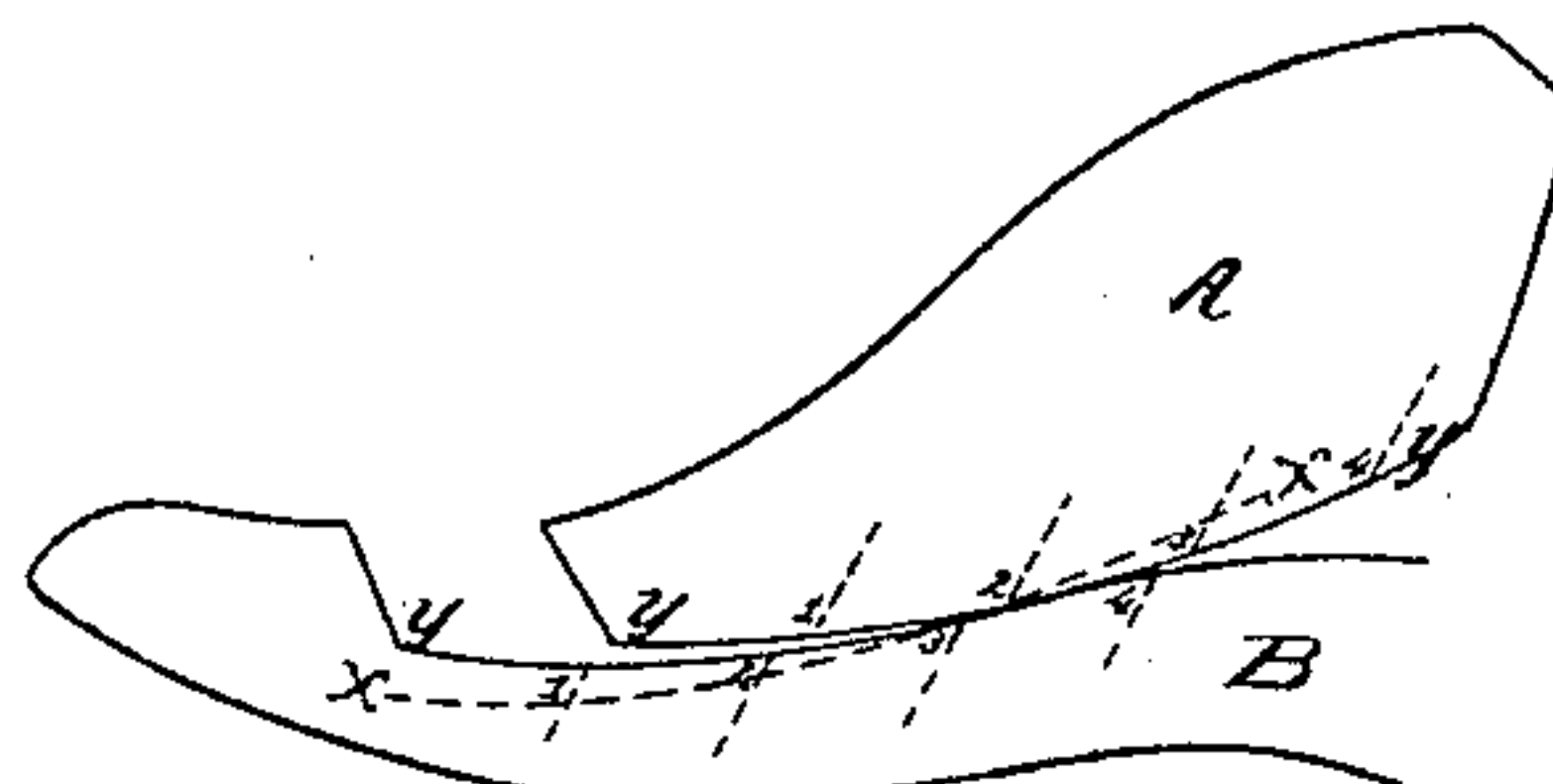
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



*Fig. 6.*

*Wm. H. Hittell.*  
*J. R. Snow.*

*George M. Wells*  
*by J. E. Maynard*

# UNITED STATES PATENT OFFICE.

GEORGE M. WELLS, OF NEW YORK, N. Y., ASSIGNOR TO THE SOLIDITY IRON  
LAST COMPANY, OF SAME PLACE.

## LAST.

SPECIFICATION forming part of Letters Patent No. 344,229, dated June 22, 1886.

Application filed June 6, 1881. Serial No. 35,017. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE M. WELLS, of New York, in the county and State of New York, have invented a new and useful  
5 Improvement in Lasts; and I do hereby declare the same to be fully described in the following specification, reference being had to the accompanying drawings, of which—

Figure 1 is a perspective view of the block,  
10 and Fig. 2 of the body, of one of my improved lasts. Fig. 3 is a side view. Fig. 4 is a section on line  $z z$ , Fig. 3. Figs. 5 and 6 are diagrams for illustration.

The block A is a shell with two tongues,  $a$   
15  $a'$ , fitting into a wide groove,  $b$ , in the body B, thereby considerably reducing the weight of both the block and body, and yet having both abundantly strong. The upper portions of the heel part of the body B are omitted,  
20 and consequently the curve of the groove  $b$  and tongues  $a a'$  may be such as to carry block A almost straight back toward the heel when it is withdrawn from body B.

Another feature of my invention consists  
25 in making the bearing-surfaces of the dovetailed groove  $b$  and the dovetailed projections  $a a'$  at an angle with the surfaces of the body and block where they come into contact, so that the contact-surfaces, body, and block will  
30 not be in contact until the block is pressed forward as far as it will go, the bearing-surfaces of the dovetailed projection and the groove acting as ways upon which the block slides when it is put in place or removed from its  
35 place on the body. Heretofore the contact-surfaces of the body and block were made substantially parallel with the bearing-surfaces of the groove and projection, and consequently the block was obliged to slide on the body  
40 when the block was withdrawn or replaced, while in a last embodying this part of my invention the sliding is confined to the bearing-surfaces of the groove and projection, the contact-surfaces of the body and block separating as soon as the block is drawn back  
45 slightly on the ways formed by the bearing-

surfaces of the groove and projection, as will be more clear from Figs. 5 and 6 of the drawings, which are diagrams for illustrating this part of my invention, and in which the  
50 dotted lines  $x x$  show the line upon which the block A travels on the ways formed by the bearing-surfaces of the groove and projection, and the full lines  $y$  illustrate the contact-surfaces between the body B and block A, and  
55 from which it will be seen that when block A is moved on the ways above mentioned, in the direction of the arrow, the points 1 2 3 4 in the block will move away from the corresponding points in the body, (See Fig. 6, which  
60 shows the block A moved slightly back.) This feature of my invention is especially important in cast-metal lasts where the body is cast upon the block, or vice versa, and the two  
65 parts are united by a dovetail, as in the last above described, but is applicable, of course, to all lasts in which the body and block are held together by a tongue and groove, and it greatly facilitates both putting the block in place pre-  
70 paratory for use, and also "pulling"—that is, withdrawing—the block from the body when the last is in a boot or shoe.

What I claim as my invention is—

1. A cast-metal last having its block A made hollow or shell-like and provided with the  
75 tongues  $a a'$ , and its body B provided with the wide groove  $b$ , to receive the tongues  $a a'$ , as above described.

2. The block A, provided with the dovetailed projections  $a a'$ , whose under faces are  
80 at an angle with the bearing-surfaces of the block, in combination with body B, provided with the groove  $b$ , whose bottom is at an angle with the bearing-surfaces of the body, the groove serving as a way in which the projec-  
85 tions slide, substantially as and for the purpose set forth.

GEO. M. WELLS.

In presence of—

WM. A. MACLEOD,  
WM. ZITTEL.