

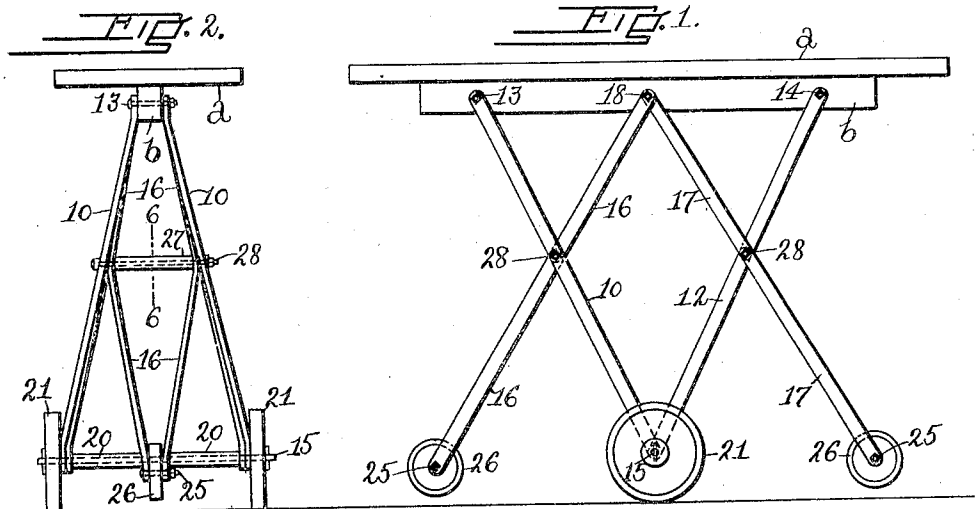
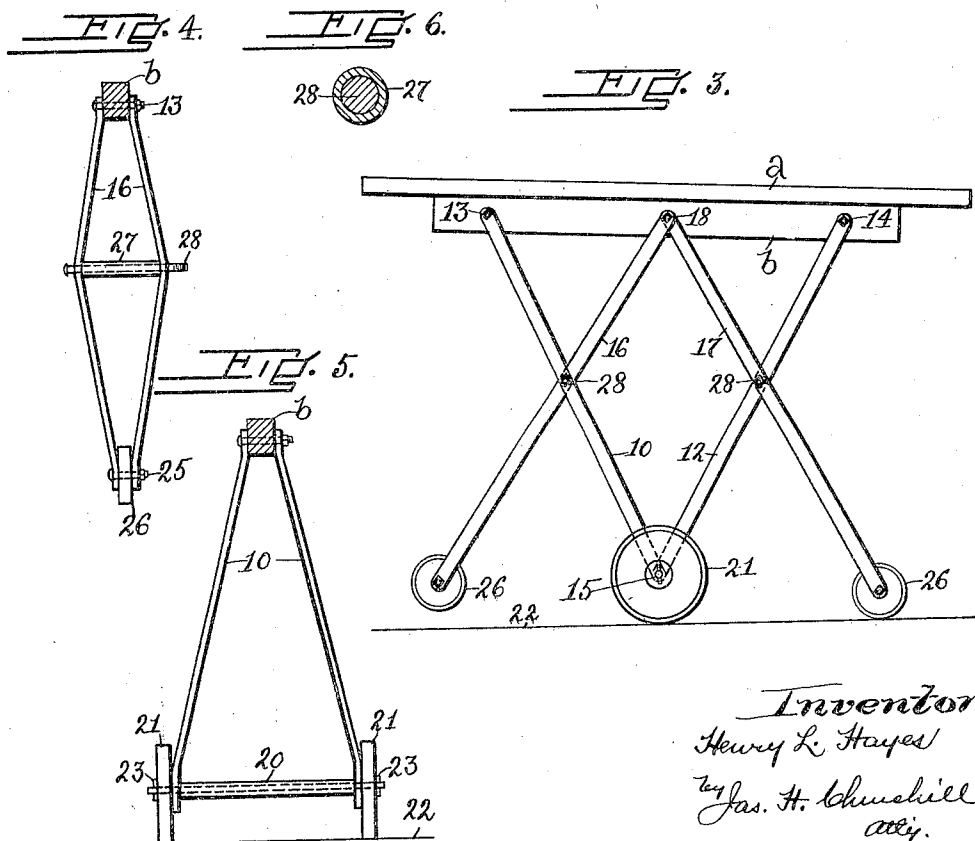
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LEATHER SUPPORTING HORSE

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UNITED STATES PATENT OFFICE.

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LEATHER-SUPPORTING HORSE.

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To all whom it may concern:

Be it known that I, HENRY L. HAYES, a citizen of the United States, residing in Peabody, in the county of Essex and State of Massachusetts, have invented an Improvement in Leather-Supporting Horses, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention relates to a movable support or horse of the character commonly used in tanneries for transporting hides, skins and leather from place to place within the tannery.

The present invention has for its object to provide a horse of the character described, which is of novel construction, as will be described, is simple, inexpensive, strong, light in weight, of maximum carrying capacity, and capable of resisting racking or distortion due to shocks caused by the horse striking obstructions in its path.

To this end, the horse is provided with a top member over which the hides, skins or leather are hung, and with main side supporting members or legs, which diverge downward from said top member and are arranged to form triangles, and auxiliary supporting members secured to said top member, with the lower ends of the auxiliary members located in a vertical plane substantially through the longitudinal axis of the top member, as will be described. The main side members, which are connected with the top member to form inverted triangles, carry at their apices relatively large wheels which contact with the floor, and the sides of the auxiliary supporting members are connected with the top member to form triangles whose apices are connected with the top member and whose lower ends carry wheels which are located substantially in a vertical plane through the longitudinal axis of the top member, and are designed to be normally off or out of contact with the floor when the horse is in motion, and one of which rests upon the floor when the horse is not in motion to obtain a three-point bearing for the horse.

These and other features of this invention will be pointed out in the claims at the end of this specification.

Fig. 1 is a side elevation of a horse embodying this invention.

Fig. 2, an end elevation looking toward the right.

Fig. 3, a side elevation with the horse stationary.

Fig. 4, an end elevation of one member of one triangle.

Fig. 5, an end elevation of one member of the other triangle, and

Fig. 6, a section on line 6—6, Fig. 2.

Referring to the drawing, *a* represents a top or supporting member of wood or other suitable material, which is suitably fastened to a bar *b*, to the opposite sides of which are fastened two sets of triangular side members or legs, for supporting the top member. The side members or legs are preferably made of flat metal bars, and one triangular set is composed of two metal bars 10, 12, which are secured at their upper ends by bolts 13, 14 to the bar *b* on opposite sides of the longitudinal center of the same; and are connected together at their lower ends by a rod 15, to form an inverted triangular main side supporting frame or member whose base is the bar *b* and whose apex is the rod 15, which latter is located in a vertical plane through the top member *a* substantially at the middle thereof.

The other triangular set of the side members is composed of metal bars 16, 17, which are reversely arranged with respect to the triangle formed by the bars 10, 12, and have their upper ends secured to the bar *b* by bolt 18, which constitutes the apex of a triangle formed by the bars 16, 17, whose lower ends are located on opposite sides of the apex of the triangle formed by the bars 10, 12.

The bar *b* has secured to its opposite sides duplicate bars 10, 12, forming two sets of main triangular side supporting members, and the rod 15 forms the apex for the two sets which are spaced apart by a metal sleeve 20 on the apex rod 15, as clearly shown in Fig. 5.

The apex rod 15 constitutes an axle upon which are mounted relatively large wheels 21, which are designed to engage the floor represented by the line 22. The wheels 21 may be retained on their axle 15 by pins 23 or otherwise. The bars 10, 12 of the side

supporting members diverge from the top supporting member *a* as represented in Fig. 2.

2. The duplicate bars 16 and 17 are bent or shaped between their ends to form diverging upper portions and converging lower portions, so that their lower ends are brought substantially close together and connected by a bolt 25, upon which is mounted a wheel 26 which is smaller than the wheels 21.

The duplicate bars 16 are separated between their ends by a metal sleeve 27 mounted on a bolt 28 which is extended through the duplicate bars 10 and serves to lock or tie the bars 10, 16 together at their point of intersection, and the duplicate bars 17 are spaced apart by a like sleeve 27 and tied or locked to the bars 12 by a like bolt 28. By reference to Figs. 2 and 4, it will be seen that the portions of the bars 16 and 17 above the point where they are attached to the bars 10, 12, by the bolts 28, diverge from the bar *b* to said points of attachment and that from the bolts 28 to their lower ends the lower portions of the bars 16 and 17 converge toward a vertical plane through the bar *b*, with the result that the wheels 26 carried by the bars 16 and 17, are located substantially in a vertical plane through the longitudinal axis of the top member. The bars 16, 17, are made of such length and the wheels 26 are of such size, that when the top member *a* is substantially parallel with the floor 22, the wheels 26 are out of contact with the latter, as represented in Fig. 1, which condition may be considered the operative condition of the horse, inasmuch as it is in such condition when in motion, loaded or unloaded. By such arrangement the weight of the load upon the top member is transmitted to the axle 15 and wheels 21 which are centrally located with relation to the top member and which enables the horse to carry a maximum load without danger of bending or buckling of the side frames 10, 12. This arrangement also prevents racking of the side frames in case the big wheels 21 should strike an obstruction in their path. So also the auxiliary frames carrying the smaller wheels 26 take care of the strain due to the wheels 26 striking an obstruction in the path of the horse, and prevent racking or twisting of the frame from this source.

When the horse is not in motion, as for instance while being loaded, one end of the horse is lowered until the smaller wheel 26 at that end of the horse rests upon the floor, as represented in Fig. 3, and while the horse is in this position, the load is placed upon the top member *a* and when the desired load has been placed on the top member, the lowered end of the latter is raised until the smaller wheels are clear of the floor as rep-

resented in Fig. 1. With the horse in the position shown in Fig. 1, the operator can push the loaded horse with a minimum of effort as the load is carried by the centrally located wheels 21.

The triangular arrangement of the side frames enables a strong and durable horse of maximum carrying capacity to be made with light iron or metal flat bars, which enables the horse to be made at a minimum cost. It will be observed that when the horse is stationary and resting on the wheels 21, 26, it has a three-point or triangular bearing upon the floor, with the small wheel 26 at the apex of the triangle and the large wheels 21 at the base of the triangle, which arrangement affords a substantial support for the horse and further facilitates turning of the horse when loaded. The horse herein shown and described is especially serviceable in tanneries, but it is not desired to limit the invention in this respect.

Claims.

1. In a horse of the character described, in combination, a top member, side supporting frames attached to said top member and each comprising bars arranged to form main and auxiliary triangles with the apex of the auxiliary triangle secured to said top member and with the sides of the main triangle secured to the top member on opposite sides of said apex and with its apex substantially in a vertical plane through the apex secured to said top member, an axle connecting the apices of the opposite triangles whose sides are secured to said top member, and wheels mounted on said axle.

2. In a horse of the character described, in combination, a top member, main triangular side supporting frames attached to said top member and diverging therefrom, wheels mounted on said main side frames at the apices thereof, auxiliary triangular supporting frames secured at their apices to said top member, and having their lower ends located substantially in a vertical plane through the longitudinal axis of said top member, and means connecting the auxiliary frames and the main frames at their points of intersection.

3. In a horse of the character described, in combination, a top member, diverging side frames for supporting said top member and each comprising a set of bars secured at their upper ends to said top member and having their lower ends connected to form the apex of a triangle, an axle connecting the said side frames at their apices, wheels mounted on said axle, and a sleeve mounted on said axle between said side frames.

4. In a horse of the character described, in combination, a top member, side frames for supporting said top member and each comprising bars spaced apart at their upper ends and secured in fixed relation to said top

member and having their lower ends connected together to form the apex of a triangle whose base is formed by said top member, both bars of each side frame diverging transversely from said top member with corresponding bars of said side frames diverging transversely from each other, and an auxiliary supporting member located between said side frames and having its lower end substantially in a vertical plane through the longitudinal axis of the top member.

5. In a horse of the character described, in combination, a top member, two side frames for supporting the top member, each comprising bars secured at their upper ends in fixed relation to the top member and converging downward in a longitudinal plane and diverging in a transverse plane and having their lower ends connected to form the apex of an inverted triangle, said side frames being arranged so that the opposed bars of each diverge downward from the top

member in a transverse plane and form a normal triangle.

6. In a horse of the character described, in combination, a substantially oblong top member having on its underside a bar extending longitudinally and located substantially at the center thereof, side supporting frames attached to the opposite sides of said bar and each comprising bars arranged to form main and auxiliary triangles with the apex of the auxiliary triangle secured in fixed relation to said bar and with the sides of the main triangle secured to said bar on opposite sides of said apex and with its apex substantially in a vertical plane through the apex secured to said bar, the bars of said side supporting frames which form the main triangles diverging downward from said bar.

In testimony whereof, I have signed my name to this specification.

HENRY L. HAYES.