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PATENTED MAY 28, 1907.

J. HOEY & F. J. CROUCH.
COUCH.

APPLICATION FILED MAY 28, 1906.

2 SHEETS—SHEET 1.

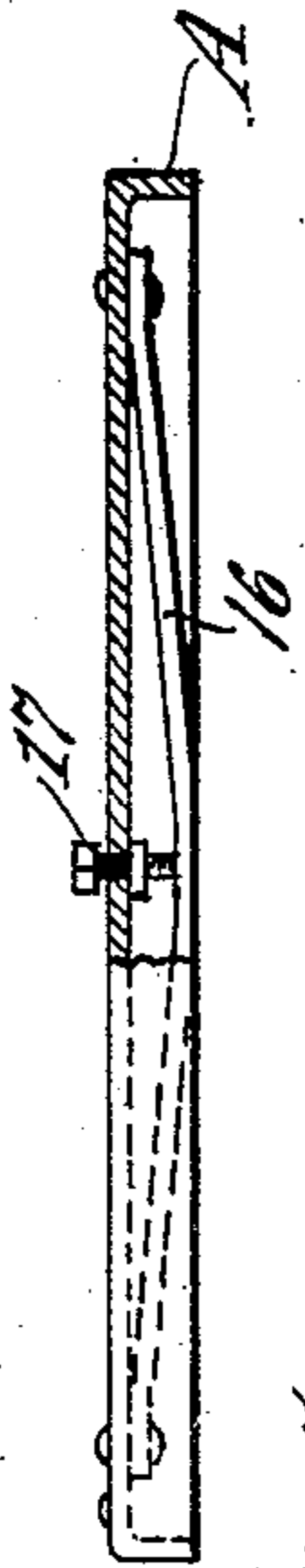


Fig. 5.

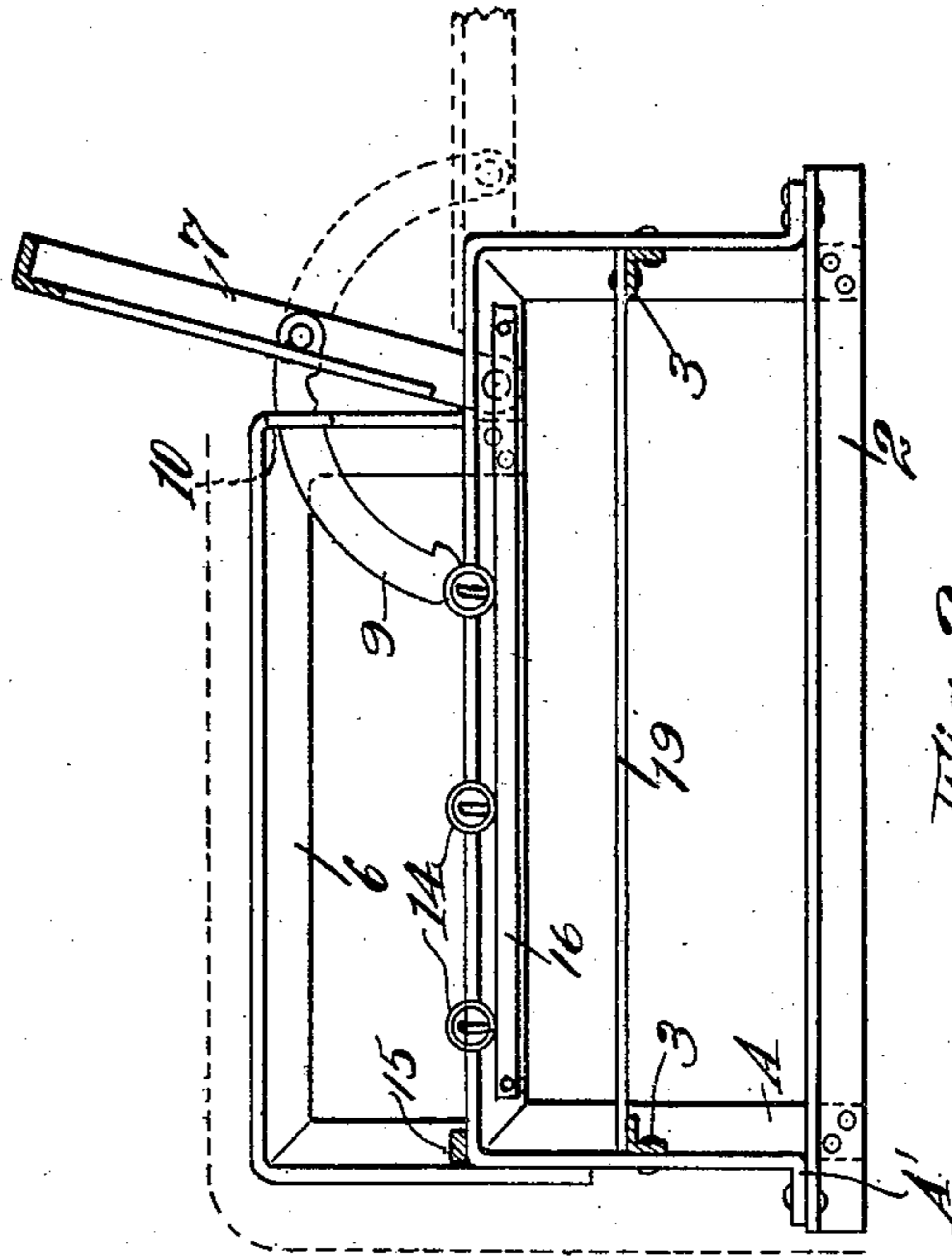


Fig. 2.

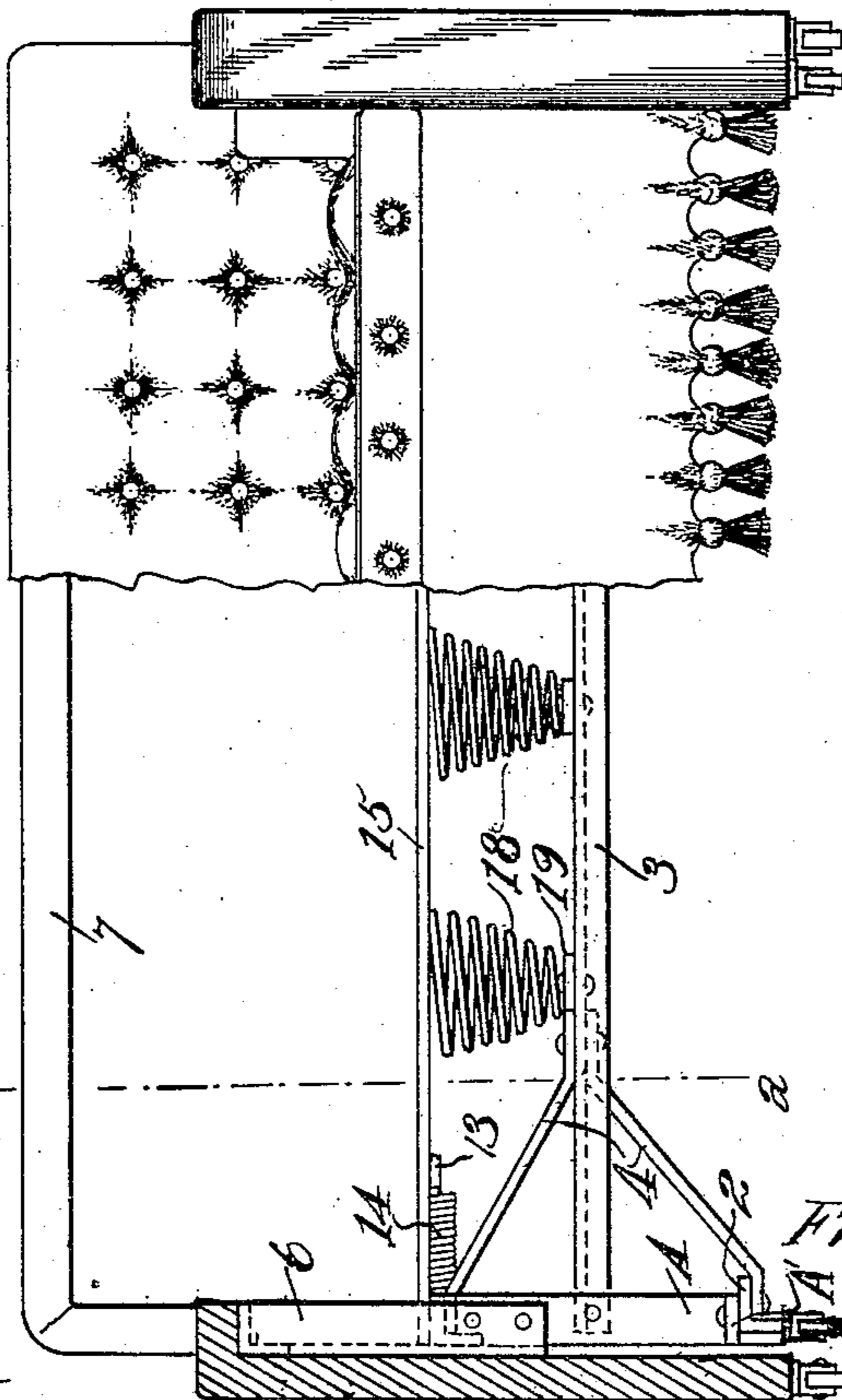


Fig. 1.

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COUCH.

No. 855,176.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, JOHN HOEY and FRANK J. CROUCH, citizens of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Couches, of which the following is a specification.

Our invention relates to improvements in couches and like structures.

It consists in combinations of parts, and in details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a front view partly sectioned. Fig. 2 is a section on line *a— a* of Fig. 1. Fig. 3 is a plan view of one end of frame. Fig. 4 shows a front extension member. Fig. 5 shows a truss member. Fig. 6 is a view of one of the locking links. Figs. 7 and 8 are construction details.

The couch as constructed consists of metal frames A, bent to form the ends, and these ends are supported upon iron base bars 2, and are also connected with each other between the ends by angle or tubular steel bars 3. Suitable diagonal braces 4 are placed between the upright ends and the horizontal bars to assist in maintaining these parts in position.

The lower ends of the bars, when of angular form, are fitted as follows: One portion of the angle bar extends down alongside the horizontal bar to which it is bolted. The angle of the vertical bar is slit up a sufficient distance, and the other portion of the bar is bent at right angles, and is bolted upon the flat portion, as shown at A'. This device provides for a very rigid connection between the parts.

The structure when made in the form of what is known as a "davenport" has arms 6 which may be made of angular or tubular steel, the front bars of which extend down parallel with the front vertical portions of the seat frames A, and are secured thereto. If made angular, the inner flange of the angle is cut so that it may be bent at right angles, forming the top bar or arm-rest, and another cut at the rear allows the vertical rear bar to extend downward and be bolted to the frame A. This rear portion of these arms is secured to the part A at some distance in front of the rear end of A. The back 7 is similarly formed of angle or tubular iron bent

or united to form three sides of a rectangle, and one of the flanges of each end of the back is cut away at the lower end; the other flange extending downwardly exterior to the side flanges of A, to which this extension flange is pivoted so that the back may be raised to stand in an approximately vertical position, or it may be let down into a horizontal position, with the end pieces resting upon the top of the rear extension of the part A. This extension is so wide that when the back lies in the horizontal position, it is sufficiently supported without the use of any legs or other means for supporting that part of the back which projects behind A, and the weight of the seat portion of the frame is sufficient to prevent any tilting of the couch by reason of weight placed upon the extreme outer edge of the back portion, when in this horizontal position. If found desirable however, it may be additionally supported by means of the links 9 which are pivoted to the end rails of the back at a point above that at which these ends are pivoted to the part A. These links extend through slots 10 made in the rear vertical portion of the angle iron arms, and the front ends of the links are bent, or formed into hooks or otherwise provided with stops which will contact with the slot in the angle iron arm when the back is in its horizontal position, thus forming an additional brace and security to strengthen the parts. These links are formed with notches 11 which engage with the shoulders of the slots in the arm sections through which the links slide, so that when the back is raised to its vertical position, these notches engaging the shoulders of the slots hold the back in this position.

When it is desired to let the back down it is necessary to raise the links in some manner to disengage the latches, and this is effected as follows: The notches 11 are continued backwardly toward the pivot points of the links, at an inclination or angle, as shown at 11^a, and from the apex of this angular portion, the notch is again formed as shown at 11^b. By pressing the back forward, the inclined edges will ride over the shoulder through which the link slides, and then by suddenly pulling the back toward the rear, the rear portion of the incline 11^b bears such relation to the shoulder of the slot that it will cause the link to jump over the notch by

which it is ordinarily retained, and the back held in a vertical position. The link after thus jumping the notch, will rest with its smooth inner edge upon the shoulder of the slot, and the back can then be easily let down to its horizontal position.

This device is especially useful in structures of considerable length, such as couches, davenport and the like; because it is not possible for one person to lift the links at both ends of the couch at the same time, whereas by this forward and sudden backward movement of the back, both links will be simultaneously disengaged from the locking shoulder and the back may be easily let down.

Any suitable fabric may be employed to form the surfaces of the seat and back, and an elastic support for the upholstery which is afterward applied. In the present case, we have shown a fabric composed of interlocking links of wire 13 extending longitudinally and transversely, the end links of the longitudinal series being connected with spiral springs 14 which have their outer ends attached to the end bars of the seat and back frames, so that any pressure brought upon this fabric will elongate the springs and make a yielding support. Either or both edges of the seat structure are formed by a flat rectangular bar 15 with which the transverse wires of the fabric are connected. This front bar having its greatest width horizontally forms a better edge support for the fabric than if made of round wire.

Considerable difficulty is experienced in preventing the steel bars from being bent inwardly by the constant tension of the springs under the weight which is put upon the fabric, and in order to overcome this I have shown truss frames 16 extending within the frames upon which said tension is exerted. These trusses have their deepest portion centrally located, and by means of screws or equivalent devices 17, any suitable or desired tension may be brought upon them, and the bars thus maintained in a substantially straight position.

In conjunction with the link fabric heretofore described we may also employ spiral springs, as at 18, the lower ends of which are supported upon transverse bars 19 extending between the longitudinal iron bars 3 of the main frame and forming supports for the spiral springs, the upper ends of which are clipped to the fabric wires, and thus serve to support them.

When this structure is to be used as a davenport, we make independent wooden ends and back bars, which may be made in any ornamental form, and these wooden ends are adapted to fit over the angle iron ends of that portion heretofore described, and are bolted or otherwise secured to the iron interior frame. These wooden ends are independ-

ently supported, so that both the metal and the wooden portion form a combined structure, the parts of which may be separated whenever desired, the iron structure forming a sufficient support in itself, and when the wooden portions have been added, the additional strength is provided. The wooden end structures may also be united by connecting rails, when desired, and the upholstery is applied in the usual manner for such structures.

We have heretofore described the structure particularly adapted for use as a davenport, the back turning down to form a sufficiently wide structure for purposes of a bed. If it be desired to make the device still wider, a leaf or extension made in the same manner of angle iron may be hinged or pivoted to the front end of the seat bars A, said extension having links pivoted to its ends and slidable over shoulders formed in the vertical front legs, said links serving to hold the extension up in a horizontal position, and capable of disengaging to allow the extension to fall into a vertical position in a manner similar to that described for the links which support the back. Such a structure may be completed either with or without the arm rests previously described.

Having thus described our invention, what we claim and desire to secure by Letters Patent is—

1. A couch consisting of an angle iron base, a main frame, the ends of which are formed of angle iron notched and bent at right angles to form a horizontal portion, and vertical legs, said legs having the lower ends vertically slit on the line of the angle, and one of the flanges turned at right angles, and riveted to the top of the base part and the other flange extending downwardly and riveted to the vertical flange of the base bar.

2. An improved furniture structure having in combination an interior metallic frame, an exterior wooden frame channeled to fit the metallic frame and slidable from one end to inclose and expose the same, and independent supporting devices for each frame.

3. The combination in a couch and davenport of a metallic seat frame and arms, a back pivoted to the seat frame in front of its rear edge, and means for holding it in either a vertical or horizontal position, an exterior wooden frame channeled to fit the metallic main frame and slidable from the rear to inclose or expose said frame, and independent supporting devices for each frame.

4. An improved couch or like structure having in combination a main frame, a metallic seat frame, the ends of which are formed of angle iron bent at right angles to form a horizontal portion, and vertical legs, said legs having their lower ends vertically slit on the line of the angle to form braced connections between the legs and the base

bar of the main frame, one of said slitted portions being bent and secured to the horizontal face of the base bar and the other slitted portion being bent at right-angles to the first
5 named slitted portion and being secured to the vertical face of the base bar.

10 5. An improved furniture structure having in combination an interior metallic frame comprising a seat-portion and a back-portion, an exterior wooden frame channeled to fit the metallic frame and slidable from the

rear to inclose and expose the same, said exterior frame having independent caster supports.

In testimony whereof we have hereunto
15 set our hands in presence of two subscribing witnesses.

JOHN HOEY.
FRANK J. CROUCH.

Witnesses:

CHARLES F. HOEY,
WALTER R. PEASE.