

(No Model.)

T. R. FERRALL.  
PULLEY BLOCK.

No. 279,553.

Patented June 19, 1883.

Fig. 1.

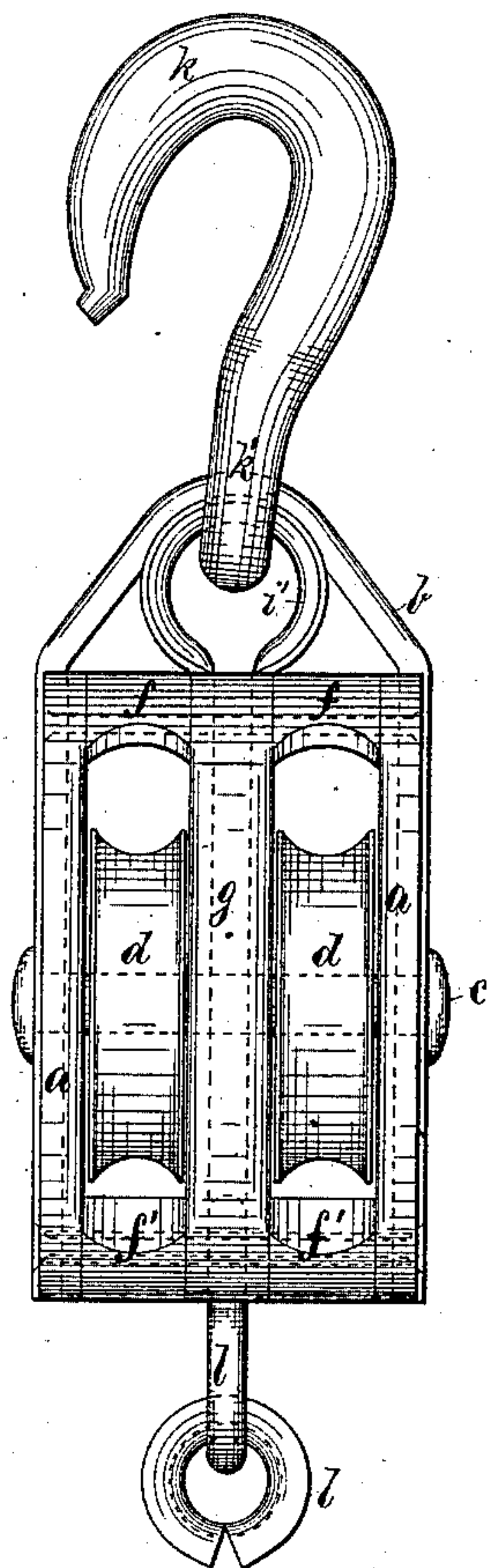


Fig. 2.

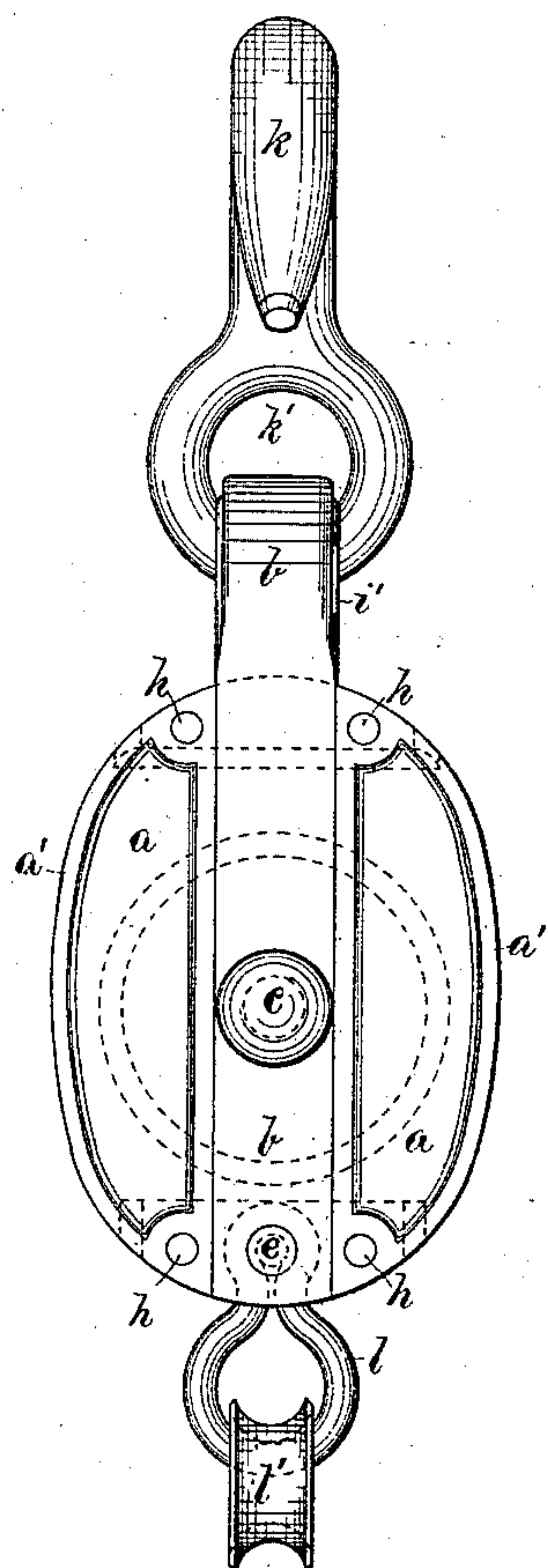
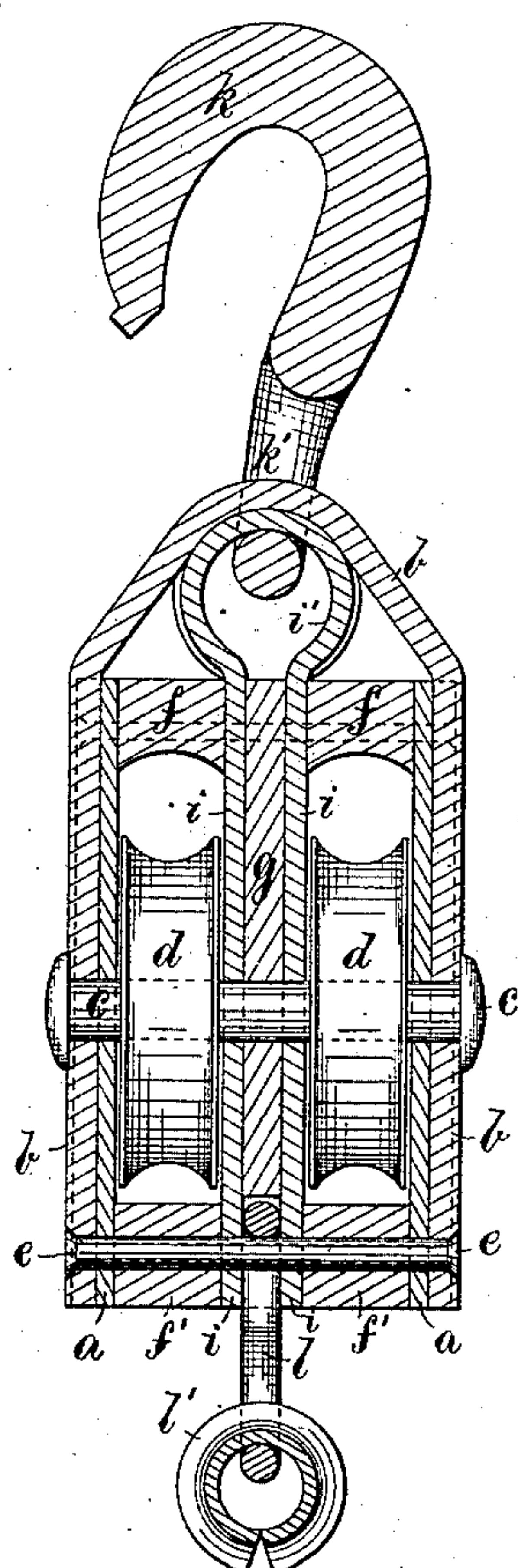


Fig. 3.



Witnesses

Henry Chadbourne.  
John H. Foster.

Inventor

Thomas R. Ferrall,  
by  
Alban Andrew.  
his atty.



# UNITED STATES PATENT OFFICE.

THOMAS R. FERRALL, OF BOSTON, MASSACHUSETTS.

## PULLEY-BLOCK.

SPECIFICATION forming part of Letters Patent No. 279,553, dated June 19, 1883.

Application filed March 30, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS R. FERRALL, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Pulley-Blocks; and I do hereby declare that the same are fully described in the following specification and illustrated in the accompanying drawings.

This invention relates to improvements in pulley-blocks, and it is carried out as follows, reference being had to the accompanying drawings, where—

Figure 1 represents a front elevation, and Fig. 2 represents a side view, of the improved pulley-block. Fig. 3 represents a central longitudinal section of the same.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

The object of my invention is to make a pulley-block with two or more sheaves, that shall be as strong as possible combined with lightness; and to obtain these combined advantages I make the sides of the block of metal and the division-wall between the sheaves, as well as the end pieces in the top and bottom of the block, of wood, by which arrangement I obtain a block made of metal and wood combined which is as durable as a solid metal block and as light as the ordinary solid wood blocks, as will hereinafter be more fully shown and described.

*a a* are the metal sides, which are made of cast metal, brass or iron, and preferably provided with a strengthening-rib, *a'*, as shown in Fig. 2, so as to combine strength and lightness. Each of the cast-metal sides *a a* is provided with a groove for the reception of the outer flat metal strap, *b*, which is arched in its upper end, as shown, and has its lower end extending downward on the metal sides *a a*, as shown, and is secured to said metal sides *a a* by means of the central pin, *c*, which passes loosely through the sheaves *d d*, and in its lower end by means of the rivet *e*, as shown in Figs. 2 and 3. The metal strap *b* may to equal advantage be located on the insides of the cast-metal sides *a a*, instead of on their outsides, in which case I make the grooves for the reception of such strap on the inside of the said cast-metal sides *a a*.

*f f* are the upper end pieces, and *f' f'* are the lower end pieces, all of which are made

of wood, for two reasons—viz., to make the block as light as possible where it is not exposed to wear, and also to prevent the ropes from being chafed and worn, which would be the case if such pieces were made of metal.

*g* is the division-wall between the sheaves *d d*, which wall is also made of wood, so as to make the block as light as possible, and also to prevent the ropes from being unnecessarily chafed. The metal sides *a a*, wooden division-wall *g*, and wooden end pieces, *f f' f'*, are secured together in the upper and lower ends of the block by means of suitable rivets, *h h h h*, as shown.

*i* is the central or middle metal strap, which may be single or double, as may be desired. It is provided in its upper end with an eye, *i'*, adjoining the upper arch of the outer strap, *b*, and both of said outer and inner metal straps are jointed to the eye *k'* of the hook *k*, as shown. The inner strap, *i*, is let in in the sides of the wood partition *g*, and extends downward far enough for the sheave-pin *c* to pass through it about midway, by which arrangement a metal bearing is obtained for said pin *c* between its sheaves *d d*, as shown. The block may be provided with more than two sheaves, according to size of block required. The inner strap, *i*, extends below the pin *c* to the lower end of the block, to allow the lower rivet, *e*, to pass through the lower end of said inner strap, as shown in Fig. 3.

*l* is a shackle jointed to the rivet *e*, and provided with the ring *l'*, as usual.

What I wish to secure by Letters Patent, and claim, is—

1. A pulley-block consisting, essentially, of metal outer side pieces, *a a*, outer strap, *b*, one or more wooden partitions, *g*, wooden top and bottom ends, *f f' f'*, and sheaves *d d*, all combined and arranged in a manner and for the purpose as set forth.

2. In a block, the grooved outer metal sides, *a a*, one or more wooden partitions, *g*, and wooden ends *f f' f'*, combined with the outer and inner straps, *b i*, and sheaves *d d*, as and for the purpose set forth.

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

THOMAS R. FERRALL.

Witnesses:

ALBAN ANDRÉN,  
HENRY CHADBURN.