

(No Model.)

H. T. WINDT.

WIRE FABRIC.

No. 323,477.

Patented Aug. 4, 1885.

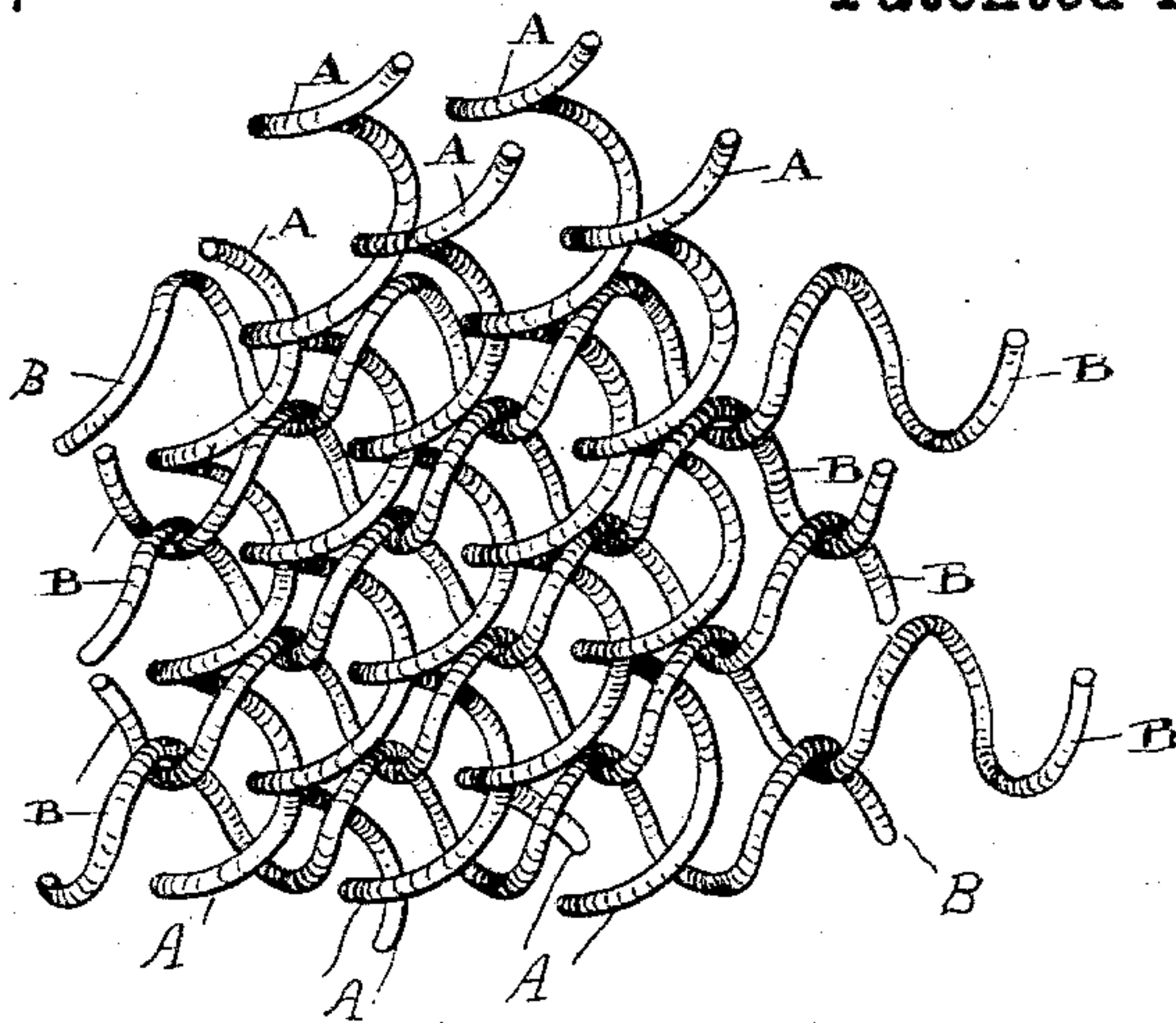


Fig. 2.

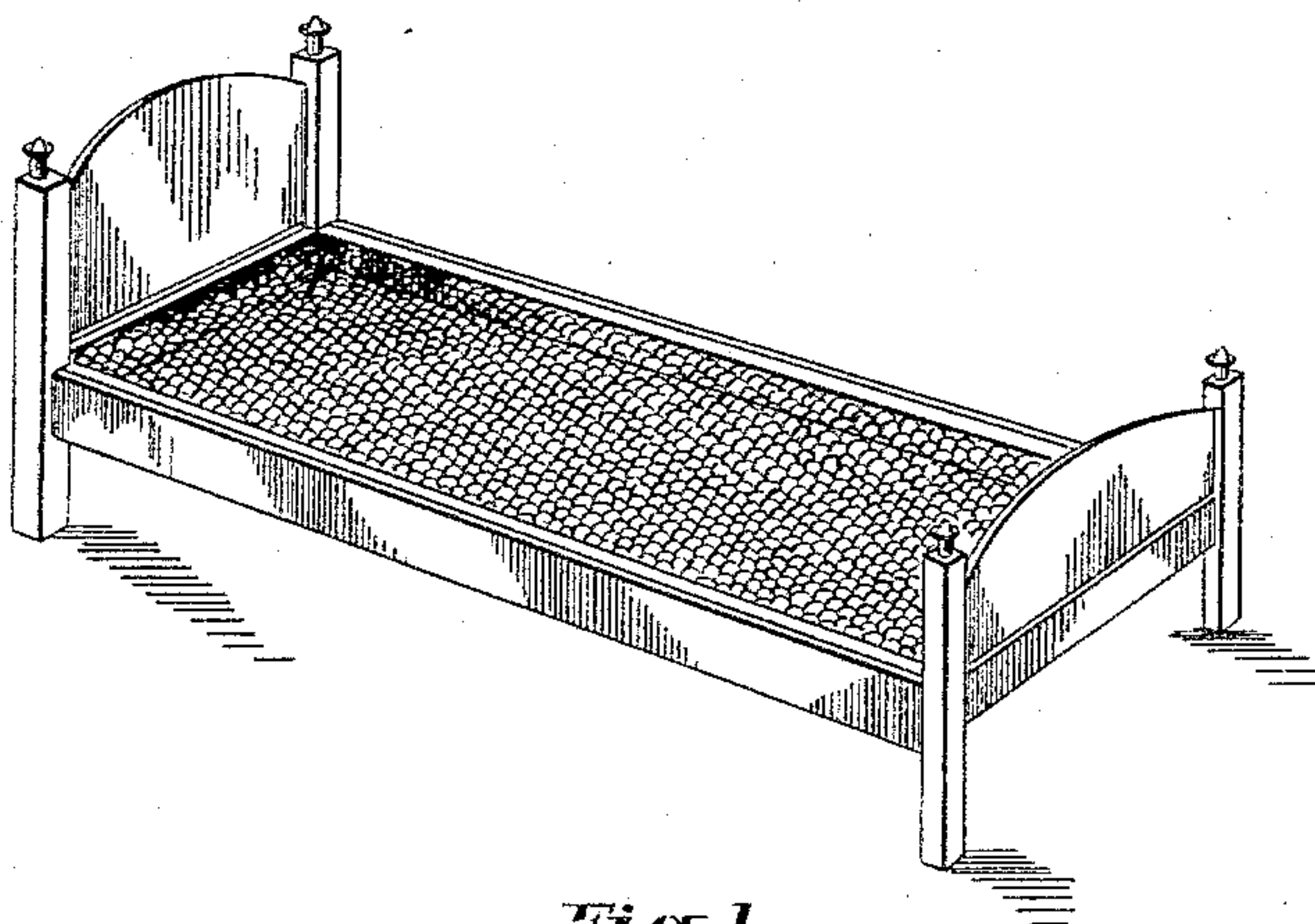


Fig. 1.

Witnesses.

J. B. Fetherstonhaugh
Chas. C. Baldwin

Inventor:

H. T. Windt
by Donald C. Fidorit & Co.
Attys.

UNITED STATES PATENT OFFICE.

HENRY T. WINDT, OF NEW YORK, N. Y.

WIRE FABRIC.

SPECIFICATION forming part of Letters Patent No. 323,477, dated August 4, 1885.

Application filed April 27, 1883. (No model.)

To all whom it may concern:

Be it known that I, HENRY THEODORE WINDT, a citizen of the United States, of the city of New York, State of New York, now temporarily residing in the city of Toronto, in the county of York, in the Province of Ontario, Dominion of Canada, have invented a certain new and useful Wire Fabric, of which the following is a specification.

10 The object of the invention is to produce a strong and elastic wire mat applicable for bed-bottoms, door-mats, &c.; and it consists, essentially, of a series of spirally-wound wire coupled together by intertwining with
15 each other, and strengthened by a series of wire also spirally wound, but in an opposite direction, and arranged to intertwine at right angles to the other series of twisted wires in such a manner that the crossings of one set of
20 wires occur in the space between the crossings of the other set of wires.

Figure 1 is a view of a bed-bottom made in accordance with my invention. Fig. 2 is an enlarged detail of the wires forming my improved mat.

25 A are a series of wires wound in the form of a right-hand helix. These wires, when wound, are formed into a mat by being intertwined with each other. When a mat of the required size is thus formed, I take the wires
30 B, which are wound in the form of a left-hand helix. These wires B are then screwed into the mat formed by the wires A in such a manner as to intertwine with each other in the
35 open spaces between the points where the wires A cross each other, and at the same time intertwine with said wires A.

I have shown in the drawings my improved mat as applied to a bed, but of course I do
40 not wish to confine myself to any particular article.

I am aware of Patent No. 140,160, which shows that it is not new to interweave two sets of spiral wires, both of which sets are coiled
45 in the same direction and intertwined with their spirals at right angles to each other; but I believe that it is new to intertwine a set of spiral wires wound in one direction with another set wound in an opposite direction,
50 so that the place where two of the wires in one set cross each other will be found to be in the

open space formed by the coils of the opposite set, and thus form an even surface and fill the space more thoroughly.

If the supplemental springs are coiled in 55 the same direction as the main springs, as shown in Patent No. 140,160, they will not produce the same closely-woven surface. If any attempt is made to weave the coiled springs shown in that patent in such a manner as to make the coils of springs fill the space left between the coils of the original fabric, and with both coils on the same plane, it will be found that after a dozen coils or so of the supplemental spring have been woven in that
60 it will be practically impossible to force the remaining coils into place, whereas by my arrangement of using one set of springs wound from right to left, and another set of springs wound from left to right, it will be found that
65 any reasonable length of spring can be readily interwoven at right angles to the other set.

Two sets of similarly-wound springs may, it is true, be easily woven together if it is not intended to have them both on the same plane; 75 but in such case the top of the second set of springs will, of course, be below the surface of the other set, and thus anything placed or resting on the fabric will have no bearing on the lower set of springs. 80

I am also aware of Patent No. 133,886, which simply shows the intertwining of right and left hand spirals in the same direction to form a fabric, without any transverse spirals, whereas my fabric is composed of a weft and 85 woof, the weft being formed of right spirals intermeshed, and the woof of left spirals interwoven with each other and with the weft. This arrangement has the advantage of stiffness in both directions, because as the wires
90 cross each other the spirals formed therein mutually brace each other and keep the fabric distended in both directions, so that a strain put thereon is evenly distributed, whereas where there are no transverse spirals the fabric will double up together and is therefore
95 not so desirable for a mat, or, in fact, for any purpose.

By my construction it will be seen that I have combined the advantages of both patents referred to above—to wit, the advantage of the use of transverse wires shown in Pat- 100

ent No. 140,160 with the ease of manufacture shown in Patent No. 133,886.

I claim—

1. The wire fabric herein described, consisting of a series of longitudinal wires, A, each wound in the form of a right-hand helix, and interwoven with each other, and a series of transverse wires, B, wound in the form of a left-hand helix and interwoven with the wires A, each of the two series of wires crossing, bracing, and connecting together all of the wires of the other series, substantially as described.

2. The wire fabric herein described, consist-

ing of a series of longitudinal wires, A, each in the form of a right-hand helix and interwoven with each other, and a series of transverse wires, B, wound in the form of a left-hand helix and interwoven with each other, and with the wires A, each wire of the two series of wires crossing, bracing, and connecting together all of the wires of the other series, substantially as described.

H. T. WINDT.

Witnesses:

CHAS. C. BALDWIN,

F. BARNARD FETHERSTONHAUGH.