

W. SMITH.
Carriage-Spring.

No. 44,668.

Patented Oct 11, 1864.

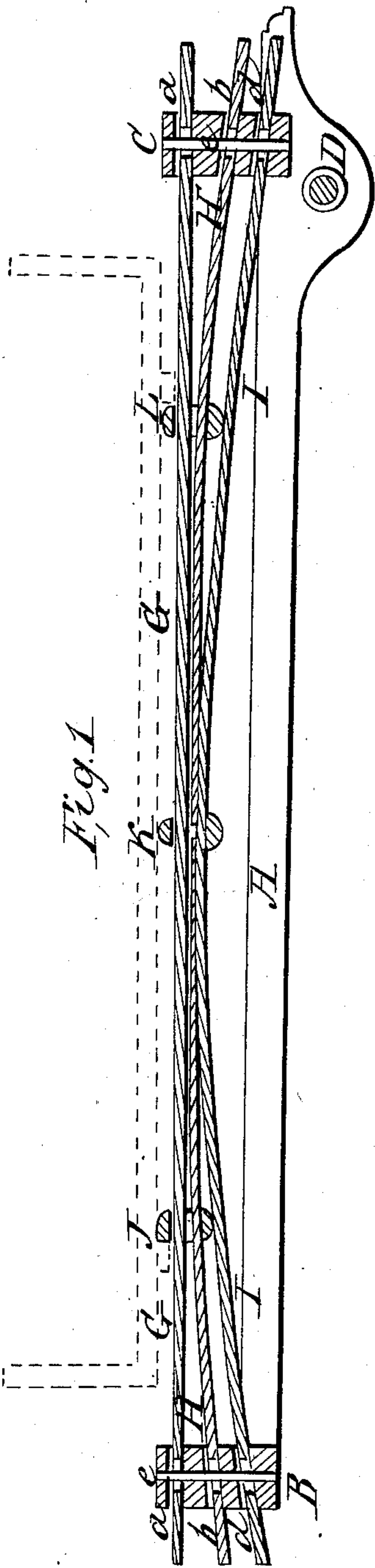


Fig. 1

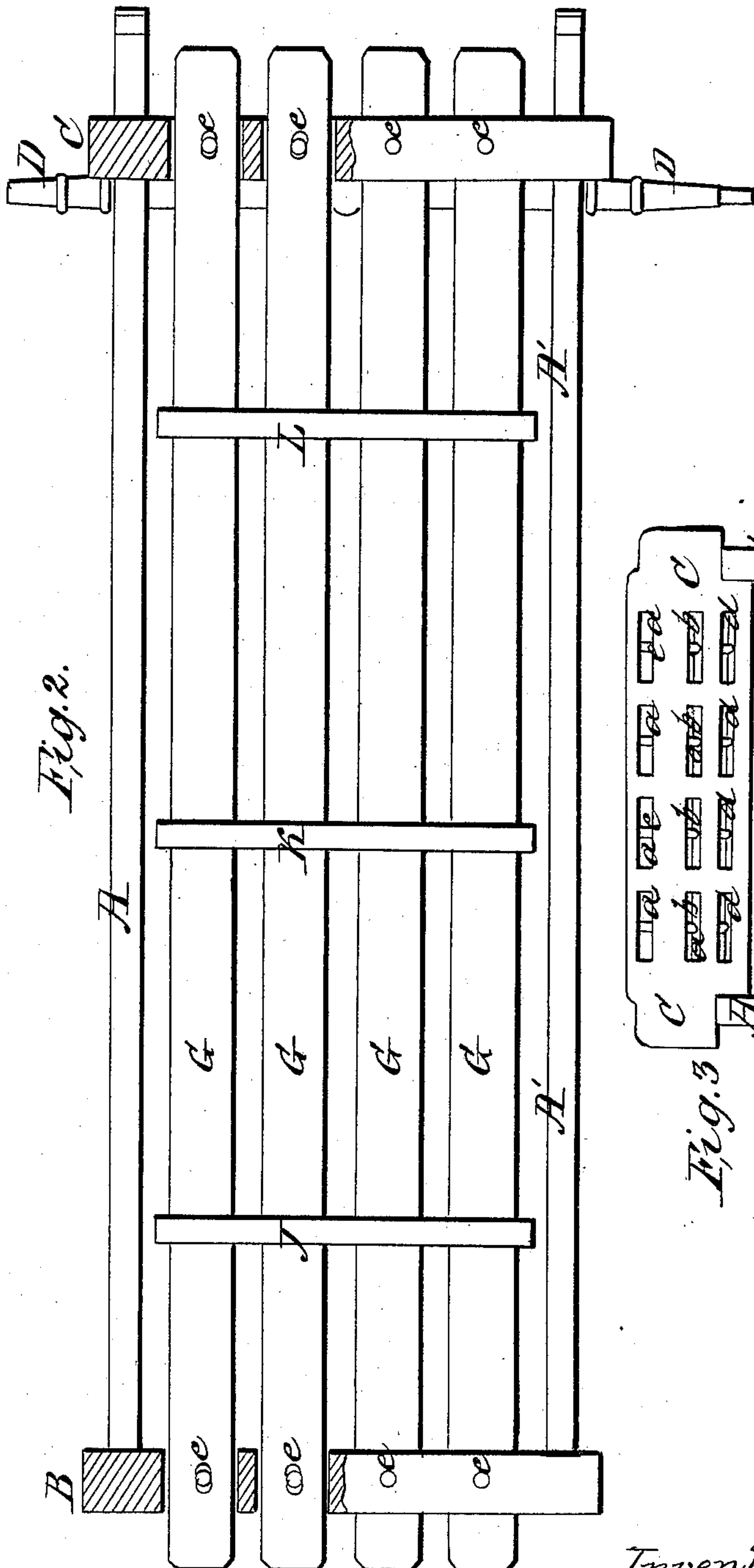


Fig. 2.

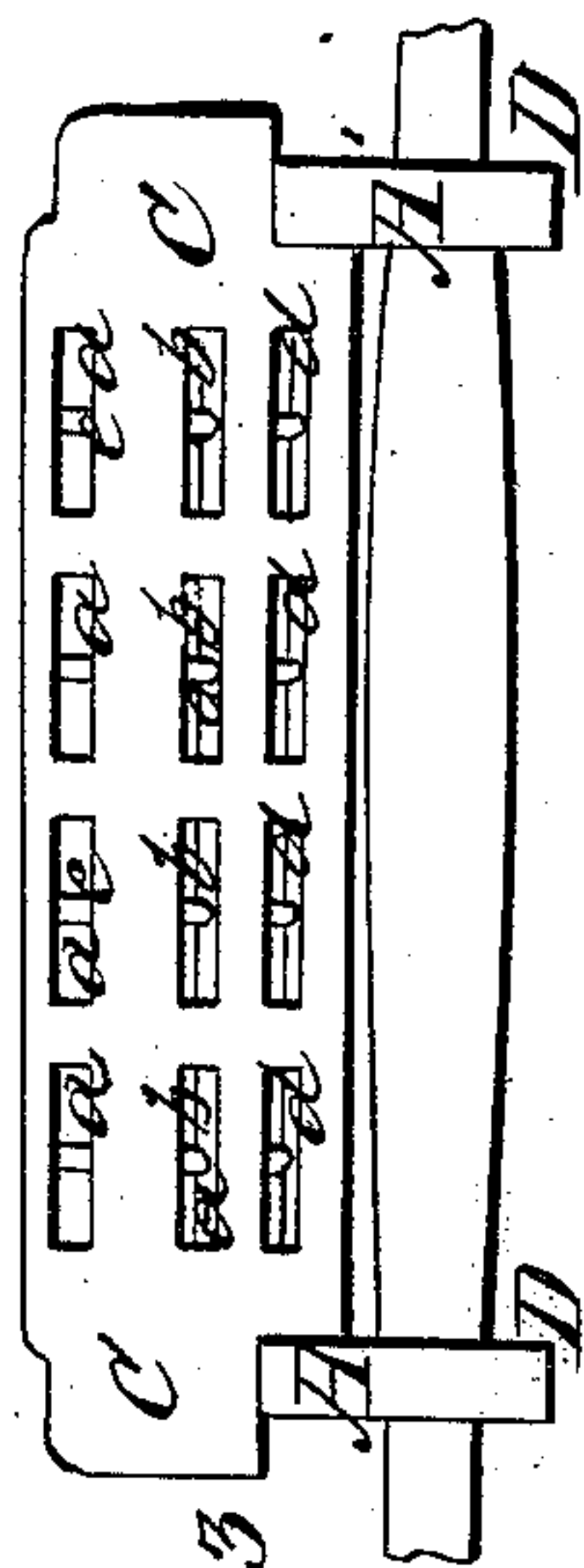


Fig. 3

Witnesses:
W. Albert Steel
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WILLIAM SMITH, OF SHREWSBURY, PENNSYLVANIA.

IMPROVEMENT IN SPRINGS FOR CARRIAGES.

Specification forming part of Letters Patent No. 44,668, dated October 11, 1864.

To all whom it may concern:

Be it known that I, WILLIAM SMITH, of Shrewsbury, York county, Pennsylvania, have invented a new and useful Improvement in Wagons, Carriages, &c.; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists of a frame composed of longitudinal beams and end beams, in combination with any desired number of slats passing through the said end beams, having oblong slots for the reception of certain pins, and being connected together by cross-bars, all constructed and arranged substantially as described hereinafter, and forming the frames and springs of a wagon.

The object of my invention has been to dispense with all smith's work, and to render the construction of both frame and springs of so simple a character that the whole can be easily made and put together by any expert farmer who has but a slight knowledge of wheelwrighting.

In order to enable others to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a longitudinal section of sufficient of a wagon to illustrate my improvements, Fig. 2, a plan view of the same, and Fig. 3 an end view.

Similar letters refer to similar parts throughout the several views.

A and A' are two longitudinal beams, connected together at one end by the front cross-beam, B, and at the opposite end by the rear cross-beam, C, D being the rear axle, turning in projections on the under side of the longitudinal beams, near the rear cross-beam. The front axle, which it has not been deemed necessary to show in the drawings, is situated under the front cross beam, B, and is arranged to swivel as in ordinary wagons.

G G G G are thin longitudinal slats made of ash or other suitable elastic wood, each slat passing through one of the openings *a* formed in both rear and front cross-beams, and seen in Fig. 3. Directly below these openings *a a*, and in the same cross-beams, are formed similar openings, *b b*, and below

the latter similar openings, *d d*, both sets of openings being cut through the cross-bars at an angle, as best observed on reference to Fig. 1.

Through each of the openings *b* of the front cross-bar, B, passes a thin slat, H, of suitable elastic wood, and through each of the openings *b* of the cross-bar G passes a similar slat, H, these two slats nearly meeting each other at a point midway, or thereabout, between the opposite cross-beams, at which point the slats are slightly thinner than at their outer ends, which pass through the said cross-beams. Through each of the openings *d* of the cross-beams passes another slat, I, slightly thinner in the middle than at the opposite ends.

Suitable pins, *e*, pass through the cross-beams, and through the ends of the slats, the holes in the latter for the reception of the pins being oblong, so that the whole of the slats can have a limited end-play in the beams.

In order to retain the whole of the slats in their proper position, both vertically and laterally, at intermediate points between the two cross-beams, I employ the transverse bars J, K, and L, the slats G and H passing through the transverse bar J, and being thereby retained in their proper position, the slats G and H' passing through openings in the transverse bar L, and the whole of the slats being held firmly together in the middle by means of the transverse bar K. The slats H, H', and I are thus held in that curved shape which renders them applicable for forming, in conjunction with the upper slats, G, springs of proper yielding and elastic quality.

The above-described plan of constructing the frame and springs of a wagon is especially well adapted for practice on farms and localities distant from manufacturing towns and villages, as all smith's work is dispensed with, and the whole can be constructed and put together by any farmer who has but a slight knowledge of wheelwrighting.

The body of the wagon is placed directly onto the upper slats G G, and if the body be used for a heavy load its bearing on the slats may extend from the transverse bars J to the transverse bar L; but if a lighter load be used, or should it be desirable to use the frame and springs as part of a family-wagon for carrying passengers, a suitable body having a more limited bearing may be placed at a point mid-

way between the opposite cross-beams B and C, so that the springs formed by the slats can have more play and afford more comfort to the passengers.

It will be evident that but two sets of slats, one above the other, may be used for lighter wagons, and for such as are required to carry very heavy loads, more than three sets of slats, placed above each other, may be used without departing from the main features, or losing any of the advantages of my improvement.

I claim as my invention and desire to secure by Letters Patent—

The frame composed of the longitudinal beams A and A', and end-beams, B and C, in

combination with any desired number of slats G, H, H' and I, passing through the said end-beams, having oblong slots for the reception of pins e, and being connected together by any desired number of cross-bars J K L, all substantially as and for the purpose herein described.

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

WILLIAM SMITH.

Witnesses:

E. McDONELL,
GEORGE W. KOLLER.