

E. O. M. HABERACKER.
FAN ATTACHMENT FOR ROCKING CHAIRS.

(Application filed Nov. 18, 1901.)

(No Model.)

2 Sheets—Sheet 1.

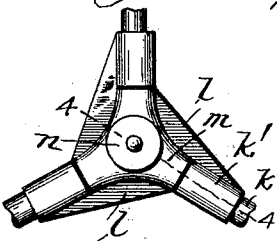
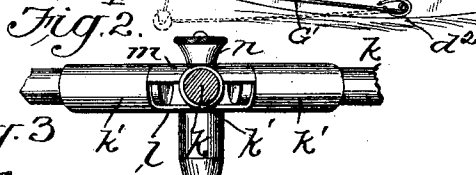
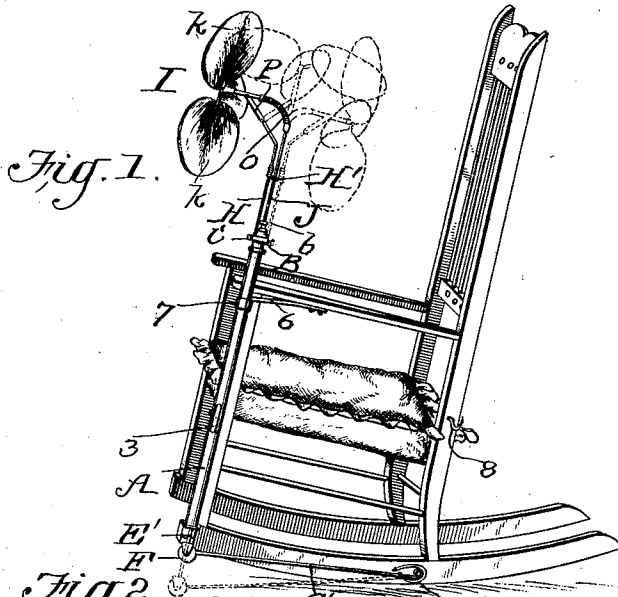


Fig. 4.

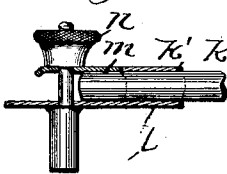
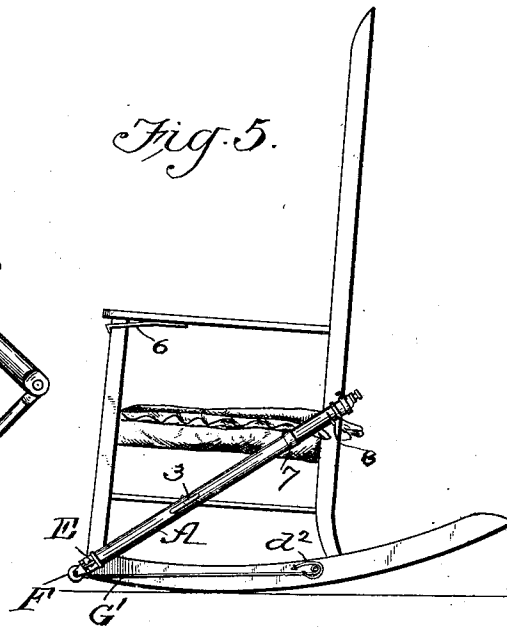


Fig. 5.



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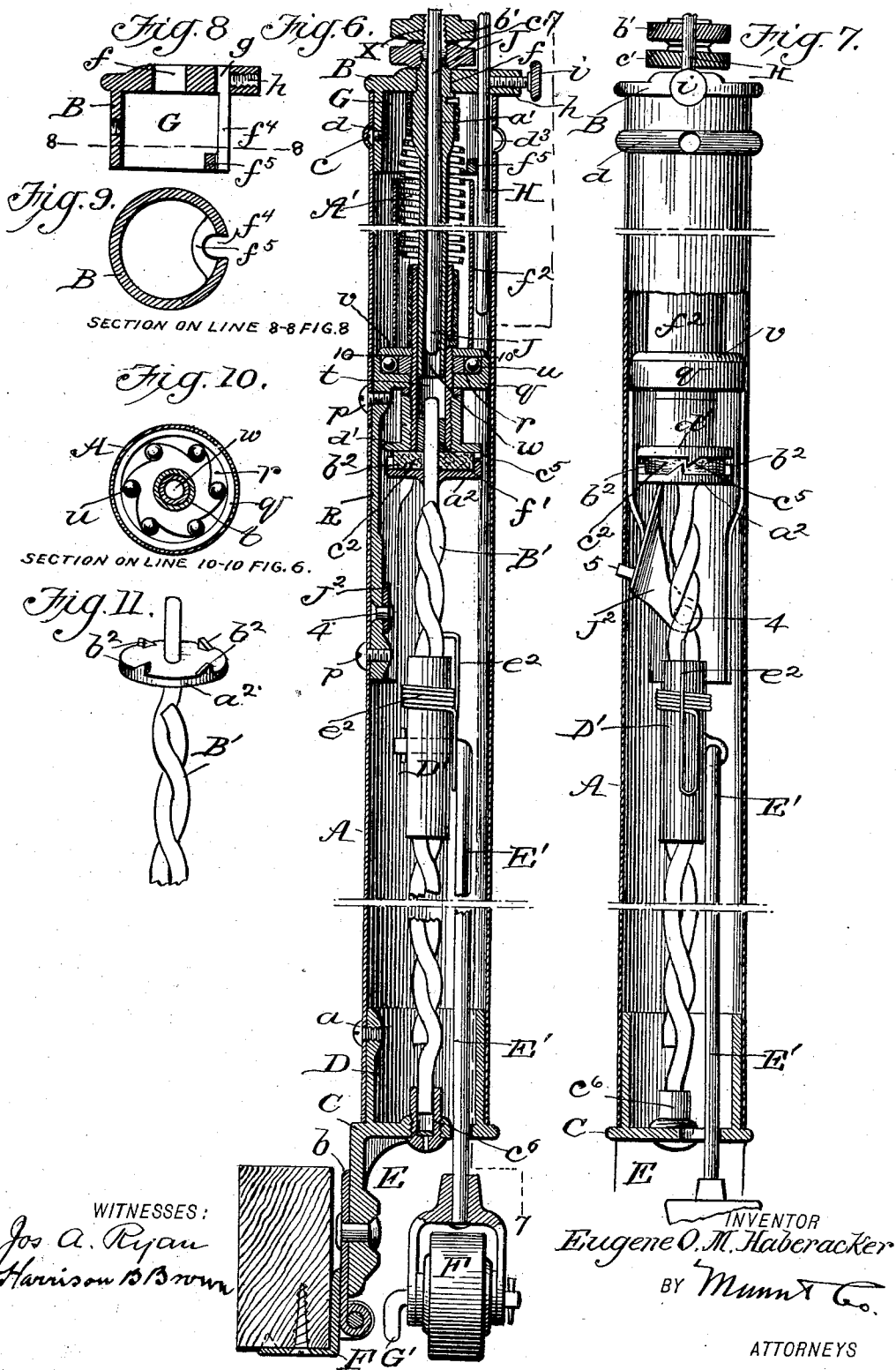
E. O. M. HABERACKER.

FAN ATTACHMENT FOR ROCKING CHAIRS.

(Application filed Nov. 16, 1901.)

(No Model.)

2 Sheets—Sheet 2.



UNITED STATES PATENT OFFICE.

EUGENE O. M. HABERACKER, OF ALTOONA, PENNSYLVANIA.

FAN ATTACHMENT FOR ROCKING-CHAIRS.

SPECIFICATION forming part of Letters Patent No. 705,399, dated July 22, 1902.

Application filed November 16, 1901. Serial No. 82,531. (No model.)

To all whom it may concern:

Be it known that I, EUGENE O. M. HABERACKER, of Altoona, in the county of Blair and State of Pennsylvania, have invented a new and useful Improvement in Fan Attachments for Rocking-Chairs, of which the following is a specification.

This invention relates to certain useful improvements in fan devices for rocking-chairs.

The object of the invention is to provide such a device that can readily be by any person applied to any chair the body of which is adapted to be rocked on the floor or a supporting-base, as is obvious.

I am aware that the broad idea of providing a rocking-chair with a fan attachment adapted to be operated as the chair is rocked to and fro is not broadly new and to all of which now provided there is more or less objection for one or another reason, and therefore I have devised a fan-attachment needing no special skill to properly affix it in working position on a chair and such a device as is adapted to be adjusted into position for operation or folded back out of the way and locked against operation, thus permitting free use of the chair with the fan device in an operative position obviating liability to breakage, all as hereinafter fully described, and shown by the drawings.

Briefly stated, my fan attachment is so constructed that it may be adjusted to force the air toward or from the occupant of the chair. In fact it may be set in a vertical, oblique, or horizontal position, forcing the air in any desired direction.

To the end above stated, I have invented the special fan attachment hereinafter fully described, and shown in the accompanying drawings, with the novel features pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective view of my fan attachment. Fig. 2 is an enlarged detail of the upper end of the fan attachment. Fig. 3 is a detail plan view of the fan-holder. Fig. 4 is a section on line 4 4 of Fig. 3. Fig. 5 is a view showing the fan attachment folded. Fig. 6 is a vertical section with the fan supporting and holding rods broken away. Fig. 7 is a section on line 7 7 of Fig. 6. Figs. 8, 9, 10, and 11 are views showing detail parts.

In carrying out my invention I employ a casing A, having at its upper and lower ends, respectively, special castings B and C. The lower casting is formed with a socket D, fitted into that end of the casing A and secured by a fastening, such as a screw-bolt *a* or other preferred means. The said casting is also provided with a downwardly-extending wing or projection E, riveted or otherwise secured to a plate *b*, having hinge connection with an L-shaped plate F, which latter is arranged on a rocker or other suitable support of a chair. This plate F, I have shown secured in place by a screw passing through the horizontal member thereof and up into the rocker; but obviously said plate may be otherwise suitably secured. The hinge connection of plate *b* with L-shaped plate F and the pivotal movement of the wing E on the rivet enables vertical adjustment of the device with relation to the curve or angle of the rocker. The upper casting B (see Figs. 6, 7, and 8) is formed with a similar socket G, entering the casing A, and is secured in place by a screw *c*, having a rounded head, if desired, which latter is received by an annular internal groove *d*, formed in the casing. By this construction the casting B is permitted rotation and still secured against withdrawal. The casing A is provided with an opening *d*³ to permit the screw *c* being affixed to the socket G after the same is arranged in the casing A. One side of the socket G is cut away, forming a passage-way *f*⁴, registering with a vertical passage *g* through the top of the casting. At the bottom of the socket the passage-way is bridged, as at *f*⁵, against which latter the rod H rests and is held firmly when the jam-screw *i* has locked the said rod H in position. The top of the casting B has a threaded passage *h* at right angles with the passage *g*, adapted to receive the jam-screw *i* for locking the rod H, whose function is to hold the fan I to an adjusted position, as hereinafter described. The rod H is arranged and supported in the casting B so as to lie within the inner wall of the casing A, and thus permit free rotation of the said casting in adjusting the position of the fans.

The fan I is mounted at the upper end of a rod J, the lower end of which passes down through an opening *f* in the casting B and

into the casing A, as will be more fully described farther on. The fan adopted by me consists of four, more or less, vanes *k*, whose arms enter sockets *k'*, as shown, of a plate *l*, and the said arms are secured against rotation by a clamping-plate *m*, forced against them by a nut *n*, threaded upon the projecting end of the rod J. The rod J is provided with a flexible member O just below the fan I. This flexible member (see Fig. 2) consists of a spirally-wound wire having at both ends detachable connection with the rod J, such as threaded sockets *o*, (shown in Fig. 2 of the drawings;) but I do not desire to limit myself to such construction, as such connections may be made permanent, if desired. The purpose of detachable connection is to allow removal of the said flexible member O when desirable. By means of such member the fan I is adapted to be adjusted to a vertical, oblique, or horizontal position and so held by the rod II, which is connected with the rod J by rigid arm P, extending at an angle from a sleeve Q. The latter is loosely mounted on the rod J above the flexible member O. As before stated, the lower end of the rod J passes down into the casing A, where it connects with mechanism inside the casing A, as will appear farther on.

Within the casing A and about half-way thereof I secure a special casting R, held by screws *p* or other suitable means. The upper end of this casting R is disk-shaped, forming a bracket *q*, and the upper side is recessed, as at *r*, forming one member of the special clutch shown in Figs. 6 and 10 of the drawings. In detail this clutch consists of a toothed wheel affixed to a sleeve *t*, passing up through the bracket *q*, and balls *u*, arranged in the space formed by the inclined walls of the teeth and the flange surrounding the recess *r* of the bracket *q*. The balls *u* are held in place by a cap *v*, which, if desired, may be integral with the toothed wheel.

Within the upper end of the sleeve *t* is loosely arranged the lower end of a tube *w*, whose upper end within the socket G of the casting B is provided with an enlargement *a'* and then extends through the opening *f* of the said casting B. The projecting end of the tube *w* is tapered and screw-threaded, as at X, and provided with one or more slits extending to the end thereof, allowing the tube at this place to be contracted by a nut *b'* screwing thereon, and thus clamping the rod J, which passes down through it into the tube *w*. The nut *b'* is held to its adjustment by a jam-nut *c'*, as shown. The sleeve *t* and the enlargement *a'*, the latter near the upper end of the tube *w*, are connected by a spiral spring A'. I have shown the ends of the spring secured to the said sleeve and enlargement by being reduced in diameter and closely encircling the said parts, with the ends of the spring being bent at right angles and engaging a recess thereof; but any other means may be employed that will provide a rigid connection.

As will be seen from the drawings, the sleeve *t* extends down through the bracket *q* and at its lower end is provided with a disk *d'*, formed with a depending tooth *c'*. The lower end of this sleeve is internally reduced in size by a socket *f'*, which receives the upper end of a spiral rod B', whose lower end is stepped in a cup-shaped bearing *c''*, having threaded adjustment in the casting C. Within the bearing *c''* may be arranged a leather or other soft disk to receive the thrust of the lower end of the spiral rod B' when said rod drops, disengaging the clutch members *d'* *a''*. The clutch member *a''* is rigid with the spiral rod B' and has two or more upwardly-projecting teeth *b''*. Upon the disk *a''* is arranged a soft packing *c''*, slightly thicker than the length of the teeth on said disk *a''*. The object of this yielding packing *c''* is that when the spiral rod is rotated and the disk *a''* is raised the upper member of clutch will be rotated by disk *d'* because of the friction provided by said packing before the teeth *b''* and *c'* come in contact. On the spiral rod B' is arranged a sliding block or sleeve D'. The passage-way through the sliding block conforms to the shape of a cross-section of the spiral rod, permitting it to slide thereon, whereby an alternating rotary motion is imparted thereto in the moving up and down of the block. The sleeve D' is forced up and down by a rod E', that passes down through a slot in the lower casting C and is connected with a roller F³, which is exterior to the sleeve D' and in operation rests upon the floor. The upper end of said rod E' is connected with a lug formed on the sleeve D'. The pin passing through the roller may be formed of an angular extension of the arm or rod G', whose rear end is pivoted to the adjacent rocker of the chair, as shown in Figs. 1 and 5. At the said pivot a spring *d''* is arranged to exert force on the rod G', tending to hold the roller on the floor.

In Figs. 6 and 7 of the drawings between the bracket *q* and the upper member *d'* of the clutch I arrange a washer, which may be replaced by a thicker one to take up wear.

Referring to Fig. 2 of the drawings, it will be seen that the rod H for holding the fan in different positions is connected with the fan-shaft or rod J by a link H', one end of which is rigid with the rod H and the other end is loosely connected with and slides on said rod J.

The sliding block or sleeve D' (see Figs. 6 and 7) is provided with a spring *e''*, whose free end bears on the spiral rod B', the object being to hold the sleeve D' by friction and prevent rattling of the spiral rod.

To prevent the spiral spring A' kinking or curling up against the sides of the rotating tube *w*, I surround the said spring with a light tube *f''*, resting loosely on the cap *v* of the upper member of this clutch device. In other words, the said tube is used only to confine the spring A', not forming any part of working mechanism.

A suitable opening may be made in the cas-

ing for oiling and inspecting the clutch devices, as shown at 3, Figs. 1 and 5 of the drawings.

Hereinbefore I have referred to the fact that the working parts, which I will call as a whole the "motor," may be locked against operation. For this purpose I provide a locking-plate J^2 , conforming to the inner shape of and pivoted to the middle casting at 4, Figs. 6 and 7. A knob 5 on the locking-plate extends through a slot in the casing. To adjust the locking device into operative position, the knob 5 is moved upwardly, which action throws the upper end of the plate under the lower member of the clutch device and moves the latter upwardly, bringing the teeth on the disks d' and d^2 into engagement. This action does not interfere with the upward movement of the sliding block and the forward rotation of the spiral rod and clutches, but prevents the lower clutch member dropping out of engagement with the upper member, and thus the spiral rod is prevented from rotating backward, and consequently the sliding block, driving-rod, and roller are held suspended at their highest points, in which position the mechanism is locked and inoperative.

In operation when the knob 5, projecting through the casing, is moved downwardly the locking-plate J^2 is slipped from under the disk forming the lower member of the clutch, allowing said member to drop out of engagement with the upper member. The spiral rod is now free to rotate backward. The roller carried by the rod E' drops to the floor, carrying with it the sliding block to its lowest point on the spiral rod. Upon a forward motion of the rocking-chair the sliding block lifts the spiral rod by reason of the friction of said spring on said block until the yielding packing on the upper face of the lower clutch member is brought into contact with the under surface of the upper member of the clutch, compressing said packing, and by the adhesive contact and sometimes partial engagement of the teeth of the clutch members rotates the sleeve t , making five or six revolutions thereof, and thereby winding the spring A' to that extent at its lower end. Upon the first backward movement of the rocker the balls in the upper clutch are forced outward, locking the clutch, and thus preventing a reverse motion of the said sleeve t . During the above-described operation the upper free end of the coiled spring A' continues to unwind itself, carrying with it the tube w and the fan-rod J . The resistance of the air retards revolution of the fans, and thus prevents exhaustion of the power stored in the spring A' until said spring again receives a fresh impetus and by repetition of the rocking motion of the chair the rotation of fans becomes continuous. In other words, the fans will revolve until the power stored in the spring is exhausted. When the knob of the locking-plate is raised, the upper end of said plate again engages the clutch mechanism, and

thus suspends further operation of the motor mechanism, as hereinbefore described. The motor device is held in working position (see Figs. 1 and 5 of the drawings) by a spring-catch 6 engaging collar 7, adjustably arranged on the casing, and when said device is folded back, as shown in Fig. 5 of the drawings, it is supported by a hook 8 on the rear leg of the chair.

Attention is called to the fact that by reason of the special construction and arrangement of parts carried by the upper casting B said casting may be turned in the upper end of the casing, and thus point the upper end of the fan-rod when deflected so as to force the air in such direction as may be desired.

It is obvious that my fan attachment will work with equal facility upon either side of the chair.

Having thus described my invention, what I claim as new is—

1. The combination in a fan attachment for chairs, of supporting and holding means between the fan and its driving devices, the said means involving a telescoping rod having a flexible section as shown, fan-holding means telescoping as stated and adapted to be revolved around the fan-support, a motor employing a spiral spring having one end fixedly connected with the fan-support and the other end adapted to be wound through clutches connecting it with driving devices, and means such as a rigid rod extending from the floor with yielding bearings thereon substantially as described.

2. The combination in a fan attachment for chairs of adjustable supporting and holding means substantially as shown, the supporting means adapted to be rotated, as stated, and the holding means adapted to be revolved around the supporting means as described, a motor employing a spiral spring, the latter connecting the driving devices and the fan-supporting devices as specified, means such as clutch devices between the lower end of the spring and its driving devices, one of said clutch devices being adapted to wind the lower end of the spring and another to hold it against unwinding, while the upper end of the spring rigid with the fan-supporting devices is permitted continuous rotary motion substantially as described.

3. The combination in a fan attachment for chairs of a motor employing a spiral spring, means such as clutches, one for winding the spring and the other for holding it against unwinding, and a pivoted locking device adapted to be adjusted into engagement with driving means holding it against operation substantially as described.

4. The combination in a fan attachment for chairs, of a motor employing a spiral spring, means for winding the spring and holding it against unwinding substantially as described, a tubular case inclosing the spring and having hinged and pivotal connection at its lower end with the chair, said hinged and pivotal

connection of the case adapting it to be adjusted from an operative or vertical position to an inclined or folded position as set forth.

5 A fan-motor employing a spiral spring, one end of which is connected with fan-supporting devices, and the other end connected with winding mechanism, consisting of a spiral rod having means for rotating it, and a clutch device adapted for intermittent connection of the spring and spiral rod as set forth.

6. The combination in a fan attachment, of a motor employing a clutch device and spiral spring as stated, a tubular inclosing case as shown, adjusting means connecting the case at its lower end with the chair, and means for securing the case in an operative or vertical position substantially as described.

7. The combination in a fan attachment for chairs, of a motor employing a clutch device and spiral spring, a tubular inclosing case as shown, adjusting means connecting the lower end of the case and chair, and a rest device at the back of the chair for supporting the case when in an inoperative position as set forth.

8. The combination with a motor device employing a spiral spring and driving means as described, of upper and lower clutch devices between the driving means and spring, the upper clutch device consisting of two members in which one member is rigid with the spring and having winding action thereon while the other member is fixed and adapted to hold the spring as wound, and the lower clutch device consisting of separable members, one member rigid with the lower member of the upper clutch device and the other member rigid with and supported by peculiar driving means extending to the floor, the said driving means being adapted in operation to move the lower member of said lower clutch device into and out of engagement with its upper member, substantially as described, and for the purpose set forth.

9. In a fan device for chairs, the combination with a motor supported and inclosed as shown, and motor-driving devices operated by a rocking motion of the chair substantially as described, of a rotatable tube projecting

into the motor-case, a fan-supporting rod telescoping into the said tube, and means on the tube for forming a rigid connection with the fan-supporting rod substantially as described.

10. In combination with a motor mechanism substantially as described, a telescoping fan-carrying rod having at its upper end a flexible section permitting of deflection of said upper end, and a holding-rod having a hinged and swiveled connection with said telescoping rod above the flexible section thereof as set forth.

11. In a fan-motor, a casing having a hinge-support at its lower end and a detachable support at its upper end, the said casing provided with end castings closing the same, and with an intermediate casting which, with the end castings, forms a support for the motor mechanism as set forth.

12. In a fan attachment, the combination of a fan, a carrying-rod, a supporting-rod having a hinged and swiveled connection with the fan-carrying rod, a spiral rod, a power-spring, clutch mechanism for connecting said spring and spiral rod, and means for operating the latter as set forth.

13. A fan attachment for chairs, consisting of a casing supported at the top and lower ends as set forth, a motor inclosed by said casing, said motor consisting of a spiral rod, clutch mechanism connecting the latter with a power-spring, means for operating the spiral rod, and means such as a rod adapted to be adjusted for holding the fan-rod to an adjusted position as set forth.

14. In a fan-motor substantially as described, the combination with the driving and driven devices, of a bracket, consisting of a casting R having at its upper end a disk adapted to support the power-spring and clutch mechanism, and which, with a lower casting, forms a support for a driving spiral, its clutch member and a sliding block, the latter adapted to be moved up and down by mechanism substantially as described.

EUGENE O. M. HABERACKER.

Witnesses:

HENRY BUDDE,
GEORGE BUDDE.