

(No Model.)

J. RILEY.

COMBINED SLEEPER AND CHAIR FOR RAILWAYS.

No. 362,787.

Patented May 10, 1887.

FIG. 1.

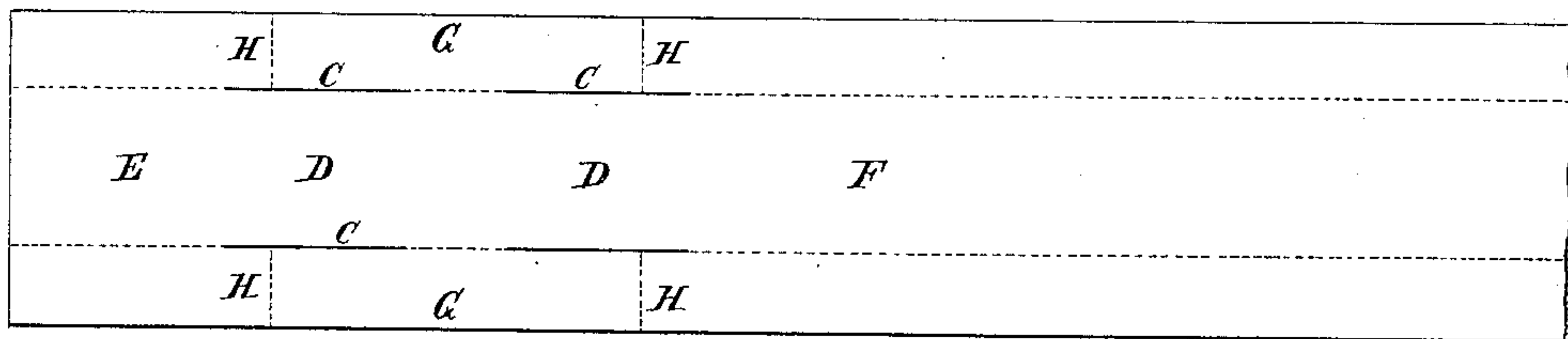


FIG. 2.

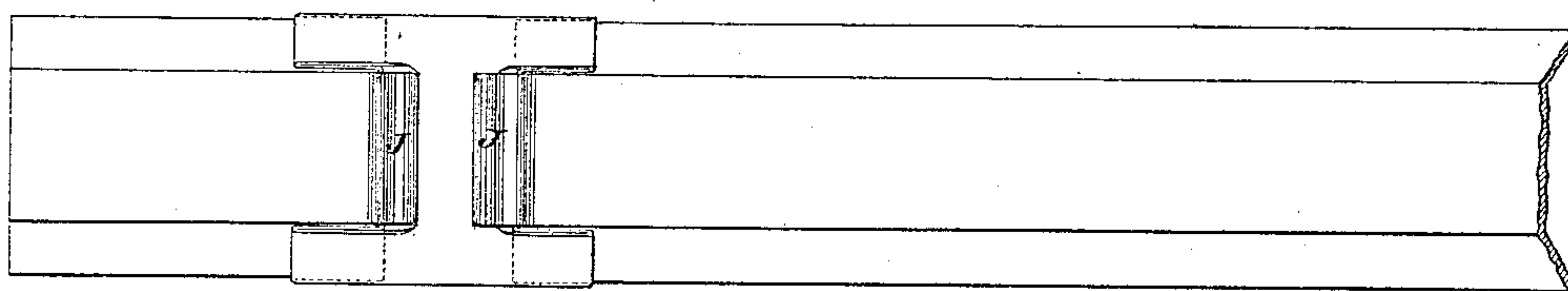


FIG. 3.

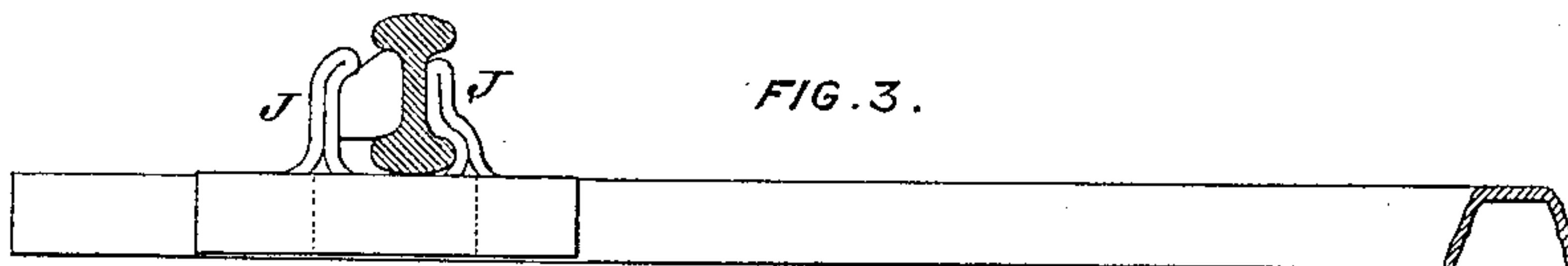


FIG. 4.

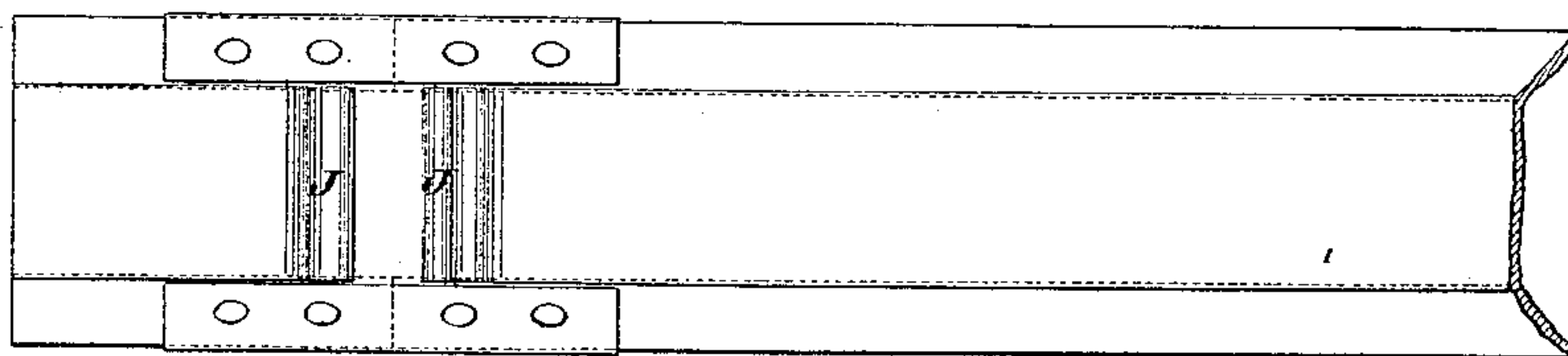
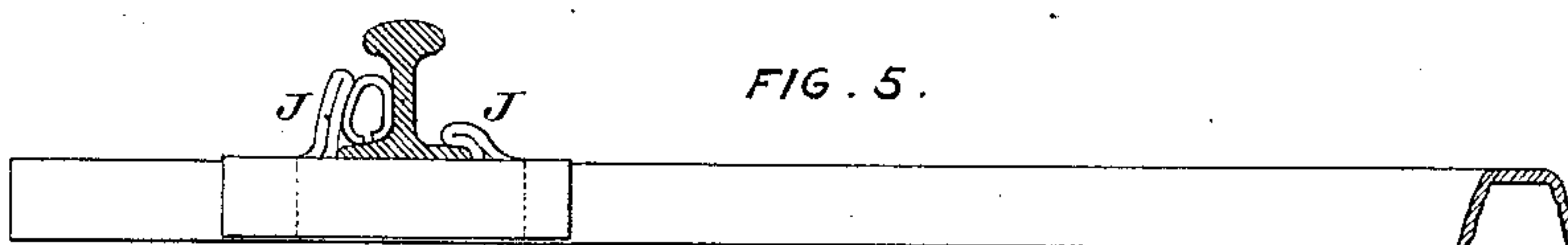


FIG. 5.



Witnesses:
Alex. Barkoff
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Inventor:
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by his Attorneys
Howson & Son

UNITED STATES PATENT OFFICE.

JAMES RILEY, OF GLASGOW, COUNTY OF LANARK, SCOTLAND.

COMBINED SLEEPER AND CHAIR FOR RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 362,787, dated May 10, 1887.

Application filed November 16, 1886. Serial No. 219,013. (No model.) Patented in England January 1, 1885, No. 11, and in Belgium July 16, 1886, No. 73,878.

To all whom it may concern:

Be it known that I, JAMES RILEY, a subject of the Queen of Great Britain and Ireland, and a resident of Glasgow, in the county of Lanark, Scotland, have invented certain Improvements in Combined Sleepers and Chairs for Railways, (for which I have obtained a British patent dated January 1, 1885, No. 11, and a Belgie patent dated July 16, 1886, No. 73,878,) of which the following is a specification.

My said invention consists in making combined sleepers and chairs for railways in an improved manner out of steel or wrought-iron plates, the jaws of the chairs being formed of part of the metal of the plate suitably shaped and folded or doubled, and each jaw having outer and inner thicknesses continuous with each other and with the middle part of the sleeper, while the lateral parts of the sleeper adjacent to each jaw are separated by slits, and are also folded or doubled, as hereinafter described, and as shown in the accompanying drawings.

A plate is first rolled of a suitable length and width, of a flat or nearly flat form and uniform section, or of a channel-shaped section, or of any other suitable section, and the shaping is effected by stamping or pressing processes in which suitable shaping-dies are used. The sizes of the chair-jaws in the direction of the rails are determined by slits formed parallel to the sides of the sleeper before the corrugations are formed and folded, and the parts of the metal at the outer sides of these slits are folded down upon the sleeper-plate and serve to strengthen it near the chair part. The plate is next subjected to a pressing or stamping operation, whereby the inverted-trough-like form is given to it, the sides being bent downward, while the ends are by preference made to assume a splayed form, to give more bearing-surface on the ballast. The bottom of the chair part, between the jaws, may, if necessary, be strengthened by the metal being originally rolled of extra thickness at that part. The steel and iron used in forming the combined sleepers and chairs is heated, if necessary, preparatory to

undergoing any of the shaping processes. The chair-jaws may be shaped to suit the double-headed or I rail or to suit the flat-bottomed or Vignoles rail.

Figure 1 of the accompanying drawings is a plan of one end of a plate for forming a complete transverse sleeper with two chairs. Fig. 2 is a plan of one end of a completed sleeper with a chair formed on it, Fig. 3 being a sectional elevation corresponding to Fig. 2, but with an I-section rail and the key shown in position. Fig. 4 is a plan showing a modification of the lateral parts of the sleeper, and Fig. 5 is a sectional elevation showing a sleeper with the chair adapted for a Vignoles rail.

A plate of a suitable size, and which may be of uniform thickness, has four slits, C, made through it at each part at which a chair is to be formed, as shown in plan in Fig. 1, and then the parts, D, between the slits are by suitable dies and compressing apparatus bent and doubled to form the jaws J of the chair, as shown in plan in Fig. 2 and in sectional elevation in Fig. 3. The parts E F at the outer and inner sides of the parts D are brought closer together in the shaping processes, and the lateral parts G are folded or doubled in the manner indicated in Figs. 2 and 3; or the parts G may be cut across, as indicated by the dotted lines H in Fig. 1, and then the parts between the lines H may be placed over and riveted upon the parts which are originally outside of those lines, but brought together during the shaping processes. This modification is shown in Fig. 4.

Either complete transverse sleepers each with two chairs, or bowl or pot, or other detached sleepers each with a single chair, may be made according to my invention.

I claim as my invention—

1. A combined sleeper and chair of plate metal having the outer and inner thicknesses of each chair-jaw continuous with the middle part of the sleeper and with each other, and having the lateral parts of the sleeper adjacent to each jaw separated by a slit and doubled or folded over, substantially as set forth.

2. The herein-described method of making

combined sleepers and chairs of plate metal, said method consisting in first making longitudinal slits in the plate on each side of the parts which are to form the chairs, then bending up and doubling the parts between the slits to form the jaws of the chairs, and then doubling or folding over the parts outside the slits, all substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES RILEY.

Witnesses:

MATTHEW A. RODGER,
DAVID FERGUSON.