

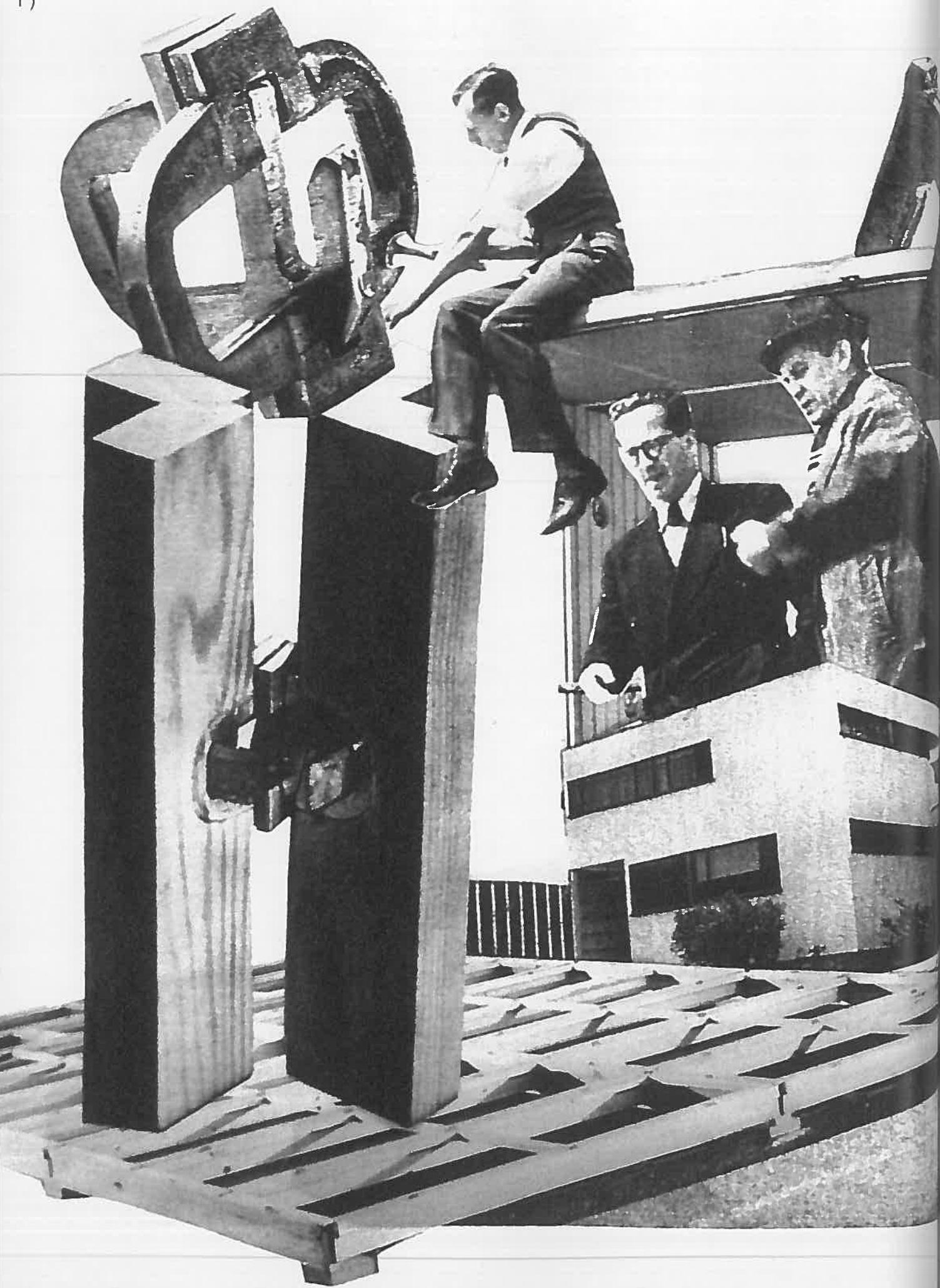
Bauhaus

№10



Standard

1)



To Build Is

Everything,

or

Nothing

Is

Built'

by

Bauhaus

Lab

2018

Like no other modernist artist, Konrad Wachsmann advanced the industrialization of building beginning in the 1940s. Bauhaus Lab 2018 participants investigated his 'Packaged House System'.

'... national defense may do for prefabrication what World War I did for the aircraft industry—raise it from infancy to adolescence in no time.'

Architectural Forum,
December 1940

Konrad Wachsmann arrived in the port of New York on the morning of 12 September 1941. He was forty years old, travelling with his wife Anna. Their journey had begun almost a decade ago. They had escaped the new totalitarian reality of Germany, only to then flee ascendant fascism in Italy and Spain. In 1938, they settled in France but were interned near Marseille alongside other German refugees.

Wachsmann, who had been trained as a carpenter after World War I, was an expert in prefabricated timber construction. His book on the subject, *Holzhausbau*, published in 1931, and letters of support coming from Albert Einstein and others in the United States secured his status as a persecuted intellectual, which granted the couple a visa to leave the camp and cross the Atlantic. They embarked in Seville aboard the *S.S. Navemar*, a freighter built to hold twenty-eight passengers that was overloaded with more than one thousand in its cargo holds.

When they arrived in New York nearly seven weeks later, they were welcomed by Walter Gropius, Bauhaus founder and now professor at Harvard. Wachsmann stayed with the Gropius family in Lincoln, Massachusetts, until the spring of 1942.

The Solution of the Defense Housing Problem?

Weeks earlier, Walter Gropius and Martin Wagner, both German immigrants, had testified before Congress in Washington, DC, to answer the question:

"How to bring forth an ideal solution of the Defense Housing Problem?" The US wartime economy had brought about a housing crisis, as thousands of workers settled near new factories. Gropius and Wagner imagined a vision of new cities ready for the age of machines. The ability to build cheaply and quickly was central to their plan. They claimed that prefabricated housing—mobile and fast-assembled—was the best means of rapidly developing housing for workers.

It was a familiar argument for Gropius, this time expressed in crucially different market conditions from those of the wartime United States. He had already taken up the subject of prefabricated housing in his 1910 memorandum for the electrical equipment company AEG, followed by experiments at the Dessau-Törten Estate, the Weissenhof Estate in Stuttgart, and the exhibition *Sonne, Luft und Haus für Alle* (Sun, Air and House for All) organized by Wagner in 1932 in Berlin, where Gropius presented his Copper Houses, made for the Hirsch Copper and Brass Company.

One evening in Lincoln, in November 1941, Wachsmann shared his idea for a prefabricated building system with Gropius. His system would employ standard-sized panels that could be joined in any orientation or combination, horizontal or vertical, to form a building of any size and use. At the heart of the system was the 'wedge connector', an ingenious metal clip that fit in the palm of one's hand and could join any panel to any other. Gropius enthusiastically agreed to help bring the system to production. On 12 September 1942, a year after Wachsmann's arrival in the US, he and Gropius registered the General Panel Corporation with the aim of producing prefabricated buildings.

Elizabeth Andrzejewski

is a designer and maker trained in architecture. She is completing her master's degree in architecture at Pennsylvania State University, where she researches metal fabrication, building methods, and the universal joint.

Phillip Denny

is an architecture writer and historian. He is currently a PhD student at Harvard University, where his research focuses on media and architecture history from the post-war to the post-modern.

The Rise and Fall of the 'Packaged House'

The first presentation of the 'Packaged House' took place in Somerville, near Boston, on 23 February 1943. Conceived as a modern, mass-produced home, the prototype was hand-built by a team of German-speaking craftsmen. Government housing officials, members of the military, and other potential investors gathered in a warehouse owned by the U.S. Plywood Corporation and watched as the house was assembled, from the ground up, in just a few hours by a team of five. It was then disassembled as the guests ate lunch. The demonstration was a success, fitting the requirements of the Defense Housing Act's 'Temporary Dwelling Unit' guidelines. Accordingly, General Panel's first house type was christened 'TDU-1'. The corporation secured a contract, but it was not able to develop its production process until after the war ended.

In the post-war reality, the market for prefabricated housing shifted dramatically and the General Panel Corporation, now split between New York and California, had to undertake changes. The ability to disassemble the house was no longer important, as it once had been for creating military barracks, but the system's flexibility and low cost remained a distinct advantage. The Packaged House was conceived as a universal system to create any type of house, large or small, and in any style, whether modern or traditional. While materials were, relatively speaking, more expensive than those used in conventional construction, the connector—which took the place of nails, screws, and other fasteners—substantially reduced labor costs. Gropius used the system as a pedagogical device for his Harvard students, who designed General Panel houses and published the

outcome in the architectural press. At the same time, the company enlisted Richard Neutra, Elsa Gidoni, Ferdinand Kramer, and other architects to underline the flexibility of the Packaged House and its usefulness for architectural modernism.

In 1946, General Panel received a loan from the Reconstruction Finance Corporation and negotiated a contract with the government to produce 8,500 houses in the framework of President Truman's Veterans' Emergency Housing Program. The company then purchased a former Lockheed Aircraft Corporation engine factory from the US government in Burbank, California. Wachsmann worked exhaustively on the design of the production line for the rest of the year. His scheme incorporated the latest automatic industrial equipment to streamline and automate panel production; the plant could theoretically produce parts for 10,000 houses each year. But successive delays—caused by the architect's endless improvements to the factory design—halted progress until June 1947, when production finally began on a 'limited basis'. Then, in July, when the factory was ready to run at full capacity, the corporation again lacked the funds necessary to kick-start production. By 1948, General Panel was on the brink of bankruptcy.

The Core of Wachsmann's Vision

Wachsmann had brought two projects to the US in 1941. The first, for the wedge connector system, failed with the General Panel Corporation's liquidation in 1951. But the second, a 'New Method of Construction', as he called it, gained the notice of the U.S. Air Force, which commissioned the architect to develop a standardized, tubular steel structure system—a 'space frame'—that could create vast spaces, such as for aircraft hangars or

1)

Collage on the 'Packaged House System'. On the top left: Konrad Wachsmann's universal joint, which was to revolutionize prefabricated construction. Collage: Participants of the Bauhaus Lab 2018.

The
Bauhaus
Dessau
Foundation's
m a g a z i n e

№10
2018

12 Euro

us Zeitschrift 10 Standard eng



68467082

9,00 EUR

ISBN
978-3-95905-226-9

