Alexander Calder

James Johnson Sweeney

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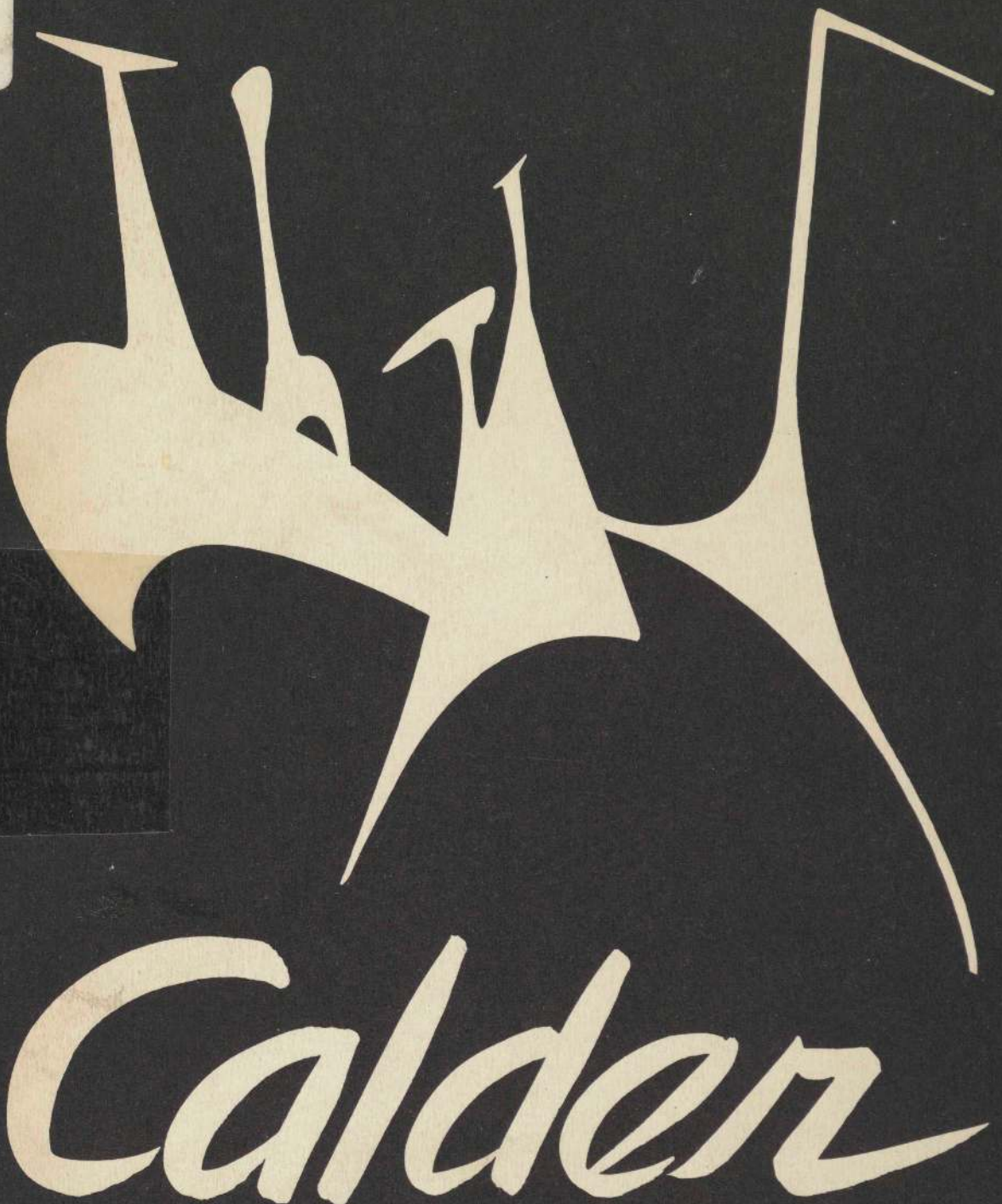

Calder

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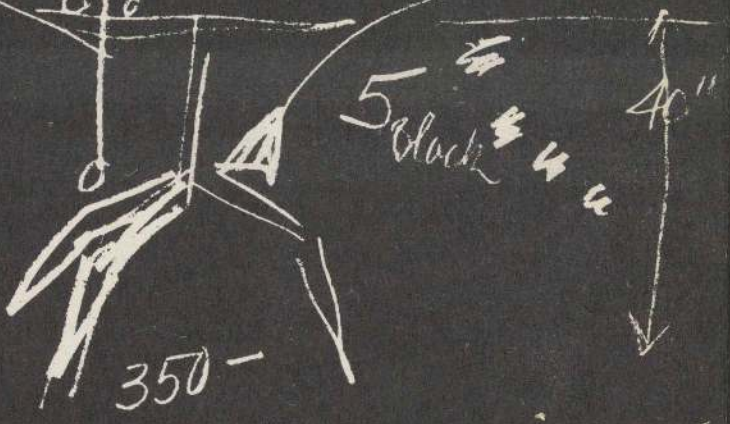

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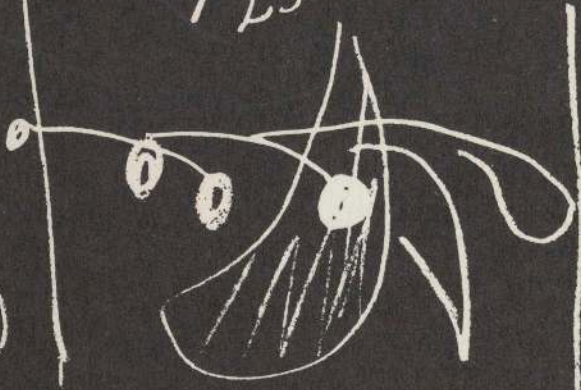

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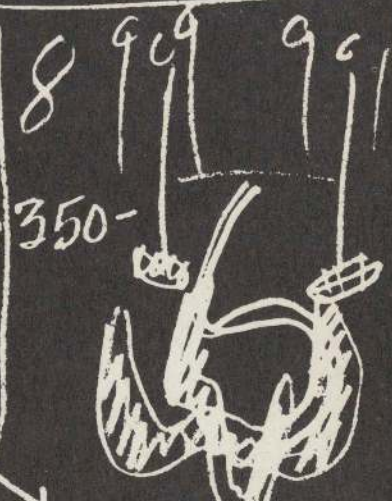

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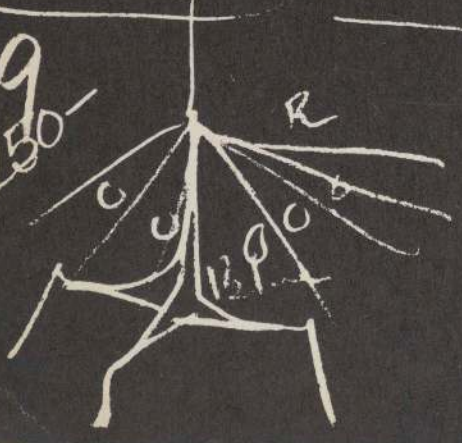

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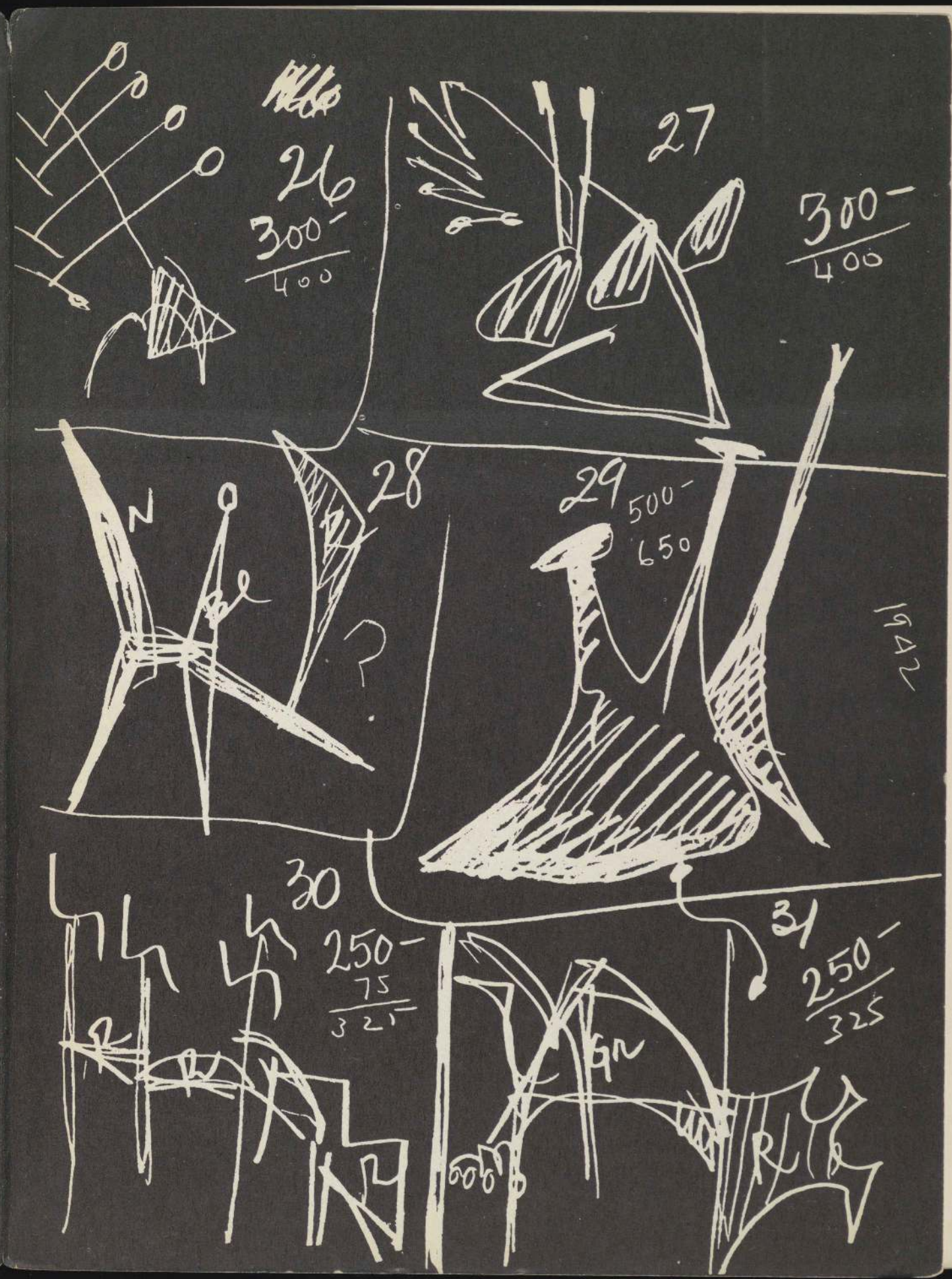
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JAMES JOHNSON SWEENEY

ALEXANDER CALDER

THE MUSEUM OF MODERN ART, NEW YORK

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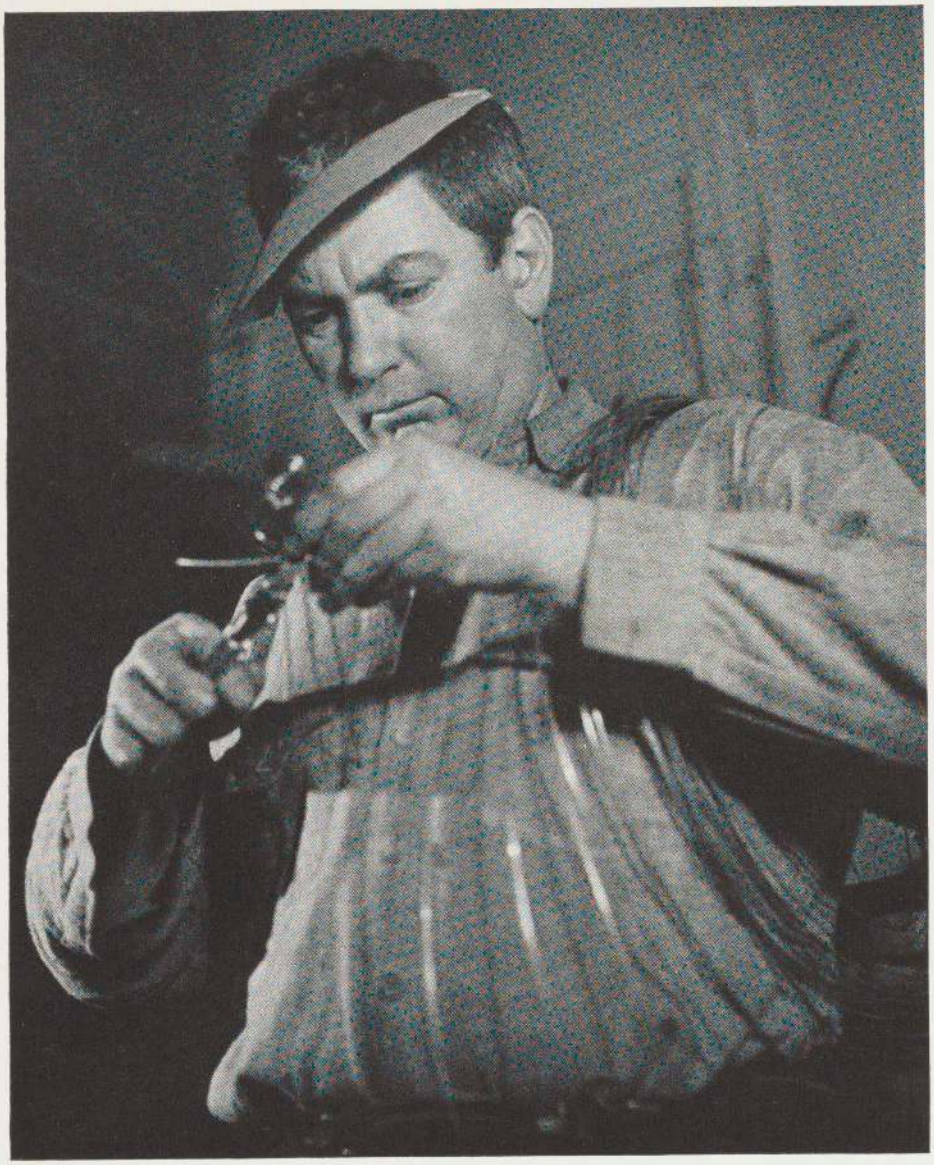


Alexander Calder

ALEXANDER CALDER

Introduction

Exuberance, buoyancy, vigor are characteristics of a young art. Humor, when it is a vitalizing force not a surface distraction, adds a dimension to dignity. Dignity is the product of an artist's whole-hearted abandon to his work. All these are features of Alexander Calder's work, together with a sensibility to materials that induces new forms and an insatiable interest in fresh patterns of order.

Calder is an American. The most conspicuous characteristics of his art are those which have been attributed to America's frontier heritage — "that coarseness and strength combined with acuteness and inquisitiveness; that practical, inventive turn of mind, quick to find expedients; that masterful grasp of material things," . . . "that restless, nervous energy," . . . "that buoyancy and exuberance which come with freedom."* But Calder is a child of his own time. His vernacular is the vernacular of his age in America — an age in which the frontiers of science, engineering and mechanics have dominated the popular imagination in the same way that the national frontier dominated it a century ago.

On the side of tradition, two generations of sculptors — father and grandfather — gave him an intimate familiarity with the grammar and conventions of art. In Paris he came to know the researches of some of the most venturesome contemporary pioneers at a time when he himself was seeking a more radical departure. The result in Calder's mature work is the marriage of an internationally educated sensibility with a native American ingenuity. Through the individuality of his work he has an established place in contemporary art both here and abroad.

The last forty years have seen a profound reaction against the deliquescence of form which had marked Occidental sculpture since the Renaissance. Calder's art embodies this reaction.

From the time of Michelangelo until the opening of the twentieth century, nobility of style and simplicity of technique seemed usually incompatible. The sculptor apparently tried to disguise his materials rather than to demonstrate them. Along with this disrespect for the material, sculptors developed a facile virtuosity which during the Baroque period became a prime quality. Modeling in clay for reproduction in bronze or marble eventually came to replace direct carving. Fluidity of sculptural form reached its highest level with Bernini in the seventeenth century. But, in general, the relaxation of material restraints led to a decay of sculptural unity and force.

With the twentieth century a renewed desire for formal precision and integrity began to assert itself. In sculpture the shortest route to simplicity and direct expression lay through a re-establishment of the discipline of materials. The peculiarities of a raw material — the grain of the wood, the texture and hardness of a stone, the surface qualities of a metal — if respected, would exert a tonic restraint on the sculptor and his forms. African Negro sculpture was a clear illustration of the advantages of this discipline. It accepted and exploited the cylindrical shape of the tree-trunk as well as the incidental suggestions of its grain and knots.

* Frederick Jackson Turner: *The Frontier in American History*, p. 37.

With Brancusi, virtuosity of handling gave way to the barest simplicity and directness. The orthodox materials of sculpture — metal, wood and stone — were employed once again to display their individual properties, not to simulate those of one another. The lightness and apparent insubstantiality of a polished metal surface were exploited to suggest a *Bird in Flight* or the shimmer of a *Fish*. Among the younger men who followed Brancusi we find Calder, like Henry Moore, "always ready to share credit for his work with his material."*

Calder's characteristic material is metal. He has always avoided modeling in favor of direct handling — cutting, shaping with a hammer, or assembling piece by piece. Such an approach has fostered a simplicity of form and clarity of contour in his work. It allies him with Brancusi, Arp, Moore and Giacometti in their repudiation of virtuosity.

At the same time Calder's concern as an artist with mechanical forms and mechanical organizations, and his use of new or unconventional materials link him with the Russian constructivists of twenty-five years ago. Open composition was their interest, as opposed to the compressed unity of Brancusi. Their aim was to expand the conception of sculptural form, so long tied to nature and to conventional materials. Instead of advocating merely a reform in the use of the orthodox materials of sculpture, the constructivists explored new materials — steel, glass, celluloid, rhodoid and the like.

The Paris cubist painters had felt that a volume could be more truthfully rendered by making its form, or a section of it, transparent. In this way features on the other side, which would normally be masked, could be seen. The constructivist sculptors carried the theory a step further, employing such transparent materials as glass and celluloid for the same purpose. Transparent surfaces led to surfaces actually nonexistent, but indicated by lines — wires, strips of wood — or merely implied by other planes. These surfaces defined "empty," or more precisely, virtual volumes. Certain constructions organized enclosed volumes; others, by means of the implied projections of their lines and planes, were designed to organize the surrounding space; or the space within a volume was employed as a foil to a solid in a sculptural composition. Even movement was tentatively introduced by Gabo in 1920 to add a time element and to trace virtual forms in space.

This last problem is the one which Calder has explored more fully than any other artist, after coming to it quite independently of constructivism. But Calder's most original contribution is his unique enlivening of abstract art by humor. Through humor he satisfies the observer's appetite for feeling or emotion without recourse to direct representation. The appeal of representation had evidently been the culprit in upsetting the balance between form and subject in art. In the effort to readjust this balance the temptation had been to limit representational appeal drastically, even to expunge it. As a result the art produced by the extremists was often chilly to the point of torpor. Every living experience owes its richness to what Santayana calls "hushed reverberations." Even without direct representation, natural materials — wood and stone — all have their funded associations for us. The "machine age" emphasis in the constructivists' mate-

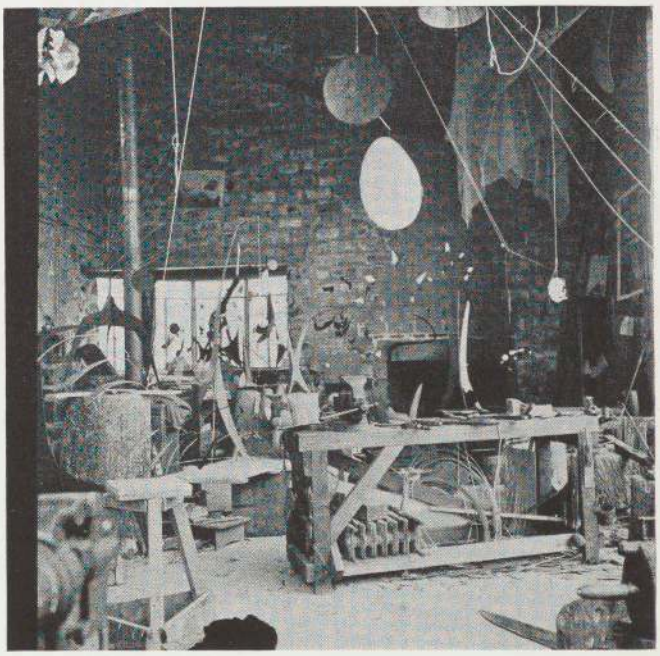
* Philip Hendy: "Henry Moore," *Horizon*, September, 1941, vol. IV, no. 21, pp. 200-26.

rials was a limitation. Where associations existed they were usually of an impersonal, scientific or industrial character. For their esthetic effects the constructivists could look only to formal relations of a geometrical, architectural character. Calder, however, with similar materials found a means to give a new vitality to his structures, without compromising the nonrepresentational approach. Toys pointed the way. If one can enjoy certain qualities that predominate in a toy, such as unfamiliar rhythms and provocative surprise, why should these features not be embodied in more ambitious esthetic expressions — provided, of course, they are held in proper balance with form and material?

The result in Calder's work is the replacement of representational interests by a humor that stirs up no specific associations and no emotional recollections to distract the observer's attention from the work of art itself. Through this conscious infusion of a playful element, Calder has maintained an independence of the doctrinaire school of abstract art as well as of orthodox surrealism. At the same time the humor in his work is a protest against false seriousness in art and the self-importance of the advance-guard painter, as well as of the academician. From this viewpoint it is a genial development of certain aspects of the dada movement.

The apparent spontaneity of Calder's work is no accident. It is rather what John Dewey describes as "complete absorption in subject matter that is fresh, the freshness of which holds and sustains emotion . . . Staleness of matter and obtrusion of calculation are the two enemies of spontaneity of expression. Reflection, even long and arduous reflection, may have been concerned in the generation of the material. But an expression will nevertheless manifest spontaneity if that matter has been vitally taken up into a present experience."*

* John Dewey: *Art as Experience*, p. 70.



Studio of the artist. Roxbury, Connecticut.

Early Years

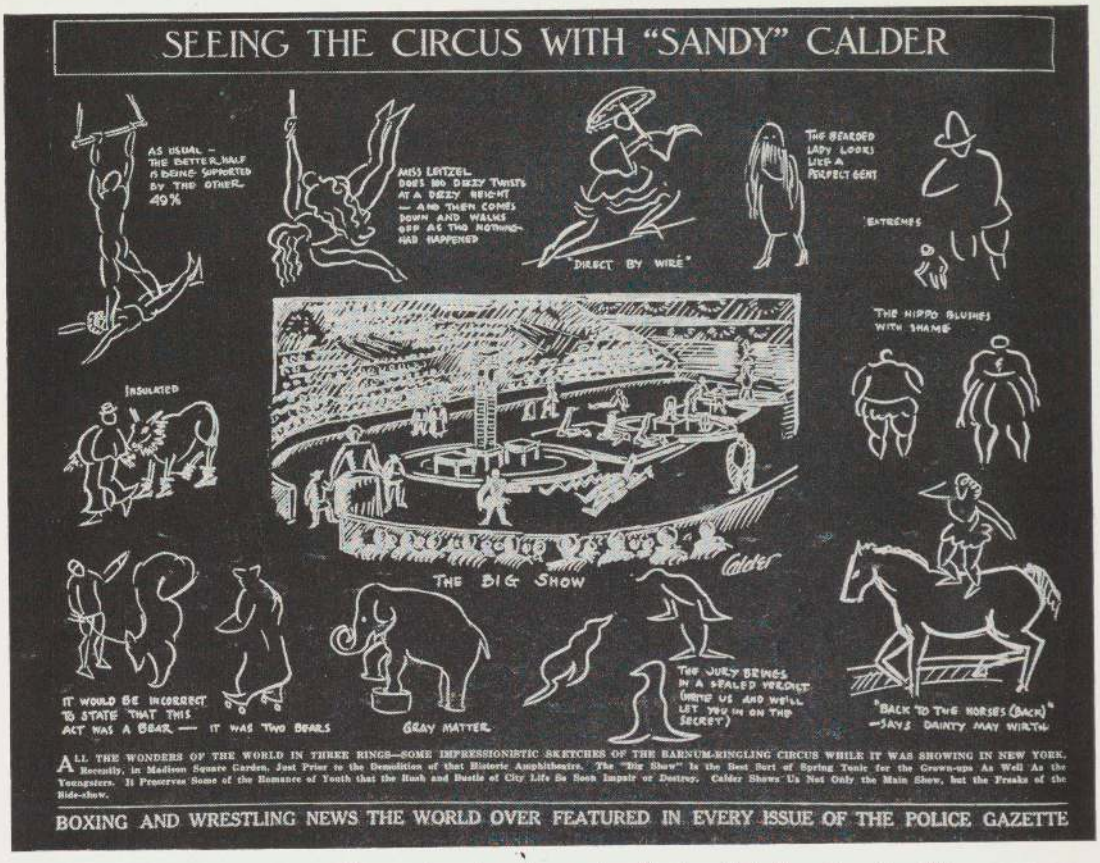
Alexander Calder was born in Philadelphia July 22, 1898. His parents are both artists. His mother is a painter; his father, A. Stirling Calder, a National Academician and one of the outstanding sculptors of the older generation. His grandfather, Alexander Milne Calder, born in Scotland, was also a sculptor, best known perhaps for his equestrian statue of General Meade in Fairmount Park, Philadelphia and for his figure of William Penn on the dome of the Philadelphia City Hall.

Calder's early years were spent in an atmosphere of art. His parents' friends were artists. He grew up in a studio. He became familiar with the procedures of painting and sculpture while posing as a model now for his mother, now for his father. Still, art as a calling had very little appeal for him at the outset. The precedent of two generations made it seem unenterprising. Tools were his main early interest, not brushes and clay (below).

Tools and an evident mechanical ingenuity suggested engineering. From 1915 to 1919 he studied at Stevens Institute of Technology. The four following years were given over to engineering. Then, in 1921, some drafting work in an engineer's office awakened a dormant interest. Shortly afterwards he began to draw regularly at a Public Night School on East 42nd Street, New York. The work was elementary drawing in charcoal, but he was enthusiastic and seldom missed a night.

The following summer he worked his way on a freighter through the Panama Canal to California. In the autumn he took a job in a logging camp in the state of Washington. Once again the old interest stirred and he wrote his mother for painting materials. He came east in the fall of 1923 and enrolled in the School of the Art Students' League.

Self-Portrait. 1907. Crayon drawing. 6 x 9″.



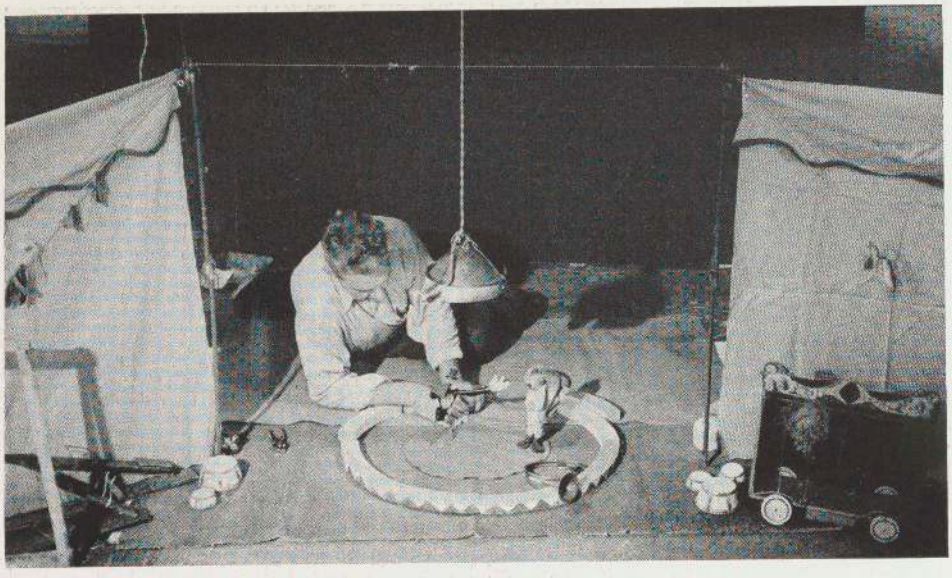
Circus drawings from the *National Police Gazette*. May 23, 1925.

Art Student and Illustrator: New York 1923-1926

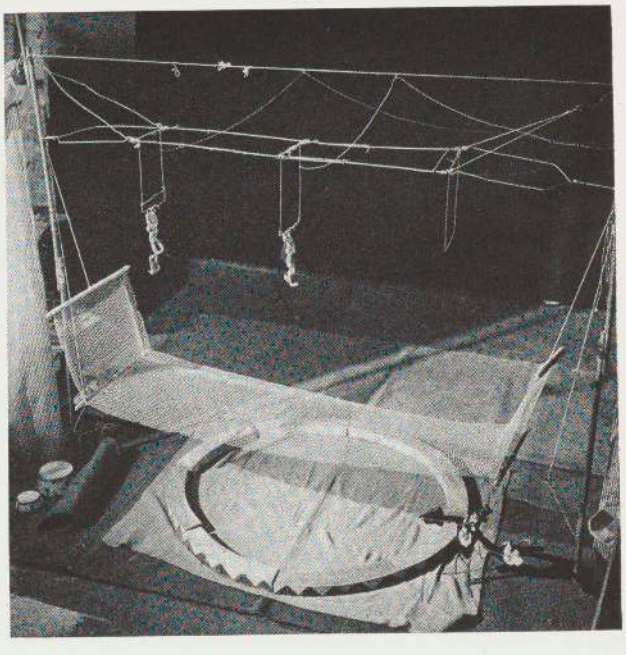
During his first year at the League School he studied two or three months with Luks, one month with Du Bois, a month or so with Robinson, and every evening with John Sloan. At the same time he tried his hand at various types of free-lance work. In 1924 a job doing regular half-page spreads for the *National Police Gazette* provided a congenial opening. The drawings were not distinguished. Throughout the series, however, we already see hints of that humor and observation which mark his mature work. This is especially true of the captions. And one of his assignments opened up an interest which was to play a major role in his future development.

In the spring of 1925 Calder was given a two-week pass to cover the Circus. One performance was enough to fill his half-page (above). But every evening saw him back sketching in the menagerie tent. He made the acquaintance of Dexter Fellows, Barnum and Bailey's famous publicity manager, and his pass was renewed for the following year.

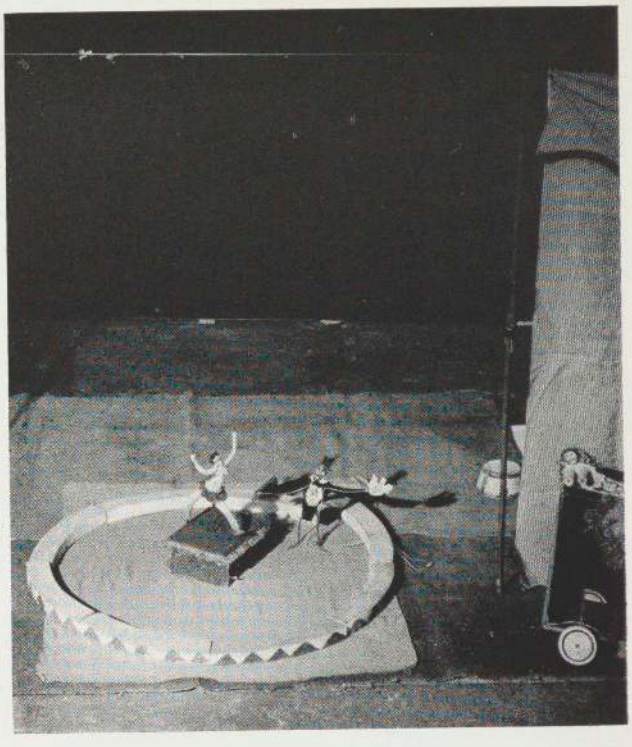
The first product of this experience was a small book, *Animal Sketching*, published the following spring. But this interest in the Circus was to have much more important consequences. Out



Calder with his circus.

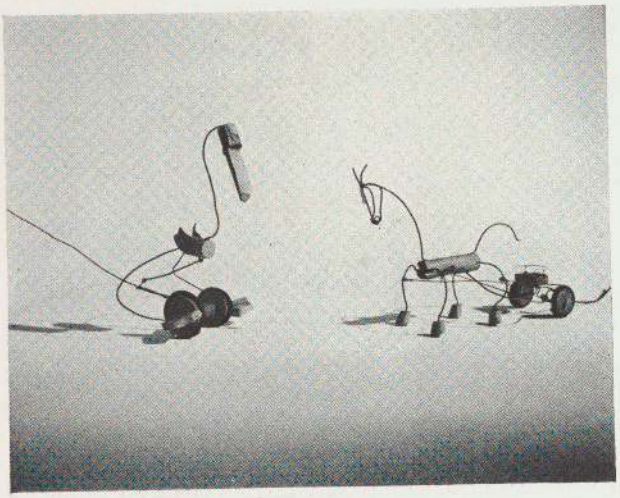


The Aerialists.



The Oriental Dancer.

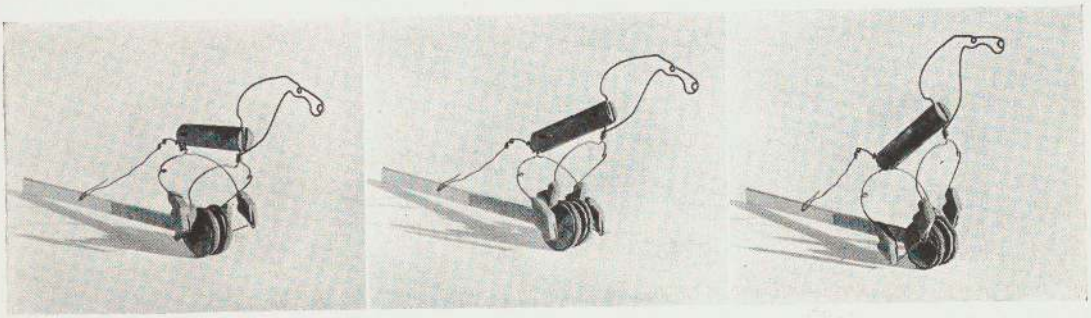
The Acrobats.



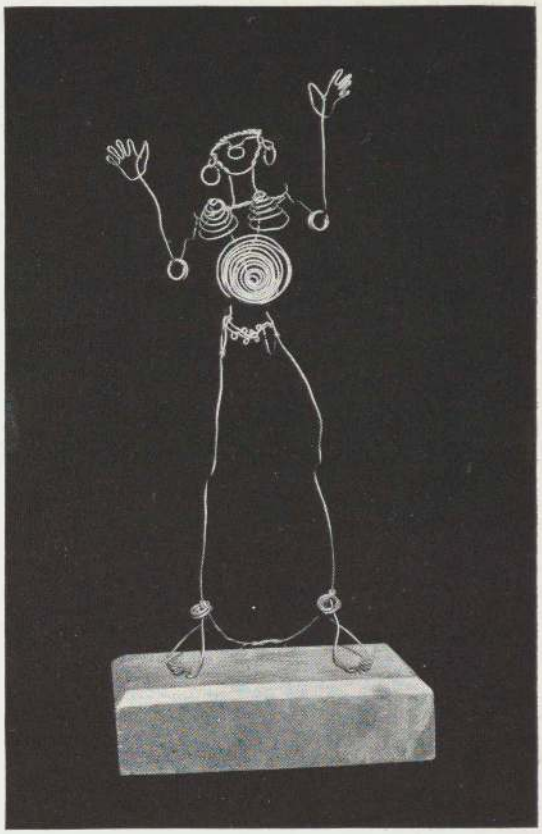
(Left) Duck on Differential Wheels. 11″ long. (Right) Red Horse and Green Sulky. 23″ long. 1926. Toys. Wire and wood.

of it was to grow his miniature circus which brought him into touch with some of the leaders in Paris at a time when their stimulation was most valuable to him. Still more important, this miniature circus was to serve as a laboratory in which some of the most original features of his later work were to be developed.

The year 1926 saw the exhibition of his first oils in The Artists' Gallery, on East 61st Street, New York. This exhibition brought him his first critical notice, a line by Murdock Pemberton in *The New Yorker:* "A. Calder is also a good bet." Yet he was by no means certain that he had found his medium. He wanted to do something of his own. But he was a sculptor's son and a sculptor's grandson. And a piece of oak fence-rail picked up that spring in Connecticut reluctantly took the shape of his first wood carving — the *Flattest Cat.*



Galloping Horse. 1926. Toy. Wire, wood and leather. 21″ long.



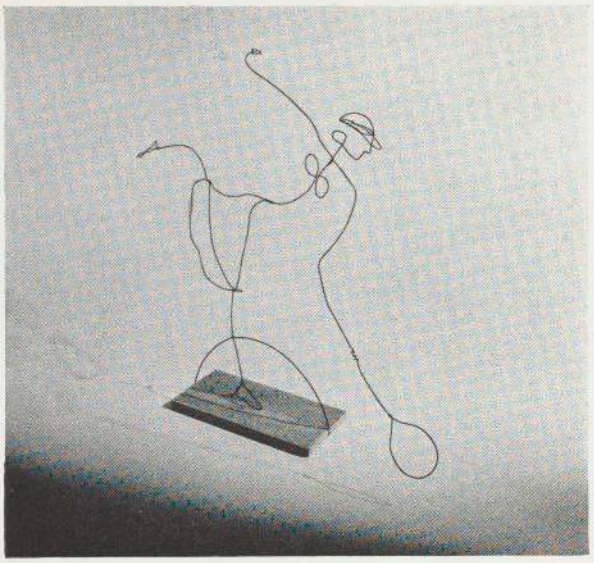
Josephine Baker. 1926. Brass wire. Ca. 28″ high. Private collection.

Calder's Circus: Paris 1926-1927

During his third year at the Art Students' League, the idea of Paris began to attract him. In late June he signed aboard the freighter, Galileo, for Hull, England. He spent three days in London; then, on to Paris. The father of a schoolmate from Stevens was practically his only acquaintance there. When he arrived he knew no older artists — only a fellow-student or two from the League. But in the autumn he met the English engraver, William Stanley Hayter. Hayter introduced him to the sculptor, José de Creeft. And Calder took up his experiments in carving again.

Spring and summer of 1927 also saw the beginning of his famous miniature circus and the production of several animated toys which de Creeft got him to exhibit that spring in the Paris Salon des Humoristes.

At the beginning the circus was merely a few ingenious figures which Calder had made for his own amusement. There was nothing elaborate about them: bits of articulated wire for arms and legs and a wooden body — a spool, or a cork (page 14). Still their creator could make them perform some most remarkable feats. Gradually the troupe increased. Word got round



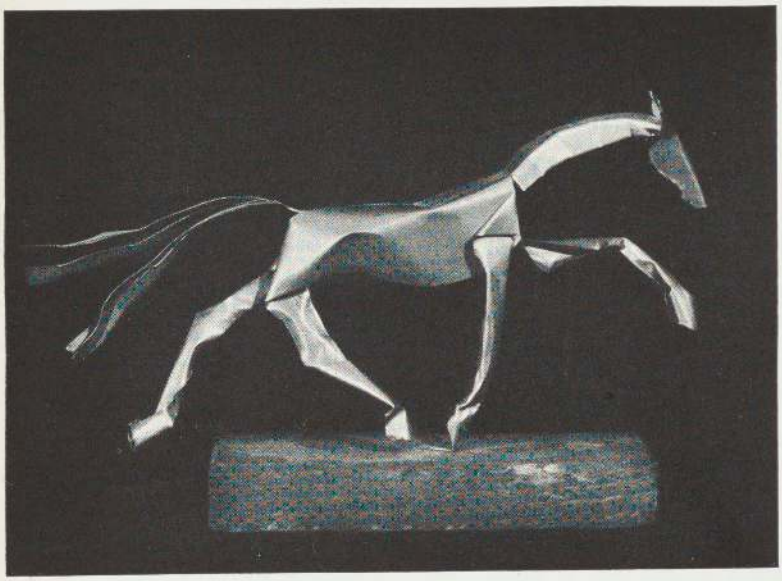
Helen Wills. 1928. Wire. 14¾″ high.

Montparnasse. A casual turn or two to amuse a friend soon became a full-length performance.

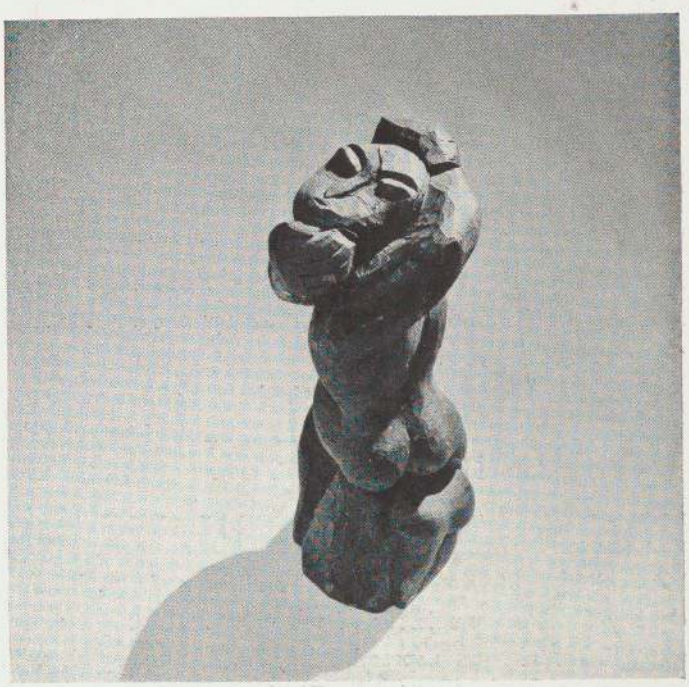
The circus was given in Calder's narrow room; the guests would crowd onto the low studio bed; the performance would take place on the floor in front of them. A bit of green carpet was unrolled; a ring was laid out; poles were erected to support the trapeze for the aerial act and wing indicators of the "big top"; a spot-light was thrown on the ring; an appropriate record placed on a small portable phonograph; "Mesdames et Messieurs, je vous presente —," and the performance began. There were acrobats, tumblers, trained dogs, slack-wire acts *à la japonaise;* a lion-tamer; a sword-swallower; Rigoulot, the strong-man; the Sultan of Senegambia who hurled knives and axes; Don Rodriguez Kolynos who risked a death-defying slide down a tight wire; "living statues"; a trapeze act; a chariot race: every classic feature of the tan-bark program (pages 12 and 13).

For the most part these toys were of a simplified marionette character. Yet they were astonishing in their condensed resemblance achieved almost entirely through movement. They were not mechanical. They had a living quality in their uncertainty. The dog might not succeed in jumping through the paper hoop. The bareback rider might not recover her balance. The aerialists might land in the net beneath, or might succeed in catching the swinging bars with their toes. The number of failures was uncertain; but an eventual success brought relief and restored equilibrium.

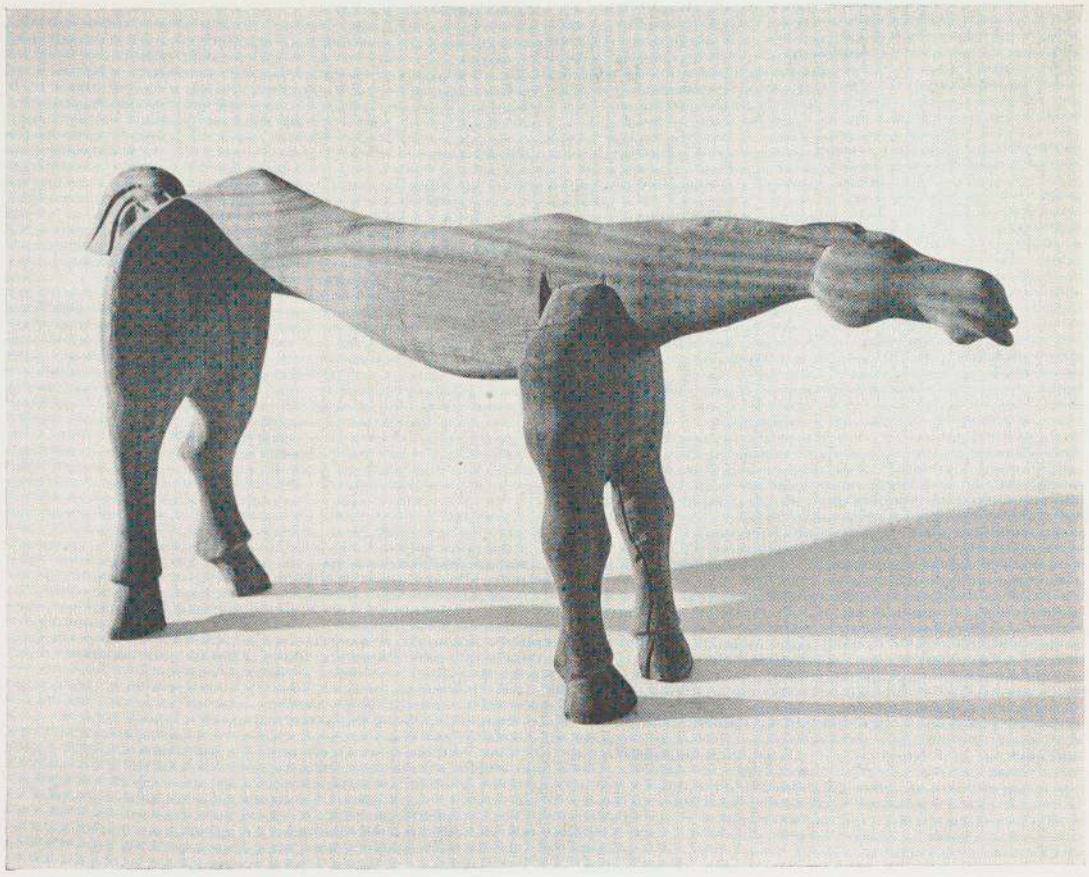
In turning to the circus Calder had adapted the time-honored tradition on which its performers based their routine. "Because the actual world, that in which we live, is a combination of movement and culmination, of breaks and reunions, the experience of a living creature is capable of esthetic quality. The live being recurrently loses and re-establishes equilibrium with his surroundings. The moment of passage from disturbance to harmony is that of intensest life . . .



Horse. 1928. Sheet brass. 10″ high.



Uncomfortable Face. 1928. Cocobolo wood. 21¼″ high.



Horse. 1928. Boxwood. 15½″ high.

In a world made after the pattern of ours, moments of fulfillment punctuate experience with rhythmically enjoyed intervals . . . a world that is finished, ended, would have no traits of suspense and crisis, and would offer no opportunity for resolution. Where everything is already complete, there is no fulfillment."*

The circus had already taught Calder the esthetic of the unfinished, of suspense and surprise; it was on this he was to base all the most personal expressions of his later work.

In the spring of 1927 Marc Réal, a French artist, persuaded Legrand-Chabrier, one of the leading Paris critics of the circus, to visit Calder's room to view a performance. Legrand-Chabrier was amazed and charmed, and left to write an enthusiastic column on it in *Commoedia* conveying brilliantly the quality of Calder and his circus. Réal brought Gustave Fréjaville, another equally famous connoisseur of the circus. Word got to Hugier, the third of a great critical triumvirate. The news spread. Mary Butts, the English author of *Ashe of Rings,* brought Jean Cocteau over from the Champs Elysées to the Left Bank. Ramon Gomez de la Serna, the circus

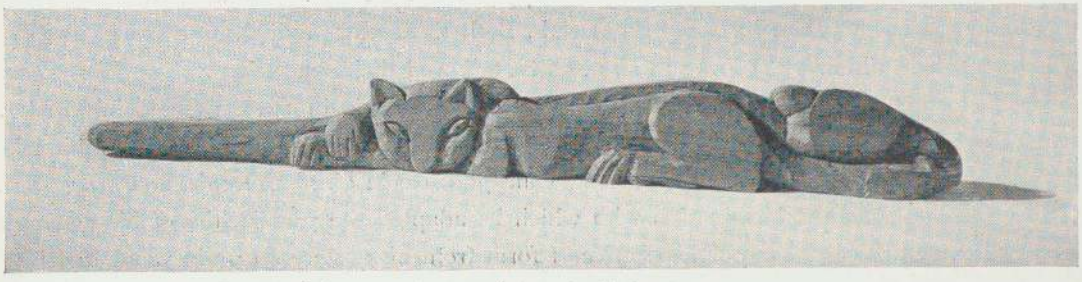
* John Dewey: *Art as Experience,* p. 17.

authority of Madrid, and Sebastia Gasch, the Catalan art critic, caught up the story. Pascin and Hermine David urged Calder without success to hold a gallery exhibition of his *artistes.* Foujita arranged an elaborate performance of the circus in his atelier. Even Paul Fratellini, the eldest of the three famous clown brothers, came. He expressed such admiration for a rubber-hose dachshund whose legs, constructed of spokes of uneven lengths, made it wobble as it moved, that Calder presented him with a large scale model, "Miss Tamara," which Albert Fratellini led round on a leash in their act for several years.

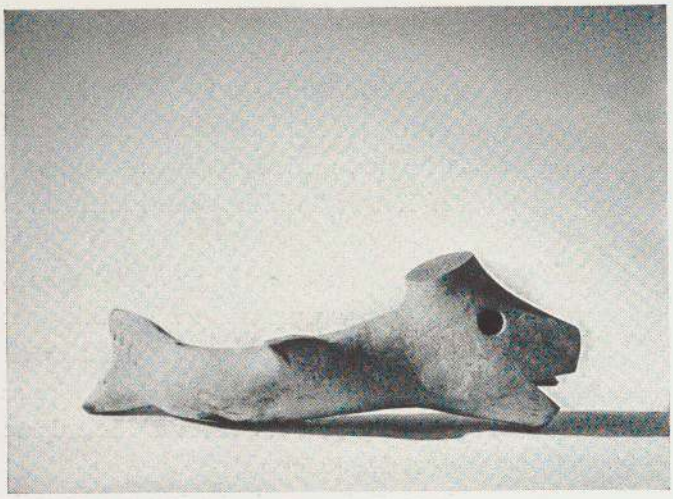
The fame of Calder's circus spread quickly between the years 1927 and 1930. All the Paris art-world eventually came to know it. It brought him his first great personal success. But what was more important, the circus also provided the first steps in Calder's development as an original sculptor. Some of his tiny circus performers and animated toys had heads of wire as well as arms and legs. A friend, Clay Spohn, a painter, suggested that he make a whole figure of wire. The result was his first wire sculpture, *Josephine Baker* (page 15).

This was a new development. The tiny articulated circus-performers had taken a new scale and a new character. These figures were no longer merely toys wittily contrived from chance materials. They were now three-dimensional forms drawn in space by wire lines — much as if the background paper of a drawing had been cut away leaving only the lines. The same incisive grasp of essentials, the same nervous sensibility to form, and the same rhythmic organization of elements, which are virtues of a drawing, were virtues of this new medium.

Calder's earliest figures in wire still retained a certain flat frontality. In fact, the *Josephine Baker* suggests a decorative approach in which a promise of his later jewelry is already evident. But Calder's intuitive feeling for the possibilities of his medium quickly carried him into a convincing three-dimensionality. He began to mark essential planes by contour lines. He seemed to dissociate physical form from the completed mental concept of it. His figures were like peelings of form without weight or density. He made space intervene as a constructive factor (*Acrobats,* page 21). Through his naive approach he had hit upon a combination of draughtsmanship and metal construction that already had much in common with the open-form of the constructivists about 1920 and of individual researchers such as Lipchitz about 1927.



Double Cat. 1929. Wood. 4′ 3″ long.



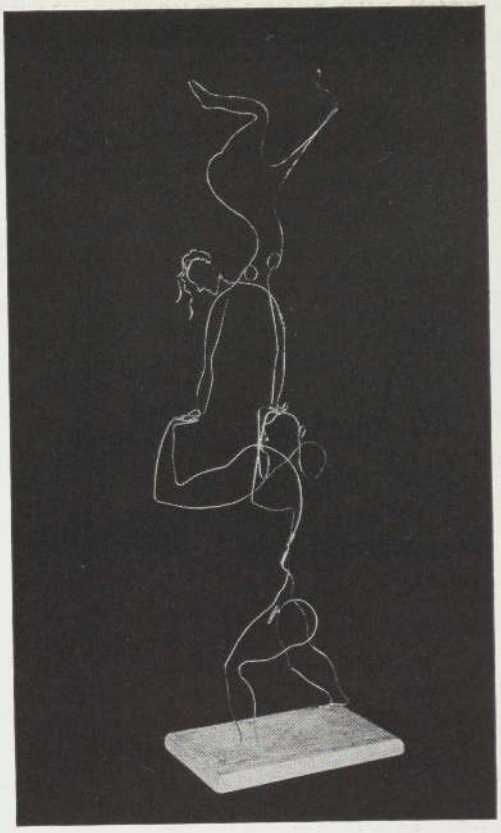
Shark Sucker. 1930. Norwegian wood. 31½" long.

Wire and Wood: New York, Paris, Berlin 1927-1930

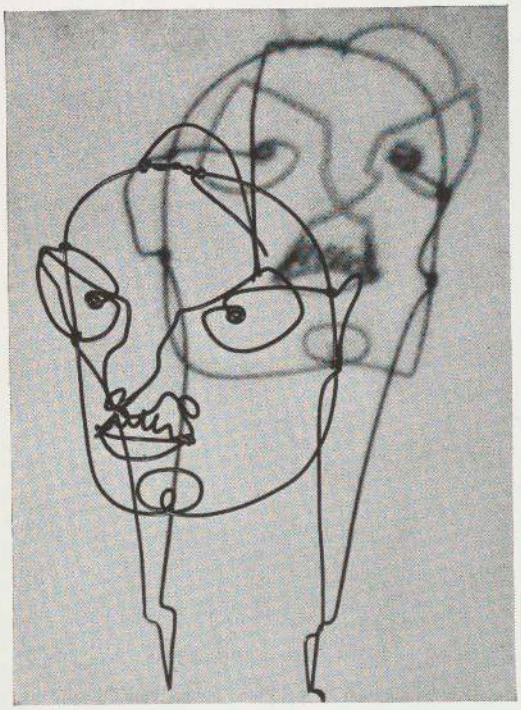
In April, 1928 Calder had his first one-man show, at the Weyhe Gallery in New York. This was made up principally of wire caricatures such as *Helen Wills* (page 16) or *The Hostess* and caricatural portraits of many well-known public figures of the day. His technical ability had increased remarkably. But such calligraphic humor in wire was still difficult to accept for those who were accustomed to regard sculpture as an interpretation of mass. His father was interested and only gently critical. His personal viewpoint did not lead him to discourage an independent one in his son, no matter how foreign to his own aims the latter's might seem to be. He liked to be able "to fondle sculpture." His only objection to this wiry kind was that it lacked the appeal to the sense of touch.

The three-dimensional character of Calder's wire sculptures, however, had developed steadily since his 1926 *Josephine Baker*. Possibly his experiments in wood carving, begun before leaving for Paris and now taken up with fresh enthusiasm, were a factor in this. In any case, the variety of woods, exotic and humble, which he has employed in his relatively limited wood sculpture production reveal his keen interest in materials. Both the texture and the form of a piece of wood appealed to him. They spoke to him and he followed their suggestions.

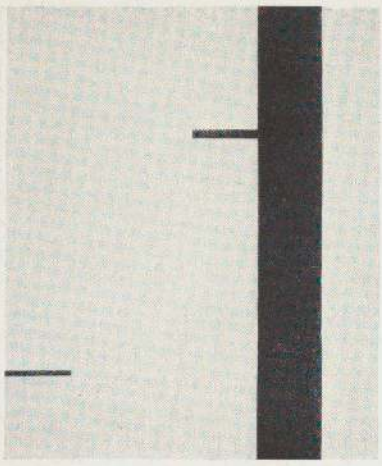
His first efforts at wood carving on his return to New York, in 1928, were mainly in low relief. But very quickly, as he allowed the natural form of a lump of wood to guide him, he developed a strong sense for three-dimensional conceptions as in *Uncomfortable Face* (page 17), *Camel,* or *Cow*. And the imagination with which he adapted the peculiarities of his materials was to provide an increasingly richer source of form from his austere *Horse* in weathered box-wood of 1928 (page 18) through *Shark Sucker* (above) down to his Martian phantasy, *Apple Monster,* in the late thirties (page 41).

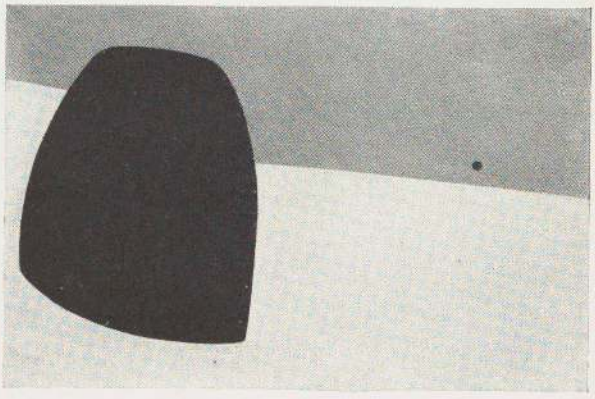


Acrobats. 1929. Wire. Ca. 27″ high. Private collection.



Portrait of Shepard Vogelgesang. 1930. Wire. Ca. 15″ high. Collection Shepard Vogelgesang, New York.



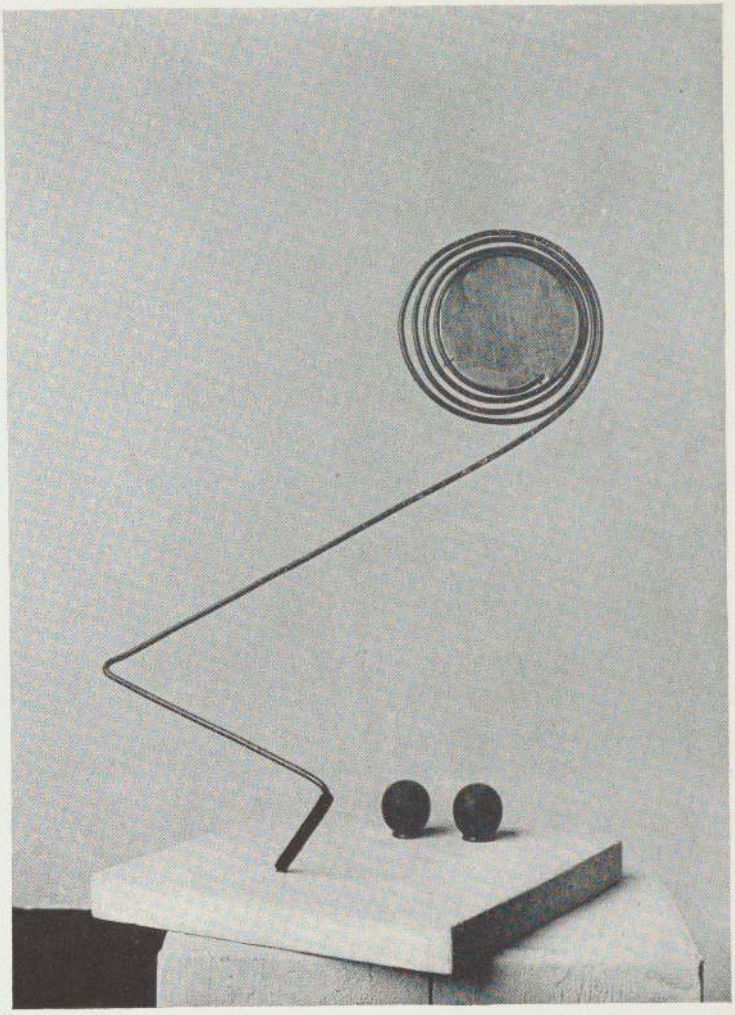


(Left) Composition. 1930. Oil on canvas. 22 x 19″. (Right) Composition. 1930. Oil on canvas. 18 x 27″.

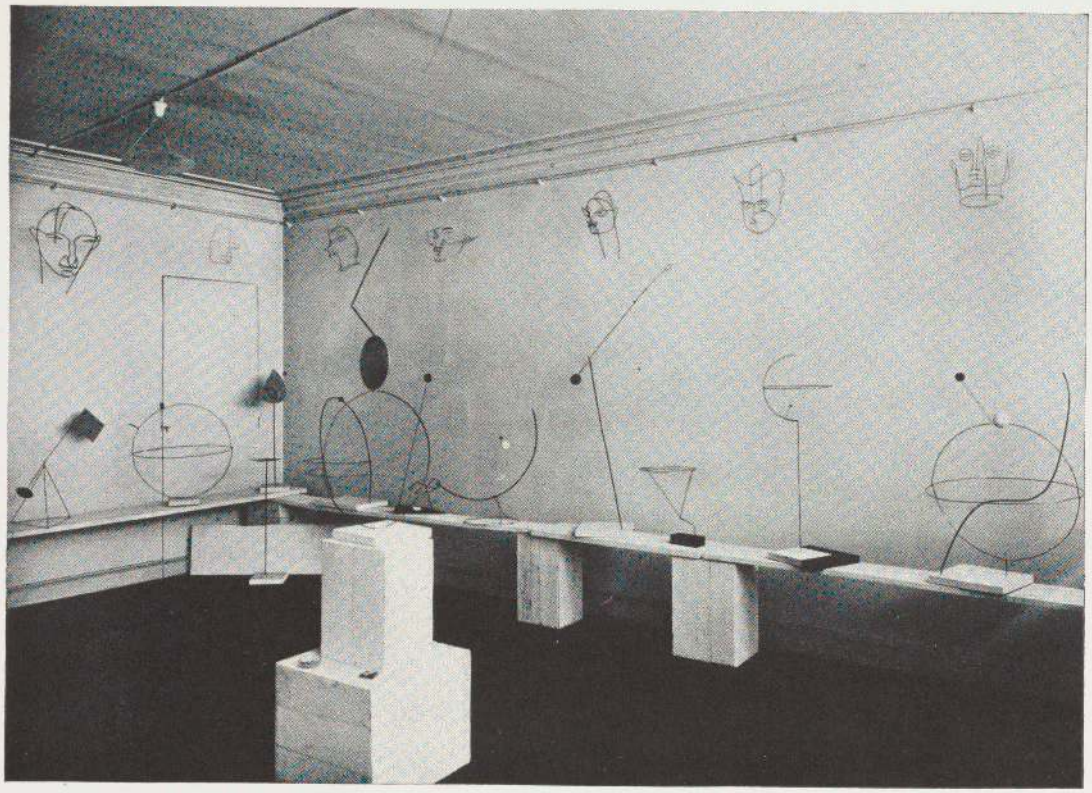
A few weeks after the opening of his exhibition at Weyhe's, Calder again caught public attention at the Independents in New York with his *Romulus and Remus* group, a fantastic ten-foot long, copper-wire she-wolf nursing a pair of wire youngsters from a row of pendent door-stops. In November Calder left once more for Paris, to remain there until June of the following year.

Calder had now achieved a certain recognition, but primarily as a humorist. He had left painting for a form of wire-drawing in space. He had come to an easy mastery of this medium and in doing so had broken away to some degree from the conventional path. But he realized that wire sculpture had its limitations as an expression.

Up to this time his associations in Paris had been mainly among the less serious members of the Paris art world. He had arrived there knowing none of the leaders. Neither the *croquis* sessions of the Grand Chaumière nor the terrace of the Dôme had brought him much closer. The success of his circus and his wire sculpture in New York had come easily out of something natural to him. But in facing the problems of three-dimensional composition and the discipline of harder materials he had taken the first step in a new direction. The results, however, were not to appear until considerably later. Certain other factors had still to make their contribution; notably, a new group of associations in Paris among fellow-artists who were also searching for fresh ways to give the inherited traditions new life.



Kiki's Nose. 1931. Stabile. Brass wire, tin. Ca. 18″ high. Private collection, Paris.



Calder exhibition. Galerie Percier. Paris, April, 1931.

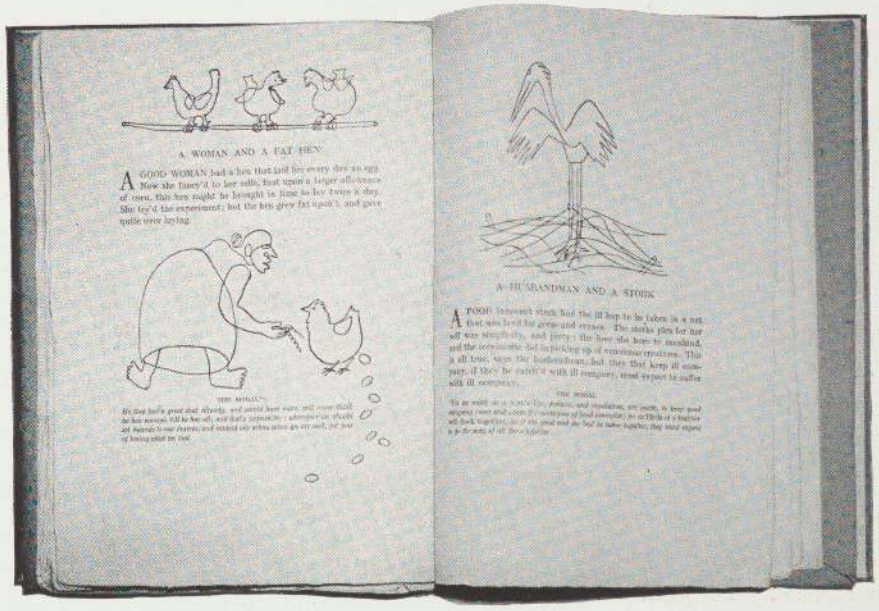
Before Calder's return to Paris in November, 1928 a friend suggested that he should make the acquaintance there of the Catalan painter, Joan Miro, and promised to write him. One evening about New Year's, when Calder was showing the circus to some American friends in his studio, Miro dropped in. Calder decided to repay the call and eventually found his way over to Miro's studio in Montmartre. Most of Miro's pictures were away at the time on exhibit in Brussels. There were only a few of his constructions in the studio — such as his 1928 *Spanish Dancer,* a feather fixed with a large colored pin to a bare cardboard ground. Calder "didn't understand his stuff"; nevertheless out of this meeting grew a friendship that was to be very valuable to Calder during the next ten years.

Another afternoon Calder was sitting on the terrace of the Dôme with Kuniyoshi. Pascin happened by. Kuniyoshi introduced them. Pascin had seen Calder's exhibition at Weyhe's in New York and had liked it. The sensibility of the wire forms had appealed to him as a draughtsman. Calder arranged a small party shortly afterwards and invited Pascin. Hermine David was having a *vernissage* the same day. Pascin arrived from the *vernissage* bringing all present — about forty.

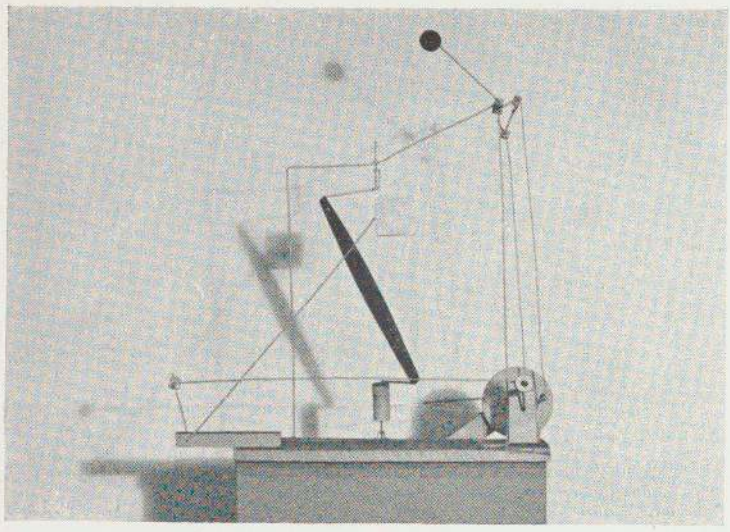
In January Calder had an exhibition at the Galerie Billiet. Pascin wrote the preface. The same month, in the Salon des Indépendants, he exhibited a new, over life-size figure, *Spring,* described by Paul Fierens as *sculpture à claire-voie,* or "openwork" sculpture. The Billiet exhibition proved Calder to be already an accomplished technician in a limited field. His ability to handle wire had brought him to an advanced point in open sculptural composition. His only serious fault was the frequency with which he still allowed the illustrator's spirit and two-dimensional technique to dominate his work. But in portrait heads, such as that of *Shepard Vogelgesang* (page 21) finished shortly before he left New York, a better balance between representation and structure had already begun to appear. And this newly acquired grasp of three-dimensional form becomes increasingly evident in similar portraits of Fernand Léger, Amédée Ozenfant, Kiki, the famous model, and others completed on returning to France.

In April, 1929 Calder exhibited some wood sculptures and wire caricatures in Berlin at the Neumann-Nierendorf Gallery. And during his stay in Berlin he made his first piece of jewelry for a woman painter, Chantal Quenneville: a collar with a projecting horizontal wire-beam from which a wire fly dangled.

On his return to New York Calder had an exhibition of wood and wire sculpture, paintings and textile designs at the Fifty-sixth Street Galleries. At the same time in an adjoining room was exhibited a private collection of eighteenth century caged mechanical-birds that twit-



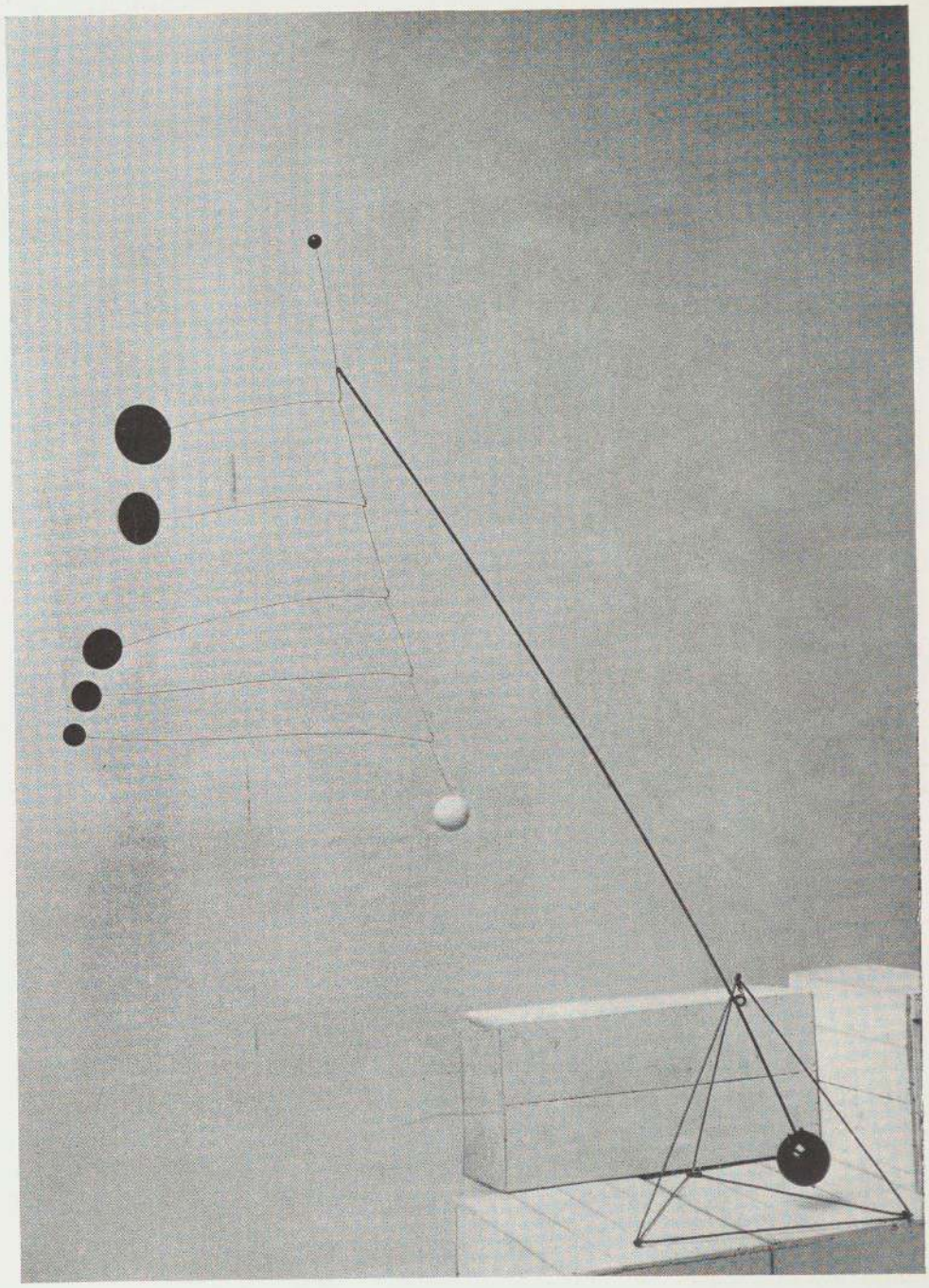
Illustrations for *Fables of Aesop,* according to Sir Roger L'Estrange, Paris, 1931.



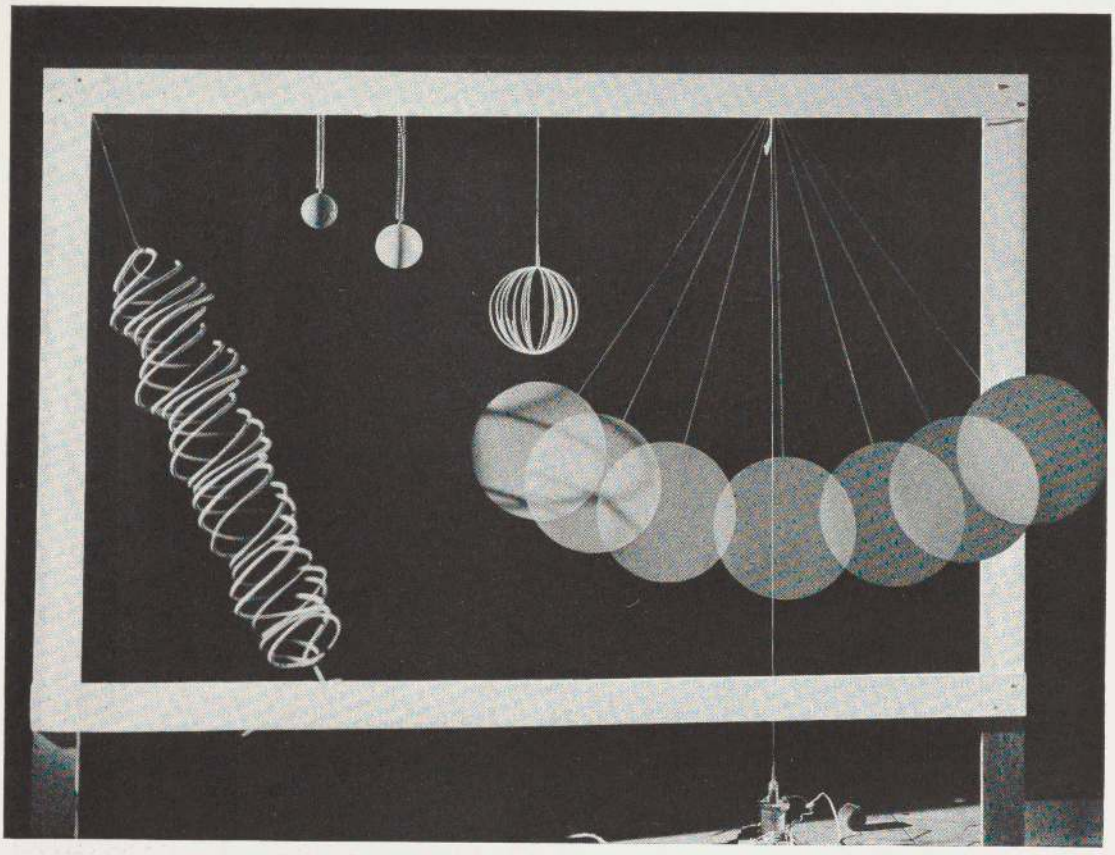
Dancing Torpedo Shape. 1932. Motorized mobile. Wood, iron wire, aluminum. 32½″ high. Berkshire Museum, Pittsfield, Massachusetts.

tered. That year Calder designed his first wire goldfish bowls, through which wire fish were made to swim back and forth by the turning of a tiny crank. Once again an animal rhythm had caught his eye. This time it was composed within a framed three-dimensional space. The result was a sort of music-box with visual rhythms. Its structure was still based on his articulated toys and circus devices. But now for the first time in his work we have a composition of movements bound to an immobile base, its primary purpose to satisfy an esthetic sense through rhythm. This was to be the basic principle of his mobiles three years later.

Since the spring of 1927 when Legrand-Chabrier first described Calder's circus in *Commoedia* its reputation had constantly spread. Just before his return to New York he had given several farewell performances in his studio. Legrand-Chabrier again attended and again wrote it up even more enthusiastically. The troupe had practically doubled since he had last seen it. Fréjaville came, and Fuzier. And when Calder returned to Paris in March of 1930 all those painters who had not seen the circus, had heard of it and were at any rate inquisitive. Varèse brought Kiesler and Jean Painlevé to a performance one evening. Another evening, Kiesler brought Léger, the critic Carl Einstein, Théo van Doesburg and Mondrian. In those days Calder was still unfamiliar with such names. But a neighbor, an American abstract painter, William Einstein, was well acquainted with the researches and personalities of contemporary art. The evening Kiesler brought Mondrian, Einstein was in charge of the phonograph. He recognized Mondrian and afterward explained to Calder who he was. His enthusiasm warmed Calder to a visit to Mondrian's studio.



Calderberry Bush. 1932. Mobile. Steel wire and rod, sheet aluminum and wood. 7′ high. Private collection, New York.



White Frame. 1934. Motorized mobile. Wood panel, wire and sheet metal. 7′ 6″ x 9″.

Abstract Stabiles: The Influence of Mondrian, 1920

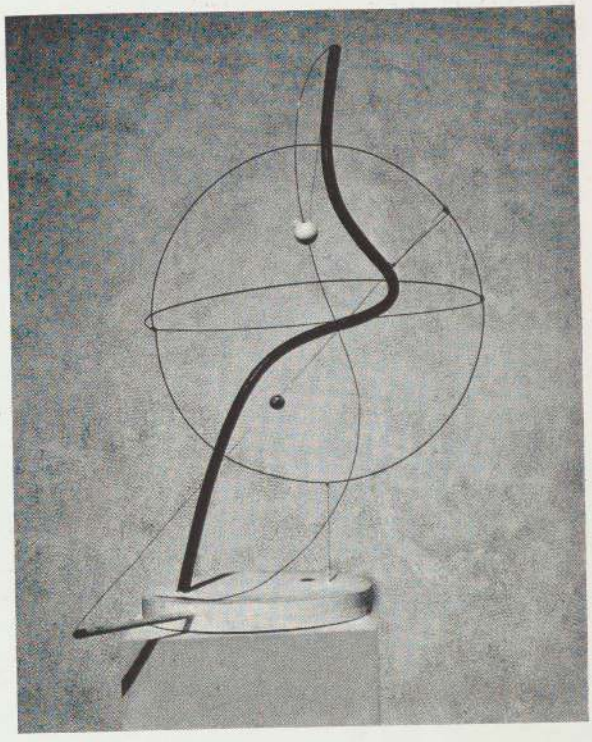
The visit to Mondrian was to mark the turning which led to all Calder's most characteristic future developments. It was what gave him, as he described it, "the necessary shock." Mondrian's large, light, irregular studio was like one of his own pictures — or a spatial translation of one. The immaculate white walls were composed by removable rectangles of red, blue and yellow; the red cube of a phonograph accented the spacious calm of the central room. Calder afterwards recalled how exciting the first view was to him, "with a cross light (there were windows on both sides), and I thought at the time how fine it would be if everything there moved; though Mondrian himself did not approve of this idea at all. I went home and tried to paint. But wire, or something to twist or tear, or bend is an easier medium for me to think in."*

* "Mobiles," *The Painter's Object,* edited by Myfanwy Evans, see Bibl. 3.

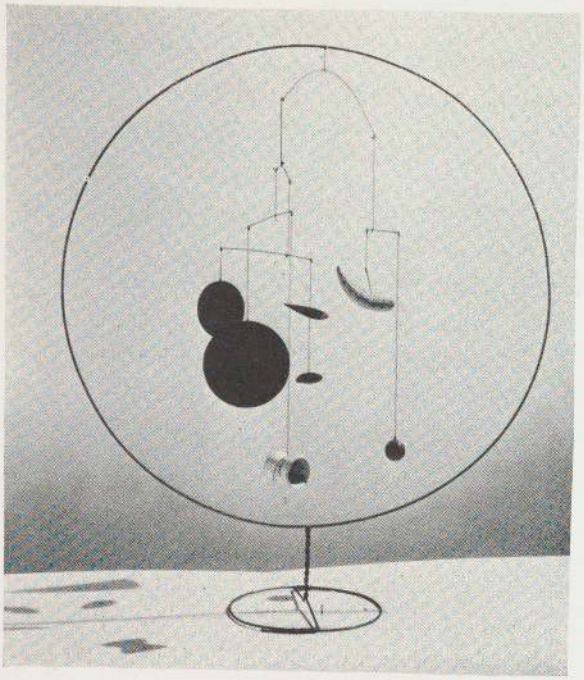
This revived interest in painting lasted barely three weeks. But from the character it took (page 22) one sees at once the consequence of his encounter with Mondrian's work, not a return to painting but a very evident turn from representational interests to abstract composition. And the step taken after this visit to Mondrian's studio was never to be retraced. When Calder returned to Paris after his marriage in January, 1931, he began to broaden his acquaintances among the admirers of Mondrian. Through his compatriot, William Einstein, he met Hans Arp and Jean Hélion. Théo van Doesburg, the founder of the de Stijl group, had come with Kiesler the year before to a presentation of the circus. Now Hélion and Arp prevailed on Calder to join van Doesburg's newly founded Paris group of nonrepresentational artists, Abstraction-Création. The interests of his new associates were quite different from those of his earlier Paris days. And when his exhibition at the Galerie Percier took place, we find him self-consciously apologizing for the inclusion of a row of some of his finest wire portraits which Mendes-France, the director of the gallery, urged him to show (page 24). On the back of a photograph of the exhibition Calder wrote: "Pay no attention to the portraits, the gallery insisted that I include them."

The paintings Calder undertook after his visit with Mondrian were exercises. But the sculpture which was exhibited at the Galerie Percier shows a full assimilation of his experiences; "Simple things," as Calder described them, "ranged on a plank against a wall." But he is perfectly justified in stating: "In a way, some of those things were as plastic as anything I have done."*

* Bibl. 3.



A Universe. 1934. Motorized mobile. Pipe, wire and wood. 40½" high. The Museum of Modern Art, New York.

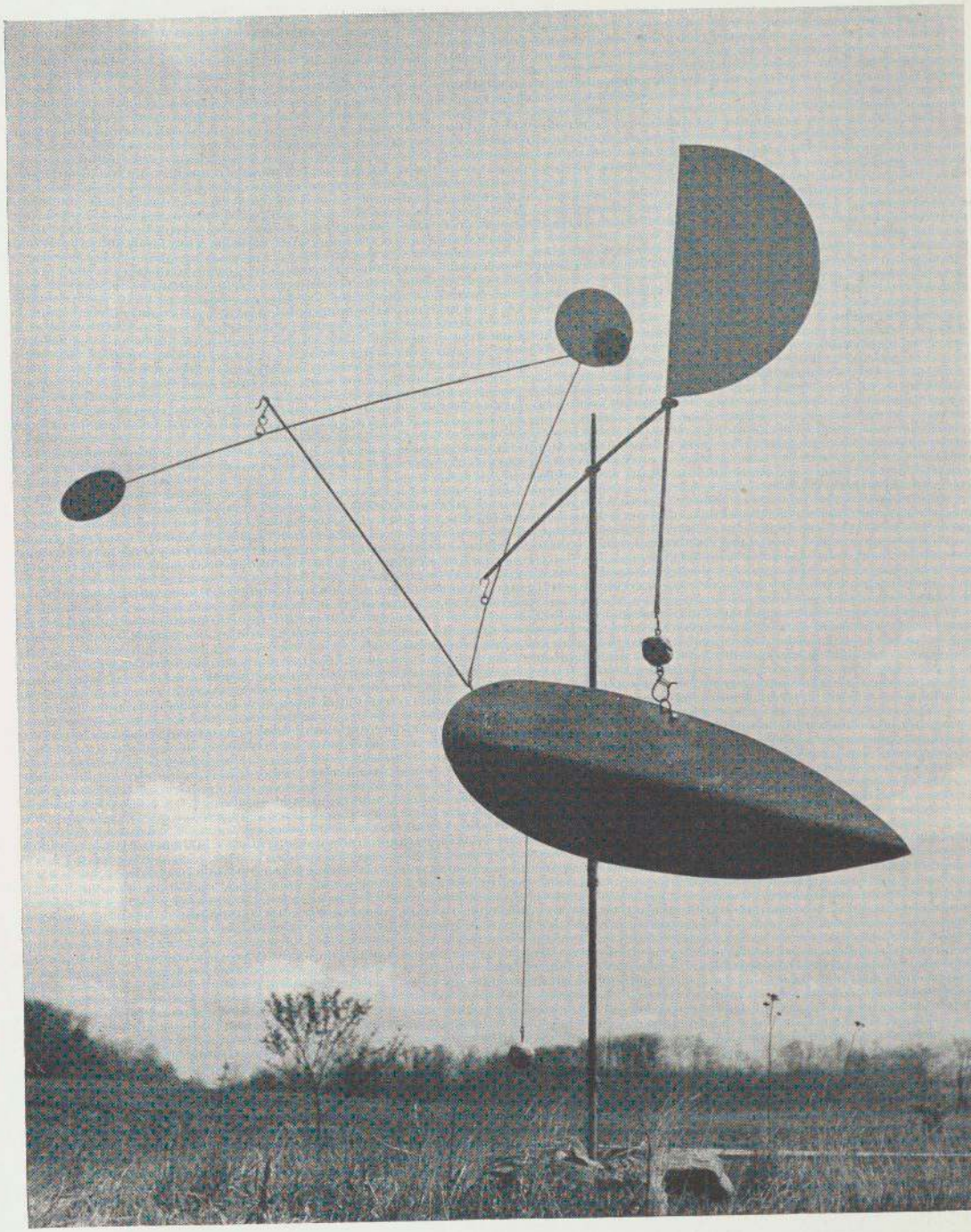


Agnes' Circle. 1934. Mobile. Steel wire, rod and sheet aluminum. 36" high. Collection Miss Agnes Rindge, Poughkeepsie, New York.

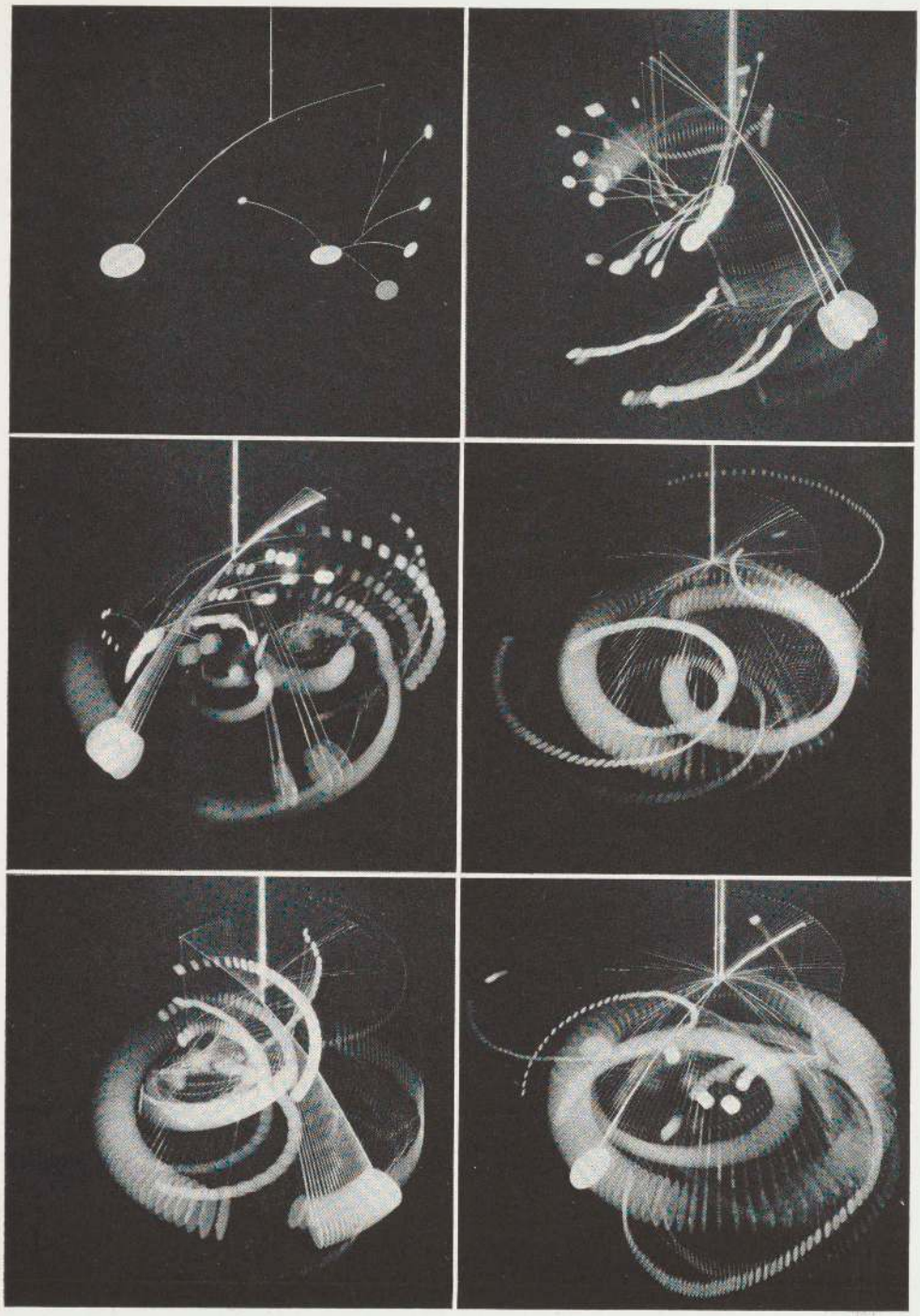
It was to this type of stationary abstract sculpture that Arp, a few months later, gave the name "stabiles."

Another consequence of Calder's visit to Mondrian was the introduction of color into his sculpture. While draughtsmanship was an essential feature of his early wire sculpture, his new work had been obviously affected by painting. The tiny spheres and disks of the "volumes, vectors and densities," as Calder described the objects in the Percier exhibition, were painted strong blues, reds and blacks. These showed up strikingly against the whitened wires and the dead white bases of the constructions.

To take such a step into the abstract field was an extremely serious departure for an artist in Calder's position at the time. He had already established himself in the public mind as a humorist — a talented and witty one. He had built up a reputation and a certain patronage. Now those who had enjoyed what he had previously done so well were left completely at a loss. Fernand Léger wrote the preface to the Percier exhibition catalog. He opened his introduction with the question: "Eric Satie illustrated by Calder, why not? He is serious without seeming to be." and closed with the statement: "Before these new works, transparent, objective, exact, I think of Satie, Mondrian, Marcel Duchamp, Brancusi, Arp; those incontestable masters of reticent and silent beauty. Calder is of that line. He is an American 100%. Satie and Duchamp



Steel Fish. 1934. Mobile. Iron, sheet steel, steel rod, sheet aluminum. 10′ high. Collection Philip L. Goodwin, New York.



Hanging Mobile. 1936. Aluminum, steel wire. Ca. 28″ wide. Collection Mrs. Meric Callery, Paris. Still (upper left) and in motion.

are 100% French. Yet we meet." Some critics picked up Léger's line in the catalog introduction, "he is serious without seeming to be." They asked, why be serious if this is the result when it is so easy for Calder to be gracefully amusing? Others who knew him only as a humorist, felt this was merely some elaborate joke. But the effect of Mondrian's work had made up Calder's mind. He had half-consciously felt that his representational work in wire had its limitations. When he saw what Mondrian had achieved, he realized how close to convention his naturalistic and caricatural drawings remained even when translated into wire. Abstract composition was the field he had been looking for. To enter it he would have to leave the other behind. Those who enjoyed his earlier work might follow him if they cared to. It was not for him to stay with them.

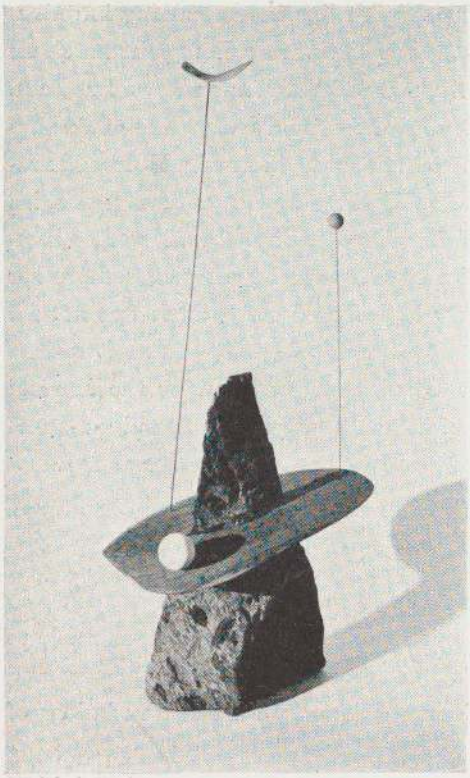
Still the naturalistic draughtsman in Calder was by no means superseded by the abstract constructor. In the summer of 1931, he produced some of his finest graphic work and a masterpiece of American book illustration, the *Fables of Aesop* for Harrison of Paris (page 25).

The First Mobiles: Manual and Motor, 1930-31

In the Galerie Percier exhibition Calder had not yet undertaken to incorporate movement into abstract design. But to realize his original idea, that Mondrian's rectangles ought to be made to oscillate or vibrate, Calder had available all the technical experience of his animated toys and circus devices. His 1929 mechanical goldfish bowl had since led to several other variations of the original. For them he had worked out a technique of simple mechanical devices for controlling a patterned rhythm of moving objects within a fixed frame. Now he again took up the problem of motion. At first he limited himself to a slight rhythmic movement in a single object fixed to a base. Then the idea struck him of making "two or more objects find actual relations in space" (*Dancing Torpedo Shape,* page 26).

This was the first feature of his new approach: the organization of contrasting movements and changing relations of form in space. This was also the point at which Calder went beyond anything the Russian constructivists had realized in mobile sculpture. For Gabo's *Kinetic Sculpture* of 1920 offered only the rhythmic swing of a single erect element — a weighted flexible perpendicular, fixed to a base. In Calder's mobile sculptures of 1931, small spheres of different sizes painted in contrasting primary colors were moved up and down thin curved wires at contrasting rates of speed, as in *A Universe,* 1934 (page 29). Various geometrical shapes were made to turn rhythmically about creating constantly changing relations of forms. Some of the constructions were driven by small electric motors, others were moved by tiny hand cranks.

The shapes employed were still strictly geometrical, like those of his stationary abstract arrangements of the Galerie Percier exhibition. In his work of this period he had put aside organic forms as completely as the constructivists had. But for all their geometrical forms and mechanical movements these new constructions had a living quality and spirit of humor about them that went back to the wit and observation of his wire sculptures and the gaiety of his circus and animated toys.

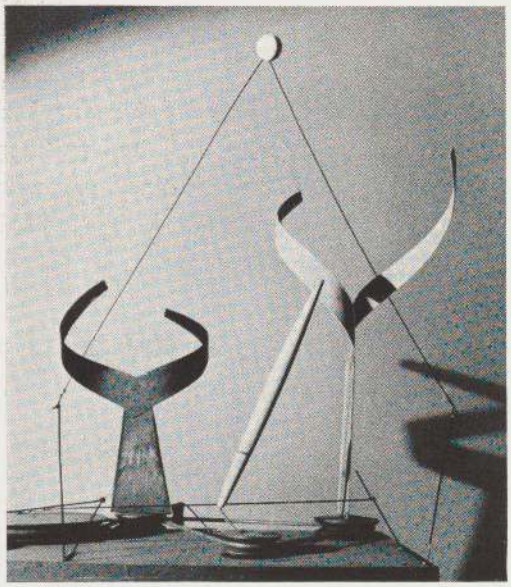


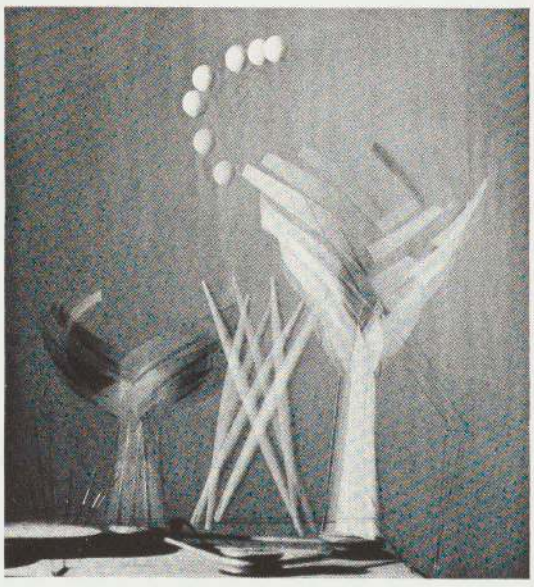
Gibraltar. 1937. Stabile. Lignum vitae, plank walnut and steel rod. 28⅝″ high.

In these new constructions Calder had managed to give abstract forms the movements which he had mimicked from nature in his toys. The surprise and charm of his circus performers and toys lay in their striking truth to characteristic human and animal movements. This was the source of life and variety in their rhythms. In the toys he had parodied a duck dragging a recalcitrant worm out of the ground: now in the mobiles the hammer motion of the duck's head and beak was reduced to the simplest form of mechanical movement. He had begun with natural movements — the galloping of a horse (page 14), the seductive wriggles of his Oriental dancer (page 13), the frenzied trot of the circus stretcher-bearers — now he was dealing with motion not in any representational frame of reference, but for its own sake. Form had been reduced to its geometrical bases, motion had followed suit. Calder felt that to combine two or more simple movements with contrasting rates of speed gave the best effect because, while simple, they are capable of infinite combinations. He had left synthesis for essence; he had come from the naturalistic to the abstract. Still these movements had kept a liveliness and variety, perhaps due to the fact that their indirect inspiration was a caricature of nature not the bare rhythms of a machine.

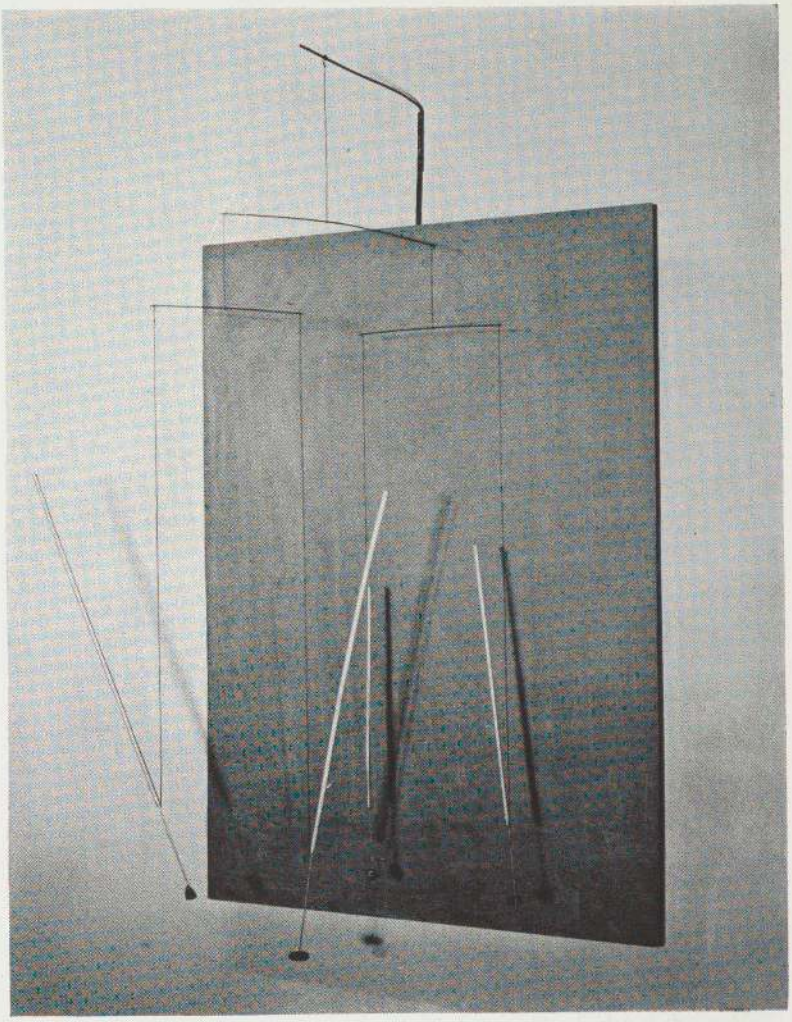
Whale. 1937. Stabile. Sheet steel. 6′ 6″ high. On extended loan by the artist to The Museum of Modern Art, New York.

And, as a consequence of this underlying parody of human and animal movements, these machines had, perhaps, a closer relationship with dada and futurism than with constructivism. The resemblance between Calder's Galerie Percier "volumes, vectors and densities" and early constructivist work was evident. But while constructivism was a calculated, unemotional expression, dada was a laughing iconoclasm based on the belief that a healthy art could only flourish if the conventional trappings and false seriousness of art were stripped away. Dada was an outgrowth of Italian futurism. The futurists had preached the importance of incorporating movement as an esthetic factor. Art had too long been static. The modern world was a world of movement. Modern art should embody it. Duchamp and Picabia, in their interest in the representation of movement and the satirical use of machine forms, effected a link between futurism and dada in such work as Duchamp's *The King and Queen Crossed by Swift Nudes* and Picabia's *The Infant Carburetor*. The spirit of Calder's new machines was certainly closer to such work than to that of the Russians. His humor was more genial. But humor took the place of subject matter with Calder, just as a less innocent type of humor was that of the dadaists. The link becomes even closer in the term, "mobile," which had perhaps its first esthetic application about 1917 in Duchamp's notes for *La Mariée mise à nue par ses célibataires, même*. And when Calder, shortly before the Galerie Vignon exhibition, asked Duchamp to suggest a name for the new constructions Duchamp without hesitation proposed "mobiles."





Dancers and Sphere. 1936. Motorized mobile. Wood, steel wire, sheet aluminum. 17¾" high.



Swizzle Sticks. 1936. Mobile. Plywood panel, wire, wood, lead. 48 x 33". Collection Mr. and Mrs. James Thrall Soby, New York.

Wind Mobiles, 1932

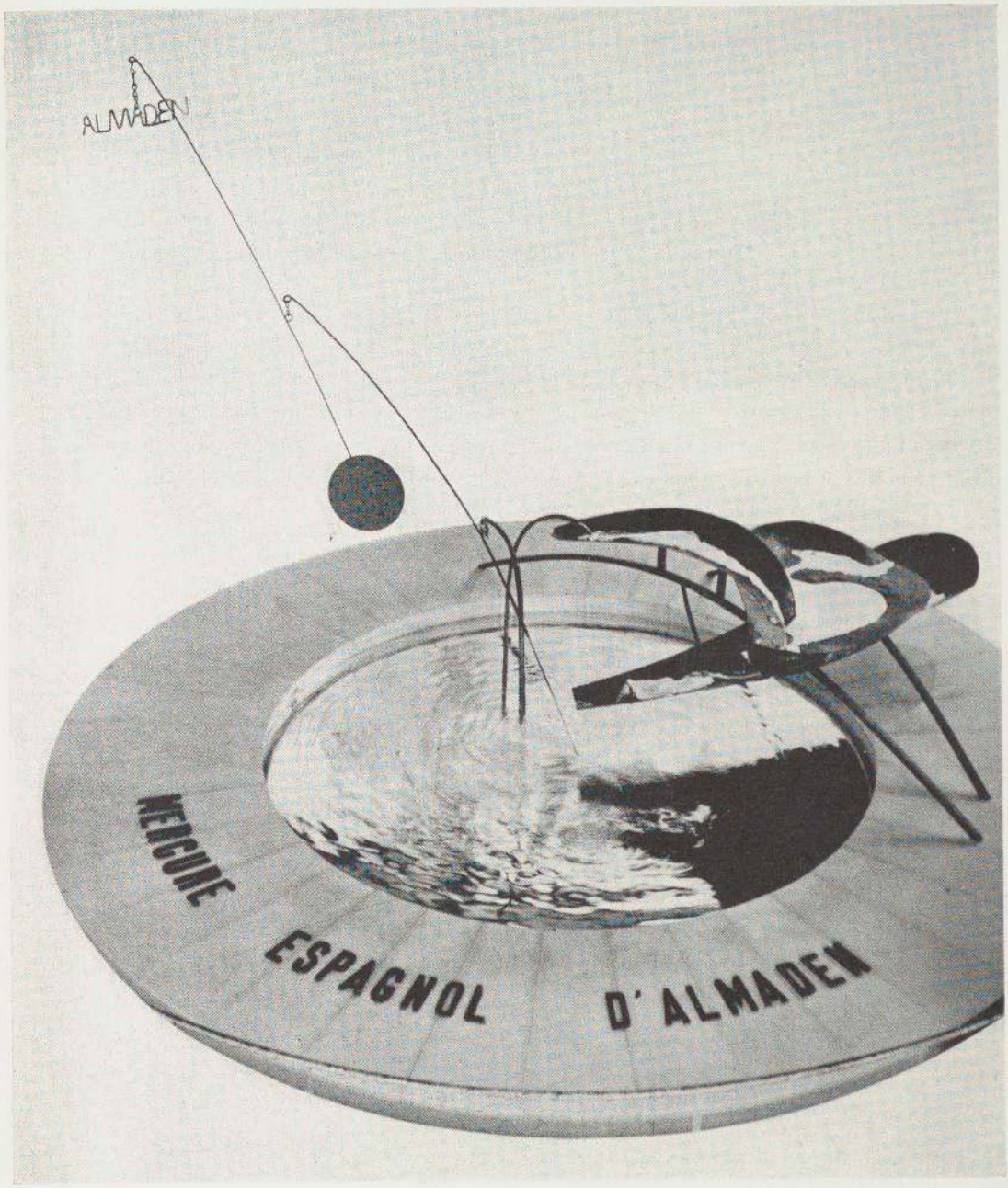
Such motor-driven or hand-cranked mobiles had the advantage of a power to control their performance and superimpose movements in the fashion of a ballet's choreography (*Dancing Torpedo Shape,* page 26). This, however, meant a set pattern. And Calder soon began to feel it a restriction: without complicated mechanisms, such controlled patterns ran the risk of becoming monotonous in their repetitions. A free natural movement would be more desirable in many ways. What might be sacrificed in formal patterns, would be made up for in rhythmic variety. Unpredictability of movement would give a greater sense of life. Chinese wind bells were made to please the ear with their tinkling tunes by a gust of air. Why should the wind not be enlisted to please the eye with rhythmically swinging sculptural forms — and for that matter to entertain the ear with their jangling?

The result was Calder's first wind-mobile, begun shortly after his Galerie Vignon exhibition. And this was the principle on which most of his future mobiles were to be based. It is true that some of his most ambitious motorized mobiles, the *White Frame* (page 28) and the *Black Box,* were produced in 1934 and 1935. Still his motorized production after 1933 was principally limited to colored wall panels against which various forms were made to describe rhythmic patterns (*Little Blue Panel* and *Orange Panel*). With his wind-mobiles movements and rhythms became more relaxed, more free — took an air of spontaneity. Little by little, chance began to play a larger part in their rhythms — eventually even in their constituent elements.

Free Forms in Free Movement: Friendship with Miro

Perhaps this reawakening of fantasy came out of a closer intimacy with Miro. Their friendship had grown steadily since their first meeting; and Calder's difficulty in responding to Miro's painting had long since disappeared. Miro at the same time had become an enthusiastic admirer of Calder's work. In August, 1932 Calder returned to Paris by way of Spain and visited Miro on his farm at Montroig, near Barcelona. The following January at Miro's suggestion Gomez de la Serna, Spain's leading circus critic, invited Calder to Madrid to present his circus during an exhibition of his work at the Residencia de Estudiantes; and Miro arranged an exhibition for him through the Amics de l'Art Nou in Barcelona. Later that spring Calder exhibited with Miro, Hélion, Pevsner, Seligmann and Arp at the Galerie Pierre in Paris. Miro's work at that time had probably touched its most abstract point. And we can recognize a definite affinity between the forms in Miro's and Arp's work of this period and Calder's which has had persistent echoes in his work even to the present day. Miro had long ago broken with the surrealist group. His fantasy, however, had by no means dried up at the separation. And Miro's fantasy as well as his sly, gnomish, yet robust humor had come to appeal very deeply to Calder.

It is likely that this new interest in chance rhythms and chance forms on Calder's part owed much to Miro. However, it is obvious from Calder's earlier approach to wood carving that he could scarcely hold happily with Mondrian's creed: "In the new art, forms are neutral . . . The



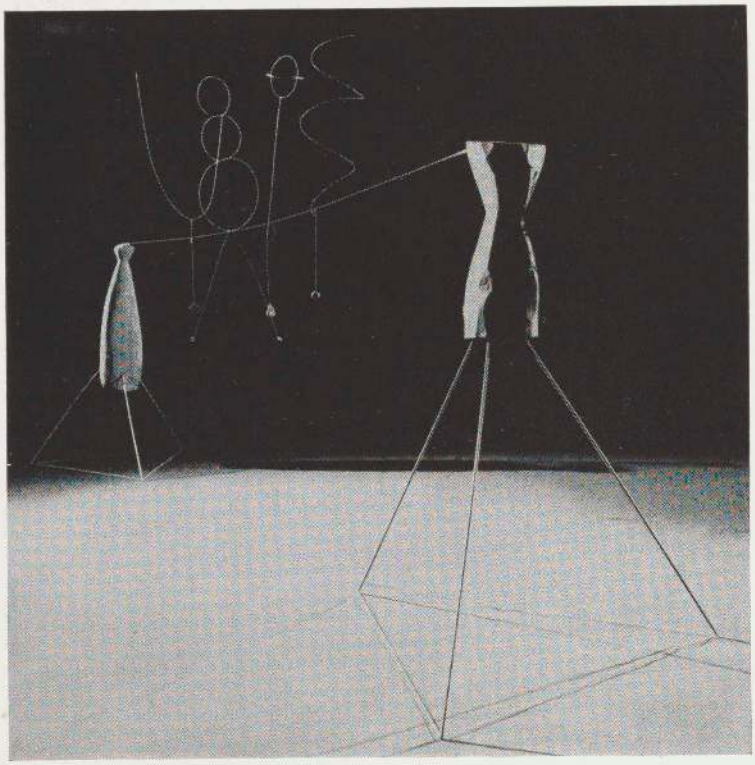
Mercury Fountain. Spanish Pavilion, Paris Exposition, 1937. Steel rod and sheet steel surfaced with pitch. 8′ 6″ high.

new art effort suppresses the subject and the particularized form."* The richness of natural forms meant too much to him. His late severely geometrical forms had taken first a freer modeling; then little by little calculated forms gave way to forms suggested by the material — a lump of wood, a piece of bone — till finally the materials employed seemed scarcely touched by tools. At the same time, chance rhythms had come to supplant patterned rhythms. By 1934, the novice stage of his work was over. The geometrical cycle opened by the shock of Mondrian's studio was completed. The organic cycle was now beginning; and with it a search for new suggestions from new materials for both static and mobile sculpture, and for a new sculpture in space.

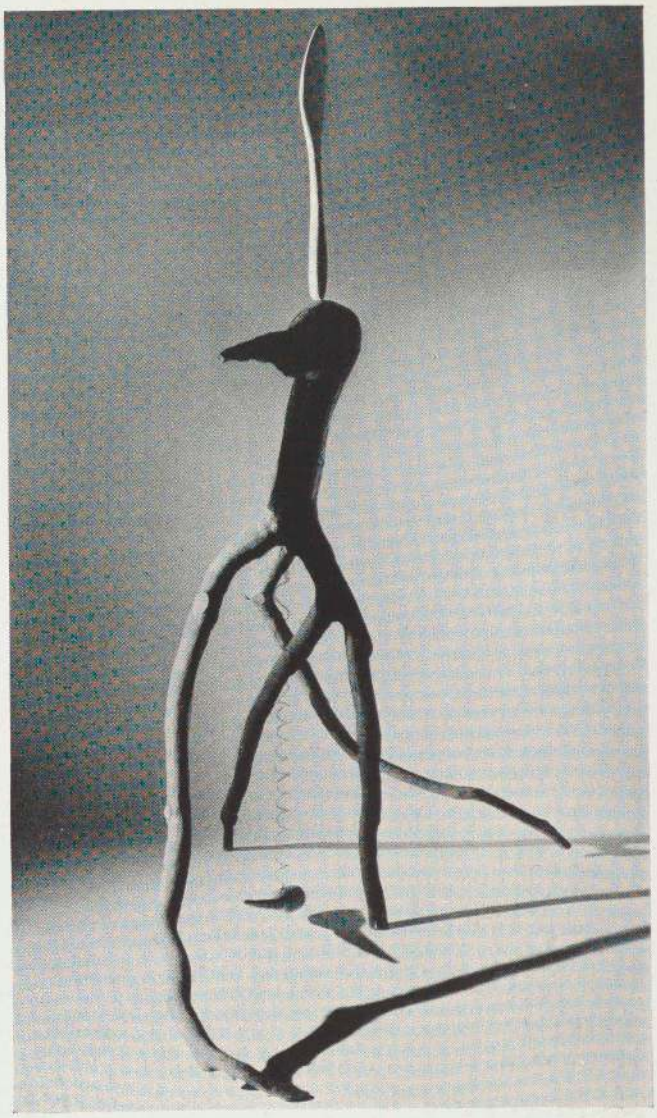
Return to America, 1933

Up to this time Calder's work had been intimate studio expressions. With the return to the United States in the summer of 1933 there began to develop a feeling for increased scale. The confined studio quarters of Montparnasse had given place to the open countryside of Connecticut. The dimensions of his sculpture seemed to respond to the scale of his new environment.

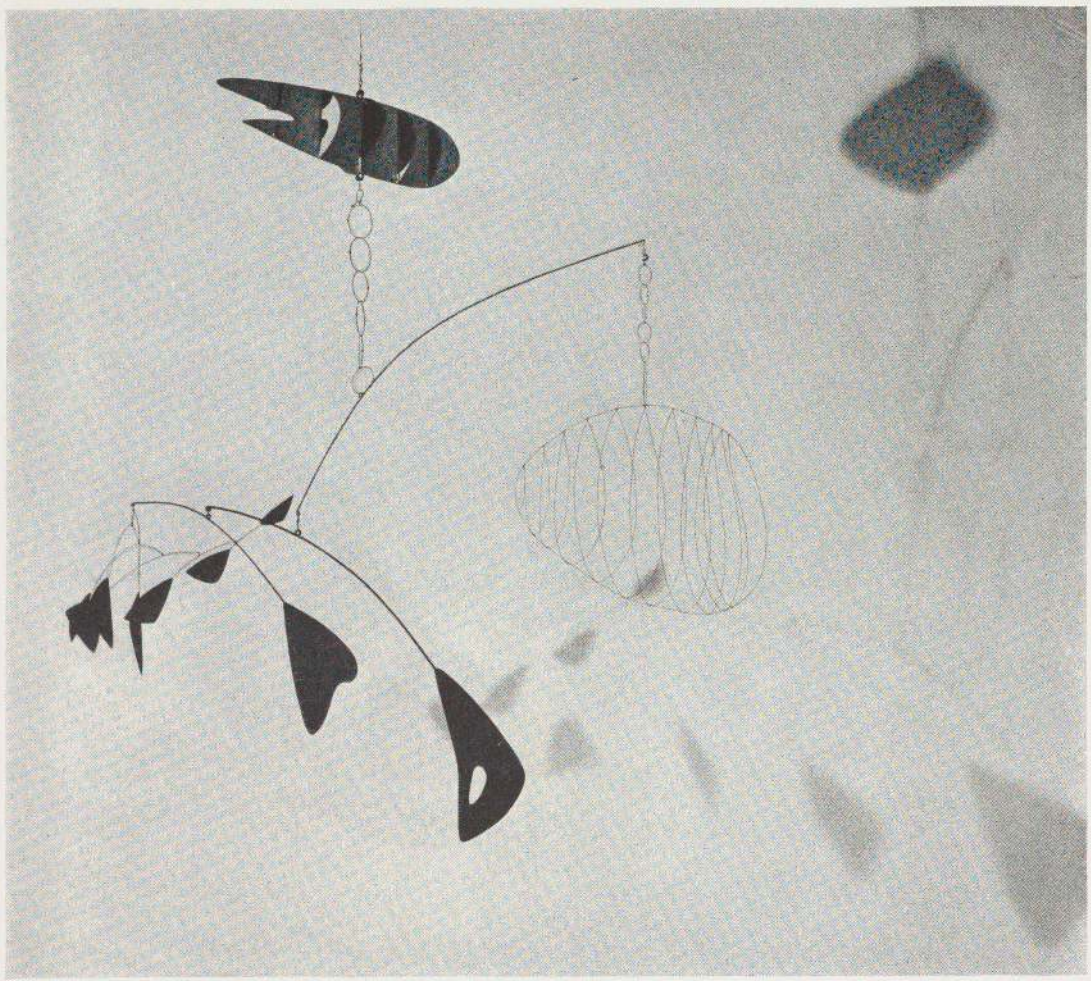
* Piet Mondrian, *L'Art nouveau de la vie nouvelle,* 1931. See bibl. 26. p. 13.



Tight Rope. 1937. Mobile. Ebony, steel rods and wire, lead weights. 9′ 3½″ long.



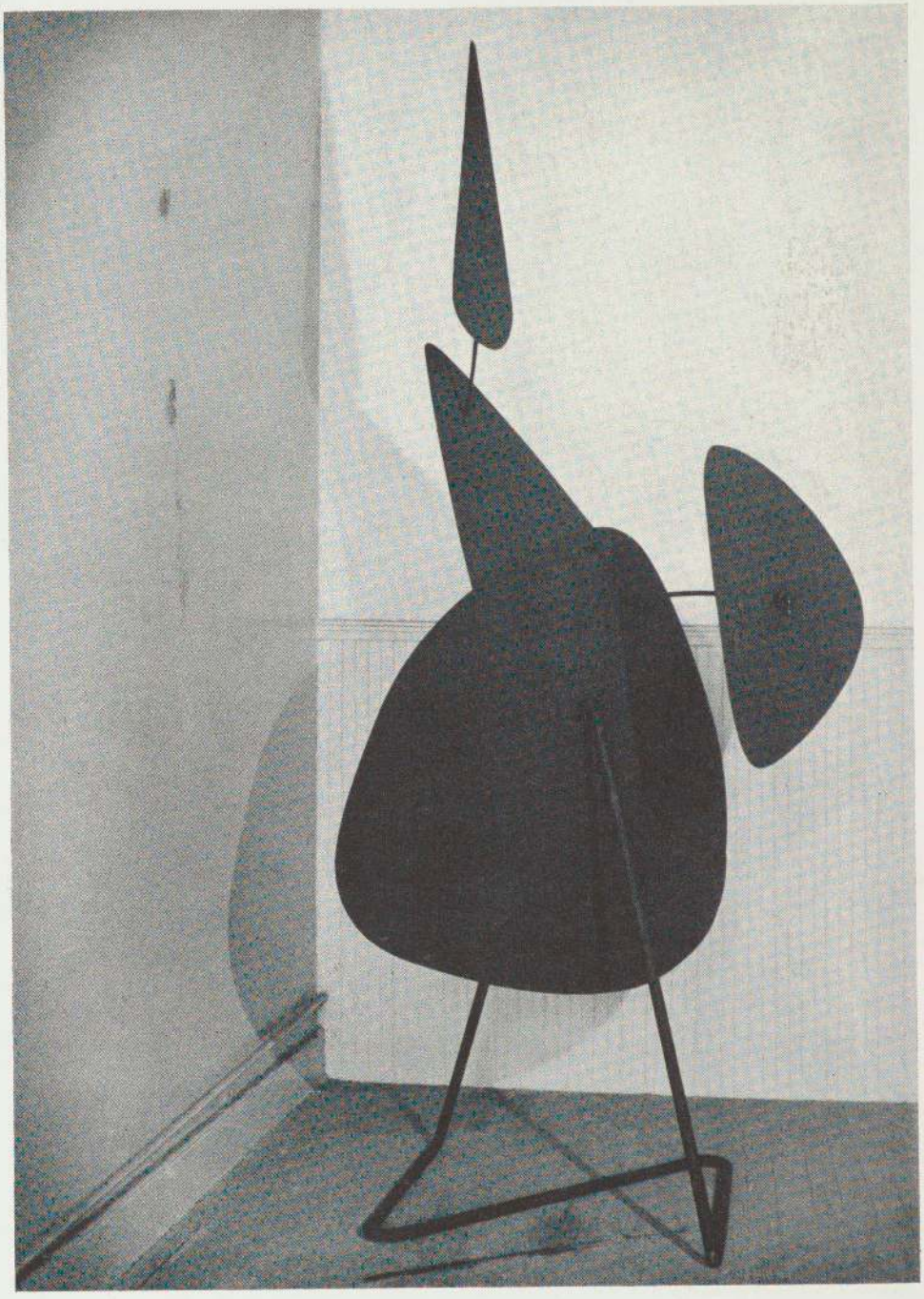
Apple Monster. 1938. Stabile. Apple branch, wire spring. 5′ 7″ high.



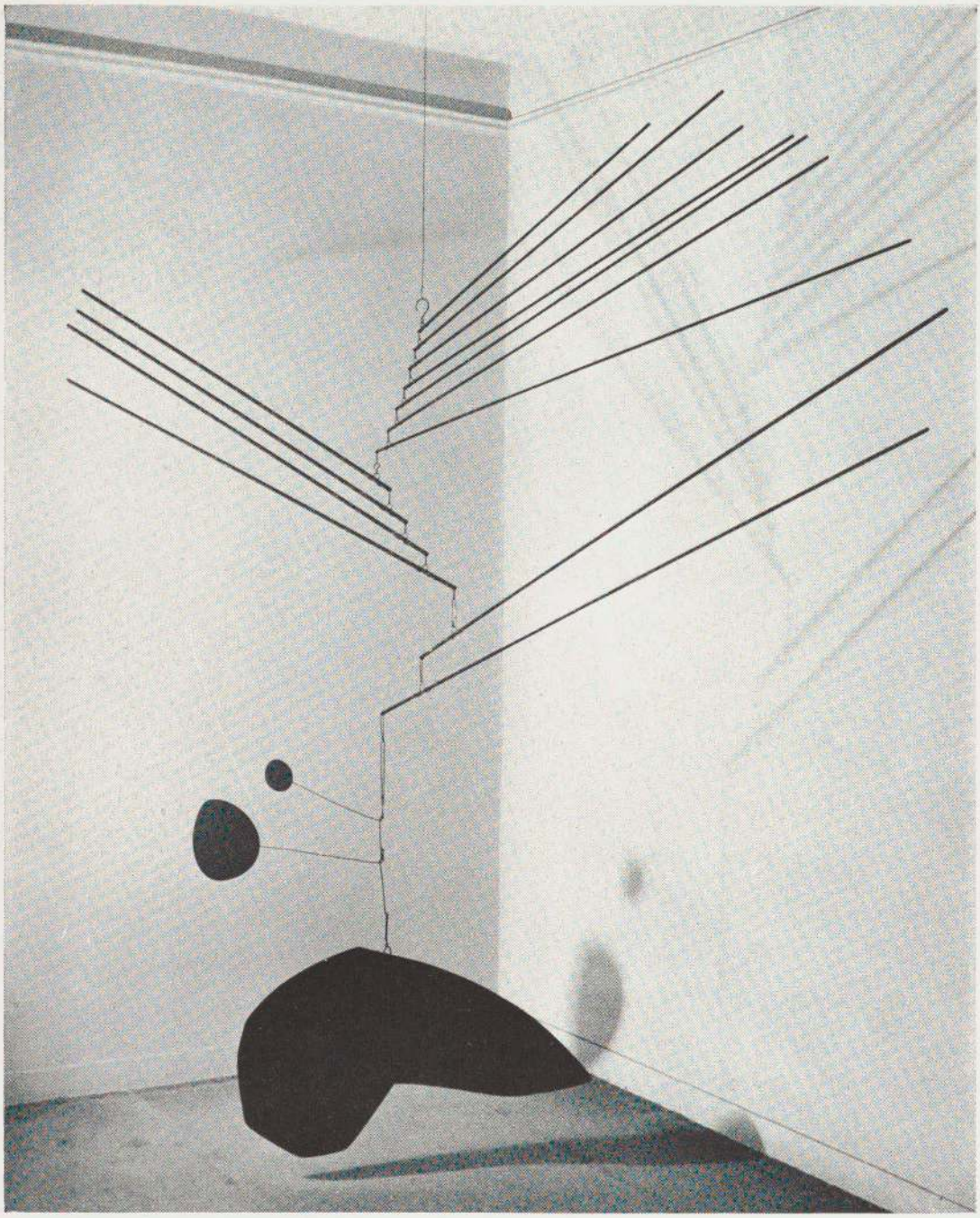
Lobster Trap and Fish Tail. Mobile. 1939. Steel wire and sheet aluminum. Ca. 15′ long. The Museum of Modern Art, New York.

Before leaving Paris Calder had produced a large motorized composition entitled the *Red Frame.* Its size and construction made it difficult to ship. But shortly after settling in Roxbury he produced another composition along the same lines, *White Frame,* the largest motorized mobile he had yet realized (page 28). And the same year, 1934, saw his first outdoor mobile, *Steel Fish* (page 31), set up on the hill behind his farmhouse at Roxbury.

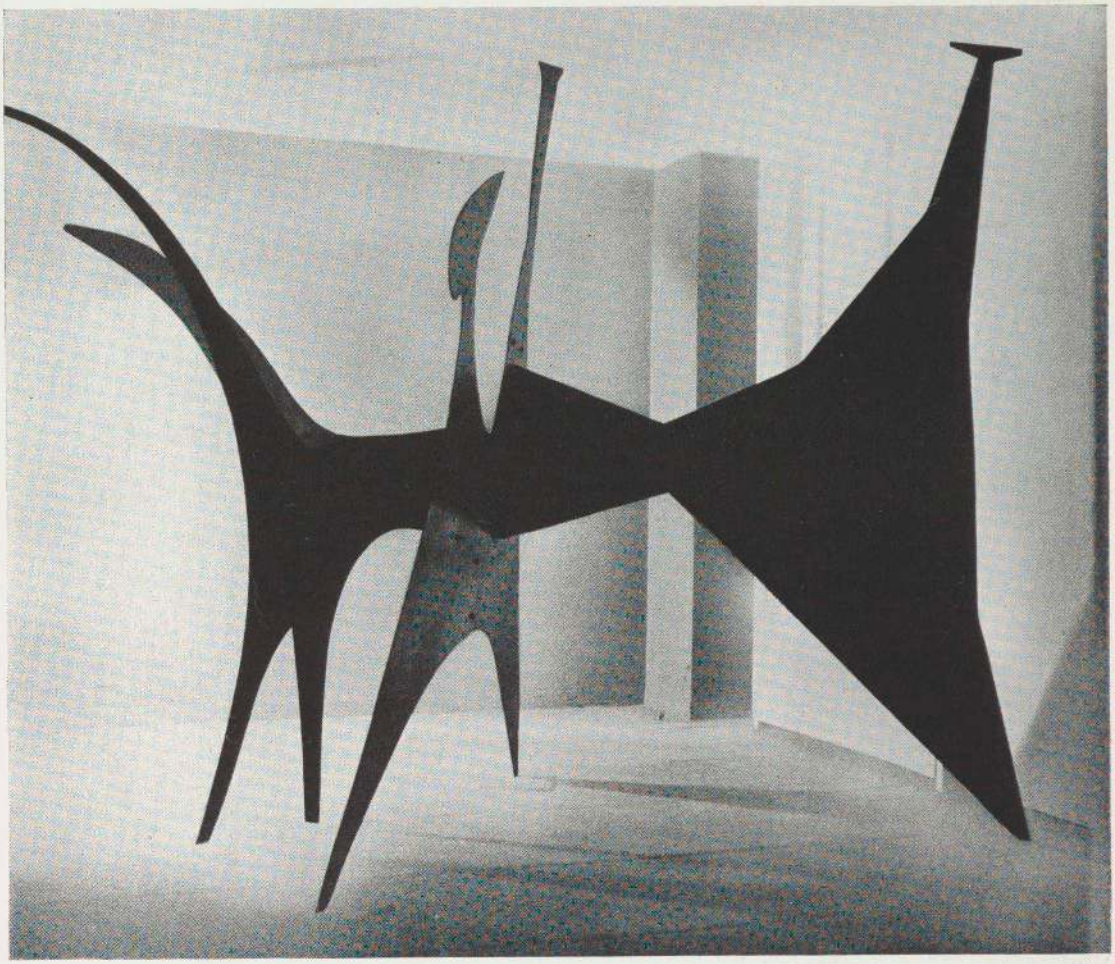
On first abandoning mechanical rhythms for free rhythms he had tended to see his forms as two dimensional compositions, for example, the *Calderberry Bush,* 1932 (page 27). But just as Calder's wire sculpture, predominantly two-dimensional at the outset, came to suggest transparent volumes, such large-scale, free-swinging mobiles as the *Steel Fish* now began to describe, with gestures



Spherical Triangle. 1939. Mobile. Sheet steel and steel rods. 8′ high.



Thirteen Spines. 1940. Mobile. Steel sheet, rods, wire and aluminum. 7′ high.

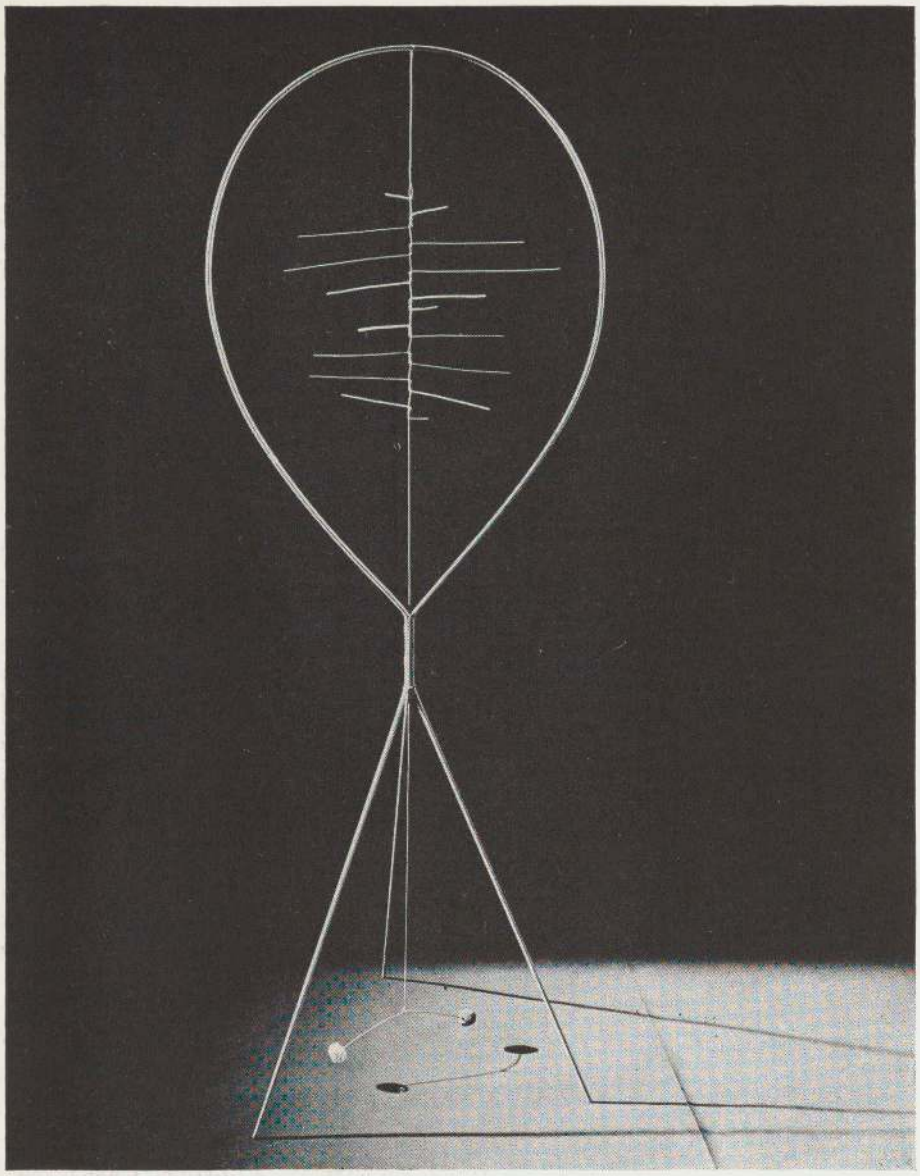


Black Beast. 1940. Stabile. Sheet steel. 8′ 9″ high.

like a dancer, volumes in space. These are most graphically recorded for us by multiflash photography (page 32).

In realizing these gesture compositions of virtual volumes through his mobiles, Calder had carried the transparency of his early wire sculpture beyond the transparency of the constructivists' work. And in hanging his mobile elements free, he had given them a far greater opportunity "to find actual relationships in space" than he had provided in his most ingenious motorized mobiles of the Galerie Vignon.

Calder's love of the spectacular had always been keen. This was evident from certain features of his circus and such a tour de force as *Romulus and Remus.* In 1935 and 1936 Miss Martha Graham recognized the dramatic possibilities of his mobile panels and had several enlarged to serve as "plastic interludes" during the performances by her dance group at Bennington and in

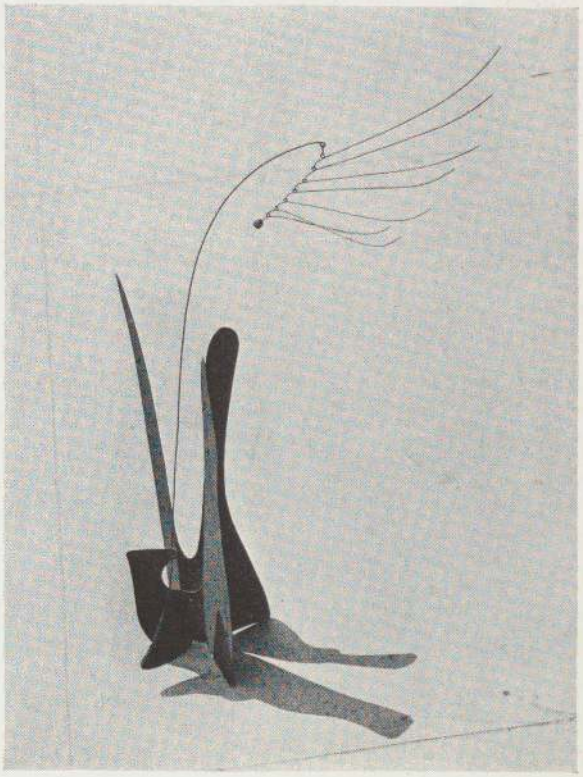


Hour Glass. 1941. Mobile. Steel rod and wire. 5′ high.

New York. In 1936 he also fulfilled Fernand Léger's query of 1931 "Eric Satie illustrated by Calder, why not?" by designing a setting for a production of Satie's *Socrate* at the Wadsworth Atheneum in Hartford.

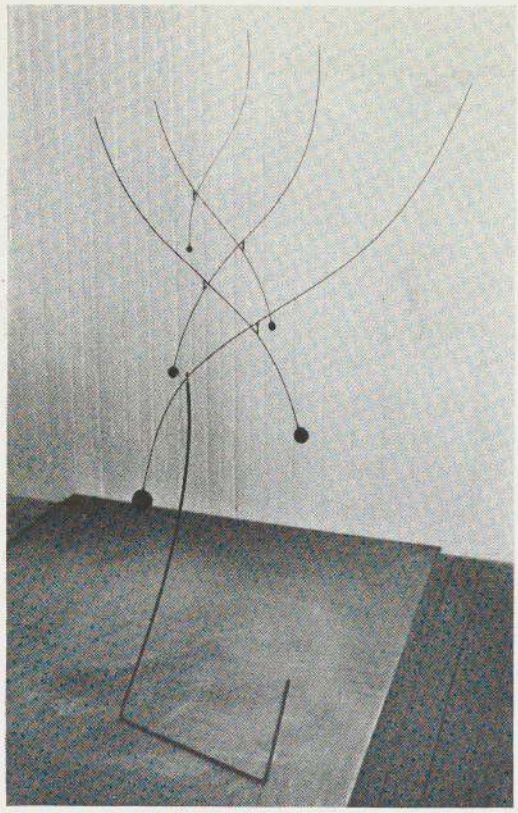
At the same time, during these years, 1933 to 1937, Calder was consistently extending his interests in unconventional materials and unusual uses of familiar ones. The contrasts of porcelain, wood and metal in *Agnes' Circle* (page 30) had led to similar oppositions of material in free-swinging mobiles. String, though perishable, allowed a greater freedom of movement than wire (*Swizzle Sticks,* page 37). Rough wood was contrasted with carefully planed wood forms, dainty spheres and disks of metal (*Gibraltar,* page 34). Heavy crudely-cut blocks were contrasted with light wire figures that danced at the slightest breath of air (*Tight Rope,* page 40). Glass and polished metal were exploited for their luminous effects.

The conscious avoidance of technical "finish" in Calder's work was always one of its qualities. In his sculpture it offers an equivalence to the nervous quality of a line in drawing. The larger lines of the total form provide the discipline or framework. This is always carefully worked out and respected. Within it the rough, unfinished elements provide a detail interest — a subordinate textural variety which gives a living quality to many of the materials he employs which, if "finished," would have no life. This "unfinished" quality within a dominant structural unity is

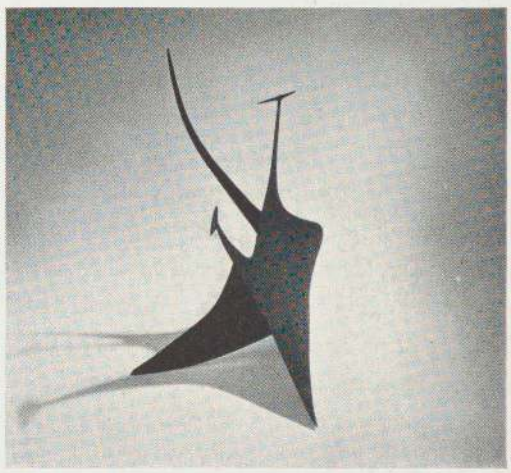


Cockatoo. 1941. Mobile. Sheet steel and wire. 36¼" high. Collection Mr. and Mrs. C. Earle Miller, Downingtown, Pennsylvania.

Red Petals. 1942. Mobile. Sheet steel and wire, sheet aluminum. 9′ 2″ high. The Arts Club, Chicago.



Little Tree. 1942. Mobile. Steel wire, rods and disks. Ca. 27″ high. Collection Edgar Kaufmann, Jr. Pittsburgh, Pennsylvania.



Black Thing. 1942. Stabile. Sheet steel. 31¼″ high. Private collection, New York.

the formal equivalent of the recurrent failure of his circus performers to achieve their feats – the equestrienne to recover her balance on the horse's back or the aerialist to catch the swinging bar. But these rough effects, like the circus performers' failures, must eventually be tied together by the satisfaction of the main form. They provide the features of "disturbance" out of which harmony is resolved in the main design.

There was, however, some danger that his often casual technique and lack of "finish" might be carried too far. But now Calder's new work at larger pieces after his return to the United States required greater technical care. This in no way conflicted with his maintenance of a lack of "finish," where such a lack was a quality. The increase in scale merely made it necessary to pay greater heed to structural problems (*Whale*, page 35).

The Mercury Fountain, 1937

In April, 1937 Calder returned to France for a visit. Paris, at the time, was in the midst of preparations for its Exposition of that year. An opportunity on the Exposition grounds gave Calder a chance to draw full advantage from his three years research in large-scale sculpture in the United States and his increased knowledge of showmanship.

Miro and Picasso were preparing mural decorations for the Spanish Pavilion. Miro had introduced Calder to the architects of the Pavilion, José Luis Sert and Luis Lacasa. One of the principal Spanish exhibits was to be mercury from the mines of Almaden in the southwest of Spain, one of the important objectives of Rebel attacks at the time. A fountain which would spout mercury was being constructed in Barcelona. But from photographs sent from Spain the architects felt it would neither harmonize with the Miro and Picasso murals, nor with the architecture of the Pavilion. Sert who knew Calder's work and admired it suggested that he design another to be used in its stead.

The result was one of the most outstanding successes of the Exposition (page 39). Unaware of the artist's nationality, André Beucler, the author of a comprehensive review of the Fair in the *Arts et Métiers Graphiques* wrote:

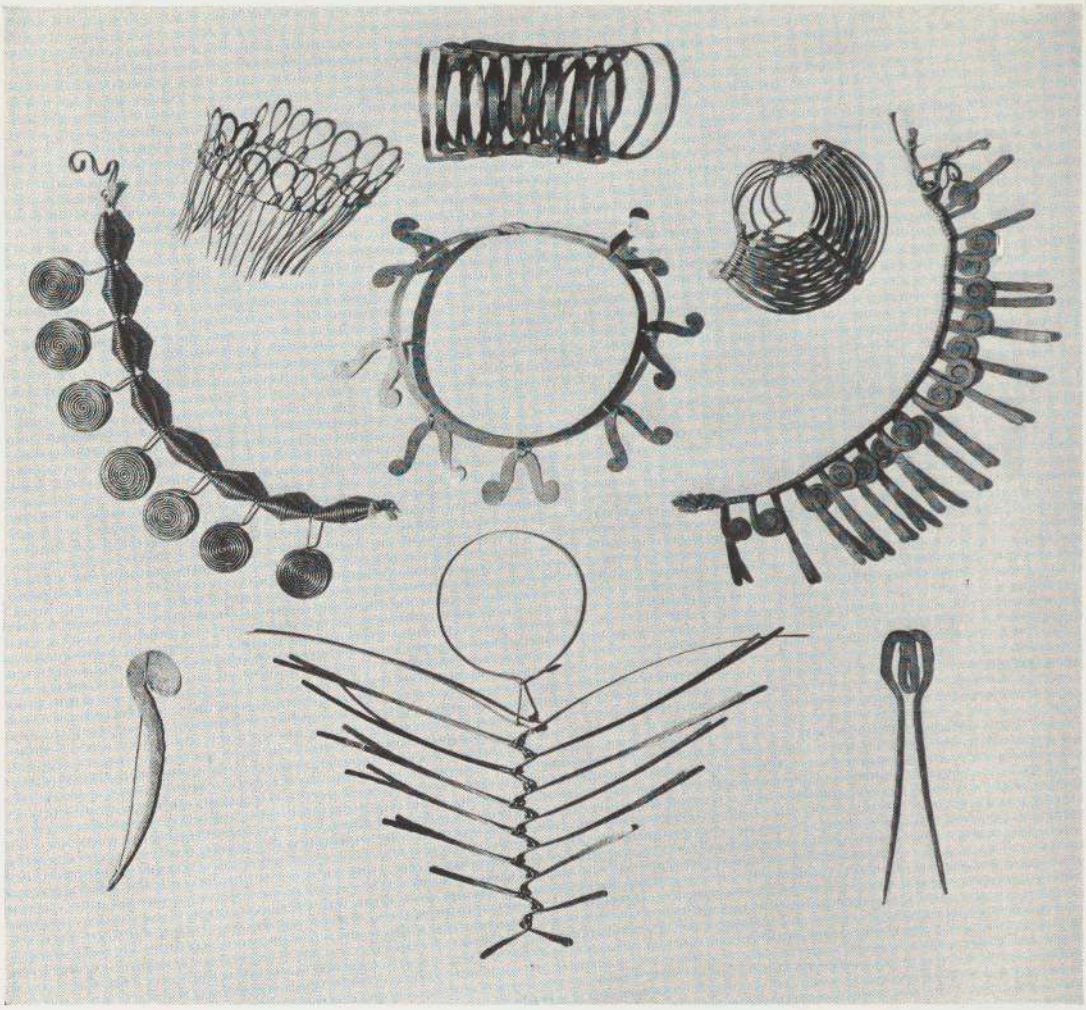
*In this field of plastic expression, Spain has realized a masterpiece: the mercury fountain. The exploitation of the mercury of Almaden is an important industry for Spain. There would have been many ways to make this theme tedious. They could have explained the nature of this metal, its properties, they could have exhibited it with all the trappings apparently due to precious things (as was done for the Belgian diamonds) but, true artists, the Spaniards concentrated on one thing only: on the beauty of the mercury in its mysterious fluidity. The architects of the Spanish Pavilion, L. Lacasa and José Luis Sert therefore designed a fountain, a simple basin, in the center of which a strange construction of black iron, graceful and precise like a great insect, allowed the mercury to flow slowly, to collect itself into a mass, to scatter, to roll from time to time in melting pearls, to play perpetually by itself, to the delight of the public which was present for the first time at the delicate spectacle of mercury moving in a fountain.**

In concluding the writer adds, "It should be observed in this connection the powerful attraction which every animated presentation exercises on the public."

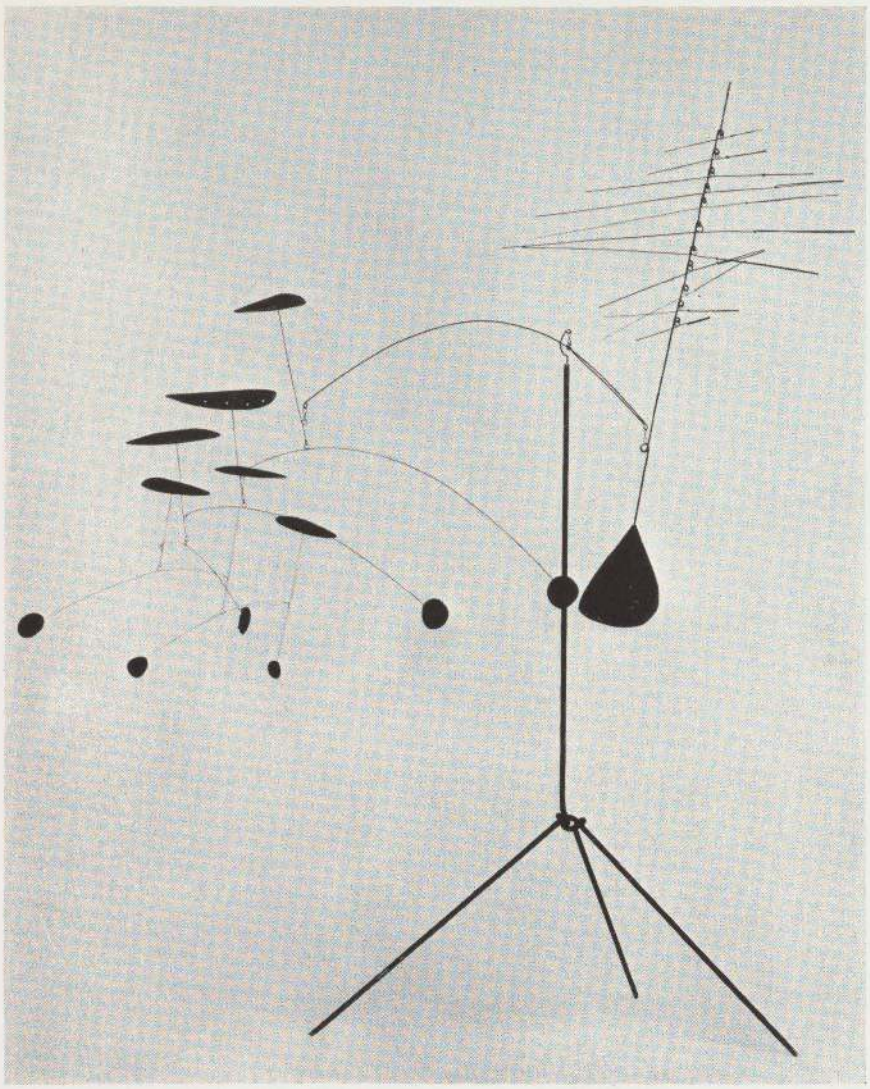
Glass and polished steel, Calder was told, were the only materials which would withstand the corrosive effects of mercury. Neither satisfied him. Neither afforded sufficient color-contrast to the mercury. But the concrete basin for the fountain was lined with pitch. Pitch, then, would resist corrosion. And pitch afforded the greatest possible color contrast to the mercury: the metal structure was painted black and lined with pitch.

Due to the weight of the mercury and the loss in splashing, Calder was allowed to spill it only from a height of little more than a yard. To give the whole design more height and to introduce a further element of mobility Calder hung a rod vertically from the top of the structure by a ring at its center of balance. The lower end of this rod was widened into a plate of irregular

* Bibl. 11.



Jewelry. 1940-41. Brass wire, silver wire.



Horizontal Spines. 1942. Mobile. Steel sheet, wire and rods, and sheet aluminum. 4′ 5″ high. Collection Addison Gallery, Phillips Academy, Andover, Massachusetts.

form and was set so that the stream of mercury leaving the chute would strike it and cause the rod to sway. From the upper end of this rod a lighter, free-swinging rod was hung; at its tip was suspended the name of the mines, Almaden, in brass wire.

The *Mercury Fountain* was a key-point in the evolution of Calder's art. Here all the important threads of his work up to this point were drawn together. The spirit of play won the public to it as to a glorified mechanical toy. It had a technician's structure, in which both the engineer and the artist in Calder collaborated. Movement and the changing relations of form in space

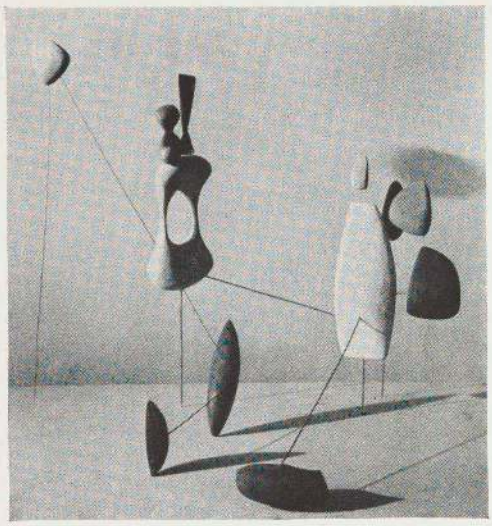
were there; new effects through new materials; an outdoor scale; a fixed construction to which a mobile arm related the lines and forms it described by its movements. All were bound together in a three-dimensional unity of open form over the circular, concrete basin: an ambitious and deeply personal realization. With it Calder achieved the first full mastery of his new idiom. He now had the assurance to speak out boldly in the future.

New Ventures: 1937-43

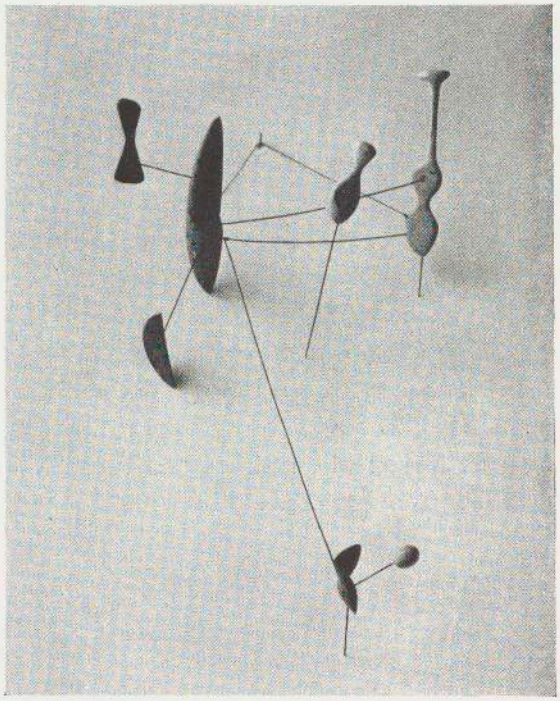
The winter of 1937 Calder spent in England. An exhibition of his work was held at the Mayor Gallery in London. But the spring of 1938, in Roxbury, already saw the fruits of this new-won confidence. His large *Apple Monster* (page 41) shows greater freedom in following the suggestions of his material on an increased scale. His motorized panels now took a frank ballet character in several instances, with even a proscenium arrangement in one on which chunky wooden forms were fixed. In the *Spherical Triangle* (page 43) he carried the relationship of large black sheet-iron forms from the static character of *Whale* into the mobile field.

In November, 1938 a retrospective exhibition of his work was held at the George Walter Vincent Smith Art Gallery of Springfield, Massachusetts. Eighty-four items were included, from his earliest wire and wood sculpture, water-colors and drawings to several large mobiles and stabiles of that autumn.

Spiny. 1942. Stabile. Sheet aluminum. 26″ high.



Vertical Constellation with Yellow Bone. 1943. Stabile. Steel wire and wood. 23¼" high.

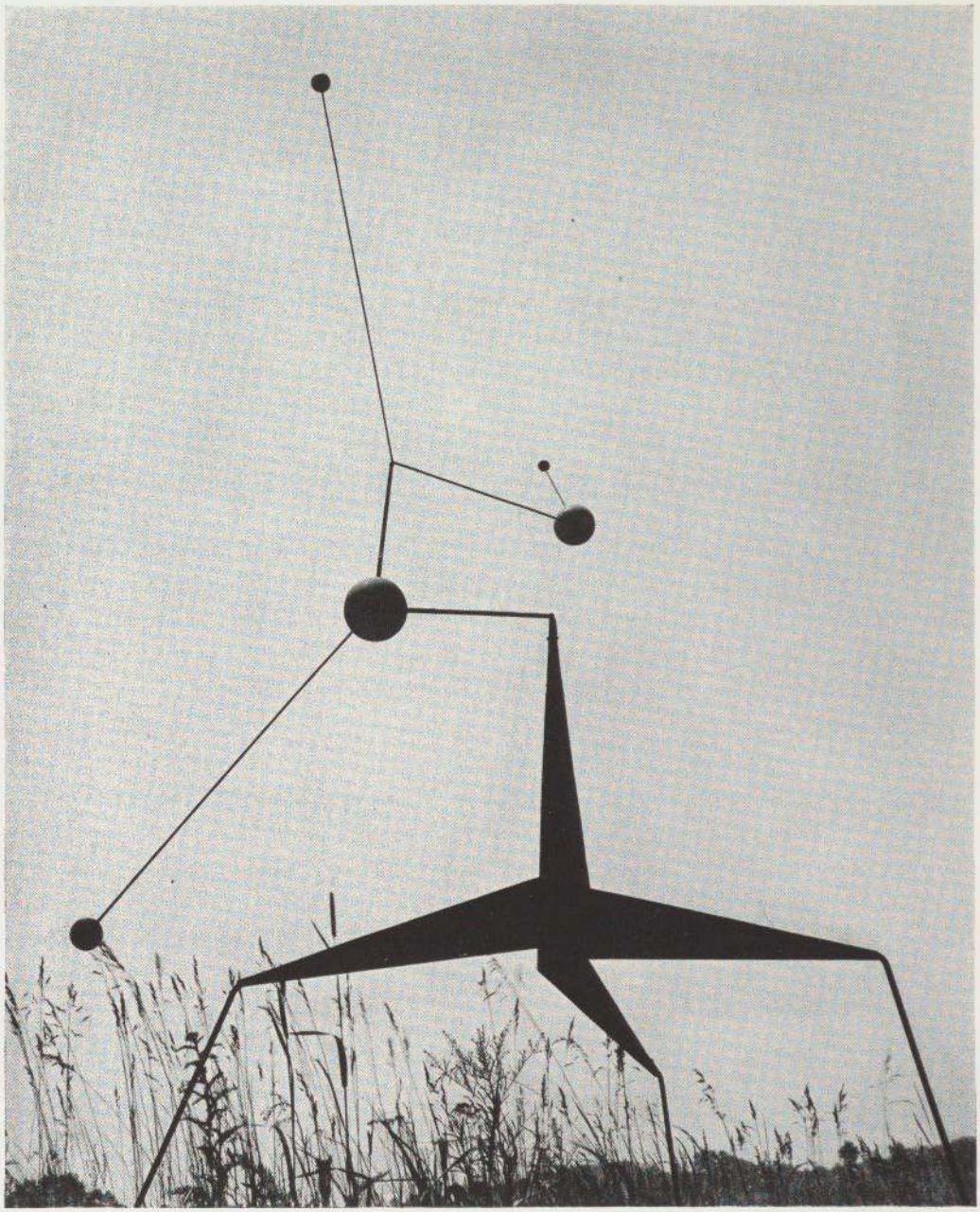


Wall Constellation with Red Object. 1943. Stabile. Steel wire and wood. 25¾" high.

The following spring, for the 1939 New York World's Fair, he designed a fountain display which he described as a "water ballet."* The dance was to be performed by fourteen forty-foot jets of water thrown up by revolving nozzles. It was punctuated by "water bombs" or isolated bursts of water which fell back into the basin of the fountain with an explosive sound. The entire performance, which should have lasted five minutes, was patterned on a complex choreographic schedule. Unfortunately, he did not receive the same sympathetic cooperation from the New York engineers in charge that he had in Paris. Although the necessary equipment was installed, a failure to follow the stipulated timing destroyed the possibilities of rhythmic variation and defeated the ballet effect.

Throughout this period, however, his mobiles lost none of their rhythmical freedom as is evidenced by the inexhaustible shadow-play of the large *Lobster Trap and Fish Tail* (page 42)

* Bibl. 62.



Morning Star. 1943. Stabile. Sheet steel, steel wire and wood. 6′ 7″ high.

which revolves in the Museum of Modern Art stair-well. Nor did the scale of his stabiles cease to grow. The dull black, riveted sheet-steel structures initiated with the *Whale* now lost their curvilinear contours for the predominantly sharp-angle forms of the *Black Beast* (page 45). Even the free-swinging elements moved with a slow, menacing heaviness in pieces like his 1940 *Black Petals.*

In December, 1940 the first exhibition solely devoted to his jewelry was held at the Willard Gallery, New York. For years he had been making occasional pieces as gifts for his friends. At first they were mainly designed in brass wire. This was either twisted into patterns somewhat reminiscent of Bronze Age ornaments in their simplicity and directness of technique, or into humorous naturalistic forms, or stylized monograms. The technique at the outset was clearly related to that of his first wire sculpture, *Josephine Baker.* But soon the twisted wire was hammered into flat strips which allowed a greater variety of effects and uses. The humorous and naturalistic treatment became less frequent. Pebbles, bits of colored glass or weathered bones were incorporated, cabochon fashion. Silver and gold wire came to be used more commonly than brass (page 51).

The beauty of his jewelry lies primarily in its decorative linear qualities. Nevertheless just as its technique and its linearism had roots in Calder's early wire sculptures, the grace of its lines and the fantasy of its forms had their echo in a new departure in Calder's constructions of 1941 and 1942. Perhaps this was in part a reaction from the overpowering, grim, black, sharp-angle forms of the previous year. But in any case, with the year 1941 we see a distinct turn from the more massive phase which Calder had just gone through, to one of gay colors and slender forms as in *Yucca.* Where the dull black tone is still retained we have a delicacy of formal elements closely reminiscent of jewelry forms. And the fantasy of some of the finest jewelry has its larger realization in mobiles such as the *Cockatoo* (page 47), or the delicate mobile bars of the *Hour Glass* (page 46).

Then, in 1942, we see in the stabiles a return to the more solid curvilinear forms of 1937 and 1940 (*Spiny,* page 53), but with a new grace inherited from the preceding season. At the same time his mobiles reveal an even fresher fantasy, echoing evident features of his jewelry (*Horizontal Spines,* page 52).

Compositional organization of three-dimensional space through new means, was the problem to which Calder as a sculptor was always returning. The scarcity of materials due to the war possibly caused him in 1943 to look in a new direction. A new type of stabile, "constellations," began to appear. These were structures of small pieces of polychromed and unpainted wood fixed together by heavy wire, and intended to stand on a base in the conventional manner (*Vertical Constellation with Yellow Bone,* page 54). These led to similar constellations, somewhat lighter in character, made to hang from the wall without obvious means of support (*Hanging Constellation with Red Object,* page 54). Finally we have the constellation translated into a stabile, free-standing in space, *Morning Star* (page 55), quite different in character from any of its immediate predecessors. And with it Calder has opened up a new avenue to explore.

CATALOG OF THE EXHIBITION

An asterisk (*) preceding the catalog number indicates that the work is illustrated in the text. When no lender is listed, the work has been lent by the artist.

*1. Self-Portrait. 1907.
Crayon drawing. 6 x 9".
Lent by Mr. A. Stirling Calder, Brooklyn, New York.

2. Dog. 1909.
Sheet brass, 4½" long.
Lent by Mr. A. Stirling Calder, Brooklyn, New York.

*3. Red Horse and Green Sulky. 1926. Toy.
Wire and wood, 23" long.

4. Duck and Snake. 1926. Toy.
Wire, cloth and wood, 25½" long.

5. Magpie. 1926. Toy.
Wire and wood, 8" high.

6. Duck Pulling up Worms. 1926. Toy.
Wood and wire, 4¼" high.

*7. Galloping Horse. 1926. Toy.
Wire, wood and leather, 21" long.

*8. Duck on Differential Wheels. 1926. Toy.
Wire and wood, 11" long.

9. Frog. 1926. Toy.
Wood, cardboard, leather, 21" long.

10. Piebald Horse. 1926. Toy.
Wire and cloth, 9½" long.

*11. Josephine Baker. 1926.
Brass wire, 18" high.
Lent by Mrs. James di Tomasi, Cold Spring Harbor, Long Island.

12. The Hostess. 1928.
Wire, 11½" high.
The Museum of Modern Art, New York.

13. Calvin Coolidge. 1928.
Wire, 12¼" high.

14. Sea Gull. 1928.
Wire, 9" high.

*15. Helen Wills. 1928.
Wire, 14¾" high.

*16. Horse. 1928.
Boxwood, 15½" high.

*17. Uncomfortable Face. 1928.
Cocobolo wood, 21¼" high.

18. Camel. 1928.
Tulipwood, 17" high.
Lent by Mrs. Sidney Howard, New York.

19. Woman with Square Umbrella. 1928.
Wood, 19" high.
Lent by Mr. Paul Nitze, Glen Cove, Long Island, New York.

20. Licorice. 1928.
Ebony, 29" high.
Lent by Mrs. Beatrice K. Winston, New York.

*21. Horse. 1928.
Sheet brass, 10" high.

22. Cow. 1928.
Wood, 17" high.
Lent by Mr. and Mrs. George D. Pratt, Bridgewater, Connecticut.

*23. Double Cat. 1929.
Wood, 4'3" long.

24. Fish. 1929.
Wire, 16" long.
Lent by Mr. A. Stirling Calder, Brooklyn, New York.

25. Goldfish Bowl. 1929.
Brass wire, 15¾" high.
Lent by Mr. A. Stirling Calder, Brooklyn, New York.

26. Acrobats. 1929.
Wire, 33" high.

*27. Portrait of Shepard Vogelgesang. 1930.
Wire, 15" high.
Lent by Mr. Shepard Vogelgesang, New York.

28. Portrait of Amédée Ozenfant. 1930.
Wire, 13" high.
Lent by Mr. Amédée Ozenfant, New York.

*29. Shark Sucker. 1930.
Norwegian wood, 31½" long.

30. Extended Spheres. 1931. Stabile.
Steel rods and wood, 23" high.
Lent by Mr. William Rogers, Springfield, Massachusetts.

31. Two Spheres. 1931. Motorized mobile.
Wood and wire, 21½" x 11".

32. Double Arc and Sphere. 1932. Motorized mobile.
Wood and wire, 24" high.
Lent by the Berkshire Museum, Pittsfield, Massachusetts.

*33. Dancing Torpedo Shape. 1932. Motorized mobile.
Wood, iron wire, aluminum, 32½" high.
Lent by the Berkshire Museum, Pittsfield, Massachusetts.

*34. Calderberry Bush. 1932. Mobile.
Steel wire and rod, sheet aluminum and wood, 7' high.
Lent anonymously.

35. Circle with Ball and Disk. 1933. Mobile.
Metal, wood and wire, 5'1¼" high.

*36. Agnes' Circle. 1934. Mobile.
Steel wire, rod and sheet aluminum, 36" high.
Lent by Miss Agnes Rindge, Poughkeepsie, New York.

*37. Steel Fish. 1934. Mobile.
Iron, sheet steel and rod, sheet aluminum, 10' high.
Lent by Mr. Philip Goodwin, New York.

*38. White Frame. 1934. Motorized mobile.
Wood panel, wire and sheet metal, 7'6" x 9'.

*39. A Universe. 1934. Motorized mobile.
Steel rod, wire and wood, 40½" high.
The Museum of Modern Art, New York.

40. Double Face. 1935. Toy.
Sheet aluminum, 12" high.
Lent by Sandra Calder, Roxbury, Connecticut.

41. Little Blue Panel. 1935. Motorized mobile.
Wood and iron wire, 19¾ x 15¾".
Lent by the Wadsworth Atheneum, Hartford, Connecticut.

42. Mobile. 1935.
Colored metal, 17" long.
Lent by Mr. George L. K. Morris, New York.

43. Vertical White Frame. 1936. Mobile.
Sheet steel and wood, 8' x 6'.
Lent by Mrs. Whitney Allen, Rochester, New York.

44. Orange Panel. 1936. Motorized mobile.
Wood, wire, sheet steel, 3' x 4'.

*45. Gibraltar. 1936. Stabile.
Lignum vitæ, plank walnut, and steel rod, 28⅝" high.

*46. Dancers and Sphere. 1936. Motorized mobile.
Wood, steel wire, sheet aluminum, 17¾" high.

47. Nine Disks. 1936. Mobile.
Sheet steel, steel rod, 15' high.

48. Praying Mantis. 1936. Mobile.
Steel rod and wood, 6'6" high.
Lent by The Wadsworth Atheneum, Hartford, Connecticut.

*49. Swizzle Sticks. 1936. Mobile.
Plywood panel, wire, wood, and lead, 48" x 33".
Lent by Mr. and Mrs. James Thrall Soby, New York.

50. Starfish. 1937. Mobile.
Wood and string, 37" wide.

51. White Panel. 1934. Mobile.
Wood panel, steel rods, sheet aluminum, 7'6" x 9'.

52. Big Bird. 1937. Stabile.
Sheet steel, 8'5" high.

53. William S. Paley Trophy. 1937.
Nickel steel, 37" to sphere.
Lent by The Columbia Broadcasting System.

*54. Whale. 1937. Stabile.
Sheet steel, 6'6" high.
On extended loan by the artist to The Museum of Modern Art.

55. Mercury Fountain. 1937. (model)
Plywood, iron, tin and steel rod. 13'6" high.

*56. Tight Rope. 1937. Mobile.
Ebony, steel rods, wire and lead, 9'3½" long.

*58. Apple Monster. 1938. Stabile.
Apple branch, wire spring, 5'7" high.

*59. Spherical Triangle. 1939. Mobile.
Sheet steel and steel rods. 8' high.

60. Cage within a Cage. 1939. Stabile.
Steel rods, wire thread, ca. 3'4" high.

61. Black Areas. 1939. Mobile.
Sheet steel and wire, ca. 40" wide.
Lent by Mr. Jean Hélion, Rockbridge Baths, Virginia.

*62. Lobster Trap and Fish Tail. 1939. Mobile.
Steel wire and sheet aluminum, ca. 15' wide.
The Museum of Modern Art, New York.

63. Tripod. 1939. Mobile.
Metal with colored disks. 7'6" wide.
On extended loan by the artist to The Museum of Modern Art.

64. Black, Brass, Red and White. 1940. Mobile.
Sheet steel, brass and aluminum, ca. 6'6" wide.

*65. Black Beast. 1940. Stabile.
Sheet steel, 8'9" high.

66. Eucalyptus. 1940. Mobile.
Steel rod, sheet steel, 7′10″ high.
Lent by Mr. and Mrs. Wallace K. Harrison, New York.

67. Hollow Egg. 1940. Stabile.
Steel rod, steel wire, 4′6″ high.

*68. Thirteen Spines. 1940. Mobile.
Sheet steel, steel rods and wire, aluminum, 7′ high.

68a. Black Petals. 1940. Mobile.
Sheet steel, 7′4″ high.

69. Arc of Petals. 1941. Mobile.
Steel wire and sheet aluminum, ca. 7½′ wide.
Lent by Art of This Century, New York.

70. Yucca. 1941. Mobile.
Sheet steel, sheet aluminum, steel wire, ca. 5′ high.
Lent by Baroness Hilla von Rebay, New York.

71. Little Leaves. 1941. Mobile.
Sheet steel, steel rods, 31″ high.
Lent by Mrs. Ralph Delahaye Paine, New York.

*72. Black Dots. 1941. Mobile.
Sheet steel and string, ca. 35″ wide.
Lent by Mrs. Charles B. Goodspeed, Chicago.

73. Clanger. 1941. Mobile.
Sheet steel, steel wire and sheet aluminum, 9′ high.
Lent by Mr. Malcolm Cowley, Gaylordsville, Connecticut.

*74. Hour Glass. 1941. Mobile.
Steel rod and wire, 5′ high.

*75. Cockatoo. 1941. Mobile.
Sheet steel and wire, 36¼″ high.
Lent by Mr. and Mrs. C. Earle Miller, Downingtown, Pennsylvania.

76. Elephant. 1942. Stabile.
Sheet steel, 20¾″ high.

77. Hanging Spheres. 1942. Mobile.
Wood, steel rod, and string, 27″ wide.
Lent by Mr. and Mrs. Richard Taylor, Bethel, Connecticut.

*78. Horizontal Spines. 1942. Mobile.
Sheet steel, steel wire and rods, and sheet aluminum, 4′5″ high.
Lent by the Addison Gallery, Phillips Academy, Andover, Massachusetts.

*79. Spiny. 1942. Stabile.
Sheet aluminum, 26″ long.

*80. Black Thing. 1942. Stabile.
Sheet steel, 31¼″.
Lent anonymously.

*81. Red Petals. 1942. Mobile.
Sheet steel, steel wire, sheet aluminum, 9′2″ high.
Lent by The Arts Club, Chicago.

*82. Vertical Constellation with Yellow Bone. 1943. Stabile.
Wood and steel rod, 23¼″ high.

83. Vertical Constellation with Bomb. 1943. Stabile.
Wood and steel rod, 31¼″ high.

*84. Wall Constellation with Red Object. 1943. Stabile.
Wood and steel rod, 25¾″ high.

85. Wall Constellation with Row of Objects. 1943. Stabile.
Wood and steel rod, 33″ high.

86. Morning Star. 1943. Stabile.
Sheet steel, wire and wood, 6′7″ high.

Jewelry 1933-43

87. Boomerang Necklace. Hammered brass.

88. Spiral Pin. Galvanized iron, blue glass.

89. Leaf Pin. Silver.

90. Pendant. Bone and gold.

91. Bracelet. Silver.

92. Earrings. Silver.

93. Necklace. Silver.

94. Bracelet (Small). Silver.

95. Necklace of Cones. Brass Wire.

96. Fish Pin. Silver.
Above pieces lent by Mrs. Alexander Calder, Roxbury, Connecticut.

97. Spiral and Star Pin. Brass.
Lent by Mrs. José Luis Sert, New York.

98. Brooch. Silver.
Lent by Mrs. Catherine White, New York.

BRIEF CHRONOLOGY

1898 Born July 22, Philadelphia, Pennsylvania.

1919 Graduated as mechanical engineer, Stevens Institute of Technology.

1919-1922 Various apprentice engineering jobs.

1922 Began to draw evenings in public night school, East 42 Street, New York, under Clinton Balmer.

1923 Interest in landscape painting awakened while on West Coast. Studied Art Students' League, New York, until 1926.

1924 Free-lance work for *National Police Gazette* until 1926.

1925 Winter: drawings for *Animal Sketching.*

1926 First paintings exhibited. *Animal Sketching* published. Began wood carving. To England by freighter. Paris: began circus; made first animated toys; first wire sculpture, *Josephine Baker.*

1927 Paris: toys exhibited, Salon des Humoristes. Returned to New York in August. Autumn: Oshkosh, Wisconsin, to supervise manufacture of toys from his models. Wood sculpture.

1928 New York, April: first one-man exhibition, Weyhe Gallery (wire sculpture). *Romulus and Remus* exhibited at Independents, New York. To Paris, November; met Miro, Pascin.

1929 Paris, February: exhibition of wire and wood sculptures, Galerie Billiet. Catalog preface by Pascin. Berlin, April: exhibition Neumann-Nierendorf Gallery. First jewelry. Returned New York, June. Wire goldfish bowls with moving fish.

1930 Paris, March to December: exhibited at XIe Salon de l'araignée. Met Léger, van Doesburg, Mondrian. Experimented briefly with abstract painting. Exhibited wood and wire sculpture, Museum of Modern Art, New York: *Paintings and Sculptures by Living Americans.* First showing in Salon des Sur-Indépendents, Paris.

1931 Married Louisa James. Returned to Paris. Met Arp, Hélion, van Doesburg. Became member of Abstraction-Création group. April: First abstract constructions at Galerie Percier; catalog preface by Léger. Illustrations for *The Fables of Aesop.*

1932 Paris, February: first exhibition of "mobiles," Galerie Vignon. Exhibited at Association Artistique "1940." New York, June: exhibition, Julien Levy Gallery.

1933 Madrid, Barcelona, January: circus; exhibitions of objects and drawings. Paris: group show, Galerie Pierre, with Arp, Hélion, Pevsner, Seligmann, Miro. July: returned to U.S.A. Purchased farm, Roxbury, Connecticut.

1934 Roxbury. First exhibition, Pierre Matisse Gallery, New York.

1935 Chicago: setting for Martha Graham's *Panorama,* Bennington, Vermont.

1936 Setting for Eric Satie's *Socrate,* Wadsworth Atheneum, Hartford, Connecticut; "Plastic interludes" for Martha Graham's *Four Movements,* New York.

1937 April: visit to France; *Mercury Fountain,* Spanish Pavilion, Paris Exposition. October to London. Exhibition Mayor Gallery.

1938 February: returned to U.S.A. Retrospective exhibition, Springfield, Massachusetts.

1939 *Water Ballet,* New York World's Fair. First prize, Plexiglas sculpture competition, Museum of Modern Art.

1940 First jewelry exhibition, Willard Gallery, December, New York.

1941 Decoration for ballroom, Hotel Avila, Caracas, Venezuela.

1943 Constellations.

EXHIBITIONS OF CALDER'S WORK

1928 NEW YORK. *Weyhe Gallery*
Feb. 20-Mar. 3

1929 PARIS. *Galerie Billiet*
Jan. 25-Feb. 7

1929 NEW YORK. *Weyhe Gallery*
Feb. 4-23

1929 BERLIN. *Neumann & Nierendorf*
April

1929 NEW YORK. *Fifty-sixth Street Galleries*
Dec. 2-14

1930 CAMBRIDGE. *Harvard Society for Contemporary Art*
Jan. 27-Feb. 4

1931 PARIS. *Galerie Percier*
Apr. 27-May 9

1932 PARIS. *Galerie Vignon*
Feb. 12-29

1932 NEW YORK. *Julien Levy Gallery*
May 12-June 11

1933 PARIS. *Galerie Pierre Colle*
May 16-18

1933 MADRID. *Sociedad de Cursos y Conferencias, Residencia of the University of Madrid.*
January

1933 BARCELONA. *Amics de l'Art Nou, Galeries Syra*
January

1934 NEW YORK. *Pierre Matisse Gallery*
Apr. 6-28

1935 CHICAGO. *Renaissance Society, University of Chicago*
Jan. 14-31

1935 CHICAGO. *Arts Club*
Feb. 1-26

1937 HOLLYWOOD. *Antheil Gallery.*

1937 HONOLULU. *Honolulu Museum.*

1937 LONDON. *Mayor Gallery*
December

1938 SPRINGFIELD. *George Walter Vincent Smith Art Gallery*
Nov. 8-27

1939 NEW YORK. *Pierre Matisse Gallery*
May 9-27

1940 NEW YORK. *Willard Gallery*
Dec. 8-25

1941 NEW ORLEANS. *Arts and Crafts Club*
Mar. 28-Apr. 11

1941 NEW YORK. *Pierre Matisse Gallery*
May 27-June 14

1941 NEW YORK. *Willard Gallery*
Dec. 3-25

1942 CINCINNATI. *Cincinnati Art Museum*
Apr. 7-May 3

1942 NEW YORK. *Pierre Matisse Gallery*
May 19-June 6

1942 LOS ANGELES. *Design Project.*
Sept. 27-Oct. 27

1942 SAN FRANCISCO. *San Francisco Museum.*

1942 NEW YORK. *Willard Gallery*
Dec. 1-24

1943 NEW YORK. *Pierre Matisse Gallery*
May 18-June 12

1943 ANDOVER. *Addison Gallery of American Art*
June 5-July 6

1943 NEW YORK. *Museum of Modern Art*
Sept. 29-Nov. 28

WORK BY CALDER IN AMERICAN MUSEUMS

ANDOVER, MASSACHUSETTS. ADDISON GALLERY, PHILLIPS ACADEMY.
1 standing mobile.

CHICAGO. THE ARTS CLUB.
1 standing mobile.

HARTFORD, CONNECTICUT. THE WADSWORTH ATHENEUM.
1 motorized panel mobile.
1 standing mobile.

HONOLULU. HONOLULU ACADEMY OF ART.
1 wire sculpture.
1 motorized panel mobile.

NEW YORK. ART OF THIS CENTURY.
1 suspended mobile.

NEW YORK. ART OF TOMORROW.
1 motorized panel mobile.

NEW YORK. THE METROPOLITAN MUSEUM OF ART.
1 suspended mobile.

NEW YORK. THE MUSEUM OF MODERN ART.
2 wire sculptures.
1 motorized mobile.
1 suspended mobile.

NORTHAMPTON, MASSACHUSETTS. SMITH COLLEGE MUSEUM.
1 mobile.

PITTSFIELD, MASSACHUSETTS. BERKSHIRE MUSEUM.
2 motorized mobiles.
2 mobiles installed in auditorium ventilators.

PHILADELPHIA. THE PENNSYLVANIA MUSEUM OF ART.
1 wall mobile.

ST. LOUIS. CITY ART MUSEUM.
1 suspended mobile.

WASHINGTON, D. C. THE PHILLIPS MEMORIAL GALLERY.
2 drawings.

ETCHINGS

1935 One etching in *23 Engravings,* a portfolio edited by Anatole Jakovski, G. Orobitz et cie., Paris.

1940 *Sunday.* Line etching submitted for *PM Competition: The Artist as Reporter* at the Museum of Modern Art, New York.

1942 One etching in *Portfolio of Eleven Original Works,* published by VVV, New York. Limited edition of 50, containing etching-frottage objects by Breton, Chagall, Ernst et al.

ILLUSTRATIONS

Books

1926 *Animal Sketching,* Pelham, New York. Bridgman Publishers.

1931 *Fables of Aesop* with fifty drawings, Paris. Harrison of Paris.

Magazines

1924-1926 *National Police Gazette:* drawings in May 3, Aug. 2, 1924; Feb. 21, March 21, April 4, May 23, June 27, Aug. 1, Aug. 22, Oct. 31, Nov. 14, 1925; May 1, July 3, 1926.

1937 *Transition* Winter no 26, pp. 135-7. Decor for *OH to AA,* a playlet by Charles Tracy.

1941 *Vertical* Cover design and title page.

1942 *Dyn* 1 no 3, pp. 4b, 9, 16, 20 a-b-c, 26. Fall 1942.

1943 *View* 3 no 1: pp. 20-1. Children's page.

POSTERS

1925 *The Glass Slipper,* a Theatre Guild production, New York.

1926 Holland-American Line.

THEATRICAL WORK

1929 *Miss Tamara,* rubber hose and wire dachshund for the clown, Paul Fratellini, Paris.

1935 *Panorama,* for Martha Graham. Mobiles for First Workshop production at the Bennington School of the Dance, Vermont.

1936 *Horizons,* for Martha Graham. Mobile settings for 33rd concert, New York.

1936 *Socrate,* by Erik Satie. Mobile settings for production at the First Hartford Festival, Connecticut.

BIBLIOGRAPHY

The arrangement of this bibliography is alphabetical, under the author's name wherever possible. Catalogs of exhibitions in public museums are listed under the name of the city where the museum is located, while private exhibition galleries are listed under the name of the gallery. The bibliographical form is modelled upon that used in the Art Index.

SAMPLE ENTRY for magazine article: SWEENEY, JAMES JOHNSON. Alexander Calder. 4il Axis lno 3: 19-21 Jy 1935.

EXPLANATION: An article by James Johnson Sweeney, entitled "Alexander Calder," with 4 illustrations, will be found in Axis, volume 1, number 3, pages 19 through 21, issue dated July 1935.

ABBREVIATIONS: Ag *August,* Ap *April,* c *copyright,* ed *editor,* F *February,* il *illustration (s),* Ja *January,* Je *June,* Jy *July,* Mr *March,* My *May,* N *November,* no *number(s),* O *October,* p *page(s),* pl *plate(s),* S *September,* sup *supplement.*

* Entries so marked are in the Museum library.

Statements by Calder

*1. ABSTRACTION-CRÉATION, ART NON FIGURATIF 1:6 1932. Translated in *Art of this century* (See 7).

*2. ANDOVER, MASS. ADDISON GALLERY OF AMERICAN ART. Mobiles by Calder. Je 5-Jy 6 1943. Exhibition catalog.

*3. EVANS, MYFANWY, ed. The painter's object. il. London, Gerald Howe, ltd., 1937. Alexander Calder: *Mobiles,* p62-7.

4. PITTSFIELD, MASS. BERKSHIRE MUSEUM. Modern painting and sculpture. Ag. 12-25 1933? Exhibition catalog.

5. Mercury fountain. Stevens Indicator 55no3:2-3,7 My 1938.

6. Mercury fountain. Technology Review 40:202 Mr. 1938. Illustration, p25 N 1937.

*7. ART OF THIS CENTURY. Edited by Peggy Guggenheim. il New York, Art of this century, 1942.
Brief biographical note. Translation of Calder's statement in *Abstraction.*

Books and Articles

*8. ARTS CLUB, CHICAGO. "Mobiles" by Alexander Calder. F 1-26 1935. Catalog, with introduction by James Johnson Sweeney.

Barr, Alfred H., Jr. See 47,48,49.

9. Belloni, La Comtesse. Staltrad. Göteborgs Handels och Sjöfarts-Tidning. F 20. p.5 1932 Ill.

*10. Benson, Emanuel Merwin. Seven sculptors: Calder, Gargallo, Lehmbruck, Lipchitz, Manolo, Moore, Wolff. il American Magazine of Art 28:454-69 Ag 1935. Calder, p468-9.

*11. Beucler, André. Les moyens d'expression. il Arts et Métiers Graphiques 62:15-36 Mr 1938.

*12. Bird, Paul. Calder and nature. il Art Digest 13:22-3 My 15 1939. Exhibition at Pierre Matisse Gallery.

*13. Breuning, Margaret. Calder mobiles and stabiles. Magazine of Art 32:361 Je 1939. Exhibition at Pierre Matisse Gallery.

14. Buffet-Picabia, Gabrièlle. Alexander Calder, ou le roi du fil de fer. Vertigral 1nol: 1 1932.

*15. Circle, International Survey of Constructive Art. Editors: J. L. Martin, Ben Nicholson, N. Gabo. il London, Faber and Faber, 1937.
Sculpture, pl 19-20. Exhibitions, p279-81.

*16. Coan, Ellen Stone. The mobiles of Alexander Calder. Vassar Journal of Undergraduate Studies il 15:1-18 My 1942.

*17. Design Project, Los Angeles. Calder exhibition. S 27-O 27 1941. Catalog, with introduction by René Lefevbre-Foinet.

*18. F., R. (Frankel, Robert ?) Calder, a humorous and inventive artist. Art News 35:14,22 Mr 13 1937.
Exhibition at the Pierre Matisse Gallery.

19. Fréjaville, Gustave. Les poupées acrobats du cirque Calder. Commoedia Ap 24 1929.

*20. Galerie Billiet, Paris. (Exposition Calder) Ja 25-F 7 1929. Catalog, with introduction by Jules Pascin.

*21. Galerie Percier, Paris. Alexander Calder. Ap 27-My 9 1931. Catalog, with introduction by Fernand Léger.

22. Gasch, Sebastià. Il circ Calder. Mirador Ja 1933.

*23. ——————El escultor americano Calder. 2 il AC no7:43 1932.

24. Gaussin, Yvan. On remplace le crayon et la couleur par—du fil de fer. La Rumeur Ja 30 1929.

25. George, Waldemar. Sculptures de Calder. La Presse (Paris) F 14 1929.

*26. Giedion-Welcker, Carola. Modern plastic art. 166p il Zurich, H. Girsberger, 1937. English version by P. Morton Shand.

27. Glaser, Curt. Porträts, drahtkunst, u.a. Berliner Börsen-Courier Ap 5 1929.

*28. Grigson, Geoffrey, ed. The arts to-day. il London, John Lane, 1935. Painting and sculpture to-day, p71-109.

*29. Haskell, Douglas. Design in industry, or Art as a toy. 14il Creative Art 4:sup56-7 F 1929.

*30. Hawes, Elizabeth. More than modern—wiry art. Charm Ap 1928.

*31. Hellman, Geoffrey T. Profiles: Everything is mobile. il New Yorker 17:25-30,33 O 4 1941.

*32. Hildebrandt, Hans. Die kunst des 19. und 20. jahrhunderts. 458p il Wildpark-Potsdam, Akademische Verlagsgesellschaft Athenaion m.-b.H,c1924. (postscript 1931).

*33. Jakovski, Anatole. Alexandre Calder. 4il Cahiers d'Art 3no5-6:244-46 1933.

*34. ——————Six essais. Arp, Calder, Hélion, Miro, Pevsner, Seligmann. 47p il Paris, Chez Jacques Povolozky (1933?)

35. Les jouets de Calder. Les Echoes des Industries d'Art p23 Ag 1927.

*36. L., J. (Lane, James ?) Alexander Calder as jewelry designer. Art News. 39:10-11 D 14 1940. Exhibition at the Willard Gallery.

37. Legrand-Chabrier. Alexandre Calder et son cirque automatique. La Volonté My 19 1929.

38. ——————Un petit cirque à domicile. Candide Je 23 1927.

*39. Lucerne. Kunstmuseum. Thèse, antithèse, synthèse. F 24-Mr 31 1935. Catalog of an exhibition. Calder, p32,40.

40. Markstrom, Ingeborg. Staltradskulptur. Svenska Dagbladet Mr 10 1929.

*41. Matisse, Pierre, Gallery. Calder mobiles. Ap 6-28 1934. Catalog, with introduction by James Johnson Sweeney.

*42. "Mobile" en mouvement. 2il Cahiers d'Art 14no1-4:74 1939.

*43. Morris, George L. K. Relations of painting and sculpture. il Partisan Review 1no1:63-71 Ja-F 1943.

44. Mouvement. Je 1 1933.

*45. Museums acquire Calder's "Art in motion." il Art Digest 9:16 N 1 1934.

*46. New York. Museum of Modern Art. (Alexander Calder, miscellaneous uncatalogued material.) A folder of bibliographies, catalogs, clippings and reproductions.

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*48. ————————Cubism and abstract art. 249p il New York (The Museum) 1936. Text by Alfred H. Barr, Jr.

*49. Paris. Musée de Jeu de Paume. Trois siècles d'art aux Etats-Unis. Exposition organisée en collaboration avec le Museum of Modern Art, New York, il Paris, Editions des musées nationaux, 1938.
A. H. Barr, Jr.: Sculpture in the United States, p32-3.

*50. Plexiglas sculpture prizes are awarded. 5il Pencil Points 20no6:sup56-7 Je 1939. Competition sponsored by the Museum of Modern Art and Röhm & Haas.

51. Powell, Hickman. His elephants don't drink. New York World My 18 1931.

52. Ramond, Edouard. Sandy Calder ou le fil de fer devient statue. Paris-Montparnasse Je 15 1929.

53. Read, Herbert Edward. Unit 1, the modern movement in English architecture, painting, sculpture. il 124p London, Cassell & Co., 1934.

*54. Renaissance Society of the University of Chicago. Calder mobiles. Ja 14-31 1935. Catalog, with introduction by James Johnson Sweeney.

*55. S., J. Alexander Calder, Pierre Matisse Gallery. Art News 32-11 Ap 14 1934.

*56. San Francisco. Golden Gate International Exposition, 1939-40. Decorative arts, official catalog. San Francisco, San Francisco Bay Exposition company, c1939. Calder mobile, p88, with comment by James Johnson Sweeney.

*57. Sayre, Ann H. Mobiles and objects in the abstract language. Art News 34:8 F 22 1936. Exhibition at Pierre Matisse Gallery.

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*59. Springfield, Mass. George Walter Vincent Smith Museum. Calder mobiles. N 8-27 1938. Catalog, with introduction by James Johnson Sweeney, and biographical note by C. S. Pond.

*60. Stabiles and mobiles. il Time p46-7 Mr 1 1937.

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*62. ————————Alexander Calder: Movement as a plastic element. 12il Architectural Forum 70:144-9 (Plus 24-9) F 1939.
Plus supplement, number 2.

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————————See 8,41,54,56.

64. Szittya, W. Alexander Calder. Kunstblatt 13:185-6 Je 1929.

*65. Tinkling metal. Art Digest 16:12 Je 1942. Exhibition at the Pierre Matisse Gallery.

66. Vanity Fair. (Hall of Fame nomination) Mr 1930.
Waldemar, George. See 25.

67. Werner, B. E. Porträts, skulpturen, drahtplastiken. Deutsche Allgemeine Zeitung Ap 12 1929.

68. Westheim, Paul. Legenden aus dem künstlerleben. Kunstblatt 15:246-8 1931.

Film on Calder

1929 *Alexander Calder,* Berlin Institut für Kulturforschung. Directed by Dr. Hans Cürlis; photographed by Walter Türck. Part of an instructional series called *Artists at Work.*

Six thousand five hundred copies of this book have been printed in October, 1943 for the Trustees of the Museum of Modern Art by the Carey Press Corporation, New York.