S. ALDRED.

Railway Rail.

No. 206,208. Patented July 23, 1878.

Fig. 1

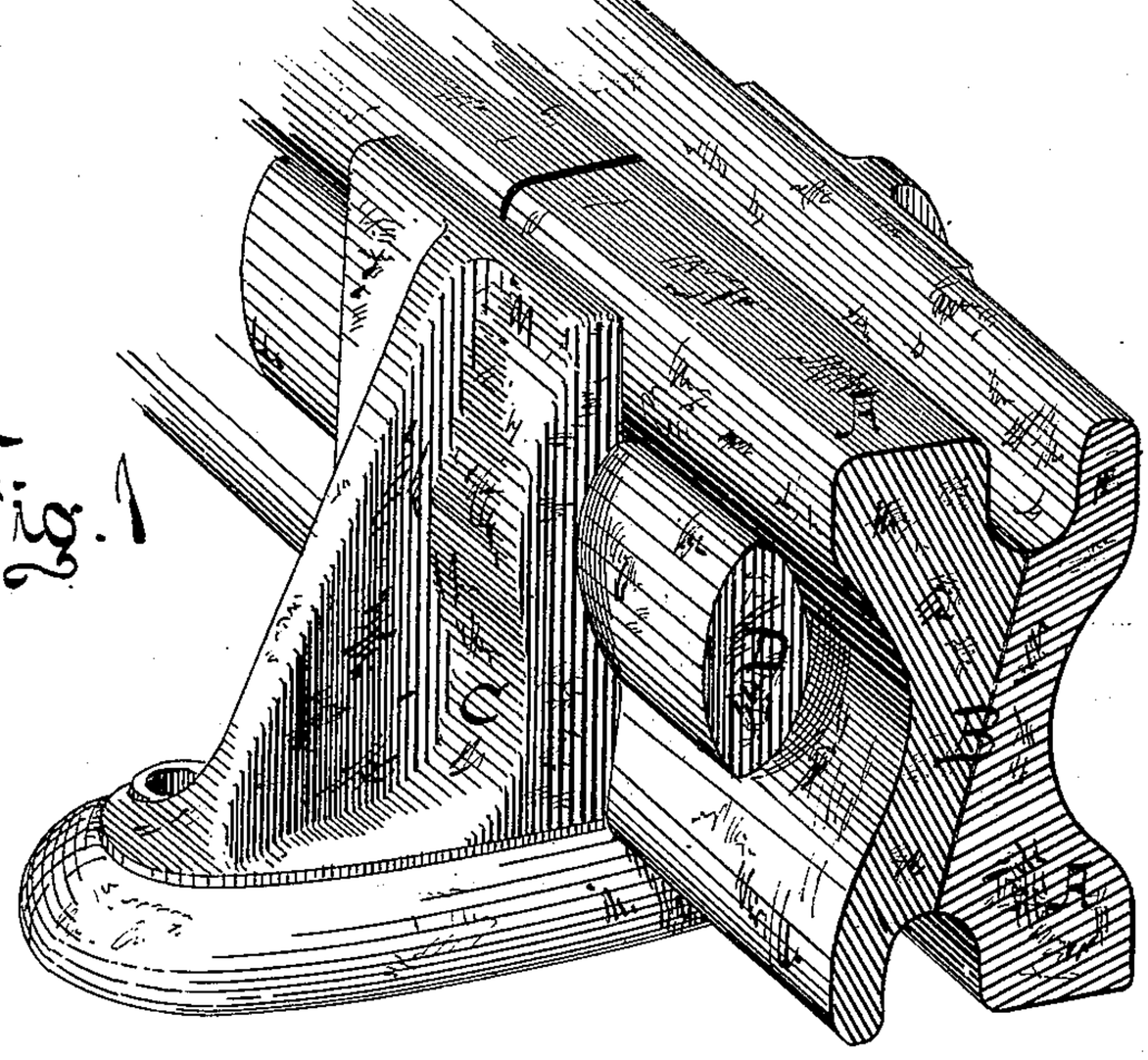
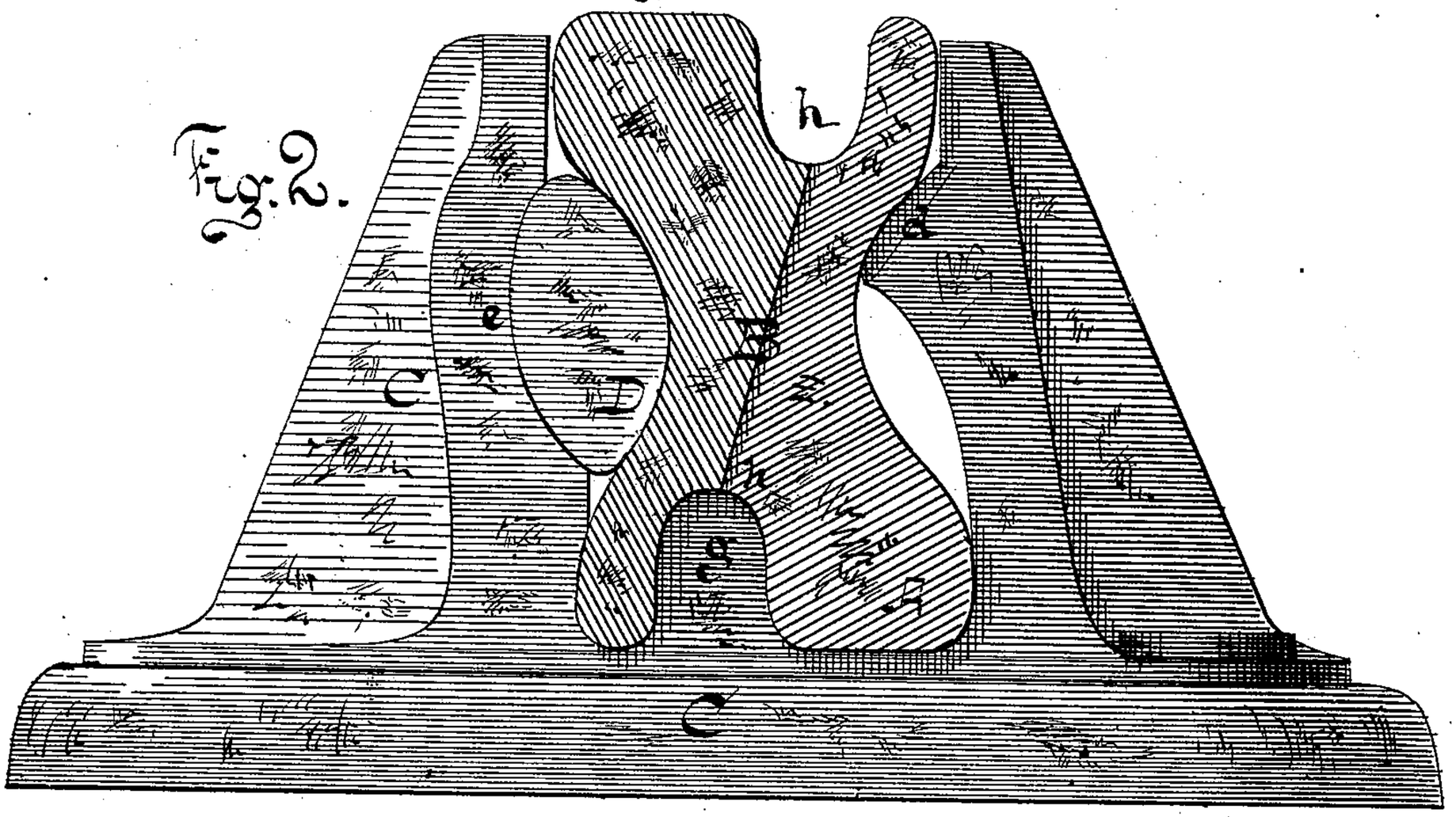


Fig. 2.



WITNESSES

Aug. S. Sordan

D. P. Cook

INVENTOR

Samuel Aldred

By R. D. O. Smith

his ATTORNEY

UNITED STATES PATENT OFFICE.

SAMUEL ALDRED, OF CHARLTON, ENGLAND.

IMPROVEMENT IN RAILWAY-RAILS.

Specification forming part of Letters Patent No. **206,208**, dated July 23, 1878; application filed May 31, 1878.

To all whom it may concern:

Be it known that I, SAMUEL ALDRED, of Charlton, in the county of Kent, England, have invented an Improved Split Rail and method of fixing same, of which the following is a specification:

My invention has for its object an improved form of double rail, and an improved method of breaking joint in such rails and of fixing the same in chairs, whereby the rail may be used twice by the reversing of the rail, which cannot be injured by the traffic on its under face from the peculiarity of its construction. The method of fixing in chairs also does away with the use of fish-plates and bolts, and therefore the rails require no punching.

My improved rail is formed of two similar sections, A A, as shown in drawing herewith, with concave sides and with a broad head at one edge and a narrow head at the other, and united by a web with one side, B, considerably inclined from the perpendicular axis of the half-rail.

The broad head of the one half-rail is used for the tread. The other half-rail is reversed with the narrow head uppermost, which thus acts as a guard for the tread of the former half.

The two inclined faces B of the rails come together, metal to metal, and when the pressure of the traffic is brought upon the tread of the one half-rail the pressure is communicated through the inclined faces to the other half-rail, which thus aids in supporting the rolling load.

From the peculiar action of the two inclined faces upon one another the pressure of the traffic resolves into horizontal strains, thrusting the two half-rails apart. The chair C is formed with a seat adapted to the cross-section shape of the rail—*i. e.*, it has on one side a shoulder, *d*, fitted to engage the rail at the upper part of its concave side, and on the opposite side a concave or gap adapted to receive the wedge D. At the bottom there is also a tongue, *g*, to seat the groove *h*. This horizontal pressure is resisted by the cast-iron chairs C and wrought-iron keys D, used with them, and its effect is thus to jam the two half-rails more securely into the chairs and upon the shoulder *d*. The effect of the two half-rails being thus jammed in the chairs is, that there can be no possibility of jar or rattle, and the pressure is taken off the downward face on the side faces, and thus the wear of the reversed half-rail is saved from taking effect on the tread of that rail.

The joints of the half-rails should never occur at the same place, but always in one of the chairs, and only for one-half in one place. The rails are thus equally strong throughout, and there is no springing at the joints. The rails are fixed into the chairs C by a horizontal wedge of wood or iron, D, fitting into the hollow chest of the rail on one side, and a hollow gap, *e*, in the cast-iron chair on the other.

An iron key would be preferable where a joint in the rail occurs. These chairs may rest upon longitudinal or cross sleepers secured thereto by the ordinary spikes, or they may be cast as part of light cast-steel plate-sleepers, or be fitted to concrete blocks or sleepers of any description.

I claim as my invention—

1. A double or split rail with beveled contact-faces, as set forth, and concave outer sides, combined with a chair, C, provided with shoulder *d* on one side, and gap *e* on the other to receive the key D, as set forth.

2. A split rail with symmetrical parts A A, having concave sides and edge or face groove *h*, combined with the chair C, provided with shoulder *d*, gap *e*, and tongue *g*, as set forth.

SAML. ALDRED.

Witnesses:
JOHN C. FELL,
J. L. SMITH.