

No. 721,408.

PATENTED FEB. 24, 1903.

W. L. WILLIAMS.
SLEIGH ATTACHMENT FOR VEHICLES.

APPLICATION FILED MAR. 3, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

FIG. 2

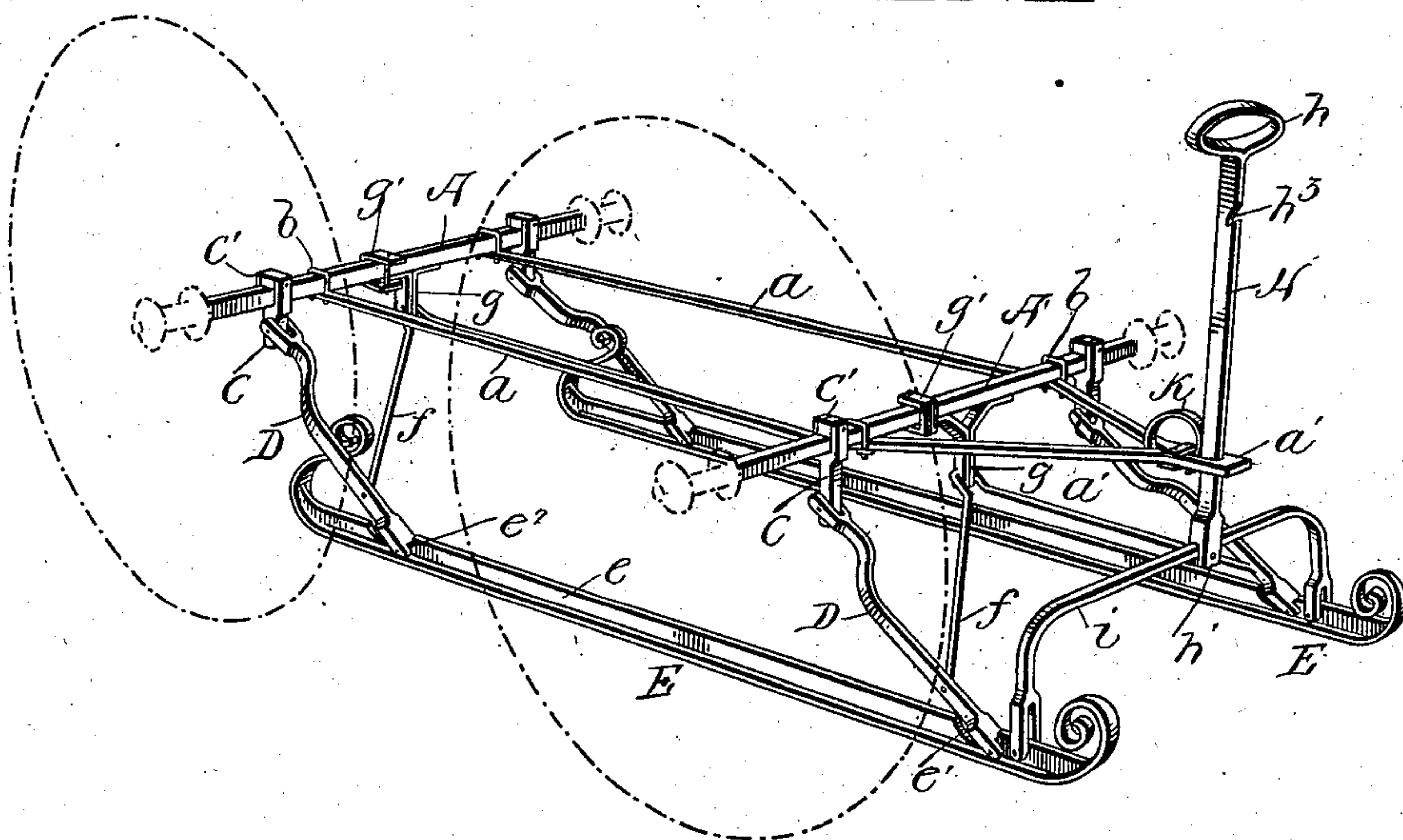
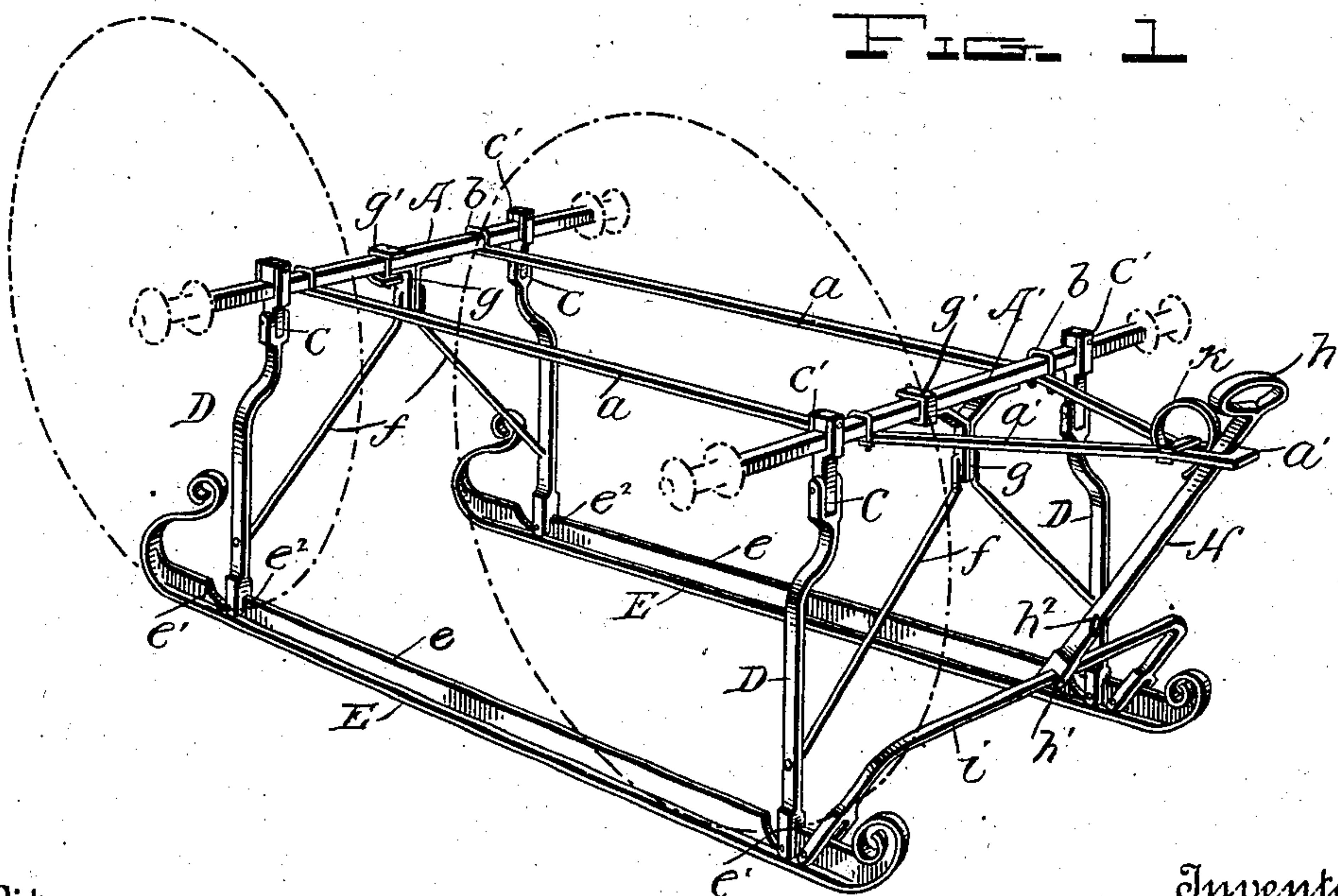


FIG. 1



Witnesses

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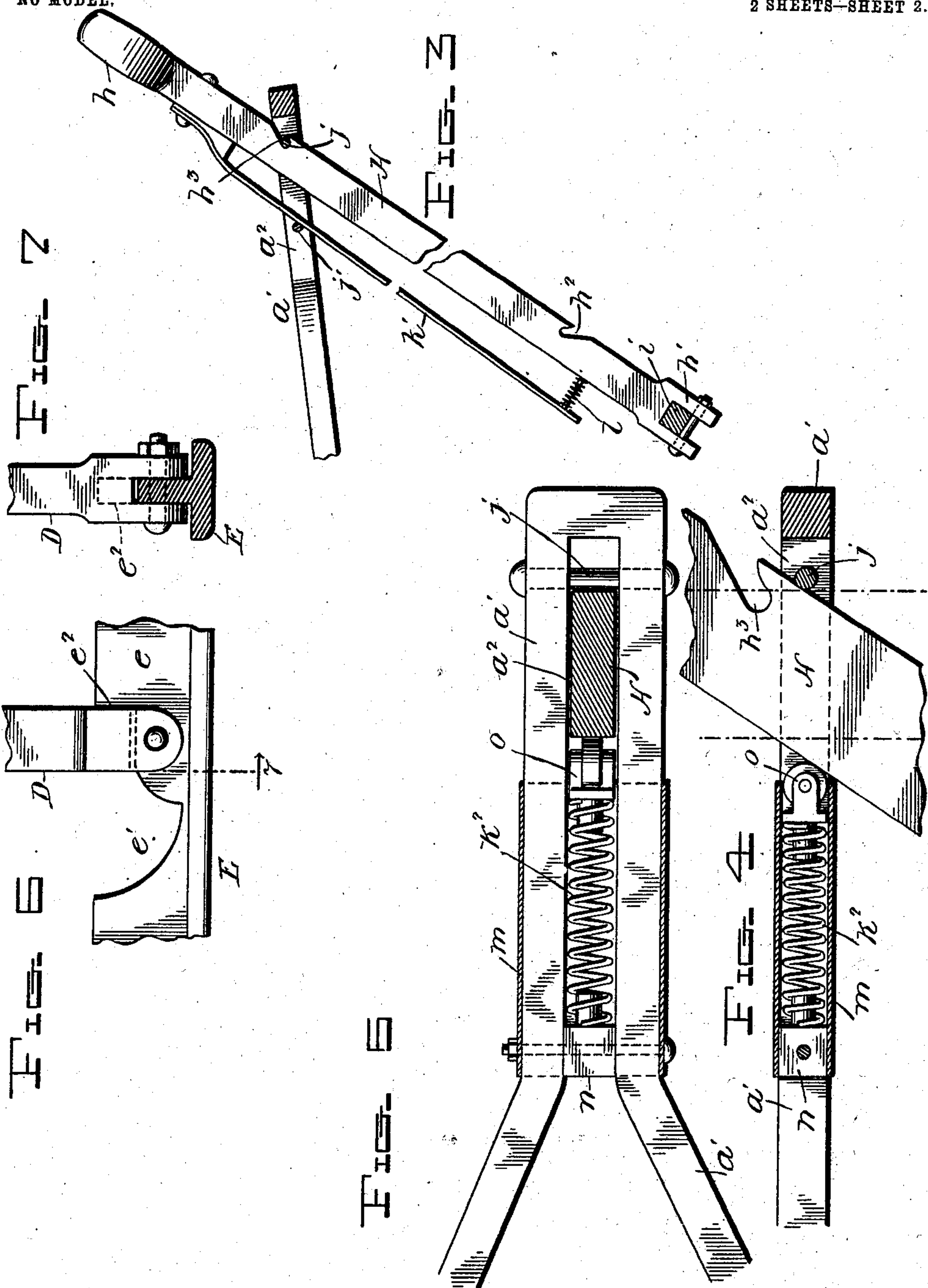
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UNITED STATES PATENT OFFICE.

WILLIAM L. WILLIAMS, OF WINONA, MINNESOTA.

SLEIGH ATTACHMENT FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 721,408, dated February 24, 1903.

Application filed March 3, 1902. Serial No. 96,446. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM L. WILLIAMS, a citizen of the United States, residing at Winona, in the county of Winona and State of Minnesota, have invented certain new and useful Improvements in Sleigh Attachments for Vehicles; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to sleigh attachments for wheeled vehicles and contemplates an improved appliance of this character adapted more especially for use in connection with baby carriages or buggies, the improvement having for its object the simplification of such structures, coupled with lightness, rigidity, and durability, and the facility of attachment and of adjusting the runners in and out of use.

The nature of the improvement will be readily comprehended, reference being had to the following detailed description and to the accompanying drawings, in which—

Figure 1 is a perspective view of a sleigh attachment adjusted for use. Fig. 2 is a similar view of the attachment adjusted in idle position. Fig. 3 is an enlarged view of the adjusting-lever, showing another form of spring for maintaining the locked positions of the lever. Figs. 4 and 5 are further enlarged detail views of the adjusting-lever and another form of spring. Fig. 6 is a detail view of a portion of a runner and supporting-knee. Fig. 7 is a sectional view on line 7 of Fig. 6.

Referring to the drawings by letter, A A' denote the front and rear axles of the vehicle—as, for instance, a baby carriage or buggy—connected together by reaches *a a*, which are extended at their rear ends and connected together to provide a yoke *a'*, in which is a rectangular opening *a²*. The reaches are secured to the axles by clips *b b*. Fastened to the axles by clips *c' c'* are depending arms *c c*, to which are pivotally connected the upper bifurcated ends of knees D D—four in number—and to the lower bifurcated ends of the

knees are pivotally secured runners E E of inverted-T form in cross-section, the knees being offset, as shown, to give to the runners the proper gage. Forward of the connections between the knees and the runners are recesses *e' e'*, formed in the web *e* of runners, which permit the knees to fold upon the runners when the latter are elevated and out of use, as shown in Fig. 2. When the runners are adjusted to extend below the carriage-wheels, as shown in Fig. 1, the knees are approximately at a right angle to the runners, and in this position the lower ends of the knees abut against shoulders *e² e²*, formed by the webs, whereby rigidity is secured.

Lateral or sidewise movement of the knees and runners is prevented by the employment of yoke-braces *f f*, which are secured at their ends toward the lower ends of the knees and are pivotally connected centrally to depending brackets *g g*, fastened by clamps *g' g'* to the axles. The runners are bent upwardly at their ends, the ends being preferably of the ornamental helical form shown.

H is the lever by which the runners are adjusted in and out of use. The lever is provided at its upper end with a handle *h*, and its lower bifurcated end *h'* is fixed to a yoke *i*, which extends between the runners, the bifurcated ends of the yoke being pivoted to the runner-webs. The lever is located to the rear of the rear axle to be within easy reach of the person propelling the carriage. The lever is movable in the opening *a²* of the yoke *a'* and is provided with notches, the lower one of which, *h²*, engages a pin *j*, extending across the opening *a²* to lock the runners when elevated out of use. The runners are adjusted in use by a downward movement of the lever, the adjustment being maintained by the engagement of the upper notch *h³* with the pin *j*. The lever H is pressed in the direction of the pin *j* to maintain the engagement of the latter with the notches through the medium of the spring, three types of which are shown. Figs. 1 and 2 illustrate a curved spring *k*, one end of which is fastened by means of a clip to the yoke and the free end of which bears against the lever. In Fig. 3 is shown a straight spring *k'*, the upper end of which is secured to the lever, and between the lower free end

of the spring and the lever is interposed a coil-spring l . The spring k' by pressing against a pin j' extending across the opening a^2 forces the lever against the pin j . In
5 Figs. 4 and 5 is shown a coiled spring k^2 confined in a housing m on the yoke and interposed between a pin on a block n and a pin on a friction-roller o , the latter bearing against the lever.

10 In operation by raising and lowering the lever in the yoke-opening the runners are brought into and out of use. When in use, the runners extend below the carriage-wheels and when elevated out of use the parts are
15 compactly folded and out of the way.

The attachment may be quickly applied to existing carriages, buggies, and other vehicles without the exercise of special skill, and being lightly constructed does not materially
20 add to the weight of the vehicle. The appliance when attached is slightly and does not materially add to the weight of the vehicle. The construction is simple, the parts being few in number, and the appliance may
25 therefore be inexpensively made.

I claim as my invention—

A sleigh attachment for wheeled vehicles,

consisting of runners of inverted-T form in cross section cut away at points to provide shoulders, arms clipped to and depending 30 from the axles of the vehicles, knees pivoted at their upper ends to said arms and having lower bifurcated ends pivoted directly to the web of the runners and arranged to engage the shoulders and limit the extended adjust- 35 ment of the runners, braces connecting the knees and centrally pivoted to arms depending from the axles, a yoke having bifurcated ends pivoted to the runners, a notched lever rigidly attached to the yoke, reaches connect- 40 ing the axles and extended beyond the rear axle providing a yoke-opening slidably receiving the lever, a pin extending across the yoke-opening, and a spring arranged to exert 45 pressure against the lever to cause either notch therein to engage the pin and lock the runners in folded or extended position.

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

WILLIAM L. WILLIAMS.

Witnesses:

N. THEISEN,

WILLIAM BURNS.