

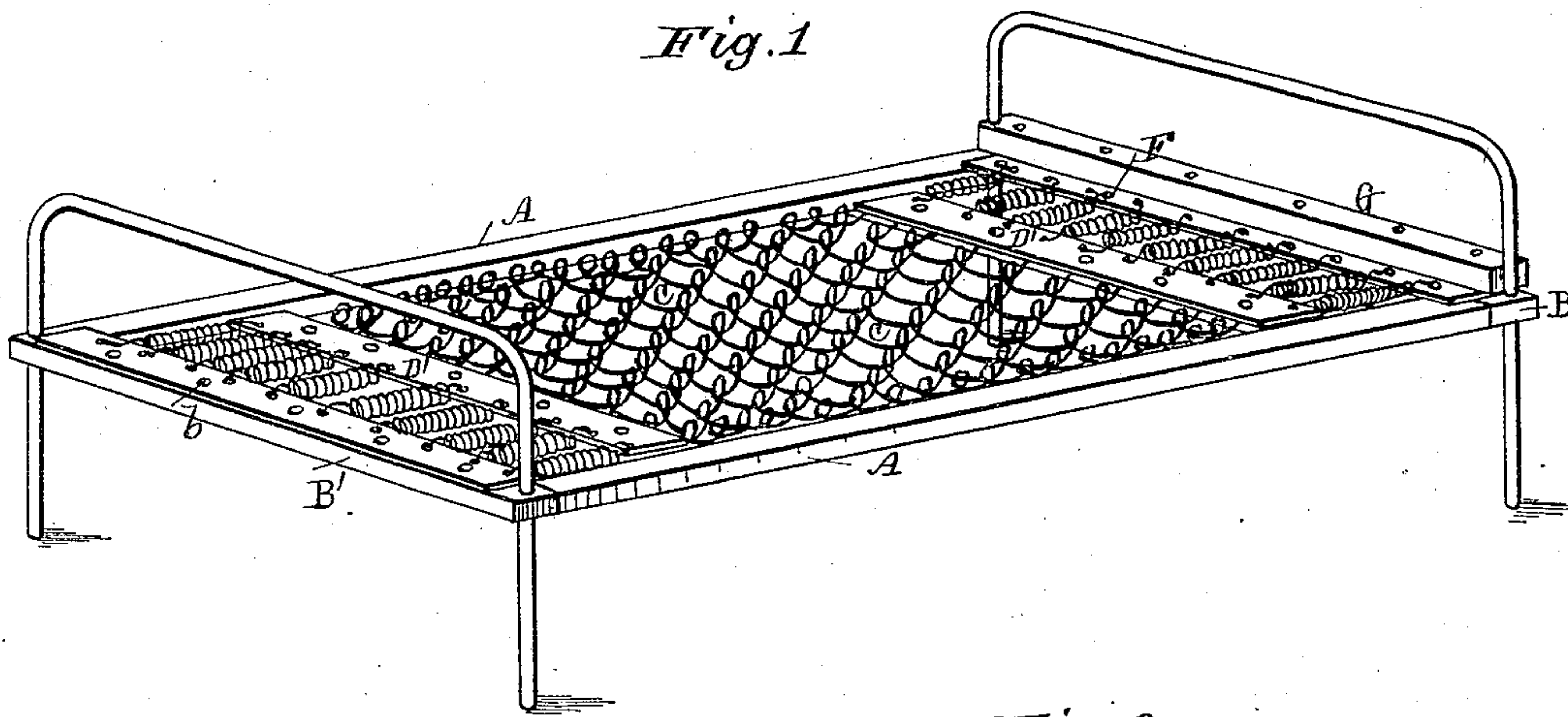
(No Model.)

C. H. DUNKS & J. B. RYAN.  
Swing Woven Wire Bed Bottom.

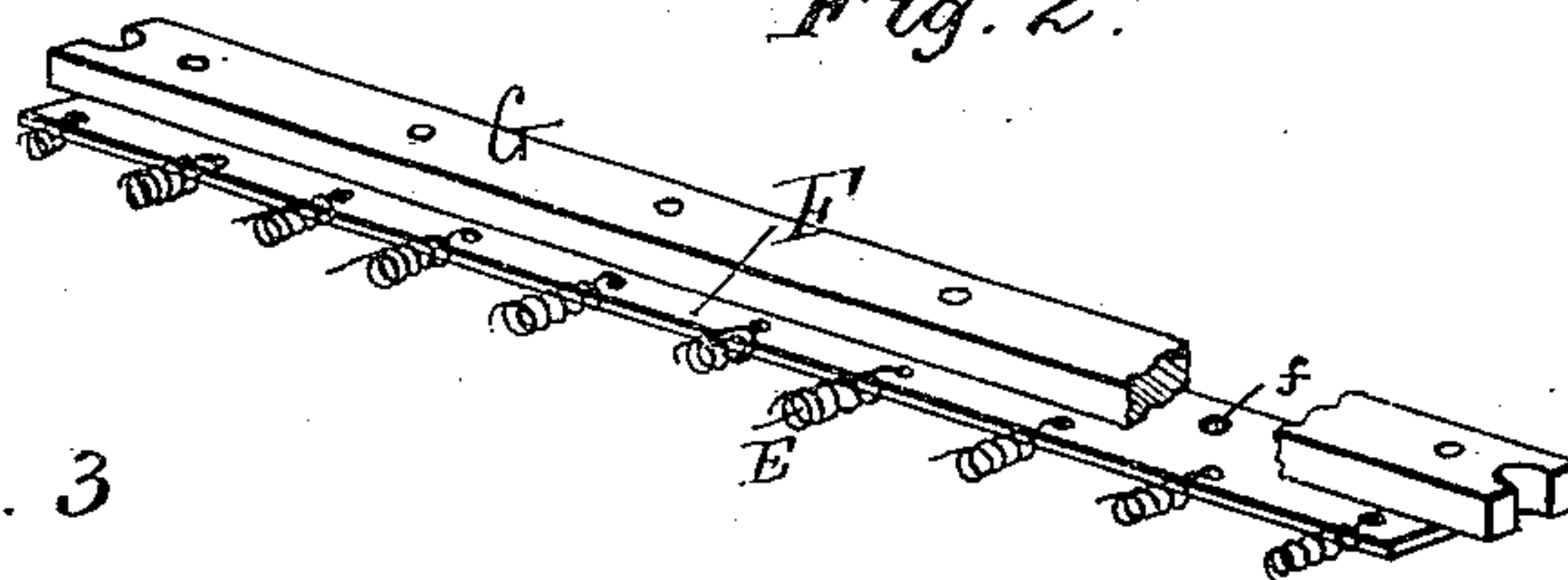
No. 241,321.

Patented May 10, 1881.

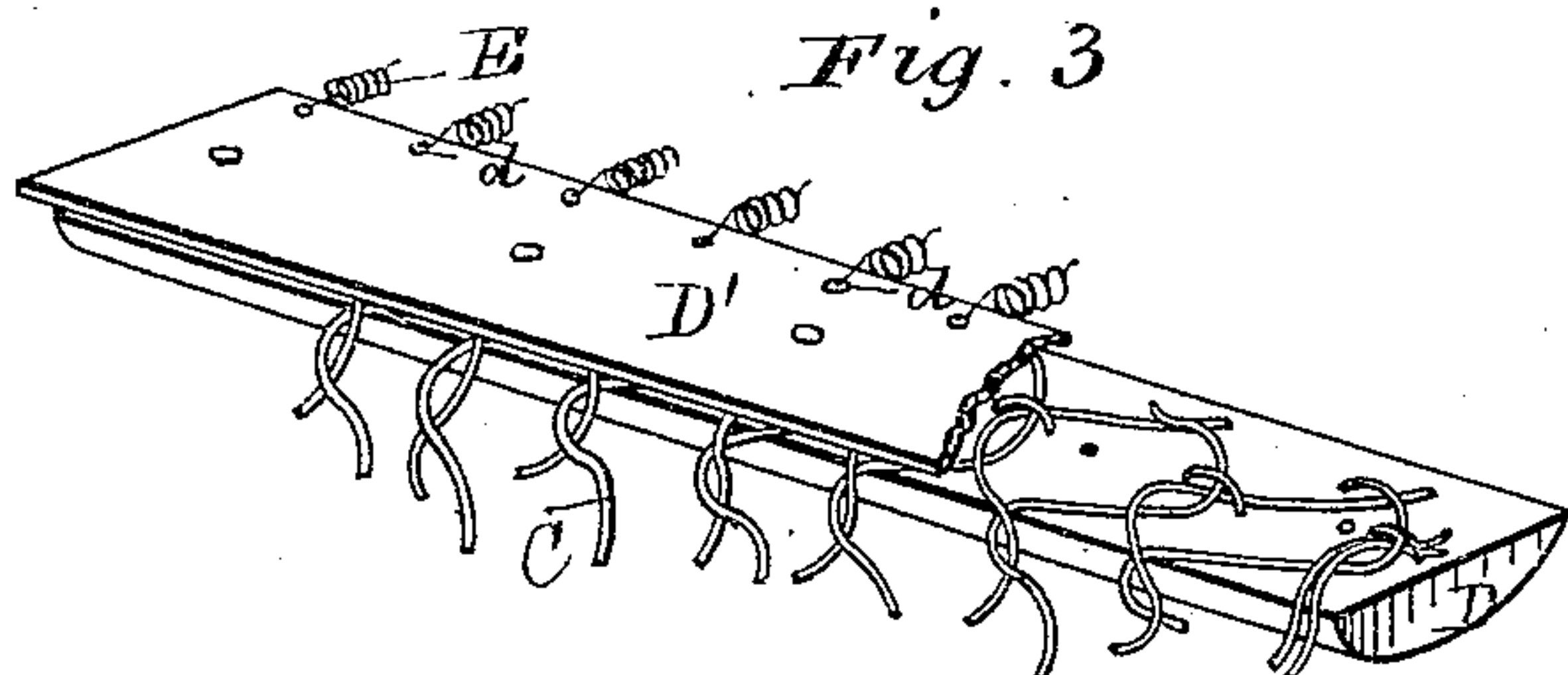
*Fig. 1*



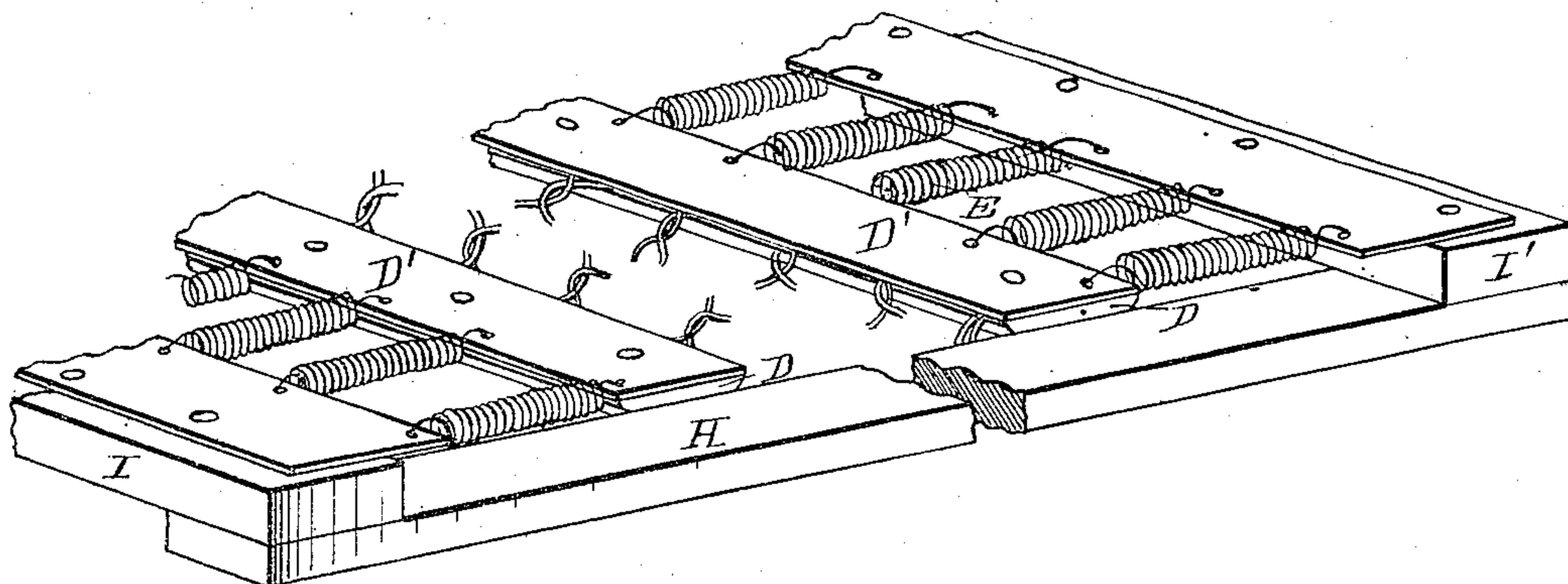
*Fig. 2.*



*Fig. 3*



*Fig. 4.*



Witnesses:

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# UNITED STATES PATENT OFFICE.

CHARLES H. DUNKS AND JAMES B. RYAN, OF NEW YORK, N. Y.

## SWING WOVEN-WIRE BED-BOTTOM.

SPECIFICATION forming part of Letters Patent No. 241,321, dated May 10, 1881.

Application filed March 26, 1881. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES H. DUNKS and JAMES B. RYAN, citizens of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Swing Woven-Wire Bed-Bottoms: and we do hereby 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 letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a perspective view of our improvement as applied to a bedstead. Fig. 2 is a detached view, showing the supporting-rail employed at the head of the bedstead shown in Fig. 1. Fig. 3 is a detached view, enlarged, of one of the swinging bars employed in our improvement, and Fig. 4 is a perspective view, showing the improvement applied to an independent frame adapted to be used in connection with a bedstead of any ordinary construction.

Referring to Fig. 1, A A are the side rails, B the head-rail, and B' the foot-rail, of a bedstead, which parts may be of any usual or approved construction adapted to have our improvement applied thereto.

C represents a central section of the ordinary woven-wire fabric in common use in bed-bottoms. This fabric is attached, at either or both ends, to a swinging cross-bar, which, in turn, is suspended from one of the end rails of the bedstead. By preference we construct the swinging bar in two parts—a lower portion, D, formed of wood, to which one end of the woven fabric is secured by means of suitable pins, or otherwise, and an upper portion, D', provided upon its outer edge with a series of holes, *d*, the upper and lower portions being secured to each other by rivets, bolts, or other analogous devices. Thus the upper part may be made to assist in securing the end of the woven fabric, to cover the end of the fabric, and thus protect the mattress from undue wear, and also as a means by which to attach the springs E,

links, or other devices employed to connect said swinging bar with the end rail of the bedstead.

E E represent a series of spiral springs, each connected at one end to the swinging bar, and at the other end to the end rail of the bedstead, preferably by means of an interposed supplemental bar or rail, F, which, in this instance, we have represented as being a metal bar provided with holes upon one edge for the attachment of the springs, and provided, also, upon the other edge with holes *f*, adapted to receive pins, by means of which said bar F can be attached, either to the end rail of the bedstead or to a separate rail, G, which, in turn, is secured to the end rail of the bedstead.

In Fig. 1 we have shown both methods of attaching the bar F to the bedstead, it being attached to the foot-rail B' by means of a series of bolts, hooks, or pins, *b*; and in case pins are inserted in the rail B' for this purpose, we prefer to incline them backward, in order to prevent the bar F from being accidentally detached when in use; or the pins may be provided with heads, the holes in the end rail of the bedstead being inclined inwardly at their lower ends, when the tension of the springs E will keep the form in position.

When the bar G is employed its ends may be notched to engage with the vertical posts of the bedstead, or with cleats or ribs secured to the inner faces of the posts or of the side rails, as the construction of the bedstead shall indicate as being most convenient; or the end rail of the bedstead may be provided with an inwardly-projecting rib having pins or hooks corresponding to those marked *b*; or hooks may be attached to and project from the inner face of the rail in proper position to receive the bar F.

Referring to Fig. 4, H H are the side rails, and I I' the end rails, of a bed-bottom adapted to be applied to a bedstead of any ordinary or approved construction, and rest upon the cleats with which such bedsteads are usually provided for the purpose of supporting a detachable bed-bottom.

In this construction we prefer to dispense with the supplemental rail G and attach the



bars F directly to the end rails, I I', in such manner as to be readily detached therefrom, in order to facilitate the rolling up of the spring portions for transportation.

5 By an examination of the drawings it will be seen that the cut ends of the woven-wire fabric enter and are secured within a throat formed between the upper and lower faces of the swinging bar D D', and that the springs or  
10 links which connect said bar to the end rail are attached to the bar at the edge opposite to that at which the woven wire enters the throat, and in about the same horizontal plane, so that the tension of the parts tends to maintain the  
15 bar in a substantially horizontal plane, thus presenting a suitable surface adapted to support the mattress without undue wear upon any portion of its lower surface. So, also, constructing the bar in such manner that it is  
20 adapted to receive a hook formed of one of the convolutions of the springs E facilitates the employment of such springs as they are usually found in the market, this result being best attained by the employment of a strip of metal  
25 for one part of the bar D D'; but we do not wish to be limited to the use of metal for that purpose. One advantage which is due to the use of wood for this bar is the fact that its yielding and elastic nature permits attachment  
30 of the spring-wire of which the fabric C is formed, and the vibrations of the bar, when in use, without breaking their attached ends.

By the use of the springs and swinging bars the great strain upon the woven fabric which is  
35 required in beds of other construction may be dispensed with, because the springs may be made of such strength as will permit the fabric to be supported with comparatively little tension upon it when the bed is not sustaining any  
40 weight except that of the bedding, the springs preventing undue sagging of the fabric when the weight of a person is thrown upon it.

We do not wish to be limited to any particular description of springs for connecting the

swinging bar or bars with the bedstead, or with the supporting-frame shown in Fig. 2, as many other forms of springs might be employed without departing from the spirit of our invention.

Whenever in this patent we use the word "bed-bottom" or "bed" we wish to be understood as meaning either a removable construction, like that shown in Fig. 4, which is adapted to be made and sold as an article of manufacture, separate and apart from the bedstead with which it is to be used, or a construction  
55 adapted to be attached directly to the end rails of an ordinary bedstead, our invention being equally adapted for use upon either of such constructions.

What we claim is—

1. In a bed-bottom, the combination, with an end rail, of the links or springs, the section of woven-wire fabric, and an intermediate connecting transverse bar, provided upon one edge with a throat adapted to receive the ends of  
65 the wire, and upon the opposite side with means for attaching the links or springs, substantially as described.

2. In a bed-bottom, the combination, with the end rail, of the links or springs, the section of woven-wire fabric, and an intermediate connecting-bar consisting of a part to which the fabric is attached, and a part adapted to protect the mattress from contact with the ends of the wire, substantially as set forth.  
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3. In a bed-bottom, the connecting-rail consisting of the part D, of wood, to which the fabric is attached, and the part D', of metal, adapted to have the end of the springs E attached thereto, substantially as set forth.  
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In testimony whereof we affix our signatures in presence of two witnesses.

CHARLES H. DUNKS.  
JAMES B. RYAN.

Witnesses:

HENRY GOTTFRETEN,  
J. HOMER HILDRETH.